Royal Society of Arts.

Royal Society of Arts.

VOLUME CII

JAN: JUNE 1912

THE BUILDER

AN : ILLUSTRATED : WEEKLY MAGAZINE : FOR : THE ARCHITECT : ENGINEER : ARCHÆOLOGIST : CONSTRUCTOR : SANITARY-REFORMER : AND ART-LOVER.

"EVERY man's proper mansion-house, and home, being the theater of his hospitality, the seate of selfe-fruition, the comfortablest part of his own life, the noblest of his sonne's inheritance, a kind of private princedome, nay, to the possessors thereof, an epitome of the whole world, may well deserve, by these attributes, according to the degree of the master, to be decently and delightfully adorned."

"Architecture can want no commendation, where there are noble men, or noble mindes."—SIR HENRY WOTTON.

"OUR English word To BUILD is the Anglo-Saxon Byldan, to confirm, to establish, to make firm and sure and fast, to consolidate, to strengthen; and is applicable to all other things as well as to dwelling-places."—DIVERSIONS OF PURLEY.

"ALWAYS be ready to speak your mind, and a base man will avoid you."—WILLIAM BLAKE.

OFFICE: CATHERINE ST. STRAND: LONDON: W.C.

INDEX TO VOLUME CII.

JANUARY TO JUNE, 1912.

CONTENTS.

	PAGE
Articles, Notes, Reviews, and General	ii
Reports of Meetings, Papers Read, Law Cases, etc.	vii
Correspondence :	
Subjects of Letters	viii
Writers of Letters...	ix
Architects, etc., of Buildings Illustrated	ix
Illustrations	x

ARTICLES, NOTES, AND REVIEWS.

ABBEY, Paisley, 91, 186
Aberdeen : Building Trade, 17 ; Church, 707 ; Market Improvements, 674
Accident : Building, Indianopolis, 42 ; Policies, 338
Accidents, Street, and Street Shelters, 416
Acetylene Gas, Lighting by, 605
Acids, Damage to Concrete by, 704
Acoustics, the Question of, 389
Acton Green Church Competition, 391, 396
Advertisements : Disfiguring, Surrey County Council and, 121 ; Regulation Act, the, 717
Advertising, the Abuse of, 416
Aerodrome, Harrow, 394
Africa, South, East London, 283
Air-Gas, Lighting by, 487
Air Purification, Ozonair System of, 608
Aldwych Site, 128
Alexander Thomson Travelling Studentship, 150
Allen *v.* London Guarantee and Accident Company, 338
Alma-Tadema, Sir L., 749
Ambleside, Roman Camp, 758
America : a Lesson from, 349 ; a Message from, 593 ; the Competitive System in, 231
American : Collegiate Architecture, 624 ; South, Project for Kingsway Site, 91
Amsterdam : Building Trade, 614 ; Gas Exhibition, 362
Antiquarian Discovery, Hatfield, 91
Antiquities in Rotherhithe, 186
Appointments, 120, 151, 201, 208, 238, 536, 573
Appointments Vacant, 717
Aqueduct, Catskill, 768
Arbitrator, the Architect as, 758
Archæological : Congress, Rome, 151, 393 ; Department, Indian, 759 ; Discovery, Corfu, 581
Archæology, French School of, Athens, 362
Arches, Brick, Some Ancient, 427
Architect : as Arbitrator, the, 758 ; in Utopia, the, 715 ; the Lady, 262
Architects and the : Corporate Sense, 657 ; Labourers' (Ireland) Act, 664
Architect's : Centenary, a Scottish Judge and an, 519 ; Certificate and Contract Price, 523 ; Procedure, the London, 20
Architects : Clients, and Specialists, 169 ; Registration of, 422, 660 ; Responsibility of, Newest, 351 ; Why Employ ? 289
Architects, Contemporary, and Their Work : Basil Champneys, 751 ; Cass Gilbert, 30 ; Arnold Mitchell, 349, 365 ; Friedrich Ohmann, 625, 634
Architectural : Assistants and the Office of Works, 170, 512, 543, 600 ; Details in Monumental Brasses, 69, 183, 460 ; Education, Board of, 599, 688 ; Societies of France, 27, 200, 748 ; Studies, Board of Cambridge, 601 ; Tour in France, 632
Architectural Association : Competitions, 723 ; Contemporary Architecture at the, 535 ; *Journal*, the, 574 ; New Secretary, 232 ; Schools, 63
Architecture : American, 349 ; American Collegiate, 624 ; and Local Patriotism, 388 ; at the Royal Academy, 505, 536, 566, 576 ; at the Royal Scottish Academy, 568 ; Contemporary, at the Architectural Association, 535 ; Education and Style in, 747 ; Methods of Business and, 750 ; of Portugal, 301, 457, 577, 729 ; Patriotism and, 415 ; Press, the Lay, and, 29 ; Reinforced Concrete in, 319 ; the Clergy and, 657 ; University College School of, 424 ; Window-breaking and, 321
Arica to La Paz Railway, 490
Art : Congress, Rome, 65, 393 ; Exhibitions (see 'Exhibitions') ; Gallery, etc., Belfast, 602 ; the Teaching of, 58 ; Treasures, Mr. Pierpont Morgan's, 114, 151, 268 ; Union of London, 424
Arts : Club, General Post Office, 451 ; Ministry of Fine, French, 321
Asbestos-Wood, 766
Ashes, Immurement of, in Church Walls, 29
Asphaltum, Rock, and Its Uses, 42
Aspirations for 1912, 3
Assessors, Competitions and, 594
Assyria, Capital of Ancient, 74
Athens : British School at, 71 ; French School of Archæology, 362
Attorney-General *v.* : Mayor, etc., of Sheffield, 407 ; Uckfield Rural District Council, 774
Auction, Mistake at an, 221
Australia : Building Notes from, 462
Australian : Capital, Competition for the, 416, 507, 513, 634 ; Commonwealth Offices, Strand, London, 46, 151

BACON STATUE, Gray's Inn, 362
Ball *v.* Hunt, 644
Banbury, the 'Reindeer' Inn, 263
Bandstand, etc., Hastings, 445, 483
Bankruptcy Bill, 582
Bargate, Southampton, 394
Barry Training College, 556
Basing House, 90
Baths : Committee, Wandsworth Council, 687 ; Miners', 43, 92
Beauty and Utility, 623
Bedford, Baptist Chapel, 601
Belfast : Art Gallery and Museum, 602 ; University Buildings, 269
Bills, Private, 44
Birmingham : Blue-Coat School, 178, 574 ; King's Heath Baths Competition, 666 ; Royal Society of Artists, 580
Birthday Honours, the, 722
Blackfriars Bridge, 100
Blomfield, Professor, Royal Academy Lectures by, 171
Board of Trade Traffic Report, 220
Boer War, Memorial of the, 693
Bolton : Miners' Federation Hall, 424, 450 ; Nurses' Home, 239
Bombay : Civic Decorations of, 667 ; the Durbar and, 363
Bond, G. E., on Registration of Architects, 422
Book Sales, 512

Books, Magazines, Pamphlets, etc., Notices, Reviews, and Articles as to :—
Abbey : Ford, the Story of, 149 ; of St. Mary, Croxden, 545, 581
Adams, H., and E. R. Matthews, Reinforced Concrete Construction, 50
Adams, H. : Designing, 377 ; Mechanics of Building Construction, 633
Adams, Mrs. H., and Edith A. Browne, Social Guide, 691
Alexander, W., Columns and Struts, 602
Allsop, R. O., Engineering Work in Public Buildings, 602
Almanack, the London, 35
Andrews, E. S., Reinforced Concrete Construction, 633
Antiquary, the, 282
Archæology, British, Byways in, 675
Architectural : Development, a History of, 260 ; Drawing, Building Construction and, 468 ; Hygiene, 50
Architecture, 483
Architecture and Sculpture in Italy, Baroque, 281
Arithmetic, Technical, and Geometry, 435
Armitage, Ella S., Early Norman Castles of the British Isles, 723
Art : Should We Stop Teaching ? 58 ; the Year's, 281
Ashbee, C. R., Teaching of Art, 58
Athens, British School at, 71
Audsley, G. A. & B. : Amateur Joinery in the Home, 675 ; Stencilling, 251
Barker, A. H., Heating and Ventilation, 602
Baroque Architecture and Sculpture in Italy, 281
Bevels and Cuts, 633
Blouns, B., and A. G. Bloxam, Chemistry, 51
Blount, B., Cement, 377
Boiler Draught, 51
Books Received, 8, 38, 68, 92, 121, 208, 238, 270, 300, 326, 363, 393, 453, 511, 546, 575, 602, 634, 666, 691, 761
Booth, W. H., and J. B. C. Kershaw, Smoke Prevention, 51
Bottler, Max, German Varnish-Making, 575
Boundaries, etc., Hunt's Law of, 761
Branscombe Church, 251
Bricks and Tiles, 51
Bridge Engineering, History of, 407
Briggs, R. A., Pompeian Decorations, 483
British : Clays, Shales, and Sands, 377 ; School at Athens, 71
Building Construction : Architectural Drawing and, 468 ; Mechanics of, 633
Building : Engineering, etc., Contracts, Law of, 633 ; Keystones of, 691 ; Structures in Earthquake Countries, 761
Burdon, E. R., Study of Timber, 672
Butterworth's Workmen's Compensation Cases, 52, 467, 691

Books, Magazines, etc. (continued) :—
Calculation of Pipe, Drain, etc Dimensions, 467
Calculations for Sanitary Official 377
Cantell, M. T., Reinforced Concret Construction, 50
Canziani, E., Costumes, Tradition and Songs of Savoy, 149
Carter, A. C. R., the Year's Art, 28
Castles, Early Norman, of th British Isles, 723
Catalogues, Trade, 24, 52, 80, 19 223, 256, 437, 468, 528, 647
Cathedrals of Spain, 92
Cement : Lectures on, 377 ; Por land, 377 ; Work, Ornamenta 252
Chemistry : for Engineers an Manufacturers, 51 ; Practical, fo Engineering Students, 545
Chimneypieces and Ingle-Nooks, 25
Church : Branscombe, 251 ; A Saints', Horseheath, 513 ; of S Giles, Northampton, 435
Churches, Homeland, 162, 281
City of London Year-Book an Directory, 394
Clarke, Orme, National Insuranc Act, 68
Clays, Shales, and Sands, British, 37
Clayworker's Handbook, the, 377
Columns and Struts, 602
Concrete Costs, 723
Concrete, Reinforced : Compressio Member Diagram, 50 ; Construc tion, 50 ; Construction, Principle of, 633
Contracts, Building, etc., Law o 633
Coombe, R. G. N., Hunt's Law o Boundaries, 761
Copyright Law, 282
Costumes, Traditions, and Songs o Savoy, 149
'Country Life,' 282
Cowderoy, J. T., Notes for Sanitar Inspectors, 252, 467
Cragg, A., and J. R. V. Marchant Hints to Young Valuers, 514
Croxden, Abbey of St. Mary, 545 581
Curtis, C. E., Farm Buildings, 676
Darling, C. R., Pyrometry, 52
Day, Lewis F., Penmanship, 92
Decoration, Pompeian, 483
Designing, Theory and Practice in 377
Destructor Practice, Modern, 633
Diary, an Architect's, 36
Diseases, Infectious, 467
Ditchfield, P. H., Memorials of Old Gloucestershire, 219
Dobson, E., and A. B. Searle Bricks and Tiles, 51
Drainage Work and Sanitary Fittings, 68
Drawing, Architectural, Building Construction and, 468
Earthquake Countries, Building Structures in, 761
Engineering : Students, Practica Chemistry for, 545 ; Work in Public Buildings, 602
Engineers and Manufacturers Chemistry for, 51

THE GETTY CENTER
LIBRARY

TICLES, NOTES, AND REVIEWS ntinued):—

ks, Magazines, etc. (continued):—
England, the Mansions of, 299
Farm Buildings, 676
Farrow, F. R., Stresses and Strains, 723
Ferro-Concrete, Hennebique, 377
Fire Brigade Handbook, 252
Fletcher, B. F. & H. P., Architectural Hygiene, 50
Ford Abbey, the Story of, 149
Forrest, H. E., Old Houses of Shrewsbury, 281
Fuel Economy, Smoke Prevention and, 51
Gade, J. A., Cathedrals of Spain, 92
Gardening, One and All, 266
German Varnish-Making, 575
Gloucestershire, Memorials of Old, 219
Goodrich, W. F., Modern Destructor Practice, 633
Gypsum Deposits of Maritime Provinces, 377
Hale, A. J., Practical Chemistry for Engineering Students, 545
Hardy, E., Bevels and Cuts, 633
Heath, Sidney: Ford Abbey, 149; Homeland Churches, 162, 281; Pilgrim Life in Middle Ages, 251
Heating and Ventilation, 602
Hennebique Ferro-Concrete, 377
Holmes, C. J., Art of Rembrandt, 513
Horner, J. G., Pattern-Making, 633
Horseheath, All Saints' Church, 513
Housden's Economic Water Supply, 512
House: and Its Equipment, the, 251; Painting and Decoration, 546
Houseden, C. E., Calculation of Pipe, Drain, etc., Dimensions, 467
Houses, Old, Shrewsbury, 281
Hudson, A. A., Law of Building, etc., Contracts, 633
Hunt's Law of Boundaries, Walls, etc., 761
Hurrell, H., Copyright Law, 282
Hygiene, Architectural, 50
Infectious Diseases, etc., 467
Insurance: Act, Guide to the, 219, 761; Act, National, 68
Italy, Baroque Architecture and Sculpture in, 281
Jennings, A. S.: House Painting, etc., 546; Kæmmerer's Letter-Book, 282
Jennison, W. T., Gypsum Deposits, 377
Johnson, T. M., Shipwiring, 52
Johnson, W., Byways in British Archæology, 675
Joinery, Amateur, in the Home, 675
Kæmmerer's Letter-Book, 282
Keen, F. N., Local Legislation, 467
Keystones of Building, 691
Laxton's Builders' Price Book, 219
Legislation, Local, 467
Lethaby, W. R., Architecture, 483
Letter-Book, Kæmmerer's, 282
Local Government Annual, 149
Local Legislation, 467
Lockwood's Price Book, 219
Lombard and Gothic Vaults, 574
London: Almanack, the, 35; Survey of (St. Giles-in-the-Fields), 675
Lynam, C., Abbey of St. Mary, Croxden, 545, 581
McIntosh, J. G., Manufacture of Varnishes, 52
Macmillan, G. A., British School at Athens, 71
Magazines and Reviews, 8, 66, 181, 329, 486, 613, 761
Mansions of England, the, 299
Marsh, C. F., Reinforced Concrete Compression Member Diagram, 50
Maxwell, W. H., Drainage Work, 68
Mechanics: of Building Construction, 633; Structural, Principles of, 633
Merryweather, J. C., Fire Brigade Handbook, 252
Metric Equivalent Tables, 180
Middle Ages, Prilgrim Life in the, 251
Middleton, G. A. T., Stresses and Thrusts, 51
Miller, F. T. W., Lockwood's Price Book, 219
Millis, C. T., Technical Arithmetic, 435
Montel, A., Building Structures in Earthquake Countries, 761
Northampton, Church of St. Giles, 435
Painting and Decoration, House, 546
Parsons, C. F., All Saints' Church, Horseheath, 513

Books, Magazines, etc. (continued):—
Parsons, R. C., the Stereophagus Pump, 52
Pattern-Making, 633
Penmanship, 92
Pennell, E. R. & J., the Life of J. McNeill Whistler, 149
Pepler, G. L., Town Planning, 401
Phillipps, Lisle March, the Works of Man, 690
Pictures by Sir H. Raeburn, 675
Pilgrim Life in the Middle Ages, 251
Pipe, Drain, and Sewer Dimensions, 467
Pompeian Decorations, 483
Portland Cement, 377
Potter, A. K., Lombard and Gothic Vaults, 574
Pratt, H. K., Boiler Draught, 51
Press Guide, Willing's, 36
Price Book: Laxton's, 219; Lockwood's, 219
Prideaux, Edith K., Branscombe Church, 251
Pump, the Stereophagus, 52
Pyrometry, 52
Raeburn, Sir H., Pictures by, 675
Reading, 676
Refrigeration, Cold Storage, etc., 407
Reid, J. A., Building Construction and Architectural Drawing, 468
Rembrandt, Notes on Art of, 513
Renaissance, the, in Italy, France, and England, 260
Ricci, Corrado, Baroque Architecture and Sculpture in Italy, 281
Riley, W., Parish of St. Giles-in-the-Fields, 675
Robson, Philip A., School Planning, 406
Romans, Art of the, 434
Roman Studies, Journal of, 186
Rothery, G. C., Chimneypieces and Ingle-Nooks, 251
Row, Prescott, and A. H. Anderson, the West Country, 691
Ruegg, Judge, and D. Knocker, Butterworth's Workmen's Compensation Cases, 52
St. Giles-in-the-Fields, the Parish of, 675
Sanitary: Inspectors, Pocket Notes for, 252, 467; Officials, Calculations for, 377
'Sanitary Record' Year-Book, 121
Savoy, Costumes, Traditions and Songs of, 149
School Planning, 406
Searle, A. B.: British Clays, etc., 377; Clayworker's Handbook, 377
Seaton, E. C., Infectious Diseases, 467
Sorjeantson, R. M., Church of St. Giles, Northampton, 435
Sewerage Disposal, 407, 467
Shenton, H. C. H., Sewerage Disposal, 407, 467
Shipwiring and Fitting, 52
Shrewsbury, Old Houses of, 281
Simpson, F. M., a History of Architectural Development, 260
Smith, T., Guide to the Insurance Act, 219, 761
Smoke Prevention and Fuel Economy, 51
Social Guide, 691
Society of Engineers' Transactions, 675
Somerset, Dorset, etc., 691
Spain, Cathedrals of, 92
Steel Square, the, 633
Stencilling, 251
Stresses and: Strains, 723; Thrusts, 51
Structural Mechanics, Principles of, 633
Survey of London (St. Giles-in-the-Fields), 675
Taylor, F. N., Small Water Supplies, 546
Taylor, F. W., and S. E. Thompson, Concrete Costs, 723
Technical Arithmetic and Geometry, 435
Thomas, F. Inigo, Keystones of Building, 691
Tiles, Bricks and, 51
Timber, the Study of, 672
Town Planning, What it Means, 401
Transactions, Society of Engineers', 675
Tyrrell, H. G., Bridge Engineering, 407
Valuers, Hints to Young, 514
Varnishes, Manufacture of, 52
Varnish-Making, German, 575
Vaults, Lombard and Gothic, 574
Waldram, P. J., Structural Mechanics, 633
Wallis-Tayler, A. J., Refrigeration, 407
Walters, H. B., on Art of the Romans, 434

Books, Magazines, etc. (continued):—
Water: Supplies, Small, 546; Supply, Economic, 512
Weaver, L., the House and Its Equipment, 251
West Country, the, Somerset, Dorset, etc., 691
Wheatley, O., Ornamental Cement Work, 252
Whistler, J. McNeill, the Life of, 149
Who's Who, 36
Willing's Press Guide, 36
Willis, W. A., Workmen's Compensation, 467
Wiring and Fitting, Ship, 52
Workmen's Compensation: Act, 467; Cases, Butterworth's, 52, 467, 691
Works of Man, the, 690
Year-Book and Directory, City of London, 394
Year's Art, the, 281
Boston National Theatre, 42
Boundaries to Highways, 774
Bournemouth, Local Improvements, 65
Bovis Window, the, 703
Bradford Library, 734
Brasses, Architectural Details in Monumental, 69, 183, 460
Brentford, Museum for, 238
Brick: Arches, Some Ancient, 427; Flooring, Reinforced, 272
Bricklayer, the Modern, 491
Brick-Making Combination, Proposed, 188
Bridge: Across the Thames, Novel Suggestion for a, 767; History of the Ouse, York, 576, 579; Passing of a, 766
Bridge: Blackfriars, 100; Boston, 3; Cambridge, St. John's, 75; Lambeth, 291; London, the Tower, 4; South Wales, 17
Bridges: Glasgow, 512; Kingston and Hampton Court, 15; Southwark and St. Paul's, 567
Bridges, Mr. Waterhouse on, 202, 210
Brighton: Danish Art at, 537; Palace Pier, 493
Bristol: Building, etc., Exhibition, 641; Guardians *v.* Waterworks Company, 498
Britain: Roman Remains at, 321; the Romans in, 461
British: Engineers' Association, 583; Fire Prevention Committee, 36, 274, 693, 733; Home for Incurables, Streatham, 693; Museum, 65, 665; Museum, etc., Lectures, 36; Museum Site, 328
British School at: Athens, 71; Rome, 445, 475
Bruges, Up-to-Date, 351
Builders' Clerks' Benevolent Institution, 216
Builders: Fire Insurance and, 770; Strikes and, 555
Builder, the Ideal, 402
Building Act: Anomalies, 692, 733; London, 613, 644; London, and Government Buildings, 468
Building: Contract, Time Clause in a, 76; Contracts, Trade Disputes and, 609; Exhibition, Bristol, 641; Exhibition, Leipzig, 526, 647; in London (see 'London'); Land Taxes and, 57; News, General, 17, 45, 77, 102, 130, 159, 188, 216, 249, 265, 277, 308, 339, 372, 403, 431, 432, 464, 492, 497, 524, 556, 582, 583, 595, 610, 640, 662, 674, 707, 726, 734, 771; Notes, Australia, 462; Plans and Building Prospects, 158, 491; Works, Projected, 44
Building Trade: Aberdeen, 17; Dundee, 17; London, 102
Building Trade: Hours and Wages in the, 77; Labour in the, 463, 492, 556, 582, 610, 673, 707; Land Taxes and the, 17; State of the, 76; Union, 707, 771; Unrest, 44
Building Trades Exhibition: Bristol, 641; Manchester, 216, 275, 276, 306
Buildings, Old: Demolition of, 573; Records of, 581; Street Widening and, 351
Buildings, Projected, in Provinces, 18, 46, 77, 104, 131, 189, 217, 250, 278, 309, 340, 373, 403, 433, 464, 493, 525, 556, 584, 611, 641, 674, 707, 734, 772
Bungalow at Howth, 701
Burford Priory, 59
Burlington Fine Arts Club, Renaissance Sculpture at, 568
Burmese Teak, 771
Burnham, Daniel Hudson, 636
Business, Methods of, and Architecture, 750
By-Laws, Local, 431
Byzantine Revival, the, 417

CAERWENT, 461
Cambridge: Cranmer Mémorial, 722; Old Bridge of St. John's, 75; Professor of Fine Arts, 201, 238; University, 8, 299, 601, 693; University New Buildings, 482
Campanile, St. Mark's, Venice, 393, 507
Canada: Designs for Monuments, 482; Port Arthur, 15; Western, Opportunities in, 340
Canadian Offices, London, 91
Cape Town, Commerce of, 120
Capital, Federal, Australia, 416, 507, 513, 634
Cardiff: County Hall, 388; Exchange, 372; Fire Station, 8, 179, 544; Football Stands, 483
Carpenters' Hall Lectures, 87
Carpenter, the Mediæval, 491
Castle: Kames, Bute, 7; Tattershall, 594, 693; Windsor, 36
Catalogues, Trade, 24, 52, 80, 194, 223, 256, 437, 468, 528, 647
Cathedral: Rochester, 65; Southwark, 3, 49; Westminster, 444, 461
Cathedral Tower Foundations, Strengthening, 43
Catskill Aqueduct, 768
Cement: Colloidal Nature of, 489; Concrete, Pure, as Lining for Kilns, 489; 'Gun,' the, 402; 'Rendering,' Injury to, 704; Trade, Russian, 647
Cements, Crushing Strengths of, 768
Centenary, an Architect's, 519
Certificate, Architect's, Contract Price and, 523
Champneys, Mr. Basil, and His Work, 751, 762
Channel Ferry, the, 759
Charing Cross: Ancient Remains, 581; Tube Station, 362
Charities, Two Old London, 7
Chelsea, Duke of York's School Buildings, 362
Chesterfield Improvements, 493
Chimney: Reinforced Concrete, Short's-gardens, Drury-lane, 490; Shafts, Straightening Brick, 42
Choppington, a Novel School, 673
Christchurch Priory, 328
Church: Acton Green, 391, 396; Building News, 17, 45, 46, 102, 188, 308, 339, 372, 403, 432, 464, 492, 514, 524, 527, 556, 583, 588, 610, 640, 674, 707, 726, 738, 748, 771; Buildings, Dry Rot in, 143
Church: Astley, Nuneaton, 581; Bloomsbury, 640; Clifton Campville, 305; Edinburgh, 45; Finchley, 556; Honiton, 731; Horsley, West, 581; Jamaica, 643; Kempley, 186; Khartoum, 120; Kirkwall, 726; London (St. Botolph), 207; London (St. Olave's, Mile End Old Town), 432; Nottingham, 485; Romford, 461; St. Marylebone, 393; Sall, Norfolk, 586; Sunderland, 640; Tunstall, 581; Versailles, 372; Wallasey, 17; Wanborough, 461; West Hartlepool, 300, 486; Whitcomb, 731
Church of St. George, Oxford Castle, 69
Church Walls, Immurement of Ashes in, 29
Cities, Building New, 128
City, Federal Capital, Australia, 416, 424, 507, 513, 634
Civic: Amenities, 568; Decorations of Bombay, 667; Design, Monthly Review of, 11, 125, 241, 397, 517, 667; Design, Professor of, Liverpool, 536; Responsibilities, 657
Civil Service Estimates, 362
Clay Excavating Plant, Warnham, 158
Clergy and Architecture, the, 657
Clifton Campville Church, 305
Clumber House, Fire at, 512
Coal: and Gas, 91; Smoke Abatement Exhibition, 328; Strike, Raw Materials and the, 328; Strike, the, 389, 477
Coatings, Metallic, Protective and Decorative, 430
Cockburn Association, the, 477
Cockerell, Professor, 305
Colchester: Corporation *v.* Gepp & King, 408; Priory Ruins, 581
Cold Houses, 115, 269
College: Exeter Diocesan Training, 277; of Art, Edinburgh, 492; Ruskin, Oxford, 188; Training, for the Potteries, 707
Collegiate Architecture, American, 624
Colley Hill, Reigate, 401
Colloidal Nature of Cement, 489
Colonies, Labour in the, 24, 104, 404
Colour Applied to Decoration, 87
Colours, Distinctive, for Pipes in Buildings, 768
Colton, W. R., on Sculpture, 87 114, 143
Columnal Monuments, 15
Commerce of Cape Town, 120

ARTICLES, NOTES, AND REVIEWS (continued) :—
Commercial Quarter of a Town, Growth of the, 125
Competition : Ethics Again, 389 ; Etiquette, 666 ; Publicity, 594
Competitions : Architectural Association Medals, etc., 723 ; Art Gallery and Museum, Belfast, 602 ; Australian Capital, 416, 424, 507, 513, 634 ; Bandstand, St. Leonards-on-Sea, 445, 483, 696 ; Baths, Balham, 723, 760 ; Baths, King's Heath, Birmingham, 666 ; Baths, Wombwell, 696 ; Chapel, Baptist, Bedford, 601 ; Church, Acton Green, 391, 396 ; Church and Schools, Baptist, Nottingham, 38 ; Church, Carrington, 92, 513 ; Church, Colwyn Bay, 723 ; Church, Eastbourne, 666 ; Church, Schools, etc., Mansfield, 601 ; Church, West Hartlepool, 178 ; Club, Liberal, Shanklin, 328 ; College, University, Dublin, 666 ; Cottages, Rhos, 666 ; Cover, A.A. *Journal*, 574 ; Decoration, Mural (see 'Mural') ; Drainage, Auchterderran, 239 ; Dwellings, Workmen's, Banbury, 8, 38 ; Estate, Prestatyn, 396, 397 ; Estate, Reigate Lodge, 666 ; Fire Station, Cardiff, 8, 179, 544 ; Hall, Blackwood, 270 ; Hall, Institute, etc., Astley Bridge, Bolton, 722 ; Hall, Miners', Bolton, 424, 450 ; Hall, Public, Spennymoor, 239 ; Hall (see 'Town Hall') ; Home, Nurses', Bolton, 239 ; Homes, the Whiteley, 634, 666 ; Hospital, Balham, 415, 424 ; Hospital, East Sussex, Hastings, 151, 182, 239, 320 ; Hospital, Middlesex, London, 483 ; Hospital, St. Anne's-on-the-Sea, 544 ; House, Medical Superintendent's, Greenwich Infirmary, 569 ; Housing, Murton, 328 ; Infirmary Extension, Rochdale, 92 ; Legislative Buildings, Winnipeg, 8, 59, 92, 121, 513 ; Library, Stafford, 151, 178 ; Memorial, Holyrood Palace, 8 ; Memorial, Scottish, King Edward, 151, 182 ; Monument, Canada, 482 ; Municipal Buildings, Glasgow, 544 ; Municipal Buildings, Padiham, 513, 544 ; Municipal Buildings, Sofia, 208 ; Mural Decorations, 513, 634, 666, 722, 759 ; Music School, Mill Hill, 544, 573 ; Offices, Council, Portland, 696 ; Offices, Municipal, Bulawayo, 364 ; Offices, Municipal, Goole, 574 ; Offices, Public, Harrow, 396 ; Offices, Public, Lymington, 759 ; Offices, Union, Salford, 38 ; Palace, Government, Montevideo, 634 ; Pavilion, Bristol, 66 ; Police and Fire Station, Swansea, 574 ; Polytechnic, North-Western, 239 ; Port of London Offices, 178, 208, 424, 445, 759 ; Regent's Quadrant, 444, 453, 483, 512, 537, 545, 573, 595, 657, 723 ; Rhos Chair Eisteddfod, 208 ; Sanatoria, Welsh National Memorial, 634, 666 ; Saxon Snell Prize, 38 ; School, Blue-Coat, Birmingham, 178, 574 ; School, Cheshire County Council, Port Sunlight, 544 ; School, Coseley, 121 ; School, Greenock, 38, 601 ; School, Knavesmire, 574 ; School, Port Sunlight, 634 ; School, Stebonheath, Llanelly, 634 ; School, Warrington, 270, 328 ; School, York, 208, 483, 542 ; Sewage Disposal, Benfieldside, 634 ; Sewage Disposal, Colwall, 760 ; Soane Medallion, R.I.B.A., 723 ; Stands, Football, Cardiff, 483 ; Stands, Grand, to Racecourse, Lombardy, 8 ; Statue, Cuba, 121 ; Street Name-Plates, 696 ; Town Hall, Newcastle, 239, 544 ; Town Hall, Warrington, 178 ; Town Planning, 121 ; Town Planning, Hale, 38, 513, 601 ; Town Planning, Halifax, 38, 92, 126, 241 ; Town Planning, Huddersfield, 270 ; Town Planning, Liverpool School of, 722 ; Village, Model Colliery, Glamorgan, 601 ; Wards, Stockport, 760
Competitions : Assessors and, 594 ; Hospital, 259, 279 ; the National, 143
Competitive System in America, the, 231
Concrete : and Steel, Adhesion between, 490 ; Cleaning Moulds for, 156 ; Damage to, by Acids, 704 ; Houses, Poured, 765 ; Injured by Freezing, Repairing, 42 ; Mixing, 638, 672, 706, 732, 770 ; Pure Cement, as Lining for Kilns, 489 ; Roadways, Mediæval, 75 ; Strength, of, 100
Concrete, Reinforced : Chimney at Short's-gardens, Drury-lane, 490 ; in Architecture, 319 ; in Great Britain, 97, 211, 331, 375, 428, 606, 608
Considère System Standard Specification, 768
Construction, Monthly Review of, 39, 153, 271, 427, 549, 697
Consular Buildings, Diplomatic and, 544
Consulting Engineers, Association of, 7
Contemporary Architects, Life and Work of : Basil Champneys, 751 ; Cass Gilbert, 30 ; Arnold Mitchell, 349, 365 ; Friedrich Ohmann, 625, 634
Contract : Building, Time Clause in a, 76 ; Price, Recovery of, without Architect's Certificate, 523
Contracts : Building, Trade Disputes and, 609 ; Government, 102, 371, 492, 610, 771
Co-partnership and Labour Unrest, 732
Copper, Ancient Art of Tempering, 461
Corbridge Excavations, 461
Corfield, W., on : Imperial London, 399 ; the Old General Post Office, 599
Corfu, Archæological Discovery, 581
Corporate Sense, Architects and the, 657
Corporations, Powers of, 407
Correction, 92
Country Planning, 443
County Hall, the New, 299, 321
Craftsman, the, and His Work, 750
Craftsmen, Indian Native, 477
Cram, R. A., at the R.I.B.A., 593
Crane, Commendatore Walter, 393
Cripples' Guild, Duchess of Sutherland's, 321
Crosby Hall, Mural Decoration Exhibition, 151, 299, 513, 634, 666, 689, 722, 759
Croxden Abbey, 545, 581
Crushing Strengths of Cement, 768
Crystal Palace : and the National Folk Museum, 115 ; Engineering School, 3, 482
Custom House, Liverpool, 623

DALLIMORE *v.* Williams & Jesson, 526
Danish Art at Brighton, 537
Darlington, School, 45
Davanzati, Palazzo, 290, 300
Dazzi, Arturo, the Monumental Art of, 727
Decoration : Colour Applied to, 87 ; Mural, 151, 299, 513, 537, 634, 666, 689, 722, 759 ; of Houses of Parliament, 238 ; of Olympia, 759 ; Scheme of, 279
Decorations, Civic, of Bombay, 667
Decorator, Painter and, 3
Delhi, New Capital, 207, 292, 693
Dellar Brothers *v.* Drury, 468
Demolition of : Old Buildings, 573 ; Rooms of Birmingham Royal Society of Artists, 580
Denman House, Piccadilly, 565, 623, 687
'Dentile' System Flooring Tests, 490
Design, Teaching of, 445
Dinner, Trade, 77
Diplomatic and Consular Buildings, 544
Discounts, 44
Discoveries at a Dorset Church, 731
Disputes, Trade, and Colonial, etc., Legislation, 431
Dock : Immingham, 763 ; Royal Albert, Extension of the, 722 ; the New London, 274
Donibristle Mansion, near Aberdour, 186
Dorset Church, Discoveries at a, 731
Dowlais, Housing, 351
Drainage : By-laws, London, 282, 644 ; of Egypt, 337
Drawings, R.I.B.A. Students' 85, 122, 152, 182, 239, 330, 485, 476
Driver, D. G., the late, 4
Drought, Failure of Buildings caused by, 16
Dry Rot in : Church Buildings, 143 ; Timber, 42
Dublin, University College, 666
Dudley, a Museum for, 65
Dundee : Building Trade, 17 ; College Garden, a, 65
Durbar, Bombay and the, 363
Durham, the Galilee Chapel, 268
Durley, R. J., on Heating and Power Plant, 292
Dyer, J. M., on Competitions, 231

EARTHQUAKE-PROOF Dwellings, Messina, 43
Eastbourne, a Park for, 401
East End Dwellings Company, 268
Ecclesiastical Metalwork, 321
Edinburgh : Church, 45, 674 ; College of Art, 492 ; Flodden Wall, 543 ; Holyrood Palace, 8 ; Improvement Projects, 246 ; London and, 171 ; Royal Scottish Museum, 482 ; Scottish King Edward Memorial, 151
Edmonton, 461
Education and Style in Architecture, 747
Egerton *v.* Moore, 462
Egypt : Drainage of, 337 ; Exploration Fund, 74, 186 ; Progress in, 768
Egyptian : and Syrian Exploration, 730 ; Excavations, 507
Egyptology, Oxford University and, 693
Elastic Limit, Yield Point of, 490
Elections, Institute of Architects', 655, 686
Electrical Wood Seasoning, 490
Electricity in the Stoneyard, 639
Electric : Lighting, Tungsten and, 42 ; Railway Bills in Parliament, 401
Electrolysis in Pipes, 767
Elizabeth, London in the Reign of, 394
Engineering : Features, Liver Building, Liverpool, 274 ; Monthly Review of, 97, 211, 331, 487, 605, 763
Engineers : British Association of, 583 ; Consulting, Association of, 7
Engraving, Wood, 87
Estate : Deceased Contractor's, 524 ; Development, Early Victorian, 127
Estates, the Severne, 708
Eton : Cloisters, 246 ; Memorial, 693
Euston-road Building Line, 613
Examinations : Institution of Civil Engineers', 326 ; Science, 252
Excavations : Corbridge, 461 ; Egyptian, 507 ; German, at Miletus, 321 ; Pompeii, 451 ; Sudan, 75
Exeter : Diocesan Training College, 277 ; the Rougemont Estate, 151
Exhibitions : American Collegiate Architecture, 624 ; Architecture at the Royal Academy, 505, 536, 566, 573 ; Building, Bristol, 641 ; Building, Leipzig, 526, 647 ; Buildings, Temporary, 718 ; Danish Art at Brighton, 537 ; Fine Arts, Rome, 65 ; Fine Art, Venice, 511 ; Gas, Amsterdam, 362 ; Ghent, 451 ; Glass, Old, Panels, 362 ; Goupil Gallery, 688 ; Hanmersmith Picture, 543 ; Housing, Paris, 543 ; Ideal Home, 451, 494 ; International Society, the, 477, 717 ; Israels, at the French Gallery, 601 ; Latin-British Pictures, 451, 688 ; Legros, Alphonse, Works of, 717 ; Léon Bakst, Works of, 717 ; Manchester Building Trades, 216, 275, 276, 306 ; Mural Painting, 299, 513, 634, 666, 689, 722, 759 ; New English Art Club, 624 ; Paintings at the Royal Academy, 594 ; Panama, San Francisco, 543 ; Pastel Society, 688 ; Pencil Society, the, 352 ; Royal Academy, 505, 536, 566, 576 ; Royal Scottish Academy, 568 ; Royal Society of Painters in Water-Colours, 507 ; Royal Society of Portrait Painters, 60 ; Sanitary Engineering, Milan, 394 ; Sculpture at the Royal Academy, 622 ; Sculpture, Renaissance, at Burlington Fine Arts Club, 568 ; 'Shakespeare's England,' 601 ; Sketch Society, the, 4 ; Smoke Abatement, 299, 328, 357, 405 ; Rimington, A. Wallace, Pictures, 352 ; Royal Society of British Artists, 389 ; Society of Twelve, 201 ; Walcot, Mr., Pictures, 352
Exploration, Egyptian and Syrian, 730

FEES : for Specification, 770 ; Surveyors', 407
Ferry, the Channel, 759
Fifty Years Ago, 9, 38, 68, 96, 123, 152, 182, 208, 240, 270, 299, 330, 364, 396, 425, 453, 486, 516, 548, 576, 603, 634, 666, 696, 723, 762
Finance Act and Site Value, 498
Fire : at Clumber House, 512 ; Derby, 17 ; Dié Cathedral, France, 624 ; Forest, Prevention, 351 ; Inquests, London, 207 ; Insurance, Builders and, 770 ; Prevention Committee, British, 36, 274, 693, 733 ; Protection, Hampton Court Palace, 87, 106 ; Protection in Paris, 297 ; Service Council, International, 604 ; Station, Hendon, 132 ; Theatre, Worcester, 208
Flats for Working Men, 696
Fleet-street Alterations, 543
Flodden Wall, Edinburgh, 543
Flooring : Brick, Reinforced, 272 ; Tests of 'Dentile' System, 490
Floor Slab Reinforcement, Spacing Gauges for, 156
Florentine : Academy of Arts, 151 ; Palace, a, 290, 300
Folk Museum, National, Crystal Palace and the, 115
Foreign and Colonial, 24, 49, 82, 104, 131, 160, 208, 226, 256, 283, 314, 340, 378, 394, 404, 424, 471, 493, 528, 614, 647, 674, 680, 708, 773
Forest Fire Prevention, 351
Forethought, Lack of, Liverpool, 623
Forfeiture, Relief from, 643
Fort, Gwalior, 457, 459
Foundation Loads, 488
Foundations, Strengthening Cathedral Tower, 43
Foy, Morgan, & Co.'s Wood Report, 45, 102
France : Architectural Societies of, 27, 200, 748 ; Architectural Tour in, 632 ; Dié Cathedral, 624
Freedom of Labour and in Life, 750
Freezing, Repairing Concrete Injured by, 42
French : Memorials, Victoria and Edward, 451 ; Ministry of Fine Arts, 321 ; School of Archæology, Athens, 362
Frith *v.* Owners of the *Louisianian*, 462
Furnaces, Iron, Ancient Scandinavian, 75

GANTRY at H.M. Stationery Office Building, 767
Garden Cities and Town Planning Association, 128
Garden : City, Boys', Woodford Bridge, 671 ; City, Montreal, 245 ; College, a Dundee, 65 ; Village, Knebworth, 482
Gardens : Association, Metropolitan Public, 543 ; Beautiful, 15
Gas : Coal and, 91 ; Exhibition, Amsterdam, 362 ; Power and Steam, 432
Gatun, Lake, Ancient Villages in, 352
General Post Office Arts Club, 451
Geological Survey, 722
Geology of Tavistock, 299
German Excavations at Miletus, 321
Ghent Exhibition, 451
Gilbert, Mr. Cass, and His Work, 30, 38
'Girtin' Discovery, a, 759
Glamorgan, Model Colliery Village, 601
Glasgow : Bridges, 512 ; Building Scheme, 216 ; Municipal Buildings, 425, 544 ; Schools, 492
Godwin *v.* Lords Commissioners of Admiralty, 282
Gold Medallist, the R.I.B.A., 143
Goldsmiths' College, University of London, 477
Good Friday Week, 362
Government : Buildings and the Building Act, 468 ; Buildings, New, 362 ; Contracts, 102, 371, 492, 610, 771 ; Offices, Whitehall, 451
Great Britain, Reinforced Concrete in, 97, 211, 331, 375, 428, 606
Great Western Roadway, the, 401
Greenock, School, 601
Greenwich Infirmary, Medical Superintendent's House, 569
Griffith *v.* Clay, 221, 614
Guildford : a Sports Ground for, 401 ; Old Houses, 15, 29, 36, 91
Guildhall, New, Middlesex, 583
Gwalior Fort, 457, 459

HALE, Town Planning, 38, 513, 601
Halifax Town Planning, 38, 92, 126, 241
Hall : County, Cardiff, 388 ; London County Council, 299, 321, 567 ; Miners', Bolton, 450
Hammersmith, Exhibition at, 543
Hampshire Association of Architects, 263
Hampton Court House, 207
Hampton Court Palace, 87, 106
Hargreave *v.* Haughhead Coal Company, 481
Harrow : Aerodrome, 394 ; Public Offices, 396
Haslemere, Old Houses in, 394
Hastings : Bandstand, etc., 445, 488, 696 ; East Sussex Hospital, 151, 182, 239, 320
Hatch, W. T., on Lightning Conductors, 613
Hatfield, Antiquarian Discovery, 91
Heating and Power Plant, Combined, 292
Heat, Transmission of, by Linoleum, 42
Hendon, Street Works, 363
Hertfordshire Firm's Record, a, 773
Higgins *v.* Poulson, 481
Highland Town, an Old, 50
Highways : Boundaries to, 774 ; Extraordinary Traffic on, 408
Historical : Review, Monthly, 69, 183, 301, 457, 577, 727 ; Structures, Preservation of, 731
Historic : Buildings, Protection of, 305 ; Places of Twickenham, 581
Hittite Remains, 75
Holborn, High, Widening of, 401
Holyrood Palace, 8
Home : Arts and Industries, 573 ; Ideal, Exhibition, 451, 494
Honiton Church, 731
Honours : Birthday, 722 ; ; List of the World, 59 ; New Year's, 7
Horniman Museum Extension, 188
Horsley, West, Church, 581
Hospital : an 'Isolation,' 231 ; Competitions, 259, 279, 320 ; Criticism,

ICLES, NOTES, AND REVIEWS (continued):—
76, 537; East Sussex, Hastings, 51, 182, 239, 320; Extension, addington, 39; Middlesex, London, 33; Wimbledon, 493
el: Adelphi, Liverpool, 548, 549, 15, 736; Cecil, Strand, 632
ifs and Wages in the Building rade, 77
se of Commons, Lighting of the, 38
se, Old, Soho, 461
se Planning, Over-Elaboration of, 42
ses and Streets, New, London, 5; Cold, 115, 269; Historical, ondon, 543; How Many to the ere? 445; Memorable London, 9; Old Guildford, 15, 29, 36, 91; ld, in Haslemere, 394; Old, Lin-oln's Inn-fields, 417; Poured oncrete, 765; Warming, 115
ses of Parliament: Decoration of ie, 238; Oak Panelling, 512
sing: Dowlais, 351; Exhibition, arts, 543; Problem, the, 248; chemes, Wider Scope for, 759; eovil, 128
ston, A. C., on Softening Water, 04
vth, Bungalow at, 701
ldersfield Town Planning, 270
l Town Hall, 707
man *v.* Rose, 643
Rib System Bungalow, Howth, 701
EAL: Builder, the, 402; Home Exhibition, 451, 494
gal Action by Societies, 344
minating Engineering, Lectures on, 6
mingham Dock, 763
perial London, 10, 11, 399
provements: Local, Bournemouth, 5; Marble Arch, 201
a Ruins in Peru, 75
rement Duty, 640
urables, British Home for, Streat-am, 693
ian: Archæological Department, 59; Native Craftsmen, 477
ia: New Capital of, 36, 91, 207, 92, 693; Royal Visit to, 666, 667
ianopolis, Collapse of a Building in, 2
ustrial Unrest, 265
uests, London Fire, 207
titute, Royal, of British Architects: ssociates and the, 230, 262, 291; At Home,' 87; Cram, Mr. R. A., at he, 593, 601; Drawings, 476, 482; lections, 686; Elections and the Compromise, 655; Form of Con-ract, 44; Gold Medallist, the, 143; leeting-Room, the, 142; Policy of he, 1, 28; Portrait, Mr. Stokes's, 50; President's Address to Students, 171; Prize Designs, 85, 15, 122, 152, 182, 239, 330, 485; Prizes and Studentships, 296; Publication of Speeches in the Journal, 262; Pugin Studentship of 880, 171; Registration and, 660, 50; Signs of Unrest amongst Students, 115; Soane Medallion, 23; Society of Architects and the, 07; Studentships, 113; Testi-onies of Study, 511; Town Plan-ing Competitions, 121
surance Act, National, Advisory Council, 120
surance Act, the, 199, 638, 705, 734, 69, 771
surance Commissioners, Offices for he, 65
ternational Society, the, 477
land: Ancient Monuments in, 460; Architects and the Labourers' Acts, 64; Royal Society of Antiquaries of, 573
aels at the French Gallery, 601
ly, Art Works in, 611
RVIS, J. J., on the Building Trade, 76
wish Memorial to King Edward, 362
iner, the Mediæval, 582
dge, a Scottish, 519
AMES CASTLE, Bute, 7
empley Church, Gloucestershire, 186
lns, Pure Cement Concrete as Lining for, 489
ng Edward Memorial (see 'Memorial')
ngston Vale, Saving of, 246
ngsway Site, South American Project for, 91
rkwall Cathedral, 726
nebworth Garden Village, 482
ynoch *v.* Rowlands, 585
ABORATORIES, Wellcome Tropical Research, 400
boratory, National Physical, 405
Labour: Freedom of, and in Life, 750; in the Building Trade, 463, 492, 556, 582, 610, 673, 707; in the Colonies, 24, 104, 404; Questions, etc., 199; Tyranny, Campaign against, 248; Unrest, Co-partnership and, 732
Lady Architect Again, the, 262
Lake, Gatun, Ancient Villages in, 352
Lambeth Bridge, 291
Lanchester, Mr. H. V., 632
Land: Boundaries to, 585; Duties, 582; Taxes and Building, 57; Taxes and the Building Trade, 17; Valuation, 402, 585, 771
Landlord and Tenant, 585, 643, 644
Latin-British Exhibition, Shepherd's Bush, 451
Lectures: British Museum, etc., 36; Carpenters' Hall, 87; Illuminating Engineering, 36; on Concrete Engineering, 543; Royal Academy, 87, 114, 143, 171
Legal: Column, 21, 52, 80, 221, 282, 344, 377, 407, 435, 468, 498, 526, 558, 585, 613, 643, 774; Points about Tenders, 16
Legislation, Trade Disputes and, 431
Legros, Professor, Works of the late, 7
Leipzig, Building Exhibition, 526, 647
Lethaby, W. R., on Church of St. George, Oxford Castle, 69
Library: Old Chapter, at Windsor, 305, 362; Stafford, 178, 209
Lighting by: Acetylene Gas, 605; Air-Gas, 487
Lighting: of the House of Commons, 688; Tungsten and Electric, 42
Lightning Conductors, 613
Light: Obstruction to, 221; the right to, 614
Lincoln College, Oxford, 65
Linderhof, Schloss, 125
Linoleum, Transmission of Heat by, 42
Liverpool: Adelphi Hotel, 403, 548, 549, 635, 736; Custom House, 623; Mayor of, *v.* Chorley Union, 21; Professor of Civic Design, 536; Repertory Theatre, 555; Royal Liver Building, Engineering Features of, 274; School of Town Planning, 722; Street Tunnel, 214
Loans, Repayment, for Wood Block Paving, 218
Local By-Laws, 431
London: a Chair of Town Planning, 671; Architect's Procedure, 20; Building Act, Government Buildings and, 468; Building Act, the, 613, 644; Building in, 17, 77, 102, 188, 193, 216, 249, 277, 308, 339, 372, 432, 493, 511, 524, 610, 640, 734; Canadian Offices, 91; Charities, Two Old, 7; Corporate Life of, 171; County Council and Architect's Procedure, 20; County Council and Science and Technology, 121; County Hall (see 'Hall'); Dock, the New, 274; Drainage By-Laws, 282, 644; East, South Africa, 283; Edinburgh and, 171; Fire Inquests, 207; Historic Houses, 543; Houses, Memorable, 29; Imperial, 10, 11, 399; Improvement of, 292; Institution, the, 269, 601; International Road Congress, 522; in the Reign of Elizabeth, 394; King Edward Memorial (see 'Memorial'); Market, Conversion of a, 394; Museum, the, 7, 321, 328; New Houses and Streets, 15; Old, a Photographical Record of, 74; Old, Relics of, 75; Opera House, 270, 271, 304, 333, 374; Port of, Offices, 178, 208, 424, 445, 581; Schools, 65; Society's Blind School, St. John's Wood, 632; Society, the, 151, 171, 191, 477, 573, 687; Society, the, and Public Opinion, 623; Statues, Control of, 115; Survey of Memorials of Greater, 657; Telephone Exchanges, 362; University of, 114, 327; University, Site for, 201, 207, 416, 567, 665; Water Supplies, 759
Lyme Regis Street Widening, 351, 693

MACDONALD *v.* Wilson's and Clyde Coal Company, 644
Magazines and Reviews, 8, 66, 181, 329, 486, 613, 761
Mahogany and Hardwood, 102
Malta as a Winter Resort, 643
Manchester: Building Trades Exhibition, 216, 275, 276, 306; Library and Art Gallery, 11; Old Town Hall, 229, 623, 715, 716; School of Architecture, 632; Schools, Building and Cost of, 351; University, 511
Manitoba Parliament Buildings Competition, 59, 92
Mansfield, Church, Schools, etc., 601
Mansion: Donibristle, 186; House Settled Estate, Rebuilding, 526
Marble Arch Improvement, 201
Marconi House, Strand, 595, 640
Market: Conversion of a West London, 394; Spitalfields, 601
Martin *v.* Mayor, etc., of Manchester, 462
Marylebone: Borough Council *v.* White, 644; Municipal Buildings, 722
Materials, Raw, and the Coal Strike, 328
Mechanics, Structural, 451
Mediæval: Carpenter, the, 491; Joiner, 582; Plumber, 555
Medicine, Royal Society of, 511
Melford, Competition Ethics at, 389
Memorial: Eton, 693; Largs, 87, 637; the Boer War, 687, 693
Memorial, King Edward: Holyrood, Edinburgh, 8, 151; Jewish, 362; London, 296, 350, 362, 388; Shadwell, 7; Welsh National, 634, 666; Windsor, 512
Memorials: French, Victoria and Edward, 451; of Greater London, Survey of, 657
Memorial to: Alexander Anderson, 759; Jane Austen, Bath, 573; Bacon, Gray's Inn, 573; Cranmer, Cambridge, 722; Pilgrim Fathers, 543
Messina, Earthquake-Proof Dwellings at, 43
Metallic Coatings, Protective and Decorative, 430
Metals, Values of, for Water Supply Pipes, 704
Metalwork, Ecclesiastical, 321
Metric Equivalent Tables, 180
Metropolitan Railway, New Offices for, 273
Middlesbrough: Carnegie Library, 556; Lloyd's Bank, 662
Middlesex, Ancient Monuments in, 660
Milan, Sanitary Engineering Exhibition, 394
Miletus, German Excavations at, 321
Mill Hill Music School, 544, 573
Miners' Baths, etc., 43, 92
Ministry of Fine Arts, French, 321
Minturn *v.* Barry, 644
Mitchell, Mr. Arnold, the Works of, 364, 365, 425
Montevideo, Government Palace, 634
Montreal, Garden City, 245
Monuments, Ancient: Bill, 328; Ireland, 460; Middlessx, 660; Welsh, 461
Monuments: Columnal, 15; in our Parks, 388; Preservation of, 292; Protection of, 506, 537
Monument: Swiss National, 36; Victor Emmanuel, Rome, 4, 10, 727
Morgan, Mr. Pierpont, Art Treasures of, 114, 151, 268
Munby, Mr., and the R.I.B.A. Meeting-Room, 142
Municipal Buildings: Glasgow, 425, 544; Marylebone, 722; Paisley, 493
Municipal Trading, 407
Mural: Decoration, 537; Painting Exhibition, the, 151, 299, 513, 634, 666, 689, 722, 759
Museum: Brentford, 238; British, Site, 328; Dudley, 65; National Folk, Crystal Palace and, 115; Proposed, Southampton, 74; Royal Scottish, 482, 511; the London, 7, 321, 328; Victoria and Albert, 201
Museums, Art, and Picture-Galleries, 299, 362

NAME-PLATES, Street, 537, 687
Nash's House, Stratford-on-Avon, 511
National Competitions, the, 143
National Gallery, Scotland, 771
Nationalisation of Railways, 595
Nautical School, the National, 482
Newcastle: New City Hall, 239, 544; Town Planning, 246
New English Art Club, 624
New Year Honours, 7
New York: Equitable Life Insurance Building, 36; Fall of Minaret 43; Skyscrapers in, 665; Subways in, 632
New Zealand Parliament Buildings, 86, 232
Nottingham Slum Areas, 401
Nuneaton, Astley Church, 581
Nutt, A. Y., Presentation to, 722

OBITUARY: Albury, F. W., 378; Allen, E. J., Milner, 711; Alma-Tadema, L., 749, 778; Badock, J. B., 561; Barbour, J., 561; Bare, H. B., 108; Bell, J., 18; Bonser, F., 617; Bradshaw, J. J., 528; Brereton, R. M., 49; Burnham, D. H., 677, 686; Clarke, J. W., 778; Felgate, E. T., 647; Festing, E. R. 617; Fox, C. B., 499; Glover, W., 136; Graham, Alexander, 194; Harrison, W., 677; Harston, A., 617; Hogan, J., 499; Hoole, E., 499; Ingle, F., 742; Johnson, I. C., 18; Kerr, P., 647; Macbeth, R. J., 528; Morean, M., 194; Morham, R., 711; Pritchett, G. E., 283, 363; Rickman, T. M., 194, 222; Seitz, O., 528; Smirke, S., 711; Smith, C., 194; Taylor, John, 528, 561; Vigers, R., 778; Wallis, W. E., 778; Wells, C. R., 712; Whaite, H. C., 712; Williams, H. J., 742
Office of Works: Architectural Assistants and, 170, 512, 543, 600; Public Buildings and, 644
Offices: Australian Commonwealth, Strand, London, 46, 151; Canadian, London, 91; for Metropolitan Railway, 273; for the Insurance Commissioners, 65; Government, Whitehall, 451; Marconi, Strand, 595, 640
Offices: Port of London, 178, 208, 424, 445, 594, 759; Site of New, Port of London, 581
Ohmann, Friedrich, the Work of, 625
Oldham, Town Hall, 556
Olympia, Decoration of, 759
Olympic Games, Stockholm, 19
Open Spaces and Recreation Grounds, 128, 394
Opera House: the London, 270, 271, 304, 333, 374; Wellington, 340
Orleans House, the Fate of, 128
Ottawa, Future Development of, 517
Ouse Bridge, York, History of the, 576, 579
Oxford: Castle, Church of St. George, 69; Lincoln College, 65; Millenary Celebration, 74; Reynolds' Window, New College, 3; Ruskin College, 188; University, 65; University and Egyptology, 693
Ozonair System of Air Purification, 608

PADDINGTON, Hospital Extension, 39
Painter and Decorator, 3
Paintings at the Royal Academy, 594
Paints, Toxicity of, 768
Paisley: Abbey, 91, 186; Municipal Buildings, 493
Palace, a Florentine, 290
Panama Exhibition, San Francisco, 543
Papal Pleasure House, a, 385, 396
Paris: Central, New Buildings in, 153; Fire Protection in, 297; Housing Exhibition, 543; Salon, the, 683
Park: a, for Eastbourne, 401; Green, London, 21; Regent's, One Hundred Years Ago, 522
Parks, Monuments in our, 388
Parliament Buildings: New Zealand, 86, 232; Winnipeg, 8, 59, 92, 121, 513
Parliament: Houses, Oak Panelling, 512; Town Planning Act and, 544
Party Walls, 644
Patent Law, 378
Patents, 25, 55, 80, 108, 136, 166, 196, 223, 256, 285, 314, 346, 381, 410, 440, 468, 499, 529, 561, 589, 617, 647, 677, 708, 735, 779
Patriotism: and Architecture, 415; Local, Architecture and, 388
Peabody Buildings, 268
Peel *v.* Lawrence & Sons, 377
Penalty Clause, the, 44
Personal Qualifications, Registration and, 566
Perspectives, R.'s Method of, 151
Perth, Infirmary, 102
Peru, Inca Ruins in, 75
Petersfield Sewerage, 299
Photographical Record of Old London, 74
Photographic Survey of Surrey, 299, 665
Physical Laboratory, the National, 405
Piccadilly: Blunder, a, 565, 623, 687; Rebuilding of, 759
Pickets and Trade Disputes, 373, 403
Picture: Exhibitions (see 'Exhibitions'); Galleries, Art Museums and, 299, 362; Gallery for Salisbury, 179
Pilgrim Fathers, Memorial to the, 543
Pipes: Electrolysis in, 767; in Buildings, Distinctive Colours for, 768; Vitrified Ware, Standardisation of, 156; Water Supply, for Houses, Values of Metals for, 704
Planning, Country, 443
Plans: Over-Elaboration of, 142; Submitting of, 238
Plant, Heating and Power, 292
Plumber, the Mediæval, 555
Polytechnic, Regent's-street, 98
Pompeii, 451
Poole, School, 77, 159
Popple *v.* Frodingham Iron Company, 482
Port Arthur, Canada, 15
Portland, Council Offices, 696
Port of: London Offices, 178, 208, 424, 445, 581, 594, 759; Valparaiso, 608

ARTICLES, NOTES, AND REVIEWS (continued):—
Portrait: Mr. Stokes's, 750; Painters, Royal Society of, 60
Portsmouth Town Planning, 245
Portugal, Architecture of, 301, 457, 577, 729
Post Office: Buildings, 632; General, the Old, 599
Poulton *v.* Kelsall, 462
Premises, Messrs. Whiteley's, 697, 719
Preservation of Historical Structures, 731
Press, the Lay, and Architecture, 29
Prestatyn Estate, North Wales, 397
Priory: Burford, 59; Christchurch, 328; Ruins, Colchester, 581
Pritchett, G. E., the Collection of, 363
Professional Announcements, 7, 65, 91, 120, 151, 179, 238, 268, 299, 328, 362, 393, 511, 632, 693, 722
Property Sales, 258, 512, 633
Prudential Assurance Company, Ltd., 314
Public: Buildings, Office of Works and, 544; Offices Sites Bill, 323; Opinion, the London Society and, 623; Works and Buildings, 262
Publishers, a New Firm of, 632
Puget, Pierre, 581
Pugin Studentship of 1880, 171
Purchase, Compulsory, 344

QUALIFICATIONS, Personal, Registration and, 566

RAILLESS Tramcars, 766
Railway: and Canal Traffic, 432; Arica to La Paz, 490; Bills, Electric, in Parliament, 401; Nationalisation, 60, 595
Railways and Socialism, 59
Rating Gathering Grounds for Water, 21
Ravenhead Scholarship, 544
Reading Co-operative Society *v.* Palmer, 407
Reconstruction, Removal and, 621
Recreation Grounds, Open Spaces and, 128, 394
Regent's: Canal Company *v.* London County Council, 344; Park a Hundred Years Ago, 522; Quadrant, 444, 453, 483, 512, 537, 573, 595, 657, 723
Regent's-street Polytechnic, 98
Registration and Personal Qualifications, 566
Registration of: Architects, 422, 660, 750; Title, 706
Reigate, Colley Hill, 401
Removal and Reconstruction, 621
Repair? What is, 435
Reredos, Christchurch Cathedral, St. Louis, 91
Residence, Proposed, for University Men, 341
Rex *v.*: Templer, 558; Tribunal of Appeal, 613
Reynolds' Window, New College, Oxford, 3
Richmond-hill View, 246, 328
Rinks, Premier, *v.* Amalgamated Cinematograph Theatres, 644
'Rising Early in the Morning,' 687
Risks, Tall Building, 43
Road: a New Arterial, 128; Wolverhampton to Birmingham, 522
Road Board: and Road Crusts, 60; Specifications, 394; the, 420
Road Congress: International, 722; the, London, 522; Third International, 127
Roadways, Mediæval Concrete, 75
Roadway, the Great Western, 401
Rochdale Infirmary Extension, 92, 308
Rochester Cathedral, 65
Rodin's 'Burghers of Calais,' 632
Roman: Camp, Ambleside, 758; Remains in Britain, 321; Studies, Society for the Promotion of, 186
Romano-British Sculptures, 665
Romans in Britain, 451
Rome: 'Altare della Patria' of Victor Emmanuel Monument, 4, 10, 727; British School at, 445, 475; International Archæological Congress, 151, 393; International Exhibition of Fine Arts, 65, 393; Old Views of, 622, 631; the Villa Pia, 385, 396
Romford, Church of Edward the Confessor, 461
Rotherhithe, Antiquities in, 186
Royal Academy: Architecture at the, 505, 536, 566, 576; Election, 601; Exhibition, the, 179, 505, 536, 566, 576; Lectures on Architecture, 171; Lectures on Sculpture, 87, 114, 143; Paintings at the, 594; Sculpture at the, 622
Royal Society of: Artists, Birmingham, 580; Painters in Water-Colours, 507
R.'s Method of Perspectives, 151
Russell *v.* Amalgamated Society of Carpenters, 407
Russian Cement Trade, 647

SACHS, E. O., Mr., Honour for, 722
St. Botolph's, Suggested Sale of, 207
St. Paul's: Bridge, 567; Clerk of the Works, 208; Wellington Monument in, 114
Sale: of Builder's Stock, 278; of Estates, 708; Wertheimer Art, 601
Sales, Property, 512, 268, 633
Salisbury, Picture-Gallery for, 179
Salon, the Paris, 683
San Francisco, Panama Exhibition, 543
Sanitary: Building Construction, 207; Engineering Exhibition, Milan, 394
Sanitation, a Pioneer in, 570
Saxon Snell Prize, 38
Scaffolding, Safety, for Steel-Frame Buildings, 338
Scandinavian Iron Furnaces, Ancient, 75
Schloss Linderhof, 125
Scholarship, Ravenhead, 544
Scholarships in Science and Technology, 121
School: Blind, London Society's, 632; Building News, 17, 45, 77, 102, 159, 403, 464, 492, 524, 556, 610, 673, 674, 707; Buildings, Duke of York's, Chelsea, 362; Crystal Palace Engineering, 482; Elementary, York, 542; National Nautical, 482
School of Architecture: Manchester, 632; University College, 424
Schools: Architectural Association, 63; London, 65; Manchester, Building and Cost of, 351
Science: and Technology, Scholarships in, 121; Examinations for 1911, 252
Scottish: Academy, Royal, Architecture at the, 568; Judge, a, and an Architect's Centenary, 519; Memorial to King Edward, 151; Royal Museum Building, 511
Screws, Small, Standard Heads for, 274
Scruttons *v.* Lewis, 585
Sculpture: at the Royal Academy, 622; Renaissance, at Burlington Fine Arts Club, 568; Royal Academy Lectures on, 87, 114, 143
Sculptures, Romano-British, 665
Sergeant's Inn, Old, 424
Sewage News, 121, 424, 640, 641
'Shakespeare's England,' Earl's Court, 601
Sheffield University Vacation Courses, 232
Shelters, Street, and Accidents, 416
Short's-gardens, Drury-lane, Reinforced Concrete Chimney at, 490
Site: British Museum, 328; London University, 416, 567; Port of London New Offices, 581; Value, the Finance Act and, 498
Sites Bill, Public Offices, 328
Skeleton-Frame Buildings, 141
Sketch Society, the, 4
Skyscrapers in New York, 665
Slicer, H., on Ancient Brick Arches, 427
Slum Areas, Nottingham, 401
Smith's Dock Company *v.* Readhead, 526
Smoke Abatement Exhibition, 299, 328, 357, 405
Socialism, Railways and, 59
Society of: Architects and the R.I.B.A., 507; Twelve, 201
Soho, an Old House in, 461
Sootfall, 30
South Africa: Building Trade in, 674; University of, 717; War Memorial, 687
Southampton: Bargate, 394; Church, 524; Proposed Museum, 74; Tudor House, 731
Southport, Town Planning, 128
Southwark: and St. Paul's Bridges, 56; Cathedral, Approach to, 3, 49, 265
Specialists, Architects, Clients, and, 169
Specification: Fees for, 770; Standard, Considère System, 768
Specifications, Road Board, 394
Speeches, Publication of, in R.I.B.A. *Journal*, 262
Spitalfields Market, 601
Sports Ground, a, Guildford, 401
Sprayed Walls, 704
Sprinklers, Value of Automatic, 767
Stafford Public Library, 151, 178, 209
Standardisation: Necessity for, 274; of Vitrified Ware Pipes, 156
Stationery Office Building, Gantry at, 767
Statue: Cuba, 121; of Bacon, Gray's Inn, 362; William III., Petersfield, 91
Statues, London, the Control of, 115
Steel: Concrete and, Adhesion between, 490; Frame Buildings, Safety Scaffolding for, 338
Stevens, Alfred, 88, 114
Stockholm, Olympic Games, 19
Stockport Union New Wards, 760
Stokes, Mr., Portrait of, 750
Stoneyard, Electricity in the, 639
Stratford-on-Avon, Nash's House, 511
Stratton, Mr. Arthur, F.S.A., 693
Street: Accidents and Street Shelters, 416; Name-Plates, 537, 687; Widening, Old Buildings and, 351, 693; Works, Hendon, 363
Strikes: Builders and, 555; Collective Bargaining, 705
Strike, the Coal, 389, 477
Structural Mechanics, 451
Students: Address to, 171; Drawings, R.I.B.A., 85, 115, 122, 152, 182, 239, 330, 485; Hints to, 143
Studentship, Alexander Thomson Travelling, 150
Studentships, the R.I.B.A., 113
Style, Education and, in Architecture, 747
Subways in New York, 632
Sudan, Excavations in the, 75
Sunderland, Hospital, 674
Surrey: County Council and Disfiguring Advertisements, 121; Photographic Survey of, 299, 665
Surveyor's Fees, 407
Swansea, Police and Fire Station, 574
Swiss National Monument, 36
Symons, Christian, the late, 232

TAIN, Sketches in, 50
Tall-Building Risks, 43
Tattershall Castle, 594, 693
Tavistock, Geology of, 299
Taylor's Patent, *re*, 378
Teaching of: Art, 58; Design, the, 445
Teak, Burmese, 771
Telephone Exchanges, London, 362
Tenant, Landlord and, 585, 643, 644
Tenders, Legal Points about, 16
Text-Book, the, 260
Thames, Bridge across the, Novel Suggestion for, 767
Theatre: Fire, Worcester, 208; National, Boston, 42; Repertory, Liverpool, 555; York, 493
Theosophical Society's New Buildings, 362
Thomas *v.* Portsmouth Ship Construction Association, 498
Thomson, Alexander, Travelling Studentship, 150
'Thyrsis,' Mr. Havard Thomas's, 693
Timber: Dry Rot in, 42; Seasoning, New Process of, 768; the Study of, 672; Values, Advance in, 43
Time Clause in a Building Contract, 76
Titanic, the, 445
Title, Registration of, 706
Tivoli, Villa d'Este, 59, 65
Tooley-street Tram Extension, 722
Tour, Architectural, France, 632
Tower Bridge, the, London, 4
Town, Growth of Commercial Quarter of a, 125
Town Hall: Hull, 707; Manchester, the Old, 229, 623, 715, 716; New, Newcastle, 239, 544; Oldham, 556
Town Planning: a Chair of, London, 671; Act, Parliament and the, 544; Act, Popularising the, 401; Association, Garden Cities and, 128; Hale, 38, 513, 601; Halifax, 38, 92, 126, 241; Huddersfield, 270; Liverpool School of, 722; Newcastle-on-Tyne, 246; Portsmouth, 245; Prestatyn, 397; Review, 400; Schemes, 128, 522; Southport, 128; Yorkshire, 128
Toxicity of Paints, 768
Trade: Acts in Interference of, 52; National Chamber of, 130; News, 18, 46, 77, 103, 130, 159, 188, 217, 249, 277, 308, 339, 372, 403, 432, 464, 493, 544, 556, 583, 610, 640, 674, 707, 734, 771; Union Bill, the, 609; Union Law, 407, 435, 498, 526; Unions, 1908-10, 431; Unions and the Minimum Wage, 247
Trade Disputes: Act, 344, 403, 585; and Building Contracts, 609; and Colonial, etc., Legislation, 431
Trading, Municipal, 407
Traffic: Extraordinary, on Highways, 408; Railway and Canal, 432; Report of Board of Trade, 220
Tramcars, Railless, 766
Tram Extension, Tooley-street, 722
Trentham Hall Demolition, 434
Tribunal of Appeal and Euston-road Building Line, 613
Tropical Research Laboratory, Wellcome, 400
Tube Station, Charing Cross, 362
Tudor House, Southampton, 731
Tungsten and Electric Lighting, 42
Tunnel, Liverpool-street, London, 214
Tunstall Parish Church, 581
Twelvetrees, W. N., on Reinforced Concrete in Great Britain, 97, 211, 331, 375, 428, 606
Twickenham, Historical Places of, 58

UNIVERSITY: Buildings, Belfast, 269; Cambridge, 8, 299, 482, 60, 693, 722; College School of Architecture, 424; London, 114, 20, 207, 327, 416, 567, 665; Manchester, 511; Men, Proposed Residence for, 341; Oxford, 65, 693; South Africa, 717
Unrest: Building Trade, 44; Industrial, 265; Signs of, 115
Utility, Beauty and, 623
Utopia, the Architect in, 715

VACHER & SONS *v.* London Society of Compositors, 435
Valparaiso, Port of, 608
Vandalism: or Improvement, Lyme Regis, 351, 693; Prevention of, 53
Vendor and Purchaser, 408
Venice, Campanile, St. Mark's, 39, 507; Fine Art Exhibition, 511
Versailles, English Church, 372
Victor Emmanuel Monument, Rome, 4, 10, 727
Victoria and Albert Museum, 36, 20
Victorian, Early, Estate Development, 127
Villa d'Este, 59, 65
Villa Pia, Rome, 385, 396
Villages: Ancient, in Lake Gatun, 352; Model Colliery, Glamorgan, 601

WAGE, Minimum, Trade Unions and the, 247
Wages, Standard Time Rates of, 216
Wallace Collection, the, 29
Walls: Church, Immurement of Ashes in, 29; Sprayed, 704
Wall Straightener, Weston's, 429
Wanborough Church, near Guildford, 461
Wandsworth: Common Extension, 671; Council Baths Committee, 68
War, Boer, Memorial of the, 693
Ward, J. S. M., on Architectural Details in Monumental Brasses, 6, 183
War Memorial, South Africa, 687
Warming Houses, 115
Warnham, Clay Excavating Plant, 15
Warrington: Council Schools, 328; Town Hall Enlargement, 178
Water Gate, York House, 477
Waterloo, Centenary of, 179
Water: Rating Gathering Grounds for, 21; Softening, etc., of, 704; Supplies, London, 759; Supply, 498; Supply Pipes for Houses, Values of Metals for, 704
Waterworks: Alnwick, 704; Langholm, 314; Talkin, 634
Wellcome Tropical Research Laboratories, 400
Wellington Monument, St. Paul's, 11
Welsh: Monuments, Ancient, 461; National Memorial Sanatoria, 63, 666
Wembley Hill Estate, 36
Wertheimer Art Sale, the, 601
Westminster Cathedral, 444, 461
Weston's Wall Straightener, 429
Weybridge, St. George's Hill Estate, 401
Whitehall Improvement, Suggested, 666, 668
Whiteley's New Premises, 697, 719
Wimbledon, Hospital, 493
Window: Bidford-on-Avon, 672; 'Bovis,' 703; Breaking, and Architecture, 321; Reynolds', New College, Oxford, 3
Windsor: Castle, 36; King Edward Memorial, 512; Old Chapter Library at, 305, 362; Retirement of Mr. Nutt, 512
Winnipeg Legislative Buildings, 59, 92, 121, 513
Wolverhampton to Birmingham New Road, 522
Woman and the Cold House, 269
Wood: Asbestos, 766; Engraving, 87; Penetration of Preservative into, 43; Seasoning, Electrical, 490
Woodford Bridge, Boys' Garden City, 671
Working Men, Flats for, 696
Workmen's Compensation, 21, 80, 28, 377, 462, 481, 526, 558, 644
Work, the Right to, 370
Wyndham's Settled Estate, *re*, 526

YEOVIL, Housing at, 128
Yield Point of Elastic Limit, 490
York: History of the Ouse Bridge, 576, 579; House Water Gate, 477; School, 208, 483, 542; Theatre, 493
Yorkshire, Town Planning in, 12

ZIMBABWE, 461

REPORTS OF MEETINGS, PAPERS READ, LAW CASES, ETC.

cident, York tower, 214
lams, M. B., on architects from George IV. to George V., 418
lshead, Professor S., on improvement of London, 245
sthetic treatment of concrete, 213, 252
lan, J. A. Ogg, on American educational buildings, 298
nerica, educational buildings of, 298
nerican architecture, 292
RCHÆOLOGICAL SOCIETIES: British Archæological Association, 601; Exeter, 632; Ireland, 573; London and Middlesex, 186; Royal Archæological Institute, 601; Surrey, 548; Sussex, 571
rchitects and the corporate sense, 661
rchitects': Benevolent Society, 466; conditions of contract, 446
rchitects: from George IV. to George V., 418; illumination as a study for, 47, 64; newer responsibilities of, 445, 658; registration of, 422
RCHITECTURAL ASSOCIATION, the: American architecture, 292; Athletic Club, the, 328, 541; bridges, 172, 204; Camera, Sketch, and Debate Club, 417; drawings, exhibition of, 535, 541; hopes and fears for architecture, 233; house list, 292, 448; house planning and elaboration, 116; *Journal*, the, 574; officers, new, 448; patriotism in architecture, 352; schools, 63; Scottish houses of the Renaissance, 448; secretary, new, 233; Stevens, Alfred, 61; visits (see 'Visits'); votes of thanks, 448
rchitectural: design, modernism and authority in, 207; drawing, 147, 175, 218; education, 118
RCHITECTURAL SOCIETIES: Aberdeen, 298; Birmingham, 207, 267, 361, 482; Bristol, 456, 663, 762; Devon and Exeter, 298, 313, 601; Edinburgh, 175, 266, 571, 691; Exeter, 632; Glasgow (Craftsmen), 95, 237, 268; Glasgow (Institute), 298, 418; Gloucestershire, 456; Hampshire, 263; Ireland (Association), 268, 361, 691; Ireland (Institute), 38, 423, 541, 663; Leeds and Yorkshire, 64, 99, 119, 175, 268, 325, 482; Leicester, 94, 120, 236, 361, 496; Liverpool, 328; Manchester, 94, 118, 207, 243, 631, 632; Northern, 361, 571; Nottingham, 64, 94, 207, 312, 326, 361, 395, 511; Sheffield, 207, 326, 541; Transvaal, 661; Ulster, 64; York and Yorkshire, 237, 268, 325, 691
rchitecture: American, 292; art and, at Cambridge, 662; collegiate, 202; colour as applied to, 88; hopes and fears for, 233; monumental qualities of, 361; of Stamford, 120, 236; of the Renaissance in France, 322; patriotism in, 352; Scottish, 207; Scottish Renaissance, 325, 361; sculptor's assistance to, 496; United States University, 593
rt and: architecture at Cambridge, 662; craft, unity and difference in, 133
rt: form and vision in reference to, 311; museums and picture-galleries, 389
shley, H. V., on Birmingham Council House extension, 267
sylums Board, Metropolitan, 82, 493, 558, 611, 735

Bank, Nottingham, 94
Bath Master Builders' Association, 249, 524
Beams, bending moments of, 466
Behar, M., on bending moments of beams, 466
Belfast Builders' Association, 188
Bidlake, W. H., on mediæval sculpture, 263
Binyon, L., on Chinese art, 186
Birmingham: Council House extension, 267; water supply, 466
Blomfield, Reginald, on architectural drawing, 147, 148, 175, 218
Bond, G. E., on registration of architects, 422
Bond, W., on church restoration, 312
Brasses, ancient, stones used for, 185
Brewer, C. C., on American architecture, 294
Brick and tile maker, the, 356
Bridges, 172, 204
Bristol Master Builders' Association, 158, 187, 674, 761
British: Decorators, Institute of, 370; Engineers' Association, the, 583; Museum, 252
Brown, Hanbury, on the Nile in English harness, 332
Builders': Accident Insurance, Ltd., 706; Clerks' Benevolent Institution, 216, 248, 371; Foremen and Clerks of Works' Institution, 171, 248; Foremen's Association, the, 130; Institute of (see 'Institute')
Building Act: applications under the London, 103, 130, 159, 188, 217, 249, 278, 309, 339, 372, 432, 524, 556, 583, 610, 640, 734, 771; cases, 79, 106, 193, 221, 409, 436, 553, 586, 614, 693
Building: conditions, 190; contracts, management of, 268; Trade Employers, National Federation of, 129, 157; trade union, a, 707, 771
Buildings: cost of labour in erecting, 465; law of support for, 207; valuation of land and, 510
Butler, C. McA., on principles of professional practice, 421

Cambridge, art and architecture at, 662
Cardiff: fair wage clause, 338; Master Builders' Association, 338
Carpenters, British Institute of Certified, 733
Carpenters' Hall lectures, 133, 150, 190, 218, 263, 303, 310, 323, 332, 341, 356, 392
Case, G. O., on ligno-concrete, 393
Champneys, Basil, on architecture, 757
Cheapness in church building, 660
Cheltenham Church tower and spire, 456
Chinese art, 186
Chorlton, A., on gas power and steam, 432
Chubb, L. W., on smoke abatement, 161
Church Building Society, 36, 87, 207, 362, 512, 632, 660, 759
Church, Cheltenham, tower and spire of, 456
Churches, East Anglian rural, 119
Churches: Hitchin, 718; Publow, 762; Whitchurch, 762
Church: House, Wesleyan, Westminster, 391; restoration, 312
Church, William, on smoke effect on building stone, 358
Cistercian monastery, a, 237
City development plan, the, 243
Clerks of Works' Association, 192
Cockburn, J. H., on support for buildings, 207
Collegiate architecture, 202
Colour as applied to architecture, 88
Commons and Foothpaths Society, 179, 299, 693
Conciliation, National Board of, 157
Concrete: æsthetic treatment of, 213, 252; Institute, 182, 213, 337, 486, 542, 572; ligno, 393; reinforced, 489; reinforced, applied to buildings, 99; reinforced, testing of materials used in, 335, 359
Construction and design, 94
Contract: architects' conditions of, 446; national form of, 129
Contracts: building, management of, 268; fair wages clauses in, 129
Co-operative Union of Builders, etc., London, 583
Corporate sense, architects and the, 661
Council House extension, Birmingham, 267
Cowdell, W. M., address by, 94
Craft, art and, unity and difference in, 133
Cram, R. A., on university architecture in United States, 595
Culley, A. E., on Liver Building, Liverpool, 274

Dams, design of high, 337
Darch, J., illumination as a study for architects, 47, 64
Daubney, C. A., on American architecture, 292
Davidson, W., on: East Anglian rural churches, 119; restoration, 266
Davison, T. Raffles, on London, 628
Decoration, mural, 739
Decorations: East Anglian rural church, 119; effect of smoke on, 358
Decorators: Institute of British, 370; Master, London Association of, 308, 402
Design, construction and, 94
Dinner: Bath Master Builders' Association, 249; Bristol Master Builders, 187; Builders' Clerks' Benevolent Institution, 371; Builders' Foremen and Clerks of Works' Institution, 248; Builders' Foremen's Association, 130; Clerks of Works' Association, 192; Incorporated British Institute of Certified Carpenters, 733; Institute of British Decorators, 370; Institute of Builders, 101; Ipswich Building Trades, 464; Leicester Building Trades Employers' Association, 159; Liverpool Master Builders' Association, 277; London Master Builders' Association, 247; Portsmouth Master Builders, 276; Quantity Surveyors' Association, 612; Society of Architects, 508
District Surveyors' Association, Lower Thames Valley, 434, 511, 585
Drainage, Glasgow main, 423
Draughtsmen: French, of the XVIIth century, 175; of the XVIth century, 148; some Italian, 218
Drawing, architectural, 147, 175
Durley, R. J., on heating, etc., McGill University, Montreal, 155

East, Alfred, on colour and architecture, 88
East Anglian rural churches, 119
Easton, W. C., on Glasgow main drainage works, 423
Eden, F. C., on hopes and fears for architecture, 233
Educational buildings of America, 298
Education: architectural, 118; L.C.C., 403
Engineering features, Liver Building, Liverpool, 274
Engineering Societies: Concrete Institute, 182, 213, 337, 486, 542, 572; Institute of Sanitary Engineers, 149, 207, 393; Institution of Civil Engineers, 65, 152, 155, 214, 326, 423, 486, 515, 543; Institution of Heating, etc., Engineers, 154; Institution of Municipal Engineers, 252, 573; Junior Institution of Engineers, 120, 270; Society of Engineers, 152, 270, 393, 601
English house from Normans to Tudors, 303, 341
Etty, W., R.A., 268
Euston-road building line, 79, 221
Evans, Sir A., on Minoan and Mycenæan elements in Hellenic life, 758

Federation of Building Trades Employers: National, 129, 157; Yorkshire, 249
Federation, Scottish Building Trades, 583
Form and vision and art, 311
France, architecture of the Renaissance in, 322
French draughtsmen of the XVIIth century, 175
Frith, W. S., on form and vision and art, 311

Garden cities: and garden suburbs, 671; and Town Planning Association, 244, 671
Garden suburb, Hampstead, 297
Gas power and steam, 432
Gattie, A. W., on cheapening transport, 187, 215
Gawthorp, W. E., on stones used for ancient brasses, 185
George IV. to George V., architects from, 418
Gilbert, W., on sculpture and architecture, 496
Glasgow main drainage, 423
Glass, stained, 642
Gloucester and Stroud Technical Schools, 637
Gothic architecture in Ireland, 268
Gray, A. Winter, on Superannuation, 252
Green, W. Curtis, on roofs and roofing, 323
Grey, Earl, on housing, 246
Guildford, archæologists at, 548
Guild of Architects' Assistants, 362, 541

Hall, E. T., on art museums, etc., 389
Hammersmith girls' school, 35
Hampstead Garden Suburb, 297
Harbour, Madras, 515
Harris, M. J., on architects and the corporate sense, 661
Heating, etc., McGill University, Montreal, 155
Heaton, N., on smoke and decorations, 358
Hellenic Studies, Society for Promotion of, 758
Hill, L., and M. Flack on ventilation, 273
Hitchin, Architectural Association visit to, 718
Hoare, W. R., on the brick and tile maker, 356
Holland, visit to, 482
Hopes and fears for architecture, 233
Hope, W. H. St. John, on the English house from the Normans to Tudors, 303, 341
Horsley, G., on: development of planning, 392; R.I.B.A. students' work, 146
Hospital, King's College, 364
House: building, 310; English, from Normans to Tudors, 303, 341; planning, over-elaboration of, 116
Houses: limitation of number of, 521; some Scottish, of the Renaissance, 448
Housing: of working classes, 176; problem, the, 246; reform, 670, 759
Hulse, H., on municipal engineering, 100

Illumination as a study for architects, 47, 64
Infirmary, Eye, Nottingham, 361
Institute of: British Decorators, 370; Builders, the, 101, 187, 215, 370
Institute, Royal, of British Architects: annual report, 537; architecture of the Renaissance in France, 322; art museums and picture-galleries, 389; Board of Architectural Education, 599; collegiate architecture, 202; colour as applied to architecture, 88; contract, conditions of, 446; deceased members, 144, 202, 478, 595, 756; Education, Board of Architectural, 599, 688; elections, annual, 688; examination results, 19; examinations, the, 60; Fellowship, the, 756; Gold Medallist, Royal, 144, 756; library, the, and its contents, 478, 482; Licentiateship, the, 19; portrait of the President, 757; President's address to students, 144; prizes and studentships, 60, 90, 146; registration of architects, 660; responsibilities of architects, the newer, 424, 445, 658; university architecture in the United States, 573, 595, 601
Insurance Act, National, 157, 403
Ipswich Building Trades Association, 464
Ireland, Gothic architecture in, 268
Italian draughtsmen, some, 218

Jemmett, A. R., on town planning, 13, 400
Jenkins, J. H., on house planning and over-elaboration, 116
Jerman, J., on architectural matters, 313
Jones, H. A., on automatic temperature regulation, 154

Kearns, R. M., on cost of labour in building, 465
Keen, A., on patriotism in architecture, 354
Kelly, S. A., on town planning, Southport, 128
Kenrick, G. H., on teaching trades, 277
Knebworth garden village, 482

Labour, cost of, in building, 465
Land valuation, 510
Lauchlan, J. A., on a Cistercian monastery, 237
Lectures on concrete engineering, 543
Lee, Stirling, on the sculptor's craft, 218
Legal: Aird & Co. *v.* Bristol Corporation, action to recover money, 282; Allen & Norris *v.* London County Council, Tribunal of Appeal case, 79, 106; Allen *v.* London Guarantee and Accident Company, liability of builders and employers, 253; Ashwell & Nesbitt *v.* Allen & Co., validity of

REPORTS, etc. (continued):—
architect's certificate, 558; Blakeley & Co. v. West Kirby Sailing Club, County Court case, 378; Bromley v. Freeman & Co., Building Act case, 586; Building Act cases, 79, 106, 193, 409, 436, 558, 586, 614, 693; Cable v. Lewis, Muswell Hill houses, 165; Chapman v. Greenwood, personal injury, 222; Clinch v. Jackson, Referee on time sheets, 645; Cockerill, H. M., v. Middlesbrough Co-operative Society, light and air case, 221: Davidson v. Prangley, architect's fees, 677: Dawnay v. Mulholland, claim against a building owner, 645: Dellar Brothers v. Drury, Building Act appeal, 436; Denman v. Finchley Urban District Council, connecting water gullies, 694, 774; Elms v. Hemsted, building dispute, 193; Euston-road building line, the, 79; Greig v. Robertson, Building Act case, 614; Griffith v. Clay & Sons, Blackfriars ancient light dispute, 585; Hallett & Langdale v. Cowdell, Battle building ownership dispute, 108; Harries v. Wright, damage to buildings by trees, 80; Hope & Sons v. Goode, building owners or Contractors? 253; King, the, v. Tribunal of Appeal, the Euston-road case, 558; Lee v. Lewisham Borough Council, dust question, 498; London County Council v. Jones, when is a building dangerous? 527; London County Council v. London and Westminster Bank, building line, Wimbledon, 693; London County Council v. Tribunal of Appeal, Euston-road building line, 221; Lyons v. Runtz, theatrical architectural dispute, 136; Marylebone Borough Council v. White, drainage by-laws, 193, 645; Measey v. Bishop of Norwich, accident to workman, 80; Metropolitan Water Board v. Evans, Wadham, & Co., water charges, 277; Minturn v. Barry, Building Act case, 193, 614; Padbury v. Holliday & Greenwood, liability for an accident, 222, 774; Pratt & Co. v. W. F. Frith, breach of covenant, 314; Ramsden & Carr v. Chessum & Sons, building dispute, 107; Reading Industrial Co-operative Society v. Palmer, surveyor's fees, 408; Richards v. Sanders & Son, painter's claim, 344; Rutter v. Great Western Land Company, a claim settled, 136; Sandon v. Mallaby-Deeley, decoration of a mansion, 527; Simpson v. Wright, action against contractor, 437; Stronge v. Beard, Wood, & Co., claim against surveyors, 408; Sun Assurance Company v. Bushby, wages under Workmen's Compensation Act policies, 527: Tolley v. Lichwitz & Co., Building Act case, 409; Tottenham Urban District Council v. Rowley, right of way case, 586; Tribunal of Appeal, 79, 106, 221, 558, 693; Wallis v. Biddulph, ancient lights and Crown leases, 645: Wilkinson v. Shorrock, contractor's appeal, 774
Leicester Building Trades Association, 159
Library: the Royal Institute of British Architects', 478; the Surveyors' Institution, 105
Light and air case, 221, 585, 645
Ligno-concrete, 393
Liverpool: Master Builders' Association, 277; Royal Liver Building, 274
Loban, G. T., valuation of land and buildings, 510
London: as an architectural syllabus, 150; as it is and as it might be, 628
London Association of: Master Decorators, 308, 402; Stonemasons, 370, 708
London Co-operative Union of Builders, etc., 585
London Councils, 24, 52, 78, 108, 160, 194, 222, 250, 314, 340, 378, 410, 437, 468, 498, 528, 557, 575, 611, 646, 694, 742, 775
London County Council, the, 106, 132, 162, 178, 219, 253, 282, 296, 326, 377, 395, 403, 526, 548, 576, 613, 739, 762
London, improvement of, 244
London Master Builders' Association, 130, 247, 276, 372, 403, 491, 582
London Society, the, 191, 573, 627

McDonald, A. B., and G. M. Taylor, on Glasgow main drainage, 423
Macdonald, J. H. A., on the road, 274
Mackenzie, A. G. R., on house planning and over-elaboration, 116
Madras Harbour, 515, 516
Manchester Town Planning Conference, 669
Mansergh, E. L. and W. L., on Birmingham Water Supply Works, 466
Martin, A. J., on standardisation, 274
Master Builders' Associations: Bath, 249, 524; Belfast, 188; Bristol, 158, 187, 674, 761; Cardiff, 338; Ipswich, 464; Leicester, 159; Liverpool, 277; London, 130, 247, 276, 372, 373, 403, 491, 582; Portsmouth, 276
Materials of construction, testing of, 156
Maule, H. P. G., on architectural education, 118
Micheli, Michele San, 237
Milburn, G. W., on Wm. Etty, 268
Milton, J. T., on testing materials, 156
Minter v. Waldstein, 668
Mitchell, H. H. G., on Madras Harbour, 516
Modernism v. authority in architectural design, 207
Monastery, a Cistercian, 237
Monson, E. C. P., on housing working classes, 177
Montreal, heating McGill University, 155
Monumental qualities of architecture, 361
Morton, D. H., on Glasgow main drainage, 424
Muir, J., on building contracts, 268
Municipal: engineering profession, the, 100; Engineers, Institution of, 252
Mural decoration, 739
Museums, art, and picture-galleries, 389

Neo-Grec, 417
Nettleford, J. S., on slum reform, 759
Nicholson, C. A., on construction and design, 94
Nicol, G. S., on visit to Holland, 482
Nile, the, in English harness, 332
Nottingham Eye Infirmary, 361

O'Brien, C., on Gothic architecture in Ireland, 268
Overbury, T., on Cheltenham Church tower and spire, 456
Ozone in ventilation, 273

Parliament and housing reform, 670
Parry, H. Lloyd, on construction of roads, 521
Paterson, A. N., on Scottish architecture, 207
Paterson, O., on taste in stained glass, 175
Patriotism in architecture, 352
Pearson, M. B., on Church of St. Mary, Rotherhithe, 186
Picture-galleries, art museums and, 389
Piranesi, 218
Pite, Beresford, on London as an architectural syllabus, 150
Planning: development of, 392; house, and over-elaboration, 116
Polytechnic, Regent-street, London, 147
Portsmouth: and town planning, 245; Master Builders' Association, 276
Practice, professional, some principles of, 421, 480
Presidential addresses: Devon and Exeter Architectural Society, 313; Leicester Society of Architects, 94; Royal Institute of British Architects, 144, 756
Prior, E. S., on study of art, etc., Cambridge, 662
Public, merchants' terms to the, 403
Quantities: Bath builders and, 524; provisional sums in, 157
Quantity Surveyors' Association, 226, 612, 722

Railways, West African, 214
Redfern, H., on smoke and buildings, 358
Registration of architects, 422
Reilly, C. H., on monumental qualities of architecture, 361
Renaissance architecture: France, 322; Scottish, 325, 361
Renaissance, some Scottish houses of the, 448
Restoration, church, 312
Restorer, the, and old work, 266
Road: Congress, International, 522; making and town planning, 669
Roads, construction and cost of, 521
Road, the, 274
Rogers, Julian C., on the Surveyors' Institution library, 105
Rogers, W., on town planning, 245
Roman Studies, Society for Promotion of, 186
Roofs and roofing, 323
Rotherhithe, antiquities in, 186
Royal Academy lectures on architecture, 147, 148, 175, 218
Ryves, R., on design of high dams, 337

Sanitary Engineers, Institute of, 149
Sanitary Institute, Royal: examination in sanitary science, 66, 547; special exhibition, 91; York Congress, 36, 238, 424
Savill, E., on the single tax movement, 161
School, girls', Hammersmith, 35
Schools, technical, and the trades, 277
Scott, A. A. H., on testing of materials for reinforced concrete, 335, 359
Scottish: architecture, 207; Building Trades Federation, 583; houses of the Renaissance, 448; Renaissance architecture, 325, 361
Scott, M. H. Baillie, on house building, 340
Sculptor's assistance to architecture, the, 496
Sculptor's craft, the, 218
Sculpture, mediæval, 263
Shelford, F., on West African railways, 214
Sketching, 325
Slum reform, 759
Smith, H. Seth, on modernity and authority in architectural design, 207
Smoke: abatement, 161; Abatement Exhibition, 357; effect of, on building stone, 358
Snell, A. Saxon, on architects' conditions of contract, 446
Snow, A., on Neo-Grec, 417
Society for Promotion of Hellenic Studies, 758
Society of Architects: annual dinner, 508; elections, 571; examination results, 600; housing of working classes, 176; illumination as a study for architects, 47, 64; principles of professional practice, 421, 480; registration of architects, 422; testing of materials for reinforced concrete, 297, 335, 359; travelling studentship, 634
Southport town planning, 128
Spring, F. J. E., on Madras harbour, 515
Stained glass, 642
Stained glass, taste in, 175
Stamford, architecture of, 120, 236
Standardisation, necessity for, 274
Stevens, Alfred, 61
Stokes, L., address by, to students, 144
Stone, building, effect of smoke on, 358
Stonemasons, London Association of, 370, 708
Stones used for ancient brasses, 185
Strange, E. F., on Alfred Stevens, 61
Superannuation and security of tenure, 252
Surveyors' Institution: annual report, 664; cost of labour in erection of buildings, 465; examination results, 161; final examination results, 571; lecture list, 207; Nottingham visit, 663; principles valuation of land and buildi 510; single tax movement, 161; Institution library, 105
Syme, J. S., on Michele San Mich 237

Tapper, W., on church building, 66
Tax, the single, movement, 161
Technical: School, Gloucester, 6 schools and the trades, 277
Temperature regulation, automa 154
Tenure, security of, 252
Testing of materials: of constructi 156; used in reinforced concre 335, 359
Thames Valley District Surveyo Association, 434, 511, 585
Town Planning: Association, garc cities and, 671; Conference, 5 Conference, Manchester, 6 lectures on, 13, 400; Portsmou 245; Southport, 128
Townsend, C. Harrison, on the Ro Institute of British Architec library, 478
Trade price, goods at, 157
Trades: Disputes Act, 402. 4 technical schools and the, 277
Transport, how to cheapen, 187,
Traylen, H. F., on architecture Stamford, 120, 236
Tribunal of Appeal under the Lond Building Act, 79, 106, 221, 558,
Turner, Thackeray, on art and cra 133

United States, University architectu in the, 595
Unwin, Raymond, on: garden citi etc., 671; limitation of number houses, 521; the city developme plan, 243

Valuation of land and buildings, 510
Varnish and enamel works, 17
Ventilation, 273
Visits, Architectural Associatio British Museum, 252; Hampste Garden suburb, 297; Hitchin, 71 King's College Hospital, 36 Regent-street Polytechnic, 14 school, Hammersmith, 35; Wesley Church House, Westminster, 39 Woking, 600
Visits: Nottingham Architectu Society: bank premises, 94; E Infirmary, 361
Voysey, C. A., on patriotism architecture, 352

Wage, fair, Cardiff, 338
Wages: clauses, fair, in contracts, 12 standard, and cost of living, 157
Walker, L., on stained glass, 642
Ward, W. H., on architecture the Renaissance in France, 322
Warren, E., on collegiate architectu 202
Water Board, Metropolitan, 611, 73
Waterhouse, Paul, on bridges, 17 204
Water supply, Birmingham, 466
Weaver, L., on: Scottish houses of t Renaissance, 448; Scottish Rena sance, 325, 361
Wells, E. P., on reinforced concret 489
Wesleyan Church House, Wes minster, 391
Westminster City Council, 526, 58 641, 773
Whitehead, W., on sketching, 325
Wilkins, W. G., on cost of maki roads, 521
Wills, H. W., on building condition 190
Woking, Architectural Associatio visit to, 600
Wood, E., on colour and architectur 89
Woodward, W., on the newer respo sibilities of architects, 658
Working classes, housing of the, 17
Workman, G. C., on reinforced co crete applied to buildings, 99

Yorkshire Federation of Buildi Trades' Employers, 249
York tower collapse, 214

CORRESPONDENCE.

SUBJECTS OF LETTERS.
Achilles, statue of, 9, 37
Air-gas, lighting by, 547, 603
Aldwych, traffic at, 9
Architects: clerk, the, 8; clients, and specialists, 208; the newer responsibilities of, 484
Architectural: Assistants and the Office of Works, 9, 37, 93, 180; development, a history of, 328
Architecture: decadence of English, 514; the lay Press and, 67
Australia, chances for an architect in, 238
Bandstand competition, Hastings, 484
Baths, swimming, 208, 238
Bricklayer, the modern, 546
Brickwork, treatment of, 484, 514
Bridges, Southwark and St. Paul's, 633
Buckingham Palace and the Victoria Memorial, 37
Builder, the ideal, 451
Building: land taxes and, 12 requirements, London, 180; trad the London, 695

Cement, Portland, and colour, 121
Church, St. Martin's, Kensal Rise, 2

ESPONDENCE (continued):—
ects of Letters (continued):—
c of works, the, and H.M. Office Works, 93
e, the architect's, 8
ur, Portland cement and, 121
petition: designs, Port of London, hibition of, 602; reform, 425
petitions: East Sussex Hospital, 00, 363; Hastings bandstand, 484; ort of London, 453; Stafford and ortland, 363
age, construction of a weather-oarded, 514
tal Palace and National Folk useum, 151
o, plaster-painted, 363
np: houses, 425, 453; plaster all, 151, 180
adence of English architecture, e, 514
oration, Pompeian, 547
onshire House staircase, 208
ton House, Bucks, 93
ver, D. G., the late, 8
ught, failure of buildings caused y, 37
t Sussex Hospital competition, 00, 363
o, 208
etions, the R.I.B.A., 514, 602
hibition: horticultural, 633; of Port f London competition designs, 602
oding, Thames, 269
ors, rotting of, 121, 151, 180
fittings, 180
l, Kelling, Norfolk, 575
tings bandstand competition, 484
ating and power plant, combined, 28, 363
nes, ideal, and ideal lighting, 547
rticultural Exhibition, Interna-ional, 633
spital, East Sussex, 300, 363
isses: damp, 425, 453; how many o the acre? 484
al: builder, the, 451; houses and deal lighting, 547
ect nuisance, 484
titute, Royal, of British Architects: ssociates and the, 269; elections, 14, 602; policy of the, 8, 37, 67, 2, 121, 151; registration and, 484, 46; studentships, *bona-fides* of ompetitors for the, 151
urance Act and workmen's com-ensation, 93
ercommunication Column, 37, 93, 21, 151, 180, 208, 238, 363, 425, 53, 484, 514, 547, 725
nwork by Tijou, 179
es, Inigo, and porch of St. Mary's, Oxford, 37, 67
lling Hall, Norfolk, 575
nsal Rise, St. Martin's Church, 238
Land taxes and building, 121
Lighting: by air-gas, 547, 603; ideal, 547
London: building requirements, 180; building trades, the, 695; County Council Architectural Assistants, 180; its new Royal Museum, etc., 395
Museum: National Folk, Crystal Palace and the, 151; the new Royal, London, 395
Office of Works: Architectural Assistants and the, 9, 37, 93, 180; the clerk of works and the, 93
Oxford, porch of St. Mary's Church, 37, 67
Padbury *v.* Holliday, 238, 269, 300
Paper for rubbings, 725
Patriotism, practical, 363
Piccadilly blunder, a, 603
Pillars, spiral, 395
Plans, over-elaboration of, 179
Plant, combined heating and power, 328, 363
Plaster: painted dado, 363; quick-setting, 37; wall, damp, 151, 180
Pompeian decoration, 547
Porch of St. Mary's Church, Oxford, 37, 67
Portland cement and colour, 121
Port of London: competition, 453; competition designs, exhibition of, 602
Press, the lay, and architecture, 67
Registration, the R.I.B.A. and, 484, 546
Rotting of floors, 121, 151, 180
Rubbings, paper for, 725
Schools, cost of, 37
Sign, projecting, 547
Skeleton-frame buildings, 93
Slate, a clean, 546
Southwark and St. Paul's bridges, 633
Specialists, architects, clients, and, 208
Specifications, timber, 665, 695, 724, 762
Spiral pillars, 395
Stafford and Portland competitions, 363
Staircase, Devonshire House, 208
Statue of Achilles, 9, 37
Studentships, the R.I.B.A., *bona-fides* of competitors for, 151
Swimming-baths, 208, 238
Taxes, land, and building, 121
Thames flooding, 269
Tijou, ironwork of, 179
Timber specifications, 665, 695, 724, 762
Town Planning Conference, the, 547
Trade unionism and restraint of trade, 208, 300, 328
Traffic at Aldwych, 9
Victoria, Memorial, Buckingham Palace and the, 37
Wall, damp plaster, 151, 180
Weather-boarded cottage, construction of a, 514
Workmen's compensation and Insurance Act, 93

WRITERS OF LETTERS.

Acetylene Corporation, the, lighting by air-gas, 603
Acetylene Publicity, Ltd., lighting by air-gas, 547, 603
Baker, H. E., lighting by air-gas, 603
Bolton, A. T., Inigo Jones and the porch of St. Mary's, Oxford, 67
Bryant, W., practical patriotism, 363
Burt, W. H., the policy of the R.I.B.A., 8
Candler, B., rotting floors, 180
Coram, J. H., R.I.B.A. elections, 514
Corfield, Wilmot, statue of Achilles, 9, 37
Cross, A. W. S., and G. Hubbard (see 'Hubbard and Cross')
Cubitt, H., London building requirements, 180
Dargue, Griffiths, & Co., combined heating and power plant, 363
Davies, J., timber specifications, 762
Duval, V. D., lighting by air-gas, 547, 603
East, D. J., workmen's compensation and the Insurance Act, 93
Fleming, H. S.: *bona-fides* of competitors for R.I.B.A. studentships, 151; the policy of the R.I.B.A., 121
Gammell, K., the policy of the R.I.B.A., 67
Gardner, J. Starkie: ironwork of Tijou, 179; London, its new Royal Museum, etc., 395; Thames flooding, 269
Gayer, F. J., Padbury *v.* Holliday, 238, 300
Goody, H. G., ideal homes and ideal lighting, 547
Groenop, E., the newer responsibilities of architects, 484
Halley, J. M. W., the lay Press and architecture, 67
Hanley, A. M., St. Martin's Church, Kensal Rise, 238
Hardcastle, W. J., and B. Dicksee, skeleton-frame buildings, 93
Harris, E. Swinfen, over-elaboration of plans, 179
Haskins, W. A., a Piccadilly blunder, 603
Henman, W., East Sussex Hospital competition, 363
Holliday, J. S., the London building trades, 695
Hooper, T. R., rotting floors, 180
Hubbard, G., and A. W. S. Cross: a clean slate, 546; the decadence of English architecture, 514; the R.I.B.A. and registration, 484, 546
Keen, Arthur, the late D. G. Driver, 8
Kenderdine, C. H., land taxes and building, 121
Kerner-Greenwood & Co., rotting of floors, 151
Laine-Pearson, B. E., timber specifications, 724
Lethbridge, E., paper for rubbings, 725
Mathews, J. Douglass, Southwark and St. Paul's bridges, 633
Maxwell, A. E., and C. Orlando Law, exhibition of Port of London competition designs, 602
Milliken, W. E. D., porch of St. Mary's Church, Oxford, 37
Peacock, H. F., timber specifications, 695
Perks, Sydney, policy of the R.I.B.A., 92
Phillips, R., timber specifications, 695
Plunkett, G. N. Count, the Crystal Palace and National Folk Museum, 151
Prentice, A. N., Pompeian decoration, 547
Procter, B., construction of a weather-boarded cottage, 514
Purchon, W. S., Associates and the R.I.B.A., 269
Pywell, W. J., treatment of brickwork, 514
Quennell, C. H. B., Port of London authority competition, 453
Robinson, S. Whitmore: combined heating and power plant, 328; damp houses, 453
Rowdon, H., Dorton House, Bucks, 93
Schofield, J. F., policy of the R.I.B.A., 37
Seth-Smith, W. H., the R.I.B.A. and registration, 546
Sharp, W. J., plaster painted dado, 363
Shiner, C. M., Hastings bandstand competition, 484
Simpson, F. M., a history of architectural development, 328
Snell, A. Saxon, East Sussex Hospital, 300
Southon, H., the traffic at Aldwych, 9
Unwin, Raymond, how many houses to the acre? 484
Walker, F.: the ideal builder, 451; the modern bricklayer, 546
Ward, A. W., Town Planning Conference, 547
Ward, J. S. M., paper for rubbings, 725
Wheatley, O., Portland cement and colour, 121
Whitbread, W., damp plaster walls, 180
Winterbottom, H., quick-setting plaster, 37
Yerbury, J. E., timber specification, 695

ARCHITECTS, ETC., OF BUILDINGS ILLUSTRATED.

ercrombie, P., E. L. Bower, & T. F. Shepheard, First Premiated Design, Prestatyn Estate, 397
ams, H. P., & C. H. Holden: Design, East Sussex Hospital, Hastings, 241; Design for Manchester Library and Art Gallery, 68
an, J. A. O., Plan, York Elementary School, 543
hley, H. V., & Winton Newman, Birmingham Municipal Buildings Extension, 267
kinson, R. F., Adelphi Hotel, Liverpool, 548-554, 635-637, 736
veling, S.: Old Bridge of St. John's, Cambridge, 75; the 'Reindeer' Inn, Banbury, 263
rrow, E. R., Plan, York Elementary School, 542
tten, J. D., Triptych, St. Martin's, Kensal Rise, 135
gg, J., General Post Office, Bombay, 642
lcher, J., & J. J. Joass, Premises, Queen's-road, W., 697-701, 719
rrington, A.: Imperial London, 10-13; Suggestion for Whitehall, 667, 670
adshaw, Gass, & Hope, Plan, Bolton Miners' Hall, 450
ewer, H. C., the Lady Chapel at the East End of St. Jacques, Dieppe, 10
Brewill & Baily: Design for Almshouses, Nottingham, 397; Territorial Headquarters, Nottingham, 397
Briggs, M. S., Music School, Mill Hill, 574
Briggs, Wolstenholme, & Thornely, Stafford Public Library, 210
Bulmer, F. H., an Interior, Talbot-square, Hyde Park, 279
Carrère & Hastings, New York Library, 295
Castle & Warren, Design, Stafford Public Library, 210
Chalkley, T. H., R.I.B.A. Tite Designs, 153
Champneys, Basil, Some Works by, 747, 751-756, 762, 763
Chillingworth & Levie, Bungalow at Howth, 702, 703
Christie & Johnson, Masonic Hall, Shanghai, 540, 541
Clark, W. L., Silver Medal Drawings, Royal Academy Schools, 427
Clough, S.: Design for a Memorial Chapel, 517; Design for Façade of a Palace, 516
Cockerell, Professor, Hanover Chapel, Regent-street, 305
Conrade, A. C.: Old Houses, Lincoln's Inn-fields, 417; Raising the Crucifix on the Summit of a Mexican Temple, 10
Cope & Stewardson: Dormitories, University of Pennsylvania, Philadelphia, 596; Washington University, St. Louis, Mo., 595
Copsey, Helen D., Design for Fireproof Curtain for Theatre, 144
Cowper, J. B. F., R.I.B.A. Cates Prize Drawings, 240
Cram, Goodhue, & Ferguson, U.S. Military Academy, West Point, New York, 597, 598
Cratney, E., Cottages, Wallsend-on-Tyne, 220
Crewe, Bertie, the London Opera House, 270-272, 334, 374
Cross, A. W. S., & A. E. Munby, Residence for University Men, 341, 342
Dann, R., Third Design, Prestatyn Estate, 398
Day Brothers & Klauder, Wilson Eyre, and Cope & Stewardson, Archæological Museum, University of Pennsylvania, Philadelphia, 593
Day, G. H., Design for Decorative Panel in a Municipal Building, 172
Dazzi, Arturo, Design for 'Altare della Patria,' Victor Emmanuel Monument, Rome, 726-728
De Jong, P., R.I.B.A. Soane Medallion Drawings, 122-124
De Soissons, Louis, R.I.B.A. Tite Prize Design, 152
Edwards, A. C. M., House at Ashstead, 726
Edwards, H. T., Dover War Memorial, 510
Elmes, Design for Liverpool Assize Courts by, 475
Ensor, L. W., Plan of Baths, Winnington, 43 (see correction, p. 92)
Falkner, H., Second Design, Prestatyn Estate, 397
Farey, C. A., Bronze Medal Design, Royal Academy Schools, 427
Flockhart, W. (and Messrs. Lemon & Blizard), Shipping Offices, Southampton, 319, 330
Foggitt, G. H., Design for a Memorial Chapel, 515, 516
Friskin, Wm., R.I.B.A. Soane Medallion Drawings, 124, 125
Fry, R. C., 'The Ideal House,' Olympia, 494
George, Ernest, & A. B. Yeates: a Wood-Frame House, British Guiana, 577; 'Woodside,' Esher, 576
Gherardi, A., Cappella di S. Cecilia, Rome, 280
Gilbert, Cass: Works by, 27, 30-35, 38, 293, 760, 761
Gimson, E. W., New Hall, Bedales School, Petersfield, 655
Grayson, H., Church of St. Barnabas, Jamaica, 643

ARCHITECTS, etc. (continued):—
Green, W., Curtis: Batts Corner Church, Frensham, 324; Church of Good Shepherd, Frensham, 325; Hall at Croydon, 326; House at Hampstead, 141
Gummer, W. H., an Architectural Design, Royal Academy Schools, 426

Hallam, J. A., Cottage at Letchworth, 505, 508
Hall-Jones & E. S. Cummings, Bank Premises, West Ealing, 259
Harding, C. A., the Villa Pia, Rome, 396
Hardwick, A. Jessop, 'Island Cottage,' Bembridge, 602
Hare, C. G., New Buildings, Queen's College, Cambridge, 604, 605
Hare, H. T., Presbyterian College, Cambridge, 202
Hayes, L. A., Business Premises, Berners-street, W., 457
Hepworth, P. D.: Abbey Gateway, Bury St. Edmunds, 487; Senlis Cathedral, 486
Heusch, Jakob de, Drawing of Ponte Rotto, 621
Hill, A., Technical Institute, Cork, 443
Hill, S. Woods, Design, Marylebone Municipal Buildings, 85, 96, 97
Howell & Brooks, Premises, Fleet-street, 696

Jemmett, A. R., Cottages, Hastings, 421
Johnston, R. F., Voor Linden, near The Hague, 95, 96
Jones, R. P., Lindsey Hall, Kensington, 454, 456

Keefer, A., Canadian Life Building, Ottawa, 518
Kitson, S. D., Premises, Doncaster, 604, 605

Lanchester & Rickards, Study for a Royal Memorial, Parliament-square, S.W., 666
Leaver, N. H, R.I.B.A. Owen Jones Prize Drawings, 330, 331
Lofting & Cooper, Church, West Hartlepool, 300
Longbottom & Culpan, Halifax Town-Planning Scheme, 241-243
Lucas, G., & Lodge: Design, Prestatyn Estate, 398; Houses, Hatfield, 683, 691
Lucas, Lodge, & Farey, Design, Marylebone Municipal Buildings, 535

Macgregor, J., R.I.B.A. Pugin Student-ship Drawings, 182
McKim, Mead, & White, War College, Washington, 296
Martin, L., No. 60, St. James's-street, London, 663
Masqueray, E. L., the Cascade, etc., St. Louis Exposition, 38
Mayor, C. K. & T. C., Design, East Sussex Hospital, Hastings, 239, 240, 241
Mitchell, Arnold: Polytechnic, Kentish Town-road, 605; Works of, 349, 364-369
Morrell, D., the Ouse Bridge, York, 577, 579
Morris, G. Ll., House at Champion Hill, S.E., 455, 456
Morton, J. H., Design, Church of St. Luke, West Hartlepool, 486, 487
Munby, A. E., Children's Hospital Extension, Paddington, 39-41

Newton, E., 'Oldcastle,' Dallington, 725, 727
Niven, D. B., Scheme, Proposed London University, 327

Oglesby, R. P., Alterations to 'Underhills,' Bletchingley, 106, 107
Ohmann, Friedrich, Some Works by, 625-627, 634, 635

Panini, Drawing by, 478
Paul, R., Hogarth's House, Chiswick, 660
Pite, W. A., St. James's Church, Alperton, 726, 727
Powles, A. E., Baths, Winnington, 43 (see correction on p. 92)
Proffitt, J. T., Plan, York Elementary School, 542

Rawlings, J., Novel Suggestion for a Bridge over the Thames, 768
Rennie, W., & E. R. Gribble, Westminster Hall Roof, 324
Roberts, W. J., Design for Town House, 569, 570
Ross, W. A., Design for a Public Place, 145
Rowse, H. J., & S. A. Kelly, Design, Prestatyn Estate, 399
Russell, S. B., Brighton, Hove, and Sussex Grammar School, 689

Sanderson, G.: Palace of Man Singh, Gwalior Fort, 459; Sketches in Tain, 50, 51
Schultz, R. Weir, Khartoum Cathedral, 120
Scott, J. Oldrid, & Son, Southwark Cathedral New Approach, 266
Sellers, J. H., Design for Art Gallery, etc., Cardiff, 522
Shaw, R. Norman, Part of Regent's Quadrant, 452
Smirke, Sir R., Drawing of Temple of Jupiter, Athens, 479
Snell, J. Saxon, & Stanley M. Spoor, East Sussex Hospital, Hastings, 182, 183
Steele, Florence, Regimental Trophy, 163
Stevens, Alfred, Sketches by, 83, 89
Stevenson, R. C., Design for a Town Library, 57, 63, 64
Sutton & Gregory: Baptist Church and Schools, Nottingham, 485, 487; Design, Stafford Public Library, 211
Sykes & Evans, Plan of Design, Bolton Miners' Hall, 450

Tait, Whitelaw, & Sutton, Design, Marylebone Municipal Building 96, 97
Thomson, R. J., Cottage Hospital, Balham, 415
Thorp, J. B., Model of 'Ideal House,' 495
Tijou, Ironwork by, 179, 180
Traquair, Ramsay, House at Skirling, 114, 118
Troup, F. W., Hall, Wootton Fitzpaine, Charmouth, 323
Truscott, A., & A. H. Moses, Baptist Church, Camden, N.J., 294

Walcot, W., Main Entrance to St. Mark's Hospital, Venice, 10
Waterhouse, Alfred, Drawings of Bridges, 169, 173, 199, 205, 211
Webb, Aston, Chapel, Worksop College, 604
Welch, H. A., Hendon Fire Station, 132, 133
Wilkinson, L., Santa Maria in Campitelli, Rome, 261
Wilson, T. M., Design, Hendon Fire Station, 133-135
Wittet, G., Decorations on Occasion of Royal Visit to India, 667-669
Wood, Edgar, Manchester Old Town Hall Façade, 715
Worthington & Son, T., Design for Manchester Library and Art Gallery, 10
Wright, W. H., Design for Fireplace, 143

Zanelli, Angiolo, 'Altare della Patria,' Victor Emmanuel Monument, Rome, 1, 6, 7, 11

ILLUSTRATIONS.

[*The Illustrations will be found on, or immediately following or preceding, the pages indicated.*]

ABBEY, CROXDEN, Plan, 545
Abbey of Batalha, Portugal, 577, 578
Alcobaca, the Abbey Church, 457, 458
Almshouses, Nottingham: Design by Brewill & Baily, Architects, 396, 397
Alperton, Church: W. A. Pite, Architect, 726
American Architecture, 293-296
American Republics: Design for International Bureau of, by Cass Gilbert, 27
Architectural Designs, Royal Academy Schools, 1911 (see 'Royal Academy')
Art Gallery and Museum, Cardiff: Design by J. H. Sellers, 522
Art Gallery, St. Louis, Mo.: Cass Gilbert, Architect, 35
Ascot Place, Organ Front and Fireplace: Arnold Mitchell, Architect, 365
Ashstead, House at: A. C. M. Edwards, Architects, 727
Assize Courts, Liverpool: Design by Elmes, 475
Athens, Temple of Jupiter: from Drawing by Sir Robert Smirke, 479
Austin, Texas: University Library: Cass Gilbert, Architect, 39

BALHAM, the Weir Cottage Hospital: R. J. Thomson, Architect, 415
Balustrades, Designs for, 179, 180
Banbury, the 'Reindeer' Inn: Drawn by S. Aveling, 263
Bank, Boston, Mass.: Cass Gilbert, Architect, 33
Bank Premises, West Ealing: Hall-Jones & E. S. Cummings, Architects, 259
Basing House, the Dove Cote, 91
Batalha, Abbey of, 577, 578
Baths, Winnington: L. W. Ensor, Architect, 43 (see correction on p. 92)
Bedford College, Regent's Park: Basil Champneys, Architect, 763
Bembridge, 'Island Cottage'; A. Jessop Hardwick, Architect, 602
Berners Street, W., Business Premises: L. A. Hayes, Architect, 456, 457
Beverley Minster, Details: Drawn by J. Macgregor, 182
Birmingham Municipal Buildings Extension: H. V. Ashley & Winton Newman, Architects, 267
Bletchingley, Alterations to 'Underhills': R. P. Oglesby, Architect, 106, 107
Bolton Miners' Hall: Plans, First Premiated Design, by Bradshaw, Gass, & Hope, 450; Plans, Second Premiated Design, by Sykes & Evans, 450
Bombay, Civic Decorations of: G. Wittet, Architect, 667-669
Bombay, General Post Office: John Begg, Architect, 642
Boston, Bank: Cass Gilbert, Architect, 33
Boulogne Column, 15
Brasses, Monumental, 69-73, 183, 184, 460
Brickwork, Unstead Manor House, near Godalming, 135
Bridge: for Crossing the Thames, Novel Suggestion for a, 768; Monmouth, 174
Bridge, Old, of St. John's, Cambridge: Drawn by S. Aveling, 75
Bridge, Ouse, York: Drawn by D. Morrell, 577, 579
Bridges: Drawings of, by Alfred Waterhouse, 169, 173, 199, 205, 211
Bridge, Wooden Trestle, Cressage, 766
Brighton, Hove, and Sussex Grammar School: S. B. Russell, Architect, 689
British Guiana, a Wood-Frame House: Ernest George & A. B. Yeates, Architects, 577
Bromley-by-Bow, Chimney-piece, 251
Bungalow at Howth: Chillingworth & Levie, Architects, 701-703
Bury St. Edmunds, Abbey Gateway: Drawn by P. D. Hepworth, 487

CAMBRIDGE, Old Bridge of St. John's: Drawn by S. Aveling, 75
Cambridge, Presbyterian College: H. T. Hare, Architect, 202
Cambridge, Queens' College, New Buildings: C. G. Hare, Architect, 604, 605
Cambridge: Queens' College, 310; Trinity, Gonville and Caius Colleges, 203
Cambridge, Some Works by Mr. Basil Champneys at, 751, 752, 762, 763
Canadian Life Building, Ottawa: A. Keefer, Architect, 518
Capital, St. Paul, Minnesota: Cass Gilbert, Architect, 30, 31, 38, 39
Cardiff Art Gallery and Museum: Design by J. H. Sellers, 522
Cathedral, Khartoum: R. Weir Schultz, Architect, 120
Cathedral: Old, of Coimbra, 301, 457, 458; Oporto, 458
Cathedral, Rheims: Drawn by Arnold Mitchell, 367
Cathedral, Senlis: Drawn by P. D. Hepworth, 486
Ceiling, Ford Abbey, 149
Champion Hill, House at: G. Ll. Morris, Architect, 455, 456
Champneys, Basil, Portrait of, 762
Chapel, Design for Royal Memorial: by S. Clough, 517; by G. H. Foggitt, 515, 516
Chapel, Hanover, Regent-street, London: C. R. Cockerell, architect, 305
Chapel, U.S. Military Academy, West Point, New York: Cram, Goodhue, & Ferguson, Architects, 597
Chicago, Lay-out of Offices, 436
Chimney-pieces, Milan and Bromley-by-Bow, 251
Chiswick, Hogarth's House, 660
Church, Alperton: W. A. Pite, Architect, 726
Church and Schools, Baptist, Nottingham: Sutton & Gregory, Architects, 485, 486
Church, Camden, N.J.: Truscott & Moses, Architects, 294
Church: Coimbra, 729-731; Hitchin, 718
Church, Dieppe: the Lady Chapel, St. Jacques: Drawn by H. C. Brewer, 10
Church, East Greenwich: St. Michael and St. Andrew: Basil Champneys, Architect, 754, 755
Church, Frensham: W. Curtis Green, Architect: Batts Corner, 324; the Good Shepherd, 325
Church, Jamaica: St. Barnabas: Hastwell Grayson, Architect, 643
Church, London, St. Martin-in-the-Fields: Royal Academy Silver Medal Drawings, by W. L. Clark, 427
Church, West Hampstead: St. Luke's: Basil Champneys, Architect, 754
Church, West Hartlepool: Lofting & Cooper, Architects, 300; Design by J. H. Morton, 486, 487
Church, Zlonic: Restored by Professor F. Ohmann, 625, 627
Coimbra, Old Cathedral, etc., 301, 302, 457, 458; 729-731
College, Bedford, Regent's Park: Basil Champneys, Architect, 763
College, Caius: Combination-Room: Arnold Michell, Architect, 365
College, Mansfield, Oxford: Basil Champneys, Architect, 751
College, Merton, Oxford: New Quadrangle: Basil Champneys, Architect, 747
College, Newnham, Cambridge: Basil Champneys, Architect, 751, 752, 762
College, Oriel: Basil Champneys, Architect, 763
College, Presbyterian, Cambridge: H. T. Hare, Architect, 202
College, Queens', Cambridge: New Buildings: C. G. Hare, Architect, 604, 605
Colleges, Cambridge, 202, 203, 310, 604, 605, 751, 752, 762
College, War, Washington: McKim, Mead, & White, Architects, 296
College, Worksop, Notts: Interior of New Chapel: Aston Webb, Architect, 604
Concrete Houses, Poured, 765
Connecticut: Design for State Library and Supreme Court, by Cass Gilbert, 32
Cork, Municipal Technical Institute: Arthur Hill, Architect, 443
Cottage, Bembridge: A. Jessop Hardwick, Architect, 602
Cottage, Letchworth: J. A. Hallam, Architect, 505, 508
Cottages, St. Helens, Hastings: A. R. Jemmett, Architect, 421

TRATIONS (continued):—
ges, Wallsend-on-Tyne: E. Cratney, Architect,
y Court House, Newark: Cass Gilbert, Archi-
, 33, 39
ge, Wooden Trestle Bridge, 766
en Abbey, Plan, 545
on, Hall at: W. Curtis Green, Architect, 326
ix, Raising the, on a Mexican Temple: Drawn
A. C. Conrade, 10
ms House, New York: Cass Gilbert, Architect,
39, 760, 761

LINGTON, 'Oldcastle': Ernest Newton,
hitect, 725, 727
. Signor Arturo, Portrait of, 727
ation, a Scheme of: F. H. Bulmer, Architect,

ations, Royal Visit to India: G. Wittet,
hitect, 667-669
ative Panel in a Municipal Building: Design
G. H. Day, 172
e, the Lady Chapel, St. Jacques: Drawn by
C. Brewer, 10
g-Room with Decorated Frieze, 495
Immingham, 763, 764
aster, Business Premises: S. D. Kitson, Archi-
, 604, 605
way, Pauntley Church, Gloucestershire, 219
Cote, Basing House, 91
War Memorial: Design by H. T. Edwards, 510

NG, WEST, Bank Premises: Hall-Jones &
S. Cummings, Architects, 259
, 'Woodside,' Ernest George & A. B. Yeates,
hitects, 576
ange, Royal, Designs for a (see 'Institute of
hitects')

PLACE, a Georgian, 622
lace, Ascot Place: Arnold Mitchell, Architect,

lace, Modelled and Carved Design for: by
H. Wright, 143
roof Curtain for Theatre, Design for: by
ten D. Copsey, 144
Station, Hendon: H. A. Welch, Architect, 132,
; Design by T. Millwood Wilson, 133-135
nce, from a Sketch by Alfred Waterhouse, 211
nce: Palazzo Davanzati, 289-291, 301; Palazzo
ndolfini, 262
nce, part of Riccardi Chapel: Drawn by
el H. Leaver, 331
Abbey Ceiling, 149
Gwalior, 457, 459
tain, Vienna: by Professor F. Ohmann, 635
ham, Churches: W. Curtis Green, Architect,
, 325

TRY, Stamford-street, London, 767
en, Winter: Royal Academy Bronze Medal
sign, by C. A. Farey, 427
way, Abbey, Bury St. Edmunds: Drawn by
D. Hepworth, 487
ary and Silos, Immingham Docks, 763
wich, East: Church of St. Michael and
Andrew: Basil Champneys, Architect, 754, 755
hall, Design for a (see 'Institute Students'
awings')
or Fort, 457, 459

IFAX TOWN-PLANNING SCHEME: First
miated Design, by Longbottom & Culpan,
-243
Bedales School, Petersfield: E. W. Gimson,
hitect, 655
Croydon: W. Curtis Green, Architect, 326
Lindsey, Kensington, W.: R. P. Jones,
hitect, 454, 456
Masonic, Shanghai: Christie & Johnson,
hitects, 540, 541
Miners', Bolton (see 'Bolton')
Wootton Fitzpaine, Charmouth: F. W. Troup,
hitect, 323
ostead, House at: W. Curtis Green, Architect,

ostead, University College School: Arnold
chell, Architect, 365, 366
ostead, West: St. Luke's Church: Basil
ampneys, Architect, 754
ver Chapel, Regent-street, London; Professor
R. Cockerell, Architect, 305
ow, Julian Cottage: Arnold Mitchell, Architect,

ngs, Cottages at St. Helens: A. R. Jemmett,
hitect, 421
ngs, East Sussex Hospital: J. Saxon Snell &
nley M. Spoor, Architects, 182, 183; Second
miated Design, by C. K. & T. C. Mayor,
, 240, 241; Third Premiated Design, by
P. Adams & C. H. Holden, 240, 241
eld, Houses: G. Lucas & A. Lodge, Architects,
, 691
ion, Fire Station: H. A. Welch, Architect,
t, 133; Design by T. Millwood Wilson, 133-135
land Town, an Old, 50, 51
in, St. Mary's Church, 718
rth's House, Chiswick, 660
ital, Children's, Paddington, Extensions: A. E.
nby, Architect, 39-41
ital, Cottage, Balham: R. J. Thomson, Archi-
t, 415
ital, East Sussex, Hastings (see 'Hastings')

Hospital, St. Mark's, Venice, Entrance to: Drawn by W. Walcot, 10
Hotel, Adelphi, Liverpool: R. Frank Atkinson, Architect, 548-554, 635-637, 736-738
House, Ashstead: A. C. M. Edwards, Architect, 727
House, Bletchingley: Alterations to 'Underhills': R. P. Oglesby, Architect, 106, 107
House, Champion Hill: G. Ll. Morris, Architect, 455, 456
House, Dallington: 'Oldcastle': Ernest Newton, Architect, 725-727
House, Design for a Town: by W. J. Roberts, 569, 570
House, Esher: 'Woodside': Ernest George & A. B. Yeates, Architects, 576
House, Hampstead: W. Curtis Green, Architect, 141
House, Hogarth's, Chiswick, 660
House, 'Ideal,' Model of Mr. Cherry's: by J. B. Thorp, 495
House, 'Ideal,' Olympia: by R. C. Fry, 494
House, Skirling: R. Traquair, Architect, 113, 118
House, Voor Linden, near the Hague: R. F. Johnston, Architect, 95, 96
House, Wood-Frame, British Guiana: Ernest George & A. B. Yeates, Architects, 577
Houses by Arnold Mitchell, 349, 364, 368, 369
Houses, Hatfield: G. Lucas & A. Lodge, Architects, 683, 691
Houses, Old, Lincoln's Inn-fields: Drawn by A. C. Conrade, 417
Houses, Poured Concrete, 765
Howth, Bungalow at: Chillingworth & Levie, Architects, 701-703
Hyde Park, interior of a Dining-Room: F. H. Bulmer, Architect, 279

'IDEAL' HOUSE, Olympia, Model of Mr. Cherry's: by J. B. Thorp, 495
'Ideal' House, the, Olympia: by R. C. Fry, 494
Immingham Dock, 763, 764
Imperial London: Drawn by A. Berrington, 10-13
India, Decorations for Royal Visit to: G. Wittet, Architect, 667-669
Indian Institute, Oxford: Basil Champneys, Architect, 753
Institute, Municipal Technical, Cork: Arthur Hill, Architect, 443
Institute of Architects' Students' Drawings: Arthur Cates Prize Drawings, by J. B. F. Cowper, 240; Owen Jones' Prize Drawings, by Noel H. Leaver, 330, 331; Pugin Studentship Drawings, by P. D. Hepworth, 486; Pugin Studentship Drawings, by James Macgregor, 182; Soane Drawings (Design for Guildhall), by Piet de Jong, 122-124; Soane Design, by W. Friskin, 124, 125; Tite Drawings, by T. H. Chalkley, 153; Tite Prize Drawings, by Louis de Soissons, 152
Insurance Offices, Norwich Union, Fleet-street, E.C., London: Howell & Brooks, Architects, 696
Ironwork by Tijou, 179, 180

JAMAICA, Church of St. Barnabas: Hastwell Grayson, Architect, 643

KENSAL RISE, Triptych: by J. D. Batten, 135
Kensington, Lindsey Hall: R. P. Jones, Architect, 454, 456
Khartoum Cathedral: R. Weir Schultz, Architect, 120
King's Lynn: King Edward VII. Grammar School: Basil Champneys, Architect, 752

LAMP POSTS: Designs by Alfred Stevens, 89
Legislative Building, Regina, Saskatchewan: Design by Cass Gilbert, 39
Letchworth, Cottage at: J. A. Hallam, Architect, 505, 508
Library and Art Gallery, Manchester: Design by Adams & Holden, 68, 69; Design by T. Worthington & Son, 10
Library and Supreme Court, Connecticut: Design by Cass Gilbert, 32
Library, Design for Town: by R. C. Stevenson, 57, 63, 64
Library, New York: Carrère & Hastings, Architects, 295
Library, Stafford (see 'Stafford')
Library, University of Texas, Austin: Cass Gilbert, Architect, 39
Limburg on the Lahn: Sketched by Alfred Waterhouse, 211
Lincoln's Inn-fields, Illustrations from, 675-677
Lincoln's Inn-fields, Old Houses: Drawn by A. C. Conrade, 417
Liverpool, Adelphi Hotel: R. Frank Atkinson, Architect, 548-554, 635-637, 736-738
Liverpool: Design for Assize Courts, by Elmes, 475
London, Imperial: Drawn by A. Berrington, 10-13
London Opera House, the: Bertie Crewe, Architect, 270-272, 334, 374
London University, Proposed Scheme: by D. B. Niven, 327
Luxembourg, Paris, Vista in Garden of, 401

MANCHESTER CATHEDRAL, Reredos: Basil Champneys, Architect, 753
Manchester Library and Art Gallery: Design by: Adams & Holden, 68, 69; T. Worthington & Son, 10
Manchester, Old Town Hall, 229, 230
Manchester Old Town Hall: Scheme for re-erecting part of Façade, by Edgar Wood, 715
Man Singh, Palace of, Gwalior Fort, 457, 459
Marylebone Municipal Buildings: Design by: Lucas, Lodge, & Farey, 535; S. Woods Hill, 85, 96, 97; Tait, Whitelaw, & Sutton, 96, 97
Mediæval Sculpture, 264, 271
Memorial Chapel, Design for Royal: by S. Clough, 517; by G. H. Foggitt, 515, 516
Memorial, Dover War: Designed by H. T. Edwards, 510
Memorial, Royal, Study for a, Parliament-square, S.W.: by Lanchester & Rickards, 666
Mexican Temple, Raising the Crucifix on the Summit of a: Drawn by A. C. Conrade, 10
Milan, Chimney-piece, 251
Military Academy Buildings, West Point, New York; Cram, Goodhue, & Ferguson, Architects, 597, 598
Mill Hill, McClure Memorial Music School: by Martin S. Briggs, 574
Minnesota, Capitol, St. Paul: Cass Gilbert, Architect, 30, 31, 38, 39
Mitchell, Arnold, Some Works by, 349, 364-369
Model of Mr. Cherry's 'Ideal' House: by J. B. Thorpe 495
Monmouth, Bridge, 174
Monument, Sketch for a: by Alfred Stevens, 88
Monument, the Tegetthoff, Vienna, 15
Monument, Victor Emmanuel, Rome: the 'Altare della Patria': Angiolo Zanelli, Sculptor, 1, 6, 7, 11; Design for the 'Altare della Patria,' by Signor Arturo Dazzi, 726-728
Municipal Buildings Extension, Birmingham: H. V. Ashley & Winton Newman, Architects, 267
Municipal Buildings, Marylebone (see 'Marylebone')

NATIONAL COMPETITION DESIGNS, 143-145
Newark, Essex County Court House: Cass Gilbert, Architect, 33, 39
New York, Customs House: Cass Gilbert, Architect, 34, 39, 760, 761
New York Library: Carrère & Hastings, Architects, 295
New York, Military Academy Buildings, West Point: Cram, Goodhue, & Ferguson, Architects, 597, 598
Nottingham, Baptist Church and Schools: Sutton & Gregory, Architects, 485, 487
Nottingham, Design for Almshouses: by Brewill & Baily, Architects, 396, 397
Nottingham, Territorial Headquarters: Brewill & Baily, Architects, 396, 397

OFFICES, CHICAGO, Lay-out of, 486
Offices, Insurance, Fleet-street, London: Howell & Brooks, Architects, 696
Offices, Shipping, Southampton: W. Flockhart and Lemon & Blizard, Architects, 319, 330
Opera House, London: Bertie Crewe, Architect, 270-272, 334, 374
Oporto Cathedral, 458
Organ Front, Ascot Place: Arnold Mitchell, Architect, 366
Ottawa, Canadian Life Building: A. Keefer, Architect, 518
Ottawa, Illustrations of, 517-519
Oxford, Indian Institute: Basil Champneys, Architect, 753
Oxford, Mansfield College: Basil Champneys, Architect, 7 1
Oxford, Merton College, New Quadrangle: Basil Champneys, Architect, 747

PADDINGTON, Children's Hospital Extensions: A. E. Munby, Architect, 39-41
Palace, Design for a Façade of a: by S. Clough, 516
Palace of Man Singh, 457, 459
Palazzo Davanzati, the, Florence, 289-291, 301
Panel, Decorative, Design for, in a Municipal Building: by G. H. Day, 172
Paris: Fire Brigade Trophy, 297; New Buildings in Central, 153, 154; Views in, 401
Parliament Buildings, Ottawa, 517
Parliament-square Royal Memorial, Study for a: by Lanchester & Rickards, 666
Pauntley Church Doorway, 219
Pavilion in the Stadt Park, Vienna: by Professor F. Ohmann, 635
Petersfield, Hall at Bedales School: E. W. Gimson, Architect, 655
Philadelphia, University of Pennsylvania: Archæological Museum: Day Brothers & Klauder, Wilson Eyre, and Cope & Stewardson, Architects, 593; Terrace Dormitories: Cope & Stewardson, Architects, 596
Place, Design for, on South Side of Thames: Royal Academy School Drawings: by W. H. Gummer, 426
Plumb-Rule made by Bromsgrove Guild, 321
Polytechnic, North-Western, Kentish Town-road: Arnold Mitchell, Architect, 605
Portico, William Kent's Seven-Arched, at Rousham, 66
Portrait of: Basil Champneys, 762; Arturo Dazzi, 727; Cass Gilbert, 30; Arnold Mitchell, 366; F. R. Yerbury, 232; Angiolo Zanelli, 5
Post Office, General, Bombay: John Begg, Architect, 642
Prague, the Bridge of: Sketched by Alfred Waterhouse, 199
Premises, Business, Berners-street, W.: Louis A. Hayes, Architect, 456, 457
Premises, Business, Doncaster: S. D. Kitson, Architect, 604, 605
Premises, Business, Whiteley's: J. Belcher & J. J. Joass, Architects, 697-701, 719, 720

ILLUSTRATIONS (continued) :—
Premises, Norwich Union Insurance, Fleet-street, London : Howell & Brooks, Architects, 696
Premises, St. James's-street, London : Leonard Martin, Architect, 663
Prestatyn Estate, North Wales, Lay-out for : First Premiated Design, by P. Abercrombie, E. L. Bower, and T. F. Shepheard, 397 ; Second Premiated Design, by H. Falkner, 397 ; Third Premiated Design, by Reginald Dann, 398 ; Highly Commended, G. Lucas & F. Lodge, 398 ; and H. J. Rowse & S. A. Kelly, 399
Priory, St. Leonards, Stamford, 237
Public Place, Design for a : by W. A. Ross, 145
Pugin Studentship Drawings (see 'Institute of Architects')

REGENT'S QUADRANT, part of : R. Norman Shaw, Architect, 452
Regimental Trophy : by Florence Steele, 163
Reredos, Manchester Cathedral : Basil Champneys, Architect, 753
Residence, Proposed, for University Men : Design by A. W. S. Cross & A. E. Munby, 341, 342
Rheims Cathedral, West Front : Drawn by Arnold Mitchell, 367
Riccardi Chapel, Florence : Drawings of Portions : by Noel H. Leaver, 331
Rome : Baroque Work from, 280, 281 ; Old Views of, 621, 631 ; the Villa Pia, 385-388
Rome, Santa Maria in Campitelli : Drawn by L. Wilkinson, 261
Rome, Victor Emmanuel Monument : the 'Altare della Patria' : Angiolo Zanelli, Sculptor, 1, 6, 7, 11 ; Design for the 'Altare della Patria,' by Signor Arturo Dazzi, 726-728
Rome, Villa Madama Drawings : by Noel H. Leaver, 330, 331
Rome, Villa Pia : Drawn by C. A. Harding, 396
Roofs, Illustrations of, 323-326
Rousham, William Kent's Seven-Arched Portico, 66
Royal Academy Schools : an Architectural Design, by W. H. Gummer, 426 ; Design awarded Silver Medal, by W. Llewellyn Clark, 427 ; Design awarded Bronze Medal, by C. A. Farey, 427 ; Design for a Town House, by W. J. Roberts, 569, 570

ST. LOUIS Art Gallery : Cass Gilbert, Architect, 35
St. Louis Exposition, Festival Hall : Cass Gilbert, Architect, 38
St. Louis, Mo. : Washington University : Cope & Stewardson, Architects, 595
St. Martin-in-the-Fields : Royal Academy Silver Medal Drawings : by W. L. Clark, 427
St. Paul's Cathedral, over South Aisle, 190
Salzburg, Suggestion for Laying-out of Market-Place : by Professor Friedrich Ohmann, 635
Saskatchewan, Design for Legislative Building, Regina : by Cass Gilbert, 39
Scaffolding, Patent Safety, 338, 339
Schloss Linderhof, 125
School, Brighton, Hove, and Sussex : S. B. Russell, Architect, 689
School, Industrial Arts, Trenton, N.J. : Cass Gilbert, Architect, 293
School, King Edward VII. Grammar, King's Lynn : Basil Champneys, Architect, 752
School, Music, Mill Hill : by Martin S. Briggs, 574
School, University College, Hampstead : Arnold Mitchell, Architect, 365, 366
School, York, 542, 543
Schools, Divinity, Cambridge : Basil Champneys, Architect, 763
Sculpture, Mediæval, 264, 271
Senlis Cathedral : Drawn by P. D. Hepworth, 486
Shanghai, Masonic Hall : Christie & Johnson, Architects, 540, 541
Skirling, House at : R. Traquair, Architect, 113, 118
Soane Medallion Drawings (see 'Institute Students' Drawings')
Southampton Shipping Offices : W. Flockhart and Lemon & Blizard, Architects, 319, 330
Southwark Cathedral New Approach : J. Oldrid Scott & Son, Architects, 266
Stadium, Plan of, Stockholm, 20
Stadt Stein, near Schaffhausen, 311
Stafford Public Library : Selected Design, by Briggs, Wolstenholme, & Thornely, 210 ; Second Design, by Sutton & Gregory, 211 ; Third Design, by Castle & Warren, 210
Staircase after Fire, Derby, 17
Stamford, Some Architecture of, 236, 237
Stevens, Alfred, Sketches, etc., by, 88, 89
Stockholm, Plan of Stadium, 20

TAIN, Sketches in, 50, 51
Temple of Jupiter, Athens : from Drawings by Sir R. Smirke, 479
Territorial Headquarters, Nottingham : Brewill & Baily, Architects, 396, 397
Theatre, Design for Fireproof Curtain for : by Helen D. Copsey, 144
Tijou, Ironwork by, 179, 180
Tite Drawings (see 'Institute of Architects')
Toledo, Bridge : Drawn by Alfred Waterhouse, 173
Town Hall, Old, Manchester, 229, 230, 715
Town Planning, Halifax : Scheme by Longbottom & Culpan, 241-243
Town Planning, Prestatyn (see 'Prestatyn')
Trentham Hall, Demolition of, 434
Triptych, St. Martin's Church, Kensal Rise : by J. D. Batten, 135
Trophy, Regimental : by Florence Steele, 163

UNIVERSITY COLLEGE SCHOOL, Hampstead : Arnold Mitchell, Architect, 365, 366
University Library, Austin, Texas : Cass Gilbert, Architect, 39
University Men, Proposed Residence for : Design by A. W. S. Cross & A. E. Munby, 341, 342
University of Cambridge : Detail of Divinity School : Mr. Basil Champneys, Architect, 763
University of Coimbra, Degrees Hall, 302
University of Pennsylvania, Philadelphia : Archæological Museum ; Day Brothers & Klauder, Wilson Eyre, and Cope & Stewardson, Architects, 592 ; Terrace Dormitories : Cope & Stewardson, Architects, 596
University, Proposed London : Scheme by D. Niven, 327
University, Washington, St. Louis, Mo. : Cope & Stewardson, Architects, 595
Unstead Manor House, near Godalming, 135, 136

VENICE, Main Entrance to St. Mark's Hospital from an Etching by W. Walcot, 10
Vicarage, Fleet-street, E.C. : Basil Champney, Architect, 756
Victor Emmanuel Monument, Rome : the 'Altare della Patria' : Angiolo Zanelli, Sculptor, 1, 6, 7, 11 ; Design for the 'Altare della Patria,' by Signor Arturo Dazzi, 726-728
Vienna, Design for Revision of the Karls-Platz : by Professor Friedrich Ohmann, 626, 627, 634
Vienna, Fountain in the Elizabeth Garden : by Professor F. Ohmann, 635
Vienna, Pavilion in the Stadt Park : by Professor F. Ohmann, 635
Vienna, the Tegetthoff Monument, 15
Villa Madama, Rome, Parts of : Drawn by Noel H. Leaver, 330, 331
Villa Pia, Rome, 385-388
Villa Pia, Rome : Drawn by C. A. Harding, 396
Voor Linden, near The Hague : R. F. Johnston, Architect, 95, 96

WALLSEND-ON-TYNE, Cottages : E. Cratney, Architect, 220
Washington War College ; McKim, Mead, & White, Architects, 296
Wells, Chapel, Vicar's Close ; Drawn by J. Macgregor, 182
West Hartlepool, Church : Design by J. H. Morton, 486, 487 ; Lofting & Cooper, Architects, 300
Westminster Hall Roof : Measured and Drawn by W. Rennie & E. R. Gribble, 324
Whitehall, a Suggestion for : Drawn by A. Berrington, 667, 670
Whiteley's New Premises, Queen's-road, W. : Belcher & J. J. Joass, Architects, 697-701, 718-720
Winnington, Baths : L. W. Ensor, Architect, 43 (see correction on p. 92)
Winnipeg, Streets in, 125, 126
Wootton Fitzpaine, Hall : F. W. Troup, Architect, 323
Worksop College New Chapel : Aston Webb, Architect, 604

YORK Elementary School : Plans : First Design by J. T. Proffitt, 542 ; Second Design, by E. R. Barrow, 542 ; Third Design, by J. A. O. Allan, 543
York, the Ouse Bridge : by D. Morrell, 577, 579

ZLONIC, Parish Church, Restored by Professor F. Ohmann, 625, 627

PRINTED AT WINDSOR HOUSE PRINTING WORKS, BREAM'S BUILDINGS, LONDON, E.C.

Vol. CII., No. 3596.—Friday, January 5, 1912.

THE BUILDER

CONTENTS.

	PAGE
The Policy of the R.I.B.A.	1
Painter and Decorator	3
Notes	3
The Sketch Society	4
The "Altare della Patria" of the Victor Emmanuel Monument at Rome (with Illustrations)	4
General News	7
Competition News	8
Correspondence (with Plan)	8
Fifty Years Ago	9
Editorial Summary	10
Meetings	10
Notes to Illustrations	10
Monthly Review of Civic Design:—	
Imperial London (with Illustrations)	11
Town Planning	13
Notes (with Illustrations)	15
The Building Trade:—	
Legal Points about Tenders	16
Failure of Buildings Caused by Drought	16
Land Taxes and the Building Trade	17
Visit of Students to Varnish and Enamel Works	17
Fire at Silk Mill Buildings, Derby	17
General Building News	17
Projected New Buildings in the Provinces	18
Obituary	18
The Royal Institute of British Architects	19
Olympic Stadium, Stockholm, 1912 (with Plan)	19
The London Architect's Procedure	20
Legal Column	21
List of Competitions, Contracts, etc., Open	22
London Councils	24
Foreign and Colonial	24
Trade Catalogues	24
Patents	25
Prices Current	25
Tenders	26

Illustrations.

Main Entrance to St. Mark's Hospital, Venice. From an Etching by Mr. W. Walcot.

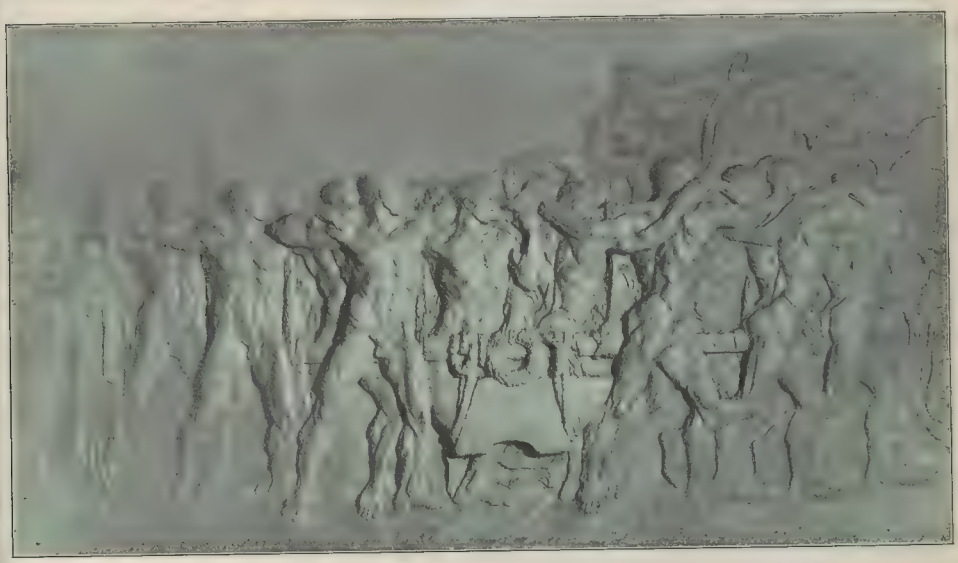
The Lady Chapel at the East End of St. Jacques, Dieppe. From a Drawing by Mr. H. C. Brewer.

Raising the Crucifix on the Summit of a Mexican Temple. From a Drawing by Mr. A. C. Conrade.

Design for the Manchester Library and Art Gallery. By Messrs. Thomas Worthington & Son.

Imperial London:—
Bird's-Eye View and Plan of Scheme for the Development of the Surrey Side of the Thames Drawn by Mr. Adrian Beerington.

Victor Emmanuel Monument, Rome:—
Details of the "Altare della Patria." Signor Angiolo Zanelli, Sculptor.



Part of the "Altare della Patria." Signor Angiolo Zanelli, Sculptor. (*See page* 4.)

THE POLICY OF THE R.I.B.A.

RECENT correspondence in our columns gives expression to a feeling of discontent amongst the Associate members of the Institute with the general attitude and policy of the Council, which discontent appears to be aggravated and brought to a head by the proposals for absorbing the members of the Society of Architects in order to facilitate Registration.

In so far as the Associate class represents the younger and better-educated members of the Institute, and in so far as their discontent voices the eternal conflict between the new ideas and the old, we may say at once that we sympathise with their feelings. Although we cannot associate ourselves with everything said by our correspondents—indeed, must expressly disassociate ourselves from certain of their remarks—we cannot disguise from ourselves that the Council of the Institute has laid itself open to them, has not always been representative of the best elements in the profession, or as conspicuous as it should be in the forefront of progress.

It is, we suppose, the inevitable tendency of all such societies to become fossilised, and eventually to concern

themselves more with their own dignity and privileges, forms, and ceremonies than with the vital interests of the science or art for whose advancement their Charter was granted. It is also perhaps the inevitable tendency of all those who hold positions of dignity and authority in such societies to adopt the same attitude towards the interests of the less dignified and privileged members they are supposed to represent. The Institute is not the only society where respectable gentlemen may sometimes be found who appear to think that all that is required of them is to occupy with dignified affability the exalted position to which their own native worth naturally and justly entitles them, and serve time on the Council in the complacent belief that they are serving their professions.

It is, no doubt, only natural that anyone with an established practice, reputation, and a seat on the Council should feel some slight difficulty in condemning a state of things which brought him to the front without discounting his own success in the process, or in realising that there is anything seriously wrong with a world which has given him all these desirable things. It is equally natural, however, that those without them should see it very clearly.

There is little doubt, we should imagine, that both the Institute and its Council have in a general way suffered from this inherent vice in a somewhat aggravated form, and that the interests of the younger members have not always been studied with exactly that anxious solicitude which could rightly be described as paternal, although, on the other hand, a lack of tact and of right feeling does not always amount to criminal negligence.

While, then, we have every sympathy with the younger members, to whom the struggle for mere existence is very real, we must confess that we are by no means satisfied that the present agitation is prompted solely by a concern for their welfare. If the Associates, as a class, are working for a general reform and uplift of the whole Institute, which would involve incidentally the removal of their special grievances, they may expect the sympathy and support of all loyal and right-minded members; but if they are simply a privileged class fighting to retain and to increase their privileges at the expense of those less fortunate their attitude is less heroic, and one in which we can take but a qualified interest.

It seems to us that in considering the grievances of the Associates and their attitude towards the present proposals we are bound to recognise that their present position is a somewhat anomalous one. So relatively large and influential a class does not appear to have been contemplated by the Charter. Its existence seems to be contrary to its spirit and intention. The continual appeals from the Council to Associates to pass on to the Fellowship suggests that the position of the average Associate was always recognised to be a temporary one from which he would pass in due course to the Fellowship as soon as he was eligible, and also that the present situation is not the fault of the governing body. On the contrary, a remark by one of our correspondents, with reference to a recent appeal by the President, that the Associates "would be well advised to do nothing of the sort," suggests evidence of a deliberate and settled policy antagonistic to the constitution of the Institute, which, if consistently pursued till all the present Fellows die out, will ultimately reduce the whole situation to absurdity.

Such a definite attitude should be capable of a definite explanation. We hesitate to suggest that the higher subscription is the trouble, and that the Associate, after agitating till his present position and title of A.R.I.B.A. has become good enough for business purposes, prefers to spend his money some other way, and to obtain greater powers and privileges in the Institute by further agitation instead of by payment of the higher subscription of a Fellow.

We prefer to think that the examination is at the root of the difficulty, and that a certain pride and satisfaction is felt in belonging to a class that can only be entered by merit and in holding a diploma which is a proof of some definite knowledge and skill.

Here, again, it is possible that certain considerations are overlooked. The examination was instituted to raise the standard of the whole Institute—Fellows as well as Associates. It was never intended solely for the benefit of the Associates as such, or to create a privileged class of members who by their self-interested action would defeat its object.

When, therefore, the complaint is made that so few of the Fellows have passed the examination, or when it is put forward as a grievance that, while the Associates outnumber the Fellows by nearly two to one, they are not proportionately represented on the Council, the reply seems to be that the grievances are of the Associates' own making, and that the remedy is in their own hands. It is entirely their own fault if the Associates so largely outnumber the Fellows, while if every Associate now eligible immediately took up the Fellowship the present representation on the Council might not be considered disproportionate for those who were left—the genuine Associates, whose legitimate interests should certainly be most scrupulously guarded.

It does not seem altogether reasonable that the Institute should be blamed for the evil results of a situation for which it is not responsible, which was not contemplated by its constitution, is not the natural outcome of any normal development, but is due to the action of the Associates themselves, and is terminable at their discretion.

With every wish to appreciate and do justice to the point of view of the Associates, it must be said that such considerations as these are likely to discount any opposition they offer to the proposals before the meeting next Monday, and that arguments based on the fact that so many of their number have not altogether acted up to the spirit of the Charter and constitution of the Institute must necessarily fail to impress. We cannot help feeling that the whole situation is somewhat out of drawing and lacking in proportion, and that the older Associates in established practice and eligible for the Fellowship are viewing the matter from a somewhat false position. They might see it in truer perspective if they viewed it from the position to which their qualifications entitle them.

Our correspondents seem to betray a tendency to look upon these proposals as merely another instance of the neglect of their interests, and to take advantage of the opportunity to air all their grievances and to impress the Council in a general sort of way with the fact that they are too important to be ignored, thus introducing much irrelevant matter into a question which is already controversial enough.

This may be good tactics from their point of view, although we doubt it, and are glad to see that a resolution dealing with the Associates' representatives on the Council has been postponed to a future occasion, when it will be more likely to receive the attention it deserves.

As, however, our correspondents do not express any decided or reasoned objections to the principle of the proposals, we are encouraged to think that there is no really widespread and settled objection to them, and to hope that, after all, they may be discussed on their merits—and their merits alone and finally adopted with the goodwill of everyone.

Surely the first question all—whether Associates or Fellows have to ask themselves is this:—Are these proposals for the good of the Institute and in the best interests of architecture, or are they not? If they are not, there is no more to be said. Let them be put away. But if they are, then they must be approached for consideration in a spirit of goodwill. Some sacrifice may have to be made for the object to be obtained. We cannot make omelets without breaking eggs, and this is not a world in which something can be obtained for nothing. If the profession is to obtain the advantage of having one united and completely representative society instead of two mutually antagonistic ones, and if the Institute is to obtain the advantage of being that strengthened Society and of exercising its increased power and influence to facilitate Registration and other vital reforms, each individual member or class of members must be prepared to pay the price, care being taken that the price is reasonable and that no member or class of members be asked to pay more than a fair share.

For reasons we have already given it is quite possible that the Council has not fully understood the Associates' point of view, or realised exactly what these proposals mean to them, and that, in consequence, the Associates may be able to show that, as a matter of fact, it may cost them more to pay their share than the Council anticipated. If this is so, the terms should be capable of adjustment.

But even if it should become evident after the most mature consideration and exhaustive discussion that any terms must in the nature of things bear with undue weight upon the Associates, they must still remember that if they pay more now they will profit more in the end, as it is the younger generation

ho will ultimately enjoy the benefits of egistration. And if there should be igible and middle-aged Associates to hom this reflection brings no comfort, ho still see themselves called upon to ay a special price for benefits to be aped by their younger brethren, again ie remedy is in their own hands.

It is open to them to avoid this disaster y taking their proper place in the ranks the Fellows, so leaving those to pay ho will ultimately profit. These latter, eing young and inexperienced, may not e quite the same grave injustice in dmitting to the Fellowship competent en who are older and more experienced an themselves.

We are aware that this is regarded y some as a matter of principle. lthough it is a poor principle that will ot stand the strain of an exception, e, no more than the Associates, have ay desire to see this one more honoured the breach than in the observance.

But every reasonable man must, e think, admit that this is a quite xceptional occasion of the greatest nportance to the future of architecture which ordinary custom does not pply. It is a crisis which must be dealt ith on its merits, and settled, we hope, ith the full approval of the general ody.

After all, the Associates might remember that a reasonable number of Fellows, xamined or not examined, are, by the erms of the Charter, as necessary to the onstitution of the Institute as the ssociates themselves. Fellows must be reated somehow, if only to fulfil atutory obligations. If the Associates ill not pass on themselves or allow nyone else to—what do they suppose going to happen?

What we venture to suppose is going happen on Monday is that the ssociates, having satisfied themselves hat no slight was intended and that heir interests really were seriously onsidered and honestly dealt with by he Council, having assured themselves hat the price they are called upon to ay is no more than the advantages stify and the necessities of the case emand, will turn out to be not such errible fellows after all, or such sticklers or privilege as they would have us to elieve.

Once convince them that these proosals are for the good of the whole ofession and of the art to which they ow such eager devotion, they are far ore likely to place the least of its terests before the whole of their rivileges.

The New Year could not open under appier auspices.

CRYSTAL PALACE ENGINEERING SCHOOL.

The "Wilson Premium," for the best paper ad before the Crystal Palace Engineering ociety (affiliated to the Society of Engineers, corporated), during the present session, has en awarded by the Council to M. F. Da S. ravo, for his paper on "Aviation." Other apers read during the session were:—Railroad Construction," by W. R. L. eaumont; "Cement Testing," by A. ammar; and "Bridge Construction," by . M. Beg. The premium was presented to r. Cravo by Sir Douglas Fox, Past-President the Institution of Civil Engineers, on the casion of the 117th distribution of certifites of the above School on Tuesday, ecember 19, at which he presided.

PAINTER AND DECORATOR.

THE question, What is decorative painting? is not an easy one to be answered. Perhaps the nearest approach to a definition would be that it is studied in relationship to its surroundings, and yet a painting may be highly decorative in effect if the process is reversed and the surroundings are brought into harmony with it, though, strictly speaking, it could hardly lay claim to the title.

Take, for example, the work of the late Mr. Edwin A. Abbey, which forms the leading feature of this year's winter exhibition at Burlington House. Few painters of recent years have shown so strong an instinct for what is usually termed the decorative quality. Quite apart from the important works executed for specified positions in public buildings, a large proportion of Mr. Abbey's easel pictures owe their main interest to composition in colour and line most emphatically decorative in its aim. In the Columbus, with the "Flamingo's Flight," so much commented on when it was first exhibited, it is clear that, regarded as the visualisation of an historical incident, the picture would tell its story more vividly without the birds, but how far away would it have been from its conception of colour pattern? The same instinct prompted the introduction of the scarlet halberds in the "Richard and Lady Anne." If these paintings may not be termed "decorative" in the strictest sense of the word, they are at all events from the hand of a decorator; and the same may be said of nearly all the artist's works, not omitting the black and white illustration to which he devoted so much of his energies.

It is as yet too soon to attempt an appreciation of the ultimate position Mr. Abbey will take in the history of the painter's art. Technically most accomplished and with, in some directions, a marked individuality, it would hardly be wise to claim for him, at the moment, an outstanding position. At the same time his work possesses so much charm and makes so strong an appeal in the direction we have indicated above that we feel tempted to hope that future generations may treasure it for these qualities, and will always preserve a niche in their temple of art for the man who but a short time back passed from our midst.

The Royal Academy has done well in giving this opportunity for studying and comparing the various forms in which their late member expressed his imaginings. It is perhaps unavoidable that the easel paintings and book illustrations should be more fully represented than the strictly decorative work. If a really good set of reproductions of the frieze in the Boston Library had been included it would have greatly enhanced the interest of the exhibition and have enabled the visitor to realise more fully the range of the artist's work.

NEW BRIDGE, BOSTON.

The Boston Town Council has been recommended to instruct their Consulting Engineer (Mr. J. J. Webster) to prepare plans for a steel bridge to cost about 5,500*l.*, the bridge to have a roadway about 25 ft. wide, with footways each side 8 ft. wide.

NOTES.

The Environment of Southwark Cathedral.

WE are glad to see that public attention is aroused to the inadequate surroundings of Southwark Cathedral. Encroached upon and hidden by buildings of the most commonplace description, and dominated and dwarfed by the adjacent elevated railway track, its condition is little short of a public scandal. We are particularly interested to notice that it seems at last to be realised by the public that the setting and environment of a building powerfully affects, for good or evil, the amount of influence which it is able to exert, and that a cathedral situated as this is fails to appeal. This is just one of those buildings of historic and artistic interest to which reference is made in a suggestion for an Imperial London in our Review of Civic Design. Any broad scheme for the improvement of this district would naturally consider the approaches and surroundings of Southwark Cathedral.

Sir Joshua Reynolds' Window in New College, Oxford.

VISITORS to the Royal Academy Winter Exhibition will certainly notice the series of allegorical figures painted by Sir Joshua Reynolds for reproduction in the painted glass window at the west end of New College chapel, Oxford. In these may be seen the accomplished balance of line and mass so notable in the replicas on glass, and we can appreciate their masterly treatment without being distracted by the utter unsuitability of the method by which these designs are embodied in a painted window. Many of our readers will remember the unhappy effect of the masses of light and shade so utterly destructive of the architectural effect of this end of the chapel and have no doubt felt their admiration of the grace and dignity of the various figures in conflict with their reprobation of the mistaken conception of what the effect of a stained glass window should be. At Burlington House we can forget the window and study the figures apart from these distractions. The two shepherds from the Nativity and the figures of Prudence and Hope are particularly fine, and, indeed, the whole series is admirable for any other scheme than the glazing of a Gothic window.

Aspirations for 1912.

AMONG the various replies to the question put to some of our leading men by the *Daily Graphic*, "What would you most wish to see accomplished in 1912?" that of Archdeacon Sinclair stands alone in displaying an appreciation of the influence of the arts on national welfare. The Archdeacon's seven proposals are as follows:—

"(1) A worthy central Gallery of Sculpture for London. Every other great capital has this essential department of art. We have a splendid collection of antiques at the British Museum, and some modern sculpture in other galleries; but if it were all collected together in periods and schools in spacious halls and corridors, as at the Vatican, the Pinakothek, or the Naples Museum, it would give an immense impulse to art and be an encouragement to donors.

(2) The restoration of the Abbey of Holyrood, hitherto defeated by the combination of

that maudlin sentimentalism which rejoices in a ruin, and that acrid pedantry which, fearful of touching anything built in a previous era, could only have been really happy if each generation had allowed every earlier structure to moulder unimpeded into decay. The architecture of Holyrood is of the simplest character.

(3) The completion of another section of the mosaic decoration of St. Paul's Cathedral.

(4) The erection of the north wing of the west front of Ely Cathedral, which has been an unsightly ruin for several centuries.

(5) The refacing of the east front of Buckingham Palace, which by common consent is unworthy of the fine Adams structure behind, as well as of the new situation created by the Processional Road and the Victoria Memorial, and of the illustrious and popular Monarchy of the United Kingdom.

(6) The purchase by public benefactors of fields in a circle all round London, to be maintained for ever as playgrounds for the children of the working classes.

(7) A central and truly imperial group of buildings, with abundant room for expansion, for the teaching University of London, so that it may exercise its just and predominating influence in the life of London."

With the first of these we can only express the most cordial sympathy; the question raised in the second has provoked widely divergent views, but we must say that we have never thought the case against reparation conclusively proved. As regards St. Paul's, architects have always maintained that the effect has not been improved by the mosaics, which are entirely out of sympathy with the architectural ideals of Wren. The east front of Buckingham Palace, though by no means so bad as public opinion seems to assume, might certainly be redesigned to form a more effective terminal to the new monumental way. Our only fear is that in the present chaotic state of architectural ideals we might get something with less breadth and repose than the present building exhibits. Archdeacon Sinclair's last two proposals commend themselves as of urgent importance, and we trust that they will not be overlooked by those who are in a position to give effect to them.

The Tower Bridge. SIR JOHN WOLFE-BARRY in a recent interview defended the combination of structural steel with decorative stonework. With the artistic ethics of the case we are not at the moment concerned, but we would point out that Sir John has on this, as well as on previous occasions, assumed the entire responsibility for the design. "I was bound to make the bridge harmonise more or less with the Tower of London," are his words. Now, we have always understood that whatever credit is due for the architectural treatment of the bridge should be given to the late Sir Horace Jones, in whose office the original design for the bridge was prepared, and by whom the general architectural treatment was determined at a time when the engineering section was still in a preliminary stage. In this statement we hold ourselves open to correction, but if our view is accurate, as we believe it to be, we cannot too strongly reprobate the tendency to forget the work of those who are no longer with us.

The Late Mr. D. G. Driver. WE should like to call attention to the letter which appears on another page from Mr. Arthur Keen, Hon. Treasurer of the Architectural Association, in reference to the proposed practical recognition of the services of the late Secretary to the Association. It will cause widespread regret to the many friends of the late Mr. Driver to learn that his widow and two children are unprovided for, and we have no doubt there will be a ready response to Mr. Keen's appeal, especially when it is known that the sum of money to be raised will be placed in the hands of trustees and that the scheme will include provision for the education of the children. Mr. Driver's wholly unexpected death at a time of life when it might reasonably be supposed he would have many years in which to provide for those dependent upon him will, no doubt, be remembered by the many friends of a man who devoted his energy so usefully to the welfare of the Association.

THE SKETCH SOCIETY.

THE Sketch Society have provided a very creditable exhibition at the Royal Institute Galleries. If it contains no work of outstanding merit that is because perhaps a general level of merit is pretty well sustained. And, in any case, where there is such a large number of works in which the intention and accomplishment is pretty much the same it would require more space than we can give to the subject to distinguish the qualities of painting susceptible of being classified into groups. In many instances the prices which the artists appraise for their works seems to us almost painfully modest. These may be what one calls the market price, or the lowness of the figure may be an expression of the artists' contempt for the facility in which he has achieved his handiwork; or, again, it may be due to the fact that the art of painting in water-colours has hitherto been overestimated. The small prices, however, are most probably due to competition and the struggle for existence, at a time when the sentiment for lyric expression, whether it be in painting, in poetry, or even the banal ditties of the musical play and music-hall, is vastly underestimated from the point of view of remuneration. And the aim of many of these water-colourists (the oil sketches are few) must have been, consciously or unconsciously, lyrical: the song of stretches of moorland and spacious skies, of odd harbours and shipping, of sheep with the sun or the mist on them, of—here and there—quaint bits of streets and buildings. And, of course, there is some rubbish (not very much), as in every exhibition, which is none the less exasperating because it is generally wrought with greater artistic placidity and seriousness than work which seeks to express a more impressionistic and ingenuous mood. Taking the exhibition, however, altogether, and looking at it from the point of view of the modern "movement" in water-colours, we seem to be able to distinguish, quite broadly, two tendencies (if we may leave out the pictures of Mr. Lawson Wood, Mr. Hassall, Mr. Staynes, and one or two other artists who, delightful and fanciful illustrators as they may be, are not particularly concerned with our point), two groups—the group who work after the intimate fashion of the old Norwich School and the group who do not seek for the secrets of atmosphere, the poetic quality of nature so much as the personal sentiment of colour, of form and mass which resolve themselves into a scheme—not yet perhaps quite realised by the artists themselves which may be called decorative. We do not wish to treat a tentative, modest exhibition like the present too seriously or attach undue importance to it, but it is a finger-post, even if it is not sure of the distance and direction. The message of the Norwich School has nothing fresh to tell us; the careful painter of every leaf, of a later school, has had his uninteresting day; there are indications, however, from the present exhibition, as there have been from others, which show that the modern artist has yet to realise certain aspects of presentment which are of more various import than the interpretation of that which hangs loosely before his eyes. For, after all, a painter must not only feel and see; the exigencies of his art also demand that he must think, and facility of accomplishment is a small matter compared with a more personal, a more thoughtful apprehension of the abstract purposes of painting than is generally to be found on these walls.

THE "ALTARE DELLA PATRIA" OF THE VICTOR EMMANUEL MONUMENT AT ROME:

I.—SCULPTURE RELIEFS BY ANGIOLO ZANELLI.

IN writing of the "Monumento Vittorio Emanuele," which was described in the *Builder* of June 9 of last year, very close upon the period of its official opening, we had occasion to mention that when the architects sought to lay the foundations they had found not, as they expected, solid work, but accumulations of rubbish dating from Roman times, through which they had to strike down. "Hence," we added, "came the idea of galleries beneath, and above these a long series of stairways, which should lead up to the central group of the 'Monumento'—the equestrian figure of the 'Re Liberatore' with beneath it the (so-called) '*Altare della Patria*' (the Nation's Altar), adorned by a frieze in marble . . . the frieze of the *altare* has been assigned, as a result of competition, to the two sculptors, Zanelli and Dazzi, and their work will be submitted to public inspection *in situ*, to decide which of the two designs shall be finally selected."

That decision has now been made, and if in the moment of choice there has been a certain amount of partisanship on either side—which will scarcely surprise those who are acquainted with art circles in Rome, but which is to be regretted in the case of work of such high competing merit—there can be no doubt, to our mind, that the decision has been an excellent one: a decision which, in accepting the relief of Angiolo Zanelli for the marble decoration of the front of the Country's Altar, places that brilliant young sculptor in the forefront of his profession in Italy and secures to his work a monumental place in the world's art.

The decision of the Royal Commission for the "Monumento," which met on the first day of last December, under the presidency of the Hon. Sacchi, and at which were present the famous lecturer and successful organiser of the Venice International Exhibitions, Antonio Fradeletto, the architect Basile, Dr. Corrado Ricci, the Director of Fine Arts, the well-known critic, Ugo Ojetti, to whom the Florence Exhibition of last summer owed so much, Senator Monteverde, and others—all names in the forefront of the art movement in Modern Italy, passed unanimously the order of the day:—"That the Royal Commission selects for execution the *alto-rilievo* (high relief) of Angiolo Zanelli, with the condition that the central statue shall be modified in a manner which corresponds more closely to the traditions of Rome and to her significance as a city (*significato civile*)." This condition which we believe to have been owing in a great measure to the influence of Ugo Ojetti, and which we shall show later in this article that we consider as critically sound—was followed by another "order of the day," in which the Committee

recommended to the Ministry to take steps that the work of Dazzi should not be entirely destroyed; and we shall follow this recommendation to some extent here also by giving a general note on the two competing reliefs before we devote our entire attention to the work of Zanelli, which is the special subject of this article.

Both reliefs have this much of subject and treatment in common that they represent an advancing and ordered group of processional figures, treated in the highest spirit of classic art and centering in the upright or seated form of Rome, the "*dea Roma*," the embodied personification of the immortal past as well as the living present and future of the Eternal City.

Such a treatment, classic in the best sense, is the only one possible to an essential central panel of the decoration of a building of such classic inspiration as that which was first created in the "Monumento" of Sacconi and never, in spite of difficulties and modifications, has really departed from his spirit; and how thankful we may here be—looking at this subject not merely from the point of view of Italian patriotism, but of the world's art—that we have been spared advancing Bersaglieri and the battlefields of the revolt from Austria.

But with this similarity in subject the likeness of the two competing reliefs ends. Of the work of Dazzi, which represents heroic groups of men, women, and even children advancing to a central seated figure of Rome, we shall not speak further here, since we hope to treat it more fully in a subsequent article; its originality and merit deserves special study. But to the work of Angiolo Zanelli, we have—from the very first moment that we saw the designs and a portion of the work itself last spring at Rome already *in situ*—given our enthusiastic admiration and approval.

When, in our notice of the "Monumento" last June, we said, "It would be out of place here to forestall the public criticism of the two competing designs," we were careful to add, "we will, therefore, only say that the relief by Angiolo Zanelli, part of which we have seen *in situ* upon the front of the '*altare*,' is very noble sculpture, inspired by that dignity of sentiment, that high sense of form which has come down to us in a masterpiece of Hellenic art—the frieze of the Parthenon"; and fuller study of the work since then has only confirmed and secured that entire approval.

We then compared this work with the best of Hellenic art; and, in fact, it is Hellenic in its dignity of form and purity of plastic inspiration. How nobly conceived these draped maidens who guide the great oxen beneath the mounted trumpeters; or, again, the four, one of whom lifts her tiny babe against her breast, might be the splendid sisters of the Caryatides or Ariadne of the Vatican! But in these processional figures there is a note which is far apart from the Hellenic serenity, but which is infinitely attractive and satisfying—a calm sadness, as if these figures who realise the human glory of life know, too, its limitations and their journey's ending. Had the sculptor drawn in this spirit with his early studies at Florence of that school where, in the hands of Mino or the Rossellini, the exquisite finish of the marble has the same note of resigned tranquillity; or had he come under the influence of the great modern sculptor of Death, Leonardo Bistolfi, as great in this his own field of art as is Daniel Chester French in America?

Before we proceed further with this question, let us enter into some details of the life and work of the young victor of the reliefs of the "Monumento." Angiolo Zanelli was born on March 17 of 1879, at S. Felice di Scovolo, near the beautiful Lago di Garda, from a Lombard family which for generations had been small proprietors and cultivators of the soil. His first studies were at the industrial school of Salo, but the love of the marble was born in him, as it would seem, and before long we find him busied in the quarries of Botticino, from which (as we pointed out in our previous article) the material of "Monumento" was to be taken. Coming later to the workshop of a good decorative sculptor of Brescia, Faitini, he made such good progress that he was able to win the purse offered every three years by the city of Brescia (of 1,500 lire annually) for three years of art study to students born within the province.

"*Brescia l'Armata*"—Brescia, whose glorious antique bronze figure of Victory may have inspired his young dreams as she did those of Carducci, was the first influence of Zanelli, and next to her Florence: for after some hesitation he chose this city—instead of Rome—for his art studies, which he prosecuted in the Academy of Fine Arts, which the present writer knows well, under the sympathetic guidance of Rivalta. These happy years of study were interrupted by the call to military service; and when—after two years lost to art, but with benefit to health and character—he returned to Florence, he found a fresh influence in the friendship of the Swedish sculptor, Lundberg. His life of artistic activity had already commenced, and the young sculptor found his way to Rome, and thence to Naples, where the wonderful "Museo Nazionale" offered to him her treasures, to which he devoted months of study. But Zanelli did not spring at once to success; his "Zanardelli Monument" has been frankly condemned as a failure; his "Gaspare di Salo" of the same period was better, but for a long time he was studying intensely, seeking out his path, creating and then destroying his own creations, unable to satisfy himself, a despair to his friends and admirers, and a likely aim for detractors.

With "The Woman with the Basket" he finds his way at last—the way that he was seeking in the "*Torso*" and the "*Biga*"; for here in this "Donna alla Canestra," a country girl carrying her basket poised upon her head, he shows that combination of simplicity of treatment, grace and charm of sentiment, and ruling strength which is the keynote of his reliefs of the "*Altare*," and which found another expression in his next commission, the "Funeral Frieze" (*Fregio Funerario*) for a mausoleum which the brilliant young architect, Marcello Piacentini, whom we found last spring at the head of the Rome Exhibition Works, had designed—taking as his model the famous Temple of Vesta at Tivoli—for a rich American client.

The impulse to compete for the "*Altare della Patria*" came to him suddenly, and with only three weeks in front of him before the "sending in." He hoped for a delay, but it was not accorded; and in this necessarily hurried work it was probably only the severity of his earlier studies—directly the recent "*Fregio Funerario*," less directly but not less surely the "*Biga*," which had entailed the most careful study of equine form, and his intense application to the human form in the "*Torso*"—which carried him through and have placed him now on the pinnacle of success.

But this success is not merely personal, and this is a point which we wish specially to bring forward in this article. It has been said, with, we believe, perfect truth, by his biographer, Mario Lago, in a very brilliant notice published by the *Tribuna*, that "had Zanelli's relief been exhibited ten years ago no jury would have accepted it, and no



Signor Angiolo Zanelli.

public in Italy would have applauded." This is to say that the young sculptor is, in a sense, the product of his age, or has at least come forward into an "*ambiente*" which made the highest sculpture possible; and we wish to insist on this point, because it is, in our belief, scarcely recognised as yet in England. While we are marking time, other nations in the plastic arts are going forward. From the academic sculpture of Canova, more coldly academic in his successors, Italian sculpture had plunged into an excess of realism which is called by her critics "*il verismo*," whose vulgarity and superficiality has only been exceeded by the recent plastic efforts of the (so-called) Post-Impressionists; and it was at this very epoch that Italy broke out into a perfect eruption of public monuments.

We are not for one moment here disparaging the patriotic sense of national unity which called for the art expression of that recent and glorious fact: we can, however, recollect our feeling when we had to report the unveiling of the statue of Manin in one of the more beautifully situated "piazze" of Florence, and we know that this is not the only plastic atrocity, or perhaps even the worst.

It is the efforts of a band of modern sculptors—among whom we would mention the names of Trentacoste, Calandra, Canonica, Macagnani, and of other sculptors whom we have the privilege of knowing personally, Apolloni, Fontana, and the great Leonardo Bistolfi—who have redeemed Italy from this invasion of ugliness, which was always opposed to the traditions of her genius; who have first stirred, then educated, and at last conquered public interest and turned indifference into intelligent sympathy.

But their work has been materially assisted by such great public undertakings as this "Monumento," which have been thrown for the most part into open competition, with the most beneficial results; and we will venture yet again to refer to our article of June 9, in which we said:—"It is not possible to leave this portion of the subject without stating our conviction of the immense benefit to the sculptors' art in Modern Italy from these free public competitions which have taken place, especially in connexion with this 'Monumento.'

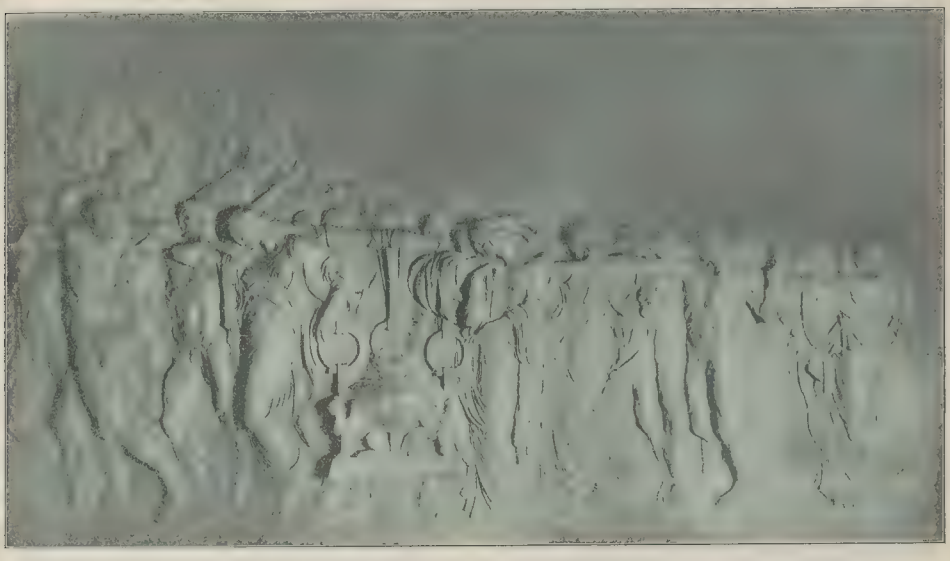
The brilliant young sculptor Zanelli is one, among others, of the younger men whom these competitions have brought forward."

In fact, in studying this young sculptor's successful and fairly rapid career one cannot help observing that a happy series of these "*concorsi*" have been the stepping-stones which made his success possible. In England we proceed on a different system, and the writer fails to see that we have any reason to congratulate ourselves on the results attained; nor do we think, without any disparagement either to a brilliant sculptor, whose work we know and admire, or to a committee which includes high and respected names in British art, that the King's Memorial—to take a single instance—would not have been better if offered as a reward to the freest competition, limited, very properly, to sculptors within the Empire. The reward, which must come in any case—and here very deservedly—would then have been a wider stimulus. We do not say that this alone would revive the present condition of plastic arts within our Empire, but it would certainly aid in doing so.

When we contrast what is being achieved at this very day and hour in the plastic arts, both in Italy and the United States of America, with the public apathy in England, and the sort of living there that awaits all but the very few most successful sculptors, one is tempted to ask—Why throw aside any means, however limited, which might help forward a better state of things? But here we feel that we must not pursue further a theme which is apart from the immediate subject of this notice.



The "Altare della Patria": Details of Frieze. Signor Angiolo Zanelli, Sculptor.



Part of the "Altare della Patria": Processional Figures bearing the Sacred Fire. Signor Angiolo Zanelli, Sculptor.

That subject is the sculpture of Angiolo Zanelli, of which we have already expressed our high opinion, and which we shall not attempt to describe in detail because we prefer to let the interesting illustrations speak for themselves. We do not for one moment pretend that even these reliefs are not open to criticism. We consider the anatomy of the muscles among some of the male nudes to be overmarked and obtrusive; and we have already given our support to the view expressed by that able critic, Sig. Ojetti, and endorsed by the Royal Commission, as to the central figure of Rome. "Zanelli," says one of his critics, "took his ideas from two masterpieces of antique sculpture—the *Athena Parthenos* of Pheidias and the *Minerva Promachos* of the Naples Museum." To base one's art on the masterpiece of Pheidias is not certainly aiming too low; but (writing from memory and without the photograph before us) his standing Rome is too archaically treated, too distinctly Hellenic for the subject, which, in treating this old mistress of the nations, needs something richer, broader than even Hellenic art can give, and is, in fact, better treated, seated, and with the spear and winged Victory as she has been designed by Dazzi.

It is hard to achieve the perfect, and it is no purpose of ours to proclaim its discovery here. What we have to acclaim here is a work of plastic genius, of divine promise; and to call from our northern capital of Empire to the young artist who steps out into the full light of fame, with all its glamour, all its pitfalls—"Be not satisfied! Be not content with yourself or the applause! Go on! Press forward, as you did in the past through those years of dissatisfied labour, to the sublime achievement, which shall come to you only through the sublime endeavour!"

GENERAL NEWS.

Professional Announcement.

Messrs. Geo. Elkington & Son, architects and surveyors, 7, Laurence Pountney-hill, E.C., have taken Mr. Hylton B. Elkington, younger son of the senior partner, into partnership as from January, 1912. He is an Associate of the Royal Institute of British Architects, and has for several years held a leading position in the office. The present title of the firm, "Geo. Elkington & Son," which has been in use since 1875, will remain unaltered.

Works of the Late Professor Legros.

The friends and admirers of the late Professor Legros will be gratified to hear that his family has arranged to hold an exhibition of the paintings, drawings, goldpoints, and crayons, medallions, and sculpture left by him. It will open at the Fine Art Society's, New Bond-street, on Friday in next week.

New Year Honours.

Mr. Bertram Mackennal, A.R.A., who designed the new coinage, and the new Indian, and New Zealand, with other Colonial postage stamps, has been appointed a member of the Fourth Class of the Royal Victorian Order. Knighthood has been conferred upon Mr. John Tudor Walters, M.P., of Sheffield, architect and surveyor. He was born, in 1866, at Clitheroe, Lancs, and practised formerly in Leicester, where, being a member of the Town Council, he carried out the scheme of municipal housing. The Y.M.C.A. Buildings, London-road, Leicester, were erected, 1901, from the designs of Messrs. Draper & Walters and Mr. A. E. Sawday, at a cost of 35,000*l*. Mr. Walters was elected M.P. for Sheffield (Brightside) in 1906 and in 1910; he has been President of the Education Association for England and Wales, and takes special interest in housing, education, and land reform.

Association of Consulting Engineers.

The Association of Consulting Engineers will hold their inaugural meeting on January 15 in the lecture theatre of the Institution of Electrical Engineers, Victoria-embankment. The Association has been formed in order to prevent the appointment of unqualified persons to advise upon engineering schemes which involve the health or the safety of the community.

Kames Castle, Bute.

Mr. A. M. Mackinlay, of Rothesay, has prepared the plans for the rebuilding, after the Scottish baronial style, of Kames Castle which is reputedly the oldest inhabited residence in Scotland. The property, formerly owned by Lord Bannatyne of Kames, now belongs to the Marquis of Bute. Mr. Mackinlay's designs comprise a group, upon a rectangular plan, of one-storied buildings, with the keep on one side, encompassing a large courtyard. We understand that the ancient keep, or tower, will thus be preserved and incorporated in the new castle.

King Edward VII. Memorial, Shadwell.

It is understood that the Corporation of the City of London would consent to transfer for about 70,000*l*. their interest in the Shadwell riverside market site, provided the site is acquired for purposes of the proposed memorial and park. The land, of which the freehold vests in the Corporation, is valued in their books at about 140,000*l*. The London County Council have agreed to capitalise for 14,000*l*. their liability in respect of their lease, having fifty-five years unexpired, at a rent of 710*l*. per annum, of a portion of the site. The Council have also offered to undertake the maintenance of the projected open space and park.

The London Museum.

Under the superintendence of Mr. Guy Laking, Keeper of the King's Armoury, considerable progress has been made in the classification and arrangement of the collection in the rooms on the upper floor of Kensington Palace. The showcases are after the Mantelet pattern, and many of them are already filled. Some of the larger exhibits, with the Roman boat from Lambeth, the cells from the prison in Wellclose-square, St. George's-in-the-East, and many architectural fittings will be shown in the northern annexe. There will be a very interesting display of XIVth and XVth century pottery, weapons, spurs, and table-knives, whilst much earlier times are represented by prehistoric remains and relics of the Bronze Age discovered in excavations in London. The comparative scarcity of Saxon objects reminds us that for a long period preceding the Conquest London continued to be more Roman than Saxon and did not regain the importance it possessed during the Roman occupation. It is anticipated that the Museum will be opened to the public shortly after the return of the King from India.

Two Old London Charities, Schools, and Almshouses.

A scheme formulated by the Board of Education applies the revenues of the Newcomen Foundation, Southwark, which amount to 1,700*l*. per annum, to the establishment of scholarships of 20*l*., tenable by boys at St. Olave's and St. Saviour's Grammar School or the Borough Polytechnic, and, to the extent of about 1,200*l*. yearly, to a higher grade domestic economy school for girls. The charity was founded by Mrs. Elizabeth Newcomen in 1675. The Charity Commissioners will erect a fresh scheme for dealing with the Amyas, Dale, Lawrence, Mills, Powell, and other charities in St. Luke's Parish, Old-

street. The trustees will be charged with the upkeep and maintenance of the Amyas Almshouses, for eight women, in Old-street, and of the Alleyne's Almshouses, appertaining to Alleyne's College of God's Gift, and the St. Luke's parochial Almshouses, in Bath-street, for twenty-two inmates. A considerable portion of the consolidated income is devoted to pensions and doles to the parishioners and almspeople.

Cambridge University, New Buildings.

The tender of Messrs. Kerridge & Shaw has been accepted for the building of section A of Block 2 of the new Museum of Archæology and Ethnology, after the designs of Mr. T. G. Jackson, R.A. (illustrated in the *Builder*, July 31, 1909, and May 7, 1910), which will complete the Downing-street façade embracing the Squire Law Library, the Law School, and the front wing of the Sedgewick Memorial Museum. On January 15 the Bishop of Ely will dedicate the new buildings of Ridley Hall, which have been erected, after the designs of Mr. William Wallace, in harmony with his previous work there, including the chapel of which we published a drawing on December 10, 1902. The new block provides accommodation in a detached house, having three stories and a basement, for ten students, with a set of rooms for a member of the resident staff. The new Literary Lecture Rooms, of which Mr. George Hubbard was the architect, comprise a lecture theatre, eight lecture-rooms, several class-rooms, library, and professors' common-room. The block stands upon the site, near Corpus Christi College—latterly the Lady Margaret Professor's Garden—of St Austin's Friary, of which some remains were discovered; the stones of a XIVth-century archway have been built into a wall of the basement floor. So similarly the fragments of the central part of Inigo Jones's choir screen at Winchester Cathedral have been reconstructed to form a doorway of the Museum of Archæology and Ethnology. In our number of June 18, 1910, we gave an illustration of Mr. Jackson's drawing of a restoration of the screen.

COMPETITION NEWS.

The Legislative and Executive Building Winnipeg, Manitoba.

The cost of the proposed building is estimated at 400,000*l.*, exclusive of heating, lighting, plumbing, etc. The site provided is a fine one, about 1,000 ft. square, at the south end of the city: it faces Broadway on the north and the Assiniboine River on the south.

The competition is in two stages, the preliminary drawings to be in pencil or ink without wash or colour to a scale of 16 ft. to the inch; plans of all floors, elevations, and two sections are required, with a brief report, estimate of cost and cubic contents.

Five designs will be selected for a second competition, and their authors will each receive 400*l.*

The successful architect will be employed to carry out the work, and will be paid in accordance with the Manitoba Association of Architects' scale of charges (elsewhere 4 per cent. is mentioned).

It is to be noted that, while the competition is open to all architects who are British subjects, the date fixed for the delivery of designs for this complex and important building, viz., February 15, 1912, renders it impossible for any architect outside Canada to do himself justice in the preparation of his design. The time is short, even without the deduction of three weeks, the handicap under which the English competitor labours.

In other respects the competition looks so promising that we would urge the R.I.B.A. to approach the Manitoba Government with a view to obtaining such an extension of time as would give English competitors a chance in this competition.

Workmen's Dwellings, Banbury.

This competition is for twenty houses costing 175*l.* and twenty costing 135*l.*, each for the working classes. The first premium of 20*l.* is to merge in a remuneration at the rate of 3½ per cent. on the work *actually carried out*. A second premium of 10*l.* is offered, 5*l.* to be added if the Council decides to purchase the second premiated design.

The Council does not bind itself to accept any of the submitted designs, nor to proceed with any design after its acceptance. It is stated in the conditions that the architect's commission is to cover plan, sections, specifications, estimates, detail drawings, quantities, superintendence, certifying, attendance at Local Government Board inquiry, and all out-of-pocket and travelling expenses.

The Council may therefore under these conditions accept plans, and then employ the architect for the erection of, say, four houses of different design and cost, and he must prepare contract and bill of quantities or pay the surveyor. For this he will receive only the premium of 20*l.*, that being about the amount of the 3½ per cent. on four houses. This is inclusive of quantities, all copy plans, all expenses, all alterations, and making up the final accounts. The Council may utilise these plans, specifications, quantities, and accounts for the erection of the remaining houses without employing the architect; or, finally, although the assessor may have "placed" the first two designs, they may reject the whole after making use of them for their own purpose.

We have rarely come across a more preposterous demand, and we trust that the architectural profession will unite in indicating its opinion of Banbury beadledom by leaving its propositions severely alone.

Grand Stands to Racecourse, Lombardy.

The Società Lombarda per le Corse di Cavalli have instituted an international competition for grand stands and subsidiary buildings at the Trenno racecourse near Milan. The awards will be made by the Council of the Society, and premiums of the value of 320*l.*, 120*l.*, and 40*l.* are offered. It is not, however, guaranteed that these premiums will be awarded, as if the Council do not consider the designs of sufficient merit three indemnities of 40*l.* each may be substituted. The cost of the proposed buildings is not to exceed 20,000*l.*; the conditions appear to be fairly well drawn up, but the facts that no professional assessor is to be employed and that the premiums may be withheld are discouraging.

Holyrood Palace.

In connexion with the Scottish National Memorial to King Edward, a memorial, to cost 15,000*l.*, will be erected at Holyrood. Most of the money has been subscribed. Three competitors will be chosen from Edinburgh, two from Glasgow, and one from Inverness.

Cardiff Fire-Station.

We understand that a competition will be open shortly for a new fire-station at Cardiff, the cost of which will be probably 15,000*l.* The site of the proposed building is in Cathays Park.

BOOKS RECEIVED.

THEORY AND PRACTICE IN DESIGNING. By Henry Adams. (London: Constable & Co. 6s. net.)

SHIP WIRING AND FITTING. By T. M. Johnson. (London: Constable & Co. 1s. net.)

PHOTOGRAPHIC LENSES. A Simple Treatise by Conrad Beck and Herbert Andrews. (London: R. & J. Beck. 1s. net.)

CORRESPONDENCE.

The Late Mr. D. G. Driver.

SIR, It is generally felt that some practical recognition of our late Secretary's services to the Association should be made. Mr. Driver, who was Secretary for over twenty years, leaves a widow and two children unprovided for, and it is proposed to raise a sum of money and to place it in the hands of trustees for their benefit.

The method of help to be adopted must depend upon the amount of the fund, but it is felt that the scheme should include provision for the education of the children.

To many of us Driver was a personal friend, and all of us know how unselfishly he spent his time and energy in the service of the Association. Such service is never paid for, and it is hoped that every member and friend of the Architectural Association will send some contribution, however small, to alleviate the hardship of those who were dependent upon him.

Contributions will be received and gratefully acknowledged by the President, Hon. Secretary, Mr. Maule, or myself.

ARTHUR KEEN,
Hon Treasurer.

The Policy of the R.I.B.A.

SIR,—Mr. Bonner makes exception to the use of the term "back door" by me in my previous letter. Surely he is convinced that plausible words are of little avail at the R.I.B.A. If not, he should be. It is time strong words were used, and even stronger action taken. Associates do not wish to form themselves into a distinct class over the matter, and the co-operation of those Fellows who have a firm purpose to rid the R.I.B.A. of all, whether officials or otherwise, who are not conscientiously doing their duty to the profession from standpoints other than art.

The Guild suggested by "Associate R.I.B.A." should, if established, leave no hesitation in the minds of the profession as to the purpose of its existence. Every member should pledge himself to attend any meeting of the R.I.B.A. when asked to do so by the Secretary of the Guild, and also to vote as his Guild wishes on the matter at issue. A strong membership pledged to act as above would cause an uneasiness in the dovecote, and enlighten the R.I.B.A. Council on various matters, including the fact that "even a worm will turn."

No, sir, the time of soft words is over. The Associates have to choose now, and either make themselves heard, and that in no uncertain manner, or retire into even greater oblivion than heretofore. I for one will hear of no half-measures. If there is dirty linen at the R.I.B.A., the sooner it is washed in public the better. ANOTHER ASSOCIATE.

SIR,—In reply to "F.R.I.B.A." in your last issue, I beg to inform him that the "R.I.B.A. Defence League" exists for the very purposes he has in view, and its membership comprises both Fellows and Associates. I shall be most pleased to give him, and others, all particulars as to its work. WILLIAM H. BURT.

Hon. Secretary, R.I.B.A. Defence League.
14, *Southampton-street, Strand.*

The Architect's Clerk.

SIR,—I read with personal interest your article on "The Architect's Clerk" in the current issue of your paper. An architect's clerk myself, I do not remember having ever seen my species in so prominent a place as in the columns of your journal.

I am, as you very rightly hint, a growing necessity, and I thank you for implying that I can be a real treasure when acquired; but there is unfortunately a general tendency with architects to regard a "clerk" more as a mere "establishment charge" than as a necessary economy. They do not realise the value of a competent clerk with a sound general technical knowledge, to relieve them of the office work, other than drawing, and to counteract that ruinous disorder and muddle in dealing with papers and drawings which, in course of several years' experience, I have found to be one of the outstanding characteristics of the architect and his draughtsman.

The architect in his profession is "up against" the same problem that besets the manufacturer, viz., how to produce an article at less cost to the purchaser, without reduction of efficiency, but with a sufficient profit to himself. Many influences make economy imperative to the architect. Among them are the concessions he has to make on the R.I.B.A. schedule of charges and the many cheaper forms of construction, which reduce the amount of his percentage without correspondingly lessening his "expenses of production." How can the architect accomplish that "economy with efficiency" which he desires? Surely best by concentrating his personal attention upon the purely technical work which he has been trained to conduct, leaving the clerical side to his trained and, let us hope, intelligent clerk.

A clerk, as indicated in your article, is infinitely of more value than appears from the description assigned to him. Given a fair education, used to advantage, he may become less of a clerk and more of a general secretary and business manager. He may accompany his chief on surveys, and from notes dictated on the spot may draft the reports, rough out specifications, and prepare

estimates of cost. Because the draughtsman has only been trained to draw, he cannot compose a good business letter, and a creditable report is far beyond him.

The architect's clerk can acquire an intimate knowledge of the cost of works, and can often take builders' accounts almost entirely off his principal's hands; he can effect many savings in time by a businesslike handling of variations on contracts, by the introduction of simple indexing systems for papers, drawings, and catalogues, and by many other means.

But the architect must realise that he has to pay for intelligence and business ability, and I am bound to say that the majority of the profession seem to think that the cheap clerk from the open market or the junior draughtsman is good enough to muddle along with.

X. Y. Z.

Architectural Assistants and the Office of Works.

SIR,—Your correspondent "The Whole Truth," in your last week's issue, brings keenly before your readers the significant omission by this Department, when supplying a List of architects they employ for Mr. Noel Buxton in Parliament on the 15th ult., of an entire class of professional men termed by them "Architectural Assistants," who have been undeniably for a number of years the genuine "workers" in the architectural hive of this Department, and although, like other hives, there are a number of "drones," these cannot be of the unestablished class, because the permanent officials have ever been distinctly jealous of their privileges in this respect.

Now it not infrequently happens that those harassed with genuine grievances when confronted with the forceful inquiry, "What do you want?" are unable (caused, in part, by dwelling too long on their "do not want" aspect) to supply an immediate answer, either concise or intelligent of what they do want. But the "Architectural Assistants" of the Office of Works are not of these. Their reply carries conviction. It is that, having received from their Board a professional qualification, a technical certificate of efficiency (in itself equivalent to a Civil Service Certificate) as far back as 1907, and the majority having a number of years of good service as architects even prior to this period to their credit, have at last the temerity "to hold up their heads and demand fair play" in the shape of (*a*) an established position; (*b*) adequate remuneration; (*c*) regular annual increment; and (*d*) the entire charge, including preparation of all drawings (assisted by "Draughtsmen") of one or more of the contracts, directly under the chief of their Branch. It should here be said this latter demand is nothing but the return to them of what was theirs up to three or four years back, when it was slowly and surreptitiously purloined and given to a number of Juniors, termed "Assistant Architects of the 2nd Class" (*vide* Mr. Dudley Ward's before-mentioned incomplete list of the "classes"); and here we might usefully take a leaf from other boards' books, even railway boards, by abolishing second class altogether, for this they have found needful for efficient working, retaining only 1st Class and "Parliamentary."

This surreptitious and almost imperceptible lowering of status, meted out to those who, by their efforts and abilities, gain the execution of superior work, to be followed by their subsequent demand for its recognition and fair wage for it, is quite "the mode" in the Department. Instead of its being met with a straightforward refusal and the denial of the superior services, thus giving opportunity for resisting injustice, the method is to deny nothing, but to prevent you from again asking for adequate return by taking the superior work quietly away, even withholding the payment for such time as you were engaged upon the superior work!

But, as stated by your correspondent "Labour Member," in 22nd ult.'s issue, Sir Schomberg McDonnell would be well advised to immediately put the Architectural Section of "his house in order" upon the lines here indicated before the more strenuous methods of the forthcoming Civil Service Commission, after taking the evidence which will be placed through the Labour Members before them, be brought into action.

LABOUR MEMBER No. 2.

The Traffic at Aldwych.

SIR,—The accompanying plan illustrates a proposed method of directing traffic round Aldwych and along the Strand, between St. Clement Danes Church and Wellington-street.

The recent addition of a fifth road at the junction near Wellington-street has enormously increased the work of regulating traffic, and the delays consequent upon the frequent stoppages which have to be made under the present system of regulation.

For instance, traffic has to be periodically stopped as under:

(*a*) At the west end of Aldwych west-bound traffic has to be stopped in Aldwych to allow east-bound traffic in the Strand to pass, and *vice versâ*.

(*b*) At the east end of Aldwych traffic going from the City to Aldwych crosses the traffic from the Strand to the City. Although the volume of this traffic is not large at present, yet it is certain that with the development of Aldwych and Kingsway it will increase so much as to necessitate special supervision and frequent stoppages if the present system be adhered to.

(*c*) At the junction of Kingsway and Aldwych, west-bound traffic from Kingsway crosses traffic from the City to Kingsway. Special regulation of this will also become necessary.

In all the above cases where lines of traffic cross vehicles are moving in opposite directions, hence the necessity for stoppages and regulation.

On inspection of the above-mentioned plan it will be seen that by its adoption:—

(1) These meetings of cross traffic would be entirely avoided.

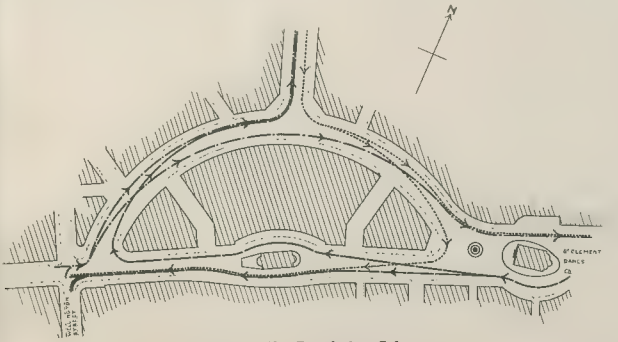
(2) The traffic arrangements would be greatly simplified, and there would be less danger of collisions.

(3) No police regulation would be necessary except that which was in existence before the construction of Aldwych and Kingsway.

(4) The traffic would be more evenly distributed between Aldwych and the Strand, both of which streets would carry a greater volume and at an increased speed.

(5) There would be no necessity to continue the widening of the Strand on the south side, east of Wellington-street, and thus there would be a great saving to the ratepayers in capital expenditure.

HAROLD SOUTHON.



Aldwych Traffic Regulation Scheme.

Statue of Achilles.

SIR,—The interesting letter in your last number on the Hyde Park statue of Achilles encourages me to hope that you will publish a suggestion of mine, which, with your permission, I now make, to erect in London a duplicate of Foley's statue in Chowringlue, Calcutta, to Outram. I am aware that there is already in London a statue to Outram, but that in Calcutta is a far more striking one, and it would give real pleasure to art lovers in London were a copy of it placed permanently on view in this city.

I understand that Alfred Steven's original model for his Wellington statue will happily remain in the Tate Gallery, and no one will be found to quarrel with this decision. The principle, however, is thus admitted of accepting for Millbank a model only as a permanent exhibit. My suggestion is that Foley's Outram should also be erected in the centre of one of the rooms at the Tate Gallery. This could be easily done, as the Crystal Palace collection already possesses a full-size model of the same artistic creation, and it is quite possible the present controllers of that collection might be willing, if approached, to present it to the Tate Gallery, thus affording many an opportunity of seeing it under far more inspiring conditions than those offered by its now incongruous surroundings.

The statue is an equestrian one; it occupies a commanding position on the maidan in Calcutta, and is one of the features of the city of palaces. Before going out to India, some time in the mid-sixties, it stood for months in Pall Mall, so far as I can gather, on or near the site upon which it is intended to place the Florence Nightingale statue when ready. I have read that the London of those days was very anxious to retain it here perpetually, and that efforts were made to induce the Calcutta subscribers to surrender their rights in it, but without avail.

Where in the world could so fine a work by a British artist be more appropriately placed than in the Tate Gallery? The statues of Calcutta are almost all remarkable for strength and beauty. That to Helen in St. Paul's Cathedral, Calcutta, has its duplicate in St. Paul's Cathedral, London. The same statue to Lord Napier of Magdala stands at Prince's Ghât, Calcutta, and in Waterloo-place, near the York Column, London, while the same statue to Clive will shortly adorn both Calcutta and London. Why should not Outram be similarly duplicated in both cities?

WILMOT CORFIELD.

FIFTY YEARS AGO.

From the *Builder* of January 4, 1862.

The Future of St. Thomas's Hospital.

THE fixing of the site for the new hospital is a highly important matter which we trust will be well considered, if it be not already too late for further consideration. Hospitals, in the midst of so vast a concourse of people as that in London, may be regarded as highly requisite; but there are also great evils arising from their position in the midst of such a population. The very object of such hospitals—the speedy cure of patients—is to a great extent frustrated by their mere locality; and if it were possible to remove the main hospital to some convenient and healthy suburban district—such as Blackheath, for example—while one or more minor establishments for the reception and the temporary disposal of patients were maintained in town, the expense and time requisite for recovery would, we do believe, be greatly lessened. In reference to St. Thomas's, now is a fitting time for well considering this subject, and we earnestly trust it is not too late to do so.

EDITORIAL SUMMARY.

Our leading article, entitled "The Policy of the R.I.B.A.," is suggested by the correspondence in our columns on questions of importance to Associate members of the Institute.

Our second article, "Painter and Decorator," deals with the work of Mr. Edwin A. Abbey, which is now in the Winter Exhibition at Burlington House (p. 3).

In "Notes" columns (p. 3) are comments on: "Sir Joshua Reynolds' Window in New College, Oxford"; "The Late Mr. D. G. Driver"; "Aspirations for 1912"; "The Tower Bridge"; "The Environment of Southwark Cathedral."

A notice of the Sketch Society Exhibition at the Royal Institute Galleries will be found on p. 4.

An illustrated article on "The Altare della Patria of the Victor Emmanuel Monument at Rome: the Reliefs by Signor Angiolo Zanelli," appears on p. 4.

In Correspondence columns (p. 8) are communications on: "The Traffic at Aldwych"; "Statue of Achilles"; "Policy of the R.I.B.A."; "Architectural Assistants and the Office of Works"; "The Architect's Clerk"; "The Late Mr. D. G. Driver."

Our Monthly Illustrated Civic Review (p. 11) contains: "Imperial London"; "Town Planning"; and Notes.

In the Building Trade Section (p. 16) will be found: "Failure of Buildings Caused by Drought"; "Legal Points about Tenders"; "Land Taxes and the Building Trade."

The Autumn Examination results of the R.I.B.A. are given on p. 19.

Another article on "London Architect's Procedure" appears on p. 20.

In Legal Column (p. 21) some observations will be found on: "Workmen's Compensation Cases"; "Rating 'Gathering Grounds' for Water."

MEETINGS.

SATURDAY, JANUARY 6.

Architectural Association.—First Spring Visit, to St. Paul's Girls' School, Brook Green, Hammersmith, Mr. Gerald C. Horsley, F.R.I.B.A... 2.30 p.m.

MONDAY, JANUARY 8.

Royal Institute of British Architects. — Business meeting. 8 p.m.

University of London (Victoria and Albert Museum).—Mr. Banister Fletcher on "Renaissance Architecture in Germany." 5 p.m.

Surveyors' Institution.—Mr. Frank W. Hunt on "The Tendency of Recent Modifications of the Lands Clauses Act." 8 p.m.

Liverpool Architectural Society.—Mr. E. T. Hall on "Museums and Art Galleries." Illustrated by lantern slides. 6 p.m.

Incorporated Clerks of Works' Association (Carpenters' Hall, London-wall).—Monthly meeting. 7 p.m.

TUESDAY, JANUARY 9.

University of London (King's College).—Mr. Banister Fletcher on "Etruscan and Roman Architecture, and Greek and Roman Architecture Compared." Lantern illustrations. 4.30 p.m.

The Institution of Civil Engineers.—Papers: "Reinforced-Concrete Wharves and Warehouses at Lower Pootung, Shanghai," by Somers Howe Ellis, M.Inst.C.E.; "The Direct Experimental Determination of the Stresses in the Steel and in the Concrete of Reinforced-Concrete Columns," by William Charles Popplewell, M.Sc., Assoc.M.Inst.C.E.; "Composite Columns of Concrete and Steel," by William Hubert Burr, M.Inst.C.E. 8 p.m.

WEDNESDAY, JANUARY 10.

Manchester Society of Architects.—Members' meeting. 6.30 p.m.

Northern Architectural Association.—Paper by Mr. T. M. Claque. 7.30 p.m.

THURSDAY, JANUARY 11.

Society of Architects.—Paper by Mr. John Darch on "Illumination as a Study for Architects." 8 p.m.

The Concrete Institute.—Discussion of the report of the Reinforced Concrete Practice Standing Committee of the Concrete Institute, embodying suggestions on "The Standardisation of Drawings for Reinforced Concrete Work." 8 p.m.

Sheffield Society of Architects and Surveyors.—Mr. C. F. Innocent on "The Old Slavonic Dwelling."

Institution of Electrical Engineers.—Mr. C. A. Ablett on "Some General Principles Involved in the Electric Driving of Rolling Mills." 8 p.m.

ILLUSTRATIONS.

Entrance to St. Mark's Hospital, Venice.

THE building formally called Scuola di S. Marco was built from the designs of Pietro Lombardo in the XVth century, and has been used as a hospital since 1815.

The architectural treatment combines effectively classical details with early Renaissance and Byzantine forms.

W. WALCOT.

The Lady Chapel, St. Jacques, Dieppe.

THE Church of St. Jacques is one of those picturesque buildings in which each style of architecture from the XIIth to the XVIIth century is represented. The piers of the nave and crossing are good work of the XIIIth century, and the transepts both internally and externally are fine examples of this period. The west front and tower, rising over early work, are profusely carved in the lacelike Flamboyant architecture of the XVth century, and here and there are Renaissance additions making a picturesque mass of stone, toned into one key by the hand of time and all crumbling in a beautiful state of decay.

The lady chapel at the east end is one of the most picturesque features. It is late Gothic in style. The cornice-like termination of the walls is evidently a latter patching up, but now in its weather-worn condition it harmonises with the rest. The chapel abuts on the apse, and is surrounded by the other apsidal chapels with their Gothic pinnacles and Renaissance turrets. Internally the surrounding chapels are divided from the rest of the building by very delicate and richly carved stone screens of late Gothic and early Renaissance designs, and the interior throughout is a fair example of Northern French art.

Few people only who cross by Dieppe to the continent bent on archæological study or architectural interest ever stay at this town. Yet a day or two can well be spent, for the views of St. Jacques rising over the old red-tiled houses surrounding the quays are most picturesque, and the Church of St. Remy, the castle, and the surrounding scenery well repay a visit.

HENRY C. BREWER.

Raising the Crucifix on the Summit of a Mexican Temple.

THIS drawing was suggested by reading Prescott's "Conquest of Mexico," and illustrates the event of the erection of the Crucifix and performance of Mass, by Father Olmedo, on the summit of one of the principal teocalli, or temples, as a thanksgiving for the first decisive victory over the Aztecs.

The doubtless horrible images of the native divinities—Quetzalcoatl, Tezcatlipoca, and others—had been previously thrown down and broken or burnt.

M. Viollet-le-duc, in his interesting work, "Cités et Ruines Américaines" (Paris, 1863), very convincingly argues that the ancient inhabitants of Mexico were of European and Asiatic descent; the peoples of these continents having, at some remote period, entered North America at the points where this continent almost touches the two others, namely, Greenland and Behring Straits. The immigrants from the opposite continents made their way slowly down the Atlantic and Pacific coasts, leaving very distinct traces of their progress visible to this day.

The period of their wanderings probably extended over some centuries. Arrived at Mexico, the southern point of the great triangle of North America, the opposing forces of immigrants necessarily met. Then ensued terrific combats as to which should be master of the soil.

This decided, the victors combined with the vanquished, producing in time the race and civilisation destroyed by Cortes.

M. Viollet-le-duc traces, in the remarkable architecture left by the vanished Mexicans, characteristics belonging in due proportions to the various nationalities of which the entire community was made up, as Finnish, Scandinavian, Malay, Chinese, etc.

To my eye, the Japanese element is distinct in many of the forms.

The most important of the ruins are those of Mitla, Palenqué, Izamal, Chichen-Itza, and Uxmal. They are, however, scattered plenteously about the Peninsula of Yucatan, one being on the edge of the cliffs and visible at sea.

F. Catherwood visited and drew the ruins in the years 1839-42.

Alexander von Humboldt has left an interesting work, "Researches Concerning the Institution and Monuments of the Ancient Inhabitants of America" (1814). In this he explains the hieroglyphic or picture-writing of the Aztecs, together with their calendar, etc.

There is a remarkable article, "The Ruined Cities of Central America" in "Chambers's Papers for the People" (1850).

A. C. CONRADE.

Manchester Library and Art Gallery.

WE referred at length in our issue of December 15 to the ten sets of designs submitted in the final competition for this building, still, unfortunately, only "proposed." This week we supplement our first illustrations of the conception of Messrs. Worthington & Son with a reproduction of Mr. Walcot's perspective drawing which accompanied the design.

We cannot do better than quote from the *Manchester Guardian* Professor Reilly's opinion on the design:—

"There is no doubt that the most scholarly set of drawings is that by Mr. Percy Worthington, with draughtsmanship as delicate and refined as the architecture. Unlike the winners, but like most of the other competitors, Mr. Worthington has divided his building horizontally into departments. He has a floor for his libraries, a floor for his museum, and a floor or floors for his picture galleries. Circulation is, therefore, easier throughout, and he can give a central yet retired position to his main library. This latter is a fine apartment, as, indeed, are all Mr. Worthington's rooms. His building, too, except perhaps for a very projecting entrance block, is finely shaped, and the curved back helps to soften the adjustment to a very angular and difficult site. The chief distinction, however, of Mr. Worthington's work is his architectural detail, as shown on his façades, which reaches a standard of refinement untouched by the other competitors. It is fitting that the one Manchester architect who has achieved the honour of getting into the final competition should be the one whose work best stands the test of Manchester's own buildings. Apart from the detail, however, there is a fine scale about Mr. Worthington's building. His, too, is the only building which on its face carries a plain indication that it is erected for artistic uses. Most of the other designs might be great banks, law courts, municipal offices, and one or two even hotels; but Mr. Worthington's, with its faint echo of the present reference library, could be nothing but a gallery, museum, or building for similar purposes. The plans are practical, while always remaining architectural, and if the additional drawings in the report are studied it will be seen that, in spite of its apparent lack of windows, all the rooms are well lit."

Mr. Percy Scott Worthington writes as follows:—

"I particularly tried in the external character to express the use of the building, and the niches in the upper part of the front mark the sculpture galleries inside. The lighting of these side-lighted sculpture-rooms was very particularly studied. It is all done from the other side, and was based on the experiments and report of the Boston Committee, with large allowance for difference in climate. A whole series of top-lighted sculpture recesses run along one side, so that not only was the gallery well lighted from the proper height and with a glass area of one-fifth of the floor, but the disadvantage of side lights, by which you often get a very dark space under the lights, was avoided, and the recesses themselves form a long series of spaces for such things as altars, fireplaces, etc., and were, I think, quite architectural and practical on plan. The central part behind the front projection was, of course, all top-lighted, and contained the sculpture hall."

It may be mentioned that Messrs. Worthington's scheme included the removal of the statue of Queen Victoria from its present incongruous position. It would have been placed against the building on one side of the main entrance, and balanced with a seated statue of King Edward on the other side.

Imperial London.

TWO OF our plates this week appear in connexion with an article on "Imperial London" (p. 11), which supplements the one published in our New Year's number last year. In presenting these suggestions we are indebted, as before, to the fine draughtsmanship of Mr. Adrian Berrington, who has interpreted our ideas not only with pictorial inventiveness but with considerable resource in the details of the schemes. The bird's-eye view is novel in conception, and illustrates effectively the broad basis of the design. We hope that the drawings will be studied in conjunction with the article by those who are professionally interested in the development of London, and if public interest can be aroused in the matter the possibilities of such a work being carried out are by no means remote.

The "Altare Della Patria."

SIGNOR ZANELLI'S sculpture on the Victor Emmanuel Monument, Rome, has appealed strongly to residents and visitors alike. Our illustrations show some of the chief groups, and an article on the subject appears on p. 4.





MAIN ENTRANCE TO ST. MARK'S HOSPITAL, VENICE.—From an Etching by Mr. W. Walcot.





THE LADY CHAPEL AT THE EAST END OF ST. JACQUES, DIEPPE.—From a Drawing by Mr. Henry C. Brewer



DESIGN FOR THE MANCHESTER LIBRARY



PHOTO SPRIGGS 4 & 5, EAST HARDING STREET FETTER LANE E.C.

TY.—By Messrs. Thomas Worthington & Son.





RAISING THE CRUCIFIX ON THE SUMMIT OF A MEXICAN TEMPLE. FROM A DRAWING BY MR. A. C. CONRADE.



Sprague & Co., Ltd., Printers, 4 & 5 East Harding St., E.C.

VICTOR EMMANUEL MONUMENT, ROME: DETAIL OF THE "ALTARE DELLA PATRIA."
SIGNOR ANGIOLO ZANELLI, SCULPTOR.





IMPERIAL LONDON: BIRD'S EYE VIEW OF SCHEME



INK PHOTO SPRAGUE & Cº L^TD 4 & 5, EA

IPMENT OF THE SURREY SIDE OF THE THAMES


NATIONAL THEATRE
ON THE SITE OF THE ADELPHI
SOMERSET HOUSE
STRAND
THE ADAM ST
WATERLOO BRIDGE
NEW "PLAYHOUSE"
"HELBIG" THEATRE
NEW HUNGERFOR
IMP. WAY

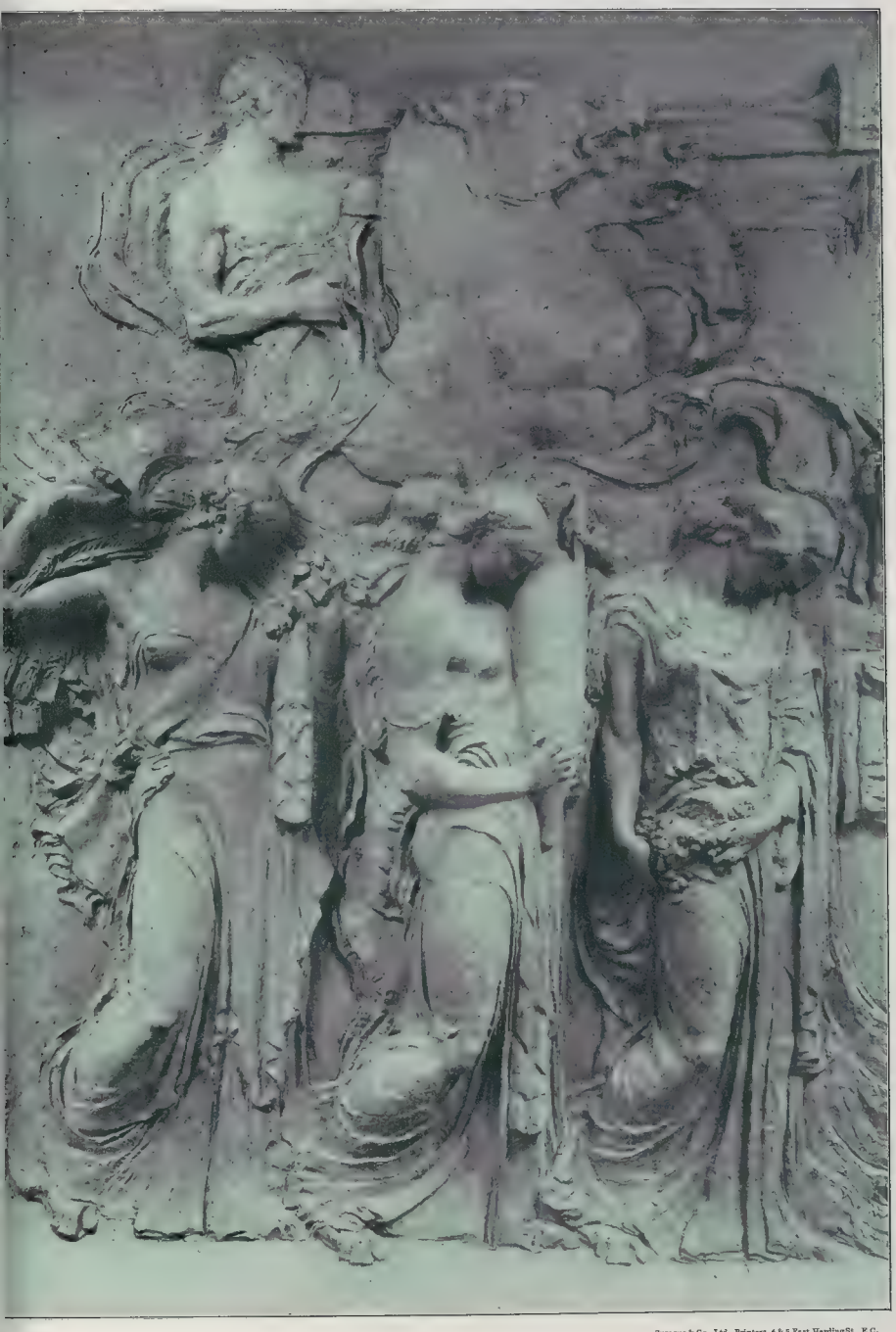


NK PHOTO SPRAGUE & Co LTD 4 & 5 EASTHARDING STREET FETTER LANE E.C.



Sprague & Co., Ltd., Printers, 4 & 5 East Harding St., E.C.

VICTOR EMMANUEL MONUMENT, ROME: DETAIL OF THE "ALTARE DELLA PATRIA."—Signor Angiolo Zanelli, Sculptor.



Sprague & Co., Ltd., Printers, 4 & 5 East Harding St., E.C.

VICTOR EMMANUEL MONUMENT, ROME: DETAIL OF THE "ALTARE DELLA PATRIA."
SIGNOR ANGIOLO ZANELLI, SCULPTOR.

MONTHLY REVIEW · *of* · CIVIC DESIGN.



IMPERIAL LONDON.

HE recent celebration of the Corona tion of King George V. brings to mind once more the idea of Imperial ration towards which all the States acknowledge his sovereignty appear slowly but inevitably tending. That yesterday was but the dream of enthu- to-day is the subject of discussion ractical statesmen; to-morrow it may ealised. When that day arrives it d find London prepared to justify tural position as the seat of a Federated rial Government.

would, of course, be possible, and some t think it more reasonable and more cordance with the fitness of things, to the example of America and of the ated States of Australia, and to found capital city, placing the seat of Empire me central position chosen by reason general convenience for the Empire whole. But it is probable that, whatever listant future may have in store, to over point the centre of gravity of our cal power may ultimately shift, a certain nentality and that sense of historic nuity which are such strongly-marked res of our racial character will preserve re-eminence for London, provided it is ble to remodel it on Imperial lines.

our overgrown village is to be trans- ed into a capital city of sufficient leur to satisfy the ideas of those of race who, free from the cramping influence of a narrow insularity, have developed, under the influence of a more spacious environment, a wider and more international outlook, nothing less than a complete reversal of our present mental attitude towards architecture and of our conception of London will be required to enable us to see this subject in the right light and to handle it in any adequate manner.

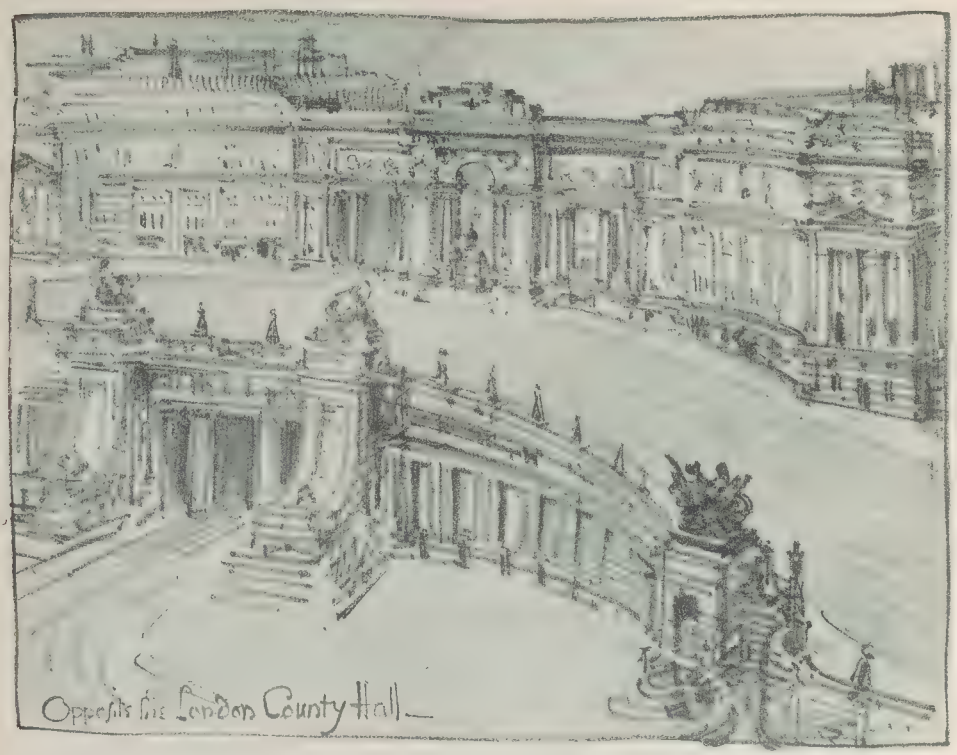
The problem to be solved in creating the capital city of our Empire under the conditions of modern civilisation differs in one essential point from that which faced the builders of the capital cities of the ancient Empires. A modern Empire is the voluntary association of equal and independent States; an ancient Empire was the involuntary association of subjugated States. This affects the question of finance. Ancient Rome was the centre into which the wealth of the conquered provinces was poured, so providing funds for palaces, temples, and fora. The city was built and rebuilt by the forced contributions of the whole Empire. London will have to be remodelled at the expense of her citizens or by the voluntary contributions of the different States.

Rome was built to please the taste of the central authority—Emperor or Senate—the tribute wrung from unwilling provinces was spent without consulting them and without in any way expressing their ideas; but in modern times he who pays the piper has the right to call the tune. London will have to express not only our own ideas, but those of the inhabitants of every quarter of the globe. This will be all to the good, for, though we may at one time have prided ourselves in conducting the affairs of the greatest Empire on earth within the four walls of a dingy little committee-room at Westminster, this curious idiosyncrasy will hardly appeal to anyone outside these islands.

A Federated Empire in these democratic days presupposes an Imperial Parliament dealing exclusively with Imperial affairs, and this appears to entail the necessity for an Imperial Parliament House. For this purpose the present Houses of Parliament would be quite inadequate, even if they would not be required for purely English affairs.

Although it were determined to locate the new Parliament House in London, yet again it might be thought more reasonable to select some open spot on the surrounding heights as an Imperial quarter. No doubt this would give a finer opportunity for architectural display, but here again practical convenience and our sense of historic continuity may possibly lead us to endeavour to preserve the great traditions inseparably connected with the name of Westminster.

The difficulty of creating an Imperial quarter with a central and commanding site for our Imperial Parliament House in the

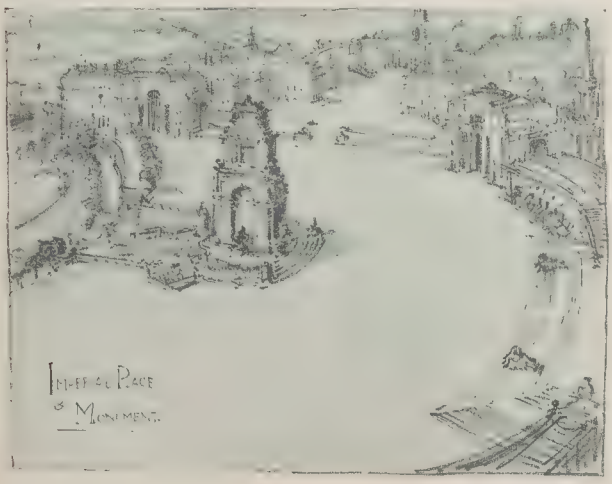


centre of London and within touch of Westminster might have been insuperable were it not for the fact that the geographical centre of London is a district that has always been overlooked and is now crying aloud for development. The whole of the district south of the river from Westminster Bridge to Blackfriars or London Bridges could be acquired and developed for this purpose at a most reasonable cost and without disturbing any buildings of artistic or historic value, and without interfering, to any appreciable extent, with the general life of the community.

In our issue of January 6, 1911, we published a suggestion for the removal of Charing Cross and the other railway stations to the south side of the river and the substitution of two union stations in connexion with the bridges and with a main traffic route from Westminster to London Bridge.

We now publish sketches showing how the space between this railway and the river can be utilised as a site for an Imperial Parliament House in connexion with a general scheme suggested by the necessities of an Imperial city.

Buckingham Palace is shown rebuilt as an Imperial Palace—as distinct from St. James's Palace, more intimately and historically associated with the Court of the United Kingdom. It is placed somewhat to the west of its present site, with a tower centring on the junction of the axial lines of the Mall and of Eaton-square. The present position of the Victoria Memorial is retained as the centre of a rond-point from which avenues radiate, the Mall forming the principal approach to the Palace. A diagonal avenue is formed by opening up the end of Pall Mall and St. James's Palace, and is continued through to Buckingham Palace-road, while Constitution-hill is slightly altered in direction to strike the centre of the rond-point and is then continued straight through St. James's Park as a grand processional way from the Palace to Westminster.



In order to form a more dignified environment and approach to both the present Houses of Parliament and to Westminster Abbey, Paliament-square is considerably enlarged. This would provide for a more dignified processional approach to these buildings on such occasions as a coronation or the opening of Parliament, and would make it possible to arrange seating accommodation for the public in some architectural form and avoid the disfigurement of, and danger to, the Abbey which is now entailed by the erection of stands in the present confined area.

From Westminster an Imperial processional way is continued over the bridge, passing the London County Council Hall—where an open place is provided for the ceremonies connected with the presentation of addresses to the Sovereign—to the Imperial Parliament House.

This is placed in a spacious square facing the river. In the centre of this square is an Imperial monument axial with Cleopatra's Needle, and with an improved Adelphi-terrace having an orchestral area in the centre and a narrowing avenue leading to a National Theatre on the site of the present Adelphi Theatre, the "Home of British Drama." The Parliament House would be

approached by steps and by inclined ways for carriages, and would extend back between Waterloo Bridge-road and the new Hungerford Bridge (over York-road), and connect with the railways.

The whole of this district, being at a lower level than the opposite bank of the river, could be treated as a double-decked city with the Imperial way and Parliament House on the higher level. Between these and the river would be an Imperial quarter in which could be situated the embassies of foreign Powers and the headquarters of the various States composing the Empire and of the different dependencies or Crown Colonies, the whole forming a magnificent river front to the south side of the Thames. Under these buildings would be waterways for barges, and the present lower level would be available for commerce and for heavy through traffic. The district south of the Imperial quarter would be left for the development which would naturally follow.

The Imperial way would continue with a monumental Place at the end of Blackfriars Bridge and connect with St. Paul's Bridge, over which it would form a processional approach to St. Paul's Cathedral, and on to the Guildhall or Mansion House. The proposal to rebuild the Mansion House suggests that it might be grouped with the Guildhall and approached by a broader avenue from Southwark Bridge.

Considerable attention has lately been given to the necessity for a general scheme for London. It is possible that the ruling idea of such a scheme may be found in the consideration of its needs as the future capital of a Federated Empire, which aspect would transcend all purely local considerations of convenience or profit. The primary requirements of such a city appear to consist of a Palace of State for the Emperor, an Imperial Parliament House for the deliberations of the Council of the Empire, and a processional way connecting them which would afford facilities for the numerous outdoor State functions which might reasonably be expected to occur more frequently than in the past. Considering the inadequacy of our streets for this purpose and the fact that all State processions nearly always follow the same route, it might be possible to get an idea from the columnal streets of the ancient Roman towns and gradually evolve an architectural processional way circling through the whole of London and touching the various places of historic or national interest.



TOWN PLANNING.*

TOWN planning has lately come into prominence in this country owing to the passing of the Town Planning Act, but it must not be assumed from this that the subject is a new one.

The Act has simply given local authorities power to carry into effect certain improvements which for years had been the dreams of the more advanced of our social reformers, and has brought the subject down from the region of the speculative to that of practical fact.

But although this Act enables us to remedy some of the worst evils in the development of the outskirts of our towns—providing, as it does the means for dealing with these districts as a whole—it hardly seems to touch the main problem, for it does not seem to be its deliberate intention to give powers to deal with the improvement of the central area of a town, to readjust it to meet the requirements of the more congested population and traffic incidental to, or caused by, the growth of the suburban areas.

In this sense the scope of the Act may be considered disappointing, and its title misleading.

The chief value of the Act, from the wider point of view, is that it has drawn public attention to the whole subject. It is hardly possible to conceive that when once the outskirts of a town are all laid out on comprehensive lines, the central area will be allowed to remain in a state of chaos.

Apart from these considerations this Act has, I believe, the distinction of being the first Act of Parliament to take official cognisance of the amenities of life—to recognise and to insist on the practical value of beauty. This alone is a proud achievement.

It should not be necessary here to insist on the value of the amenities of life, or to point out the effect on human health and happiness of gracious and pleasant surroundings; but, all the same, I would ask you to bear this in mind, as it is, I think, the paramount consideration, and the ultimate end to which all our endeavours are directed.

But, although we may take this for granted, it is to be feared that the public does not, and if in this respect the Town Planning Act may be said to be in advance of public opinion we should be all the more grateful for it on that account.

That the amenities of life have been neglected, since the rise of our modern industrialism, is most evident in the aspect of many of our manufacturing towns, where we generally find a development dictated solely by the financial interests of a comparatively small number of capitalists who are not obliged to live in the towns, without due consideration being given to the interests of those who are.

Now we, as town planners, have to consider the needs of every class of the community; we have an equal interest in all alike. From our point of view such a town is a failure, however well it may serve its purpose of cheap production—to the profit of the manufacturer and the advantage of the general consumer—if it does so at the expense of the health and happiness of its inhabitants. Indeed, I do not think we should be far from the truth if we asserted that a town is a success which first of all provides a healthy life for its inhabitants, even though it thereby increases the cost of production, and so handicaps itself in the race for commercial success.

We must not, however, misunderstand this point, as it is particularly important. It is not suggested that every town should be laid out simply as an agreeable place of residence without any regard for the necessities of its trade, or that, if divided up into factory and residential quarters, the factory quarter should be made so agreeable to the workers while at work that it is no use as a factory, or spread out so spaciously and adorned so lavishly as to render it an economic impossibility. This, obviously enough, would be absurd, for a town has to pay its way, otherwise it could not exist; but all the same it must be done in such a way that its inhabitants have at least a healthy place in which to work, and a pleasant place in which to play.

If it be contended that a town in the Potteries, for instance, cannot, in the nature of things, by reason of the character of its work, fulfil these requirements, our answer as town planners must be that it must either reorganise its methods of manufacture or cease to exist. If we are told that neither alternative is possible, we might suggest that it is only a question of time, and, possibly, of money. How long will the inhabitants of such a town submit to their present degrading environment, or, if the cost of improving this environment will lessen the profits of the trade of the town, what percentage of that profit can be devoted to this purpose without ruining the trade?

When we consider our present advanced state of civilisation, and our general high standard of decency, cleanliness, and comfort, and then think of the volume of trade and the immense profits made by our thriving manufacturing centres, we can only express our astonishment at their present condition, and their complete lack of the first necessities of civilised life, and ask ourselves why it is so.

Now, if we look at this question from the point of view of the town as a complete unit,

* Extracted from an introductory lecture at the Westminster Technical Institute by Mr. A. R. Jemmett, F.R.I.B.A.

consider the inhabitants of a town as a body of men carrying on an industry owned by themselves, it would seem that the problem would work itself out in a natural way.

The whole object of money, the fruit of industry, being to provide ourselves with the comforts, conveniences, and pleasures of life, it is to be supposed the people of such a town would naturally spend a percentage of the profits of the town on their own comfort and pleasure. A certain amount might be put by and invested, or spent in travel and amusement elsewhere, but considering the Englishman's love of his home and garden we might expect a considerable amount to be spent on securing home comforts amid pleasant surroundings, pure air, clean streets, foliage, and running water. Where a town is doing a thriving trade, such amount should be sufficient to procure the most beautiful surroundings—for the town could afford it.

Why is it not so? There are no doubt many causes which all combine to create the results we deplore, but the one to which I would draw your attention now is this. As a matter of fact the inhabitants of a town do not usually own the industries of the town, do not receive the bulk of the profits from these industries, so these profits are therefore not spent on the town.

The majority of the inhabitants consists of the workers in the industries with the retail traders and professional men, who feed and clothe them, and minister to their needs. The industries themselves are, as often as not, owned by absentee capitalists or shareholders in companies, who live anywhere but in the town.

Shareholders being but human, their chief interest is in their dividends—as long as these are paid they are apt to be satisfied—they know little of, and care less for, the town that created their dividends.

We thus get this position, that the wealth created by the town is not spent on the town and is not available for its improvement without the consent of those who take no interest in its amenities because they do not live there, while the actual inhabitants of the town, receiving only the workers' wage or the retail traders' comparatively small profit—which comes out of the workers' wage—are not in a position to improve the town at their own expense.

It is quite possible that the conditions here described are not exactly applicable to any one individual town. I am not suggesting that they are, I am only drawing your attention to one aspect of our social and economic organisation, which seems to me to exercise a bad influence on the amenities of our towns. But whatever the cause may be, the broad fact remains that thriving manufacturing towns are precisely those which should be able to afford the amenities of life, while it is notorious that they are just the ones that most lack them.

We must not, however, lose sight of a fact that has some influence on this question. When men are hard at work, their minds absorbed in their business, they are comparatively indifferent to their surroundings. The more occupied the brain, the more concentrated the mind, the less it is open to outside influences; therefore it may be argued that in a factory town, where everyone is busy, gracious surroundings would be thrown away on them.

This fact has an undoubted influence, but it is really a question of degree; it does not give sufficient reason for leaving out the amenities; it only helps us to determine their amount and special character. It helps us, for instance, in determining the different treatment to be adopted in the factory quarter as distinct from the residential quarter, or in a factory town as distinct from an agricultural or a residential town. But there is no proof that beautiful surroundings may be entirely neglected where people are sufficiently preoccupied, if only for the further fact that the influence of environment is partly subconscious, and has a certain influence, even though the mind does not consciously appreciate it.

We shall find that this point has a bearing on many aspects of our subject, and that, if we apply it for a moment to this question of the factory town, we arrive at rather curious results.

As you are all aware, the tendency of modern commercial organisation, especially in a factory where machinery is used, is to put one man in authority to administer the business and do the thinking for the rest. The more perfect the machinery used the less thought is required from the men who use it. The few managers then have their minds fully occupied, while the many workers have an occupation which allows them to think of other things.

We can understand, then, that the manager, coming in from his pleasant country residence, with his mind entirely preoccupied with the many pressing problems of his business, might be quite unconscious of the appearance of the streets through which he passes, while the factory hand, with mind less preoccupied, would be more likely to notice and be affected by their depressing influence.

So we find this—not only are the greater number of the owners of the profits absentees, and therefore indifferent, or even hostile, to the amenities of the town, but the few who come there every day as managers or the highly paid officials who represent them, who could, by their influential positions, do much for the cause, are just the very people who do not feel the need, the town being to them simply a place of business; while, on the other hand, the worker has no influential position, and can do nothing, although the town is to him a home.

All this seems to lead to the conclusion that those who have interesting and absorbing work do not need such pleasant environment as those engaged in unthinking, mechanical labour. So, from this point of view, the managing staff might live in the squalid neighbourhood of the factories, while the factory hands came in from the more pleasant atmosphere of the country. For where mechanical occupations tend, by their monotony, to deaden the mental and emotional faculties, pleasant surroundings are all the more necessary to counteract their effect. The more deadening and degrading the work, the more beautiful should be the environment. On this principle, factory towns should be the most pleasantly situated and most cheerfully disposed of all.

I have dwelt at some length upon this particular aspect of the subject, as it shows us that we cannot begin to discuss the amenities of a town—apart from mere practical necessity or convenience—without at once coming into contact with social, economic, and political questions, with physiological, psychological, and even ethical considerations, with which we may be told we have no direct concern.

Now, if we adopt the point of view that we are not concerned with ethics or political economy, we can take our present social conditions—the life of the city as we find it—acknowledge that it is no concern of ours whether it is good or bad, but that our business is simply to express it as we find it by arranging the town to suit it. We can apply the theory that our business is to provide each member of the community with an environment suitable to the work he happens to be performing.

But if we accept life as we find it, we must accept the bad—or the indifferent—with the good. If we provide such an environment as will facilitate the work of the bricklayer and be in proportion to his value to the community, then when we come to deal with a class of degenerate derelicts of no economic value to the state, we must provide them also with no more than the miserable sort of accommodation that is in keeping with their economic worthlessness. But if we facilitate the work of the bricklayer, we seem bound to facilitate that of the burglar also, for he also, on this assumption, is part of life as we find it. It is not for us on this theory to dabble in morality, to approve or to disapprove, but to confine ourselves to our proper business of arranging the town to suit the needs of every class of its inhabitants.

But if we facilitate the work of the burglar we are bound also to facilitate that of the police; and we reduce the whole argument to absurdity if we contemplate the town planner contriving a system of crooked alleys and slipways exactly adjusted to give the burglar a sporting chance of escape, or laying out a superior residential district with a nice appreciation of the conflicting interests of burglar and policeman.

We started out with the assumption that it was our duty to consider the needs of every class of the community, and to take an equal interest in all. It is evident that we must qualify that assumption to some extent. If we look upon the life of the town as an organic whole, it seems necessary to encourage the elements which tend to strengthen and solidify that life; not to disintegrate it.

I think, then, we may safely start the consideration of our subject on the assumption that there are defects in our social system which every right-minded man would wish to see removed, and that it is our business to help, and that social and ethical questions are our concern in so far as they affect our subject.

Now our subject, unfortunately, touches upon, and is intimately related to, certain questions, such as land tenure, which are sometimes the subject of acute and bitter controversy. It is therefore very necessary for us, in order to avoid prejudice, to approach them in a detached and impersonal way, to realise that we are not interested in them for their own sake, but only as they affect town planning. That we are town planners, not politicians or social reformers, and that we discuss the proposals of either simply from this point of view. If, on the one hand, the Radicals propose a radical or even a revolutionary change in the condition of our slum areas, we are Radicals with them—to that extent. If, on the other hand, the Conservatives wish to conserve our open spaces, or the beauty of our river banks, we are Conservatives with them—to that extent.

The more we study this subject, the more we see that the town is the result, and the expression in bricks and stones of the human life within it; that if you want a well-arranged town, you must first of all have a well-arranged social life.

No one can admit the perfection of the present basis of our civic life, with its enormous wealth, its appalling poverty, its misery, its vice, its disease, and crime, or maintain that our business is simply to arrange the town to suit these conditions, so that each man can find a suitable environment in which to be either rich or poor, healthy or diseased, criminal or law-abiding, with the greatest satisfaction to himself and all concerned.

As we have said, it is not our business to reform society; our object is to produce the perfect town, but, as we cannot have one without the other, it seems to be our duty to call attention to any social or economic custom which seems to be inconsistent with our purpose. Should we find any such custom so completely opposed to our ideals as to make a perfect town impossible, it is for us to point out the fact, and for the public to decide whether they prefer the custom to the town.

Let us take, as an instance, a point we have already touched on, the system whereby town factories or other town properties, such as slum areas, may be owned by absentees. Here we seem to come up against our whole industrial and economic organisation—the system of putting money out to interest, of joint stock, trading, and limited liability companies.

It is possible that this method of trading, whereby a man need not even always know how or where his money is being used—a system which has increased and reached a high state of development in modern times—will be found on inquiry to be largely responsible for the absence of the amenities in our modern towns.

It appears to separate capital from all personal, human feeling, and from all sense of personal responsibility, and it is just this personal feeling that seems so necessary when the question of beauty arises, particularly the personal interest and enthusisam of those who have the controlling financial interest.

As a matter of fact, I should doubt if it was possible in these days to carry out any improvement—even utilitarian—without coming into contact with the interests of absentee owners, who know nothing about it and care less—so long as they are looked after.

Now it is not for us to say whether this system is necessary to the social community or not—we are no judges of this—but I think it is for us just to point out that if every factory owner lived next door to his factory, and every slum owner lived in his own slum,

should probably see an improvement in h. But, as the owner of shares in a dozen ferent industries, situated in a dozen differ- towns could not possibly live in all of m at the same time, we might again point that if a percentage of the profits of any lustry or slum area, sufficient to provide amenities of life for the workers in that tory or the dwellers in that slum, were ducted before the profits were paid away outsiders—possibly even foreigners—the ne improvement might result.

I would ask you then to consider the town the outcome, the result, the expression material form of the physical, mental, and iritual needs of its inhabitants. To re- mber that these inhabitants are not in- pendent units who live independent lives, t that they are mutually dependent one on e other, and are being gradually welded gether by a process of evolution into a cial or civic organism, a coherent and ing entity, the collective or corporate life the city.

Now, as we have seen, this corporate life far from perfect yet. The elements of nich it is composed are not completely fused. nch conflicting interests as rich and poor, pital and labour, landlord and tenant, are ntinually acting and reacting one upon the her. There is a residue of degeneracy, of sease, and crime. There is nothing final our present social state. It is simply a assing phase in the general progress of manity towards the ideal of the perfect vic life. When that ideal arrives, it will e the town planner's duty and pleasure to ndeavour to express it in a perfect city.

We shall find that this subject of town lanning is not only important, but intensely nteresting also. It deals with human life n all its manifestations. It should appeal o all tastes, and to all types of mind, for o vast is the subject, so varied its details, hat everyone should find something to nterest him. Complicated it may be, but it s not commonplace; difficult, perhaps, but ot dull. However scientific or abstract some f its aspects may appear, underlying them ll is the human interest which never fails us.

CIVIC DESIGN NOTES.

New Houses and Streets in the Metropolis.

It is stated in the official report of the Commissioner of Police of the Metropolis that in the year 1910, in the Metropolitan Police District, 11,757 new houses were built, and that 172 new streets and two new squares were formed, the aggregate length of these new streets and squares being 28 miles 1,456 yards. The number of new houses being built at the commencement of the year 1911 was 3,285. The following are detailed figures for the present century :—

Year.	No. of New Houses Built.	New Streets.	New Squares.	Length of New Streets and Squares.	
				Miles.	Yards.
1901	27,174	301	0	60	408
1902	25,480	301	1	64	764
1903	26,42	350	0	68	944
1904	23,269	374	0	74	139
1905	21,070	300	0	60	409
1906	21,415	295	0	68	917
1907	19,211	264	0	64	1,742
1908	13,377	250	0	51	1,688
1909	13,343	217	0	48	378
1910	11,757	172	2	28	1,456

Two Thames Bridges, Kingston and Hampton Court.

The widening of Kingston Bridge will be shortly proceeded with after the plans of Mr. Basil Mott, with whom Mr. A. Dryland and Mr. H. Wakelam, County Surveyors for Surrey and Middlesex respectively, will be associated in the work. The two County Councils have contributed a sum of 120,000*l.*, which will be expended upon improving the approaches and widening the bridge upstream from 25 ft. to 55 ft. The existing structure—of which we published a view, after a drawing by Mr. W. Monk, on January 7, 1905—was built in 1825-8 by Edward Lapidge, county surveyor, the total expenses being limited by the Act to 40,000*l.*; the bridge itself cost 26,800*l.* A wooden bridge at Kingston is cited in a Close Roll of seventh Henry III., and, London Bridge excepted, it was the most ancient across the Thames. The ugly iron bridge at Hampton Court is to be repaired at an immediate outlay of 3,500*l.*; the carriageway will be laid with wooden blocks upon concrete, and the plank-decking will be replaced with a decking of mild steel. The bridge has a roadway about 18 ft. wide with one narrow footpath, and a general opinion prevails in the locality that it should give way to a new structure in view of the greatly increased traffic.

Columnal Monuments.

The two monuments we publish are taken from a valuable and profusely illustrated article in a recent number of the "Town Planning Review" on "Columnal Monuments as a Feature in Civic Design," and published by the courtesy of the editor.



Base of the Boulogne Column.
(From the "Town Planning Review.")

The Development of Port Arthur, Canada.

The City of Port Arthur has evolved from the appearance of a village to every indication of a city in the short space of three years.

Three years ago there were no paved roadways. To-day one drives on asphalt roads over 10 miles, and arrangements have been completed which will result in there being 25 miles of asphalt-paved streets by the end of 1912.

Three years ago there was not 1 ft. of permanent sidewalk. The city now boasts 100 miles of concrete sidewalks, all 8 ft. wide.

Three years ago the city after eight o'clock at night was almost in total darkness. Now the streets at night are almost as light as in the day. Thousands of incandescent lamp standards have been erected, not only in the business district, but throughout the residential quarter. This elaborate lighting system was made possible by harnessing water power within reach of the city.

In 1909 the actual value in buildings and land was 3,600,000*l.*, and to-day the value of buildings and land is 11,000,000*l.*

Three years ago the stranger approaching the city by water was impressed mainly with the untidy appearance of the water front, docks, etc. To-day he is amazed at its beautiful appearance. Terraced banks of rich green grass give an effect both artistic and progressive. The railway-stations which adjoin the docks are surrounded by attractive gardens. At nighttime the water front is a blaze of light.

The secret of this wonderful development is the fact that Port Arthur has been discovered to be the logical manufacturing centre for Canada, as she is situated just exactly halfway between the enormous Western and Eastern markets. Owing to her being the terminus of navigation, freight rates, which are such an important item with the manufacturer, are most satisfactory, rail rates being controlled by water competition.

Old Houses at Guildford.

In the course of a letter to the *Times* the Rev. Gerald S. Davies, M.A., Master of Charterhouse, writes :—"Of the towns which lie south of London and near it, there is none so well known and so worth knowing as a storehouse of really beautiful, simple, dignified old English houses as the town of Guildford. The municipality possesses therein, to put the matter on its most vulgar footing, a source of income through the number of visitors which are attracted to it annually thereby which, as a mere matter of duty to their town, no member of that body has any right to ignore. One learns, therefore, with no small surprise, that it is intended to destroy two old and valuable examples which could be saved with hardly any difficulty. About 200 yds. south of Guildford Station, on the south side of the narrow street which leads directly to the main Portsmouth road, stand two houses of that quiet, restrained, well-proportioned, and wholly satisfactory type which is still the best model, from all points of view, for our domestic town architecture. These are to go to widen the road which, every one admits, is too narrow now for motor traffic. But on the north side there are houses of no such value, which could be removed without any one regretting them. It is quite admitted that the removal of these houses on the north side presents no difficulty and entirely meets the need. Possibly and probably it would cost a little more. But the municipal authorities, who are the guardians surely of all that is worth guarding, would thereby have preserved, for all eyes to see, some of that inestimable store which, since I first knew the beautiful old town, has been so sadly reduced."

Beautiful Gardens.

A lecture was recently delivered by Mr. Horace J. Wright, F.R.H.S., to an audience assembled in the One and All Club Room of the Agricultural and Horticultural Association, Longacre. It was explained by Mr. Edward Owen Greening, who presided, that a special interest attached to the lecture because it was part of a movement for promoting rural revival. An effort was being made, under Mr. Wright's control, to federate the numerous local horticultural societies throughout the kingdom which organise annual flower shows.—Mr. Wright showed by lantern illustrations the remarkable results which can be achieved with skill and knowledge in London backyard gardens, adding that, where space permitted, the combined culture of vegetables, fruit, and flowers was the ideal at which to aim.



The Tegetthoff Monument, Vienna.
(From the "Town Planning Review.")

THE BUILDING TRADE.

LEGAL POINTS ABOUT TENDERS.

IT is important for every contractor who makes a tender to clearly understand the legal position in which his tender places him. Inasmuch as a large part of the work in the office of an engineering contractor consists in preparing tenders, it is useful to understand exactly what a tender should contain and what is the legal effect of its acceptance. For instance, something may occur after the tender has been posted, in consequence of which the contractor may desire to withdraw the document. Can he do so? If he makes a tender, he not unnaturally requires to know whether he has any remedy against the employers if they refuse to accept it. Finally, he will require to know his position when his tender is accepted.

A tender is an offer to do certain work at a certain cost based upon specifications which are sent out by the employers. As a general rule, the advertisement for tenders contains a statement to the effect that "the company [or as may be] do not undertake to accept the lowest or any tender." If this advertisement appears, and a tender is made upon the strength of it, the lowest tenderer has no cause for complaint if he fails to get the contract. If no such disclaimer is made, however, it is a nice question whether there is not an undertaking on the part of the advertisers to accept the lowest tender.

First, as to the making of a tender. The man who tenders sometimes repents before his tender is accepted. It is useful to point out that an offer or tender may be revoked at any time before it is accepted. The retraction must, however, be received by the employers before their acceptance has been posted, for the acceptance of an offer is deemed to be received as soon as it is posted.

A tender is usually made in writing, but it is not necessary that the tender should be in the tenderer's writing, providing the other circumstances are sufficient to identify the tenderer.

In a case which was heard many years ago, a railway contractor met a number of persons, one of whom we may call A, in order to receive tenders from each of them as to the execution of certain work. He read the specification with reference to the work, and after this A handed in his tender with the others. His tender was signed with his name, but there was no evidence that it was in his handwriting. It was held, notwithstanding, that such tender, taken with the specification, sufficiently proved the contract (Allen *v.* Yoxall, I. C. and K. 315).

It is important to notice that a tender and acceptance may amount to a contract, although the acceptance refers to a formal contract to be drawn up afterwards. So if an electrical contractor were invited to tender for certain work, and he made his tender and received the following reply from the employers:—"We accept the tender. The contract will be prepared by our solicitors," this would form a complete contract. In Lewis *v.* Brass (3 Q. B. D.) it was held that where a tender was accepted for building, with notice given that the contract would be ready for signature in a few days, it was held that there was a binding agreement upon acceptance of the tender. This rule, however, does not hold good if it can be made clear that the employers will require a written document. In the case of Kingston-upon-Hull (Governors) *v.* Petch (10 ex. 611), the Guardians of the Poor had issued an advertisement stating that they would receive tenders for the supply of the workhouse with meat for three months, from 30 stone to 50 stone (setting out the description of the meat), that sealed tenders were to be forwarded, and that all contractors would have to sign a written contract after acceptance of the tender. A butcher wrote to the Guardians as follows:—"I propose to supply your house with meat according to advertisement for the next six months at 6d. per pound." His proposal was accepted, and he was informed that he was appointed butcher, upon which he immediately declined the appointment. It was decided that the transaction amounted merely to a proposal for a contract, and that there was no binding agreement until a written document was signed.

A most important question arises as to the validity of an agreement amongst a number of contractors not to tender for a particular piece of work. This course is sometimes adopted in order to leave the field clear for an independent contractor who may be under agreement to share profits with those who have stood out of the way. The principle that such an agreement was not void was declared in an early case. There it appeared that tenders for the supply of stone were invited by a corporation. Four neighbouring quarry owners entered into an agreement that they each supply a certain proportion of the stone, and that the plaintiffs should make the lowest tender to the Corporation. The plaintiffs entered into contracts with the other quarry owners to purchase the proportion of stone agreed upon from each. Notwithstanding the agreement, one of the quarry owners sent in a tender, which was accepted by the Corporation. The other quarry owners who had been party to the agreement thereupon applied to the Court of Chancery for an injunction to restrain the supply of stone to the Corporation by the defendants. It was held, overruling an objection by the defendants, that the agreement was not void, either as against public policy or upon any other ground.

An agreement not to tender in competition extends apparently to work other than that which may be within the immediate contemplation of the parties at the time of the contract. Thus, suppose two electrical contractors agreed not to tender in competition with each other for the supply of goods or machinery to a certain Corporation. This agreement would not be satisfied merely by their recognition of it in respect of one tender. In one case an agreement was made between A and B not to tender in competition with each other for gas-tar. In answer to an advertisement, and acting upon his agreement with B, A sent in a merely nominal tender, with the result that B got the contract. Later, fresh advertisements were issued and a tender by B was rejected, whereupon A, without communicating with B, sent in a tender on his own account. It was decided that the agreement between them was still pending and that A was liable for the breach of it.

It may be stated that, as a general rule, there is no implied undertaking in an advertisement for tenders to the effect that the lowest tender will be accepted. This rule, however, only holds good where there is no custom of the trade to the contrary. In one case the plaintiff sent to the defendant's agent a tender for the execution of certain buildings. It was held that the judge was right, having regard to the evidence, in concluding that, according to the custom of the trade, the plaintiff's tender, being the lowest, it had been accepted, although their agent had absolutely no authority to accept the lowest. In a later case, however, an attempt to establish a custom met with failure. There the defendants had issued a circular in which it was stated that they had been instructed to offer to the wholesale trade for sale by tender the stock-in-trade of a certain firm, which they announced would be sold at a discount in one lot. They also stated in the circular the day and hour when the tenders would be received and opened at their offices. The plaintiffs made a tender which they alleged was the highest. In an action against the defendants for not accepting such tender it was decided by the Court that the circular was only an invitation for offers, and that there was no implied undertaking by the defendants to accept any tender at all.

No "custom" to accept the lowest tender could be set up in the engineering circles, although it may be, and often does, turn out that the lowest tenderer is successful. Yet a tender must be *bonâ fide* and not in any way likely to open the door to fraud. For instance, suppose employers agreed to accept the lowest tender for the erection of an electric lighting station, and that a contractor sent in a tender by which he undertook to do the work for, say, a less sum by 100*l.* than any sum mentioned by any of his rivals. It is submitted that the employers could not be compelled to give him the contract.

This submission is based upon the case of the South Hetton Coal Company *v.* Haswell (1898, 14 T. L. R. 277), which differs in that the question there arose in connexion with the purchase of royalties due from certain collieries. An offer was made to accept the highest net money tender they should receive (all other things being equal) from one of two rival purchasers. One party offered a certain sum, the other offered such a sum as would exceed by 200*l.* the amount offered by the other proposing purchaser.

Upon a refusal on the part of the employers to accept this offer, an action was brought for specific performance. The Court refused to grant a decree. Lord Lindley, then Master of the Rolls, when the case came before him in the Court of Appeal said:—"The plaintiff's offer is illusory; it does not answer to the description of the highest money tender either in the business sense or in the legal sense of the words. To hold that the plaintiff's offer answered that description would be to encourage trickery and chicanery. It would be opening the door to the grossest fraud, not only towards purchasers, but towards vendors also.

FAILURE OF BUILDINGS CAUSED BY DROUGHT.

IT is impossible to estimate the enormous damage that has been done to buildings throughout the country by the excessive spell of hot and dry weather experienced last summer.

Suburban London has suffered to a remarkable degree. In many districts, where the foundations rest upon clay, buildings by the hundred have needed underpinning.

The explanation of the trouble is a simple one: clay retains a considerable amount of water in its structure, and even at the height of an ordinary summer the soil is found to be quite moist at a depth of from 2 ft. 6 in. to 3 ft. from the surface. Last year, however, so great was the heat that the moisture evaporated to a much greater depth and the clay was frequently found perfectly dry as much as 5 ft. and 6 ft. down. The extraction of all this water left a considerable vacuity in the ground, and shrinkage in bulk of the clay took place, and with it settlements appeared in the buildings above.

Just as clay shrinks in a vertical direction, so also does it contract horizontally, forming great fissures. Some were found to extend 6 ft. into the ground under the abnormal conditions that prevailed last year. There is yet another cause of failure, for, as clay when dry tends to fall to powder, the rain of early autumn, instead of percolating gradually through the soil, finds its way into these fissures and washes the powdered clay out of its place, and, moreover, sliding or lateral movement is likely to occur where a part only of the soil is thoroughly wet and the remaining parts are still quite dry.

The proximity of trees to a building considerably increases the damage, as their roots suck out the water from the soil and the fibres running in all directions through the clay split it up and destroy its cohesion.

The paving of the surface of the ground, whilst keeping the rain from the clay, yet seems to act as a protection from the fierce rays of the sun, preventing the moisture being drawn out to the same extent as when the ground is unpaved. At any rate, it keeps the ground in a more equable condition, and, after all, the stability of the structure above depends, not so much upon whether the clay is moist or dry, as upon the condition, whichever it be, remaining unaltered.

The consideration of the action of the rather upon the clay emphasises the import- ce, firstly, of obtaining a sufficient depth of ndation to reach below the point affected sun and rain, and, secondly, of carrying all ndations to a uniform depth.

In the first case, increase of width does t make up for depth, for, assuming that e bearing capacity of the soil is adequate, hether the clay is wet or dry, the building still certain to settle if the moisture is with- awn from any part of the ground beneath e concrete bed, and, no matter how strong e foundations may be in themselves, failure bound to follow if an adequate depth is not ached.

In the second case, in dealing with over enty examples of failures last autumn the tter found only two or three instances of ctures occurring where the foundations were a uniform depth; and this is what might expected, for where an even settlement of whole building takes place no great harm done, but where one part settles more than other cracks and rents are sure to appear.

AND TAXES AND THE BUILDING TRADE.

We have received the following communica- n from Mr. Hy. Wrighitt, of Beverley :—

'I have read with deep interest your leader this week's *Builder*. The Chancellor nies the effects of the Land Taxes on the ilding trade. Would it not be possible to k a Member of Parliament to move for a turn of the number of building plans for ouses" passed by the various local authori- s during the last six years? This might ry up the promised inquiry."

ISIT OF STUDENTS TO VARNISH AND ENAMEL WORKS.

A party of students, under the leadership of Charles H. Eaton, who is the Instructor the Willesden Polytechnic, Redhill Technical stitute and Godalming Technical Institute rrey), and Mr. John West Derrett, who nducts the decorators' classes at the Batter Polytechnic and the Bromley School of t (Kent), visited Messrs. Thomas Parsons & ns' varnish and enamel works at Mitcham ring the Christmas vacation. As Messrs. rsons have a large order in hand for India, students were enabled to see practically the ole of the works in full operation.

The party, which was made up of students m the various institutes, was conducted und by Mr. V. W. Theobalds, the works nager and a colleague, and observed the ocess of manufacture of the enamels, Endel- e and Endelflat, and the undercoating ako.

Before departing, the visitors partook of ht refreshments, which were supplied by the n, when Mr. Derrett took advantage of the portunity, on behalf of the students, to der their thanks for the excellent manner in ich the firm, through their manager, had d everything explained. The students were ch presented with a souvenir of the occasion.

RE AT SILK MILL BUILDINGS, DERBY.

The accompanying illustration is of the k Mill buildings at Derby, after a severe fire ne time ago. The fire, which was very roe, gutted the inside of the building com- tely, but the iron staircase remained stand- g, the top part being strong enough to hold without the walls in an extraordinary nner. The staircase, which was supplied by ssrs. Hayward Brothers & Eckstein, Ltd., ion-street, Borough, S.E., was afterwards en down, and on the mill being rebuilt it being re-erected.

ENERAL BUILDING NEWS.

CHURCH OF ST. NICHOLAS, WALLASEY.

The Church of St. Nicholas, Wallasey (the rrison memorial), was consecrated on the h ult. by the Bishop of Chester. The urch is built upon a raft made of Kahn el rods, embedded in concrete and resting on the sand. The ground plan consists of ve, north and south aisles, narthex, chancel, e chapel, clergy and choir vestries, and zan-chamber. There are two main entrances the north and south sides of the church. h special entrance to side chapel. The urch is heated by means of a low-pressure hot-water system, and ventilated by radiators, with fresh-air inlets in the walls and extract ventilators in the roof. The lighting is by electricity. The exterior of the building is of rock-faced Storeton stone, with rubbed-faced quoins and dressings. The interior is rubbed Storeton stone and plaster. The roof is covered with Yorkshire flags. The floor of the chancel is Hopton Wood marble paving, with borders of green tinos and red verona panels. The remainder of the church is of wood-block flooring. The seating accommoda- tion is :—Nave, aisles, and transepts, 548; side chapel, thirty-six; chancel, twenty-six—total 610. The total external dimensions of the church are :—Length, 128 ft. 6 in.; breadth, 54 ft.; height to top of tower, 75 ft. Mr. J. Francis Doyle, Liverpool, is the architect; Colonel S. W. Doyle, V.D., surveyor; Mr. W. H. Power, clerk of works; and the follow- ing have been the contractors :—Building, Messrs. John Thomas & Sons, Oxton, Birken- head; plumbing, painting, and glazing, Messrs. S. R. Henshaw & Son, Liverpool; electric light, Messrs. F. B. Hellon & Co., Liverpool; heating, Messrs. J. R. Cooper & Sons, Liverpool; wood-block floors, Messrs. Roger L. Lowe & Co., Liverpool; reredos, Messrs. Harry Hems & Sons, Exeter; chancel and chapel and altar paving, Mr. George Swift, Liverpool; carving, pulpit, and font, Messrs. Norbury & Co., Liverpool; chancel seats, etc., Messrs. Jones & Willis, Ltd., Liver- pool; chancel screens and vestry furniture, Messrs. Waring & Gillow, Ltd., Liverpool; organ, Messrs. Nicholson & Co., Worcester; bells, Messrs. John Warner & Sons, Ltd., London, N.E.; chancel window and chapel window, Messrs. Shrigley & Hunt, Lancaster. Engineer for the raft, Mr. A. C. Auden, A.M.Inst.C.E.; engineer for electrical work, Mr. A. H. Robinson.

GRAMMAR SCHOOL, EYE.

New classrooms, a central hall, laboratory, carpentry, laundry, and cooking rooms have been erected on the site of the old Grammar School. The buildings, which are of red brick with white Gunton dressings, and roofed with sand-faced tiles, are heated with hot-water throughout, and ventilated by Boyles' ex- tractor ventilators, with fresh-air inlets; they have been erected from plans prepared by Mr. J. Webb, Surveyor to the East Suffolk County Education Committee, who also super- intended the erection. The general con- tractor, Mr. A. Gayford, of Ipswich, carried out the work. Messrs. Martin & Newby, of Ipswich, supplied the gas installation, and Mr. E. Scott, of Ipswich, erected the heating apparatus.

NEW COLLEGE, CAERLEON.

The amended plans of Messrs. Alfred Swash, F.R.I.B.A., & Son, architects, of Newport, have been approved by the Local Government Board, and the erection of the college is to be proceeded with at once. The contract has been secured by Mr. F. Bond, builder, of Cardiff, whose estimate was 28,248*l*. The college will be a three-story building, and will have a frontage of over 230 ft.; a residence for the principal, caretaker's cottage, and power house will also be erected. Mr. Charles Locke, of Newport, is the clerk of works.

ABERDEEN BUILDING TRADE.

The statistics as to the extent of building in the city during the past twelve months—for the period from December 1, 1910, to Novem- ber 30 last—show an increase as compared with those of the past two or three years, but the improvement is not of an outstanding nature, and, in the words of several of the builders themselves, 1910 has been "a dull year." The total value of the new buildings, alterations, and additions sanctioned during the year was 139,781*l*., as compared with 100,235*l*. in 1910—an increase of 39,546*l*. This looks a substantial increase, and one which might be expected to give gratification to those concerned; but how far the industry has receded from the high- water mark will be seen when it is stated that this year's value is the lowest of any year from 1907 to 1898, in which year the total value was 514,015*l*. The value in 1909 was 132,054*l*., and in 1908 91,272*l*. The number of the new buildings erected and additions and alterations carried out during the year under review was 214, as against 183 in 1910. The new goods stations accounted for 35,000*l*. of the total—that being the amount of expendi- ture on that work sanctioned during the past year.

DUNDEE BUILDING TRADE.

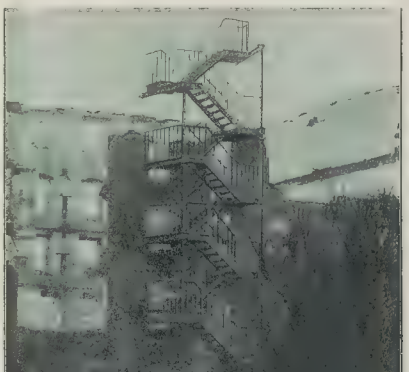
According to the *Dundee Advertiser*, those engaged in the building trades in Dundee have just passed through one of the poorest years on record, and the outlook is far from promis- ing. Since the completion of the scheme for providing district libraries, including the Central Reading Rooms, there has been no building of any outstanding nature started, and next year all that appears likely to be undertaken will be the erection of a new Training College for teachers in Park-place and the provision of a hostel or hostels for students in training on the Mayfield estate in the east end of the city.

NEW BUILDINGS IN LONDON.

Model dwelling-houses, site of vacant brewery, Brookmill-road, Deptford, S.E. (11,000*l*.); Mr. W. J. Burton, builder, Broad- stairs. Extensions to No. 165, Gray's Inn-road, W.C. Messrs. Mattock & Parsons, builders, 10, Gray's Inn-road, W.C. Proposed public hall, Hotham-road, Putney, S.W.; Rev. Canon Rivington, Vicar, St. John's Church, Putney. Conveniences, Victoria-embankment-gardens, E.C. (1,215*l*.); Messrs. W. Johnson & Co., Ltd., builders, Wandsworth Common, S.W.

NEW BRIDGE, SOUTH WALES.

The opening of the new Rumney Bridge took place on New Year's Day, when the Lord Mayor of Cardiff performed the cere- mony. The bridge has been erected at a cost of about 7,000*l*. from the plans of the engineers,



Staircase after Fire at the Silk Mill Buildings, Derby.

Mr. W. Harpur, M.Inst.C.E., and Mr. W. Tanner, F.S.I. The contractors for the work were Messrs. Barnes, Chaplin, & Co., of Cardiff.

TRADE NEWS.

Under the direction of Mr. William Huckvale, architect, Tring, the "Boyle" system of ventilation (natural), embracing Boyle's latest patent "air-pump" ventilators and air inlets, has been applied to the Victoria Hall, Tring.

The Roman Catholic School, Romford, has recently been fitted with two of D. O. Boyd's "hygnastic" ventilating school stoves, supplied by Messrs. O'Brien, Thomas, & Co., Upper Thames-street, London, E.C., and Excelsior Works, South Bermondsey.

The Infectious Hospital, Newark, is being supplied with Shorland's warm-air ventilating patent Manchester grates, patent exhaust roof ventilators and inlet ventilators, supplied by Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester.

Messrs E. H. Shorland & Brother, Ltd., of Failsworth, Manchester, have just supplied their warm air ventilating patent Manchester grates to the Council Schools, Cleethorpes.

The Directors of the London County and Westminster Bank, Ltd., have declared a dividend of 10§ per cent. (less income tax) for the half-year ended December 31 last, making a total distribution for the year of 21¼ per cent.

THE LATE MR. I. C. JOHNSON.

The estate of the late Mr. Isaac Charles Johnson, of Mayfield, Gravesend, head of the firm of Messrs. I. C. Johnson & Co., Ltd., cement manufacturers, who died on November 29, in his 101st year, is sworn as of the gross value of 40,656*l.*, with net personalty 38,750*l.*

PROJECTED NEW BUILDINGS IN THE PROVINCES.*

ABBEY MOUNT.—New hall (3,000*l.*); Mr. E. Calvert, architect, 16, North-street, Andrew-street, Edinburgh.

Bedley (Beds).—School (5,000*l.*); Mr. J. T. Blackwell, architect, Market-place, Kettering.

Bedminster.—Catholic church; Mr. J. C. Bevan, 36, Corn-street, Bristol.

Bellshill.—Rebuilding works for Messrs. W. Beardmore, Ltd., Mossend-street Works, Bellshill.

Bexhill.—School (4,325*l.*); Messrs. Cook & Son, builders, Crawley.

Bridgend.—Proposed maternity ward at workhouse (1,150*l.*); Clerk, Bridgend and Cowbridge Board of Guardians.

Caehopkin.—School (3,600*l.*); Mr. A. W. Best, County Architect, Brecon.

Cambridge.—School (6,000*l.*); Mr. J. Julien, Guildhall, Cambridge.

Cambusnethan (Wishaw). Extensions to school (2,000*l.*); Mr. J. King, Russell-street, Wishaw.

Chard.—Corn exchange (2,000*l.*); Mr. A. W. Hearn, Surveyor, Chard Town Council.

Chirk (Denbighshire).—Mansion-house for Lord Howard de Walden; Mr. E. G. Davis, architect, Llangollen.

Chorley.—Billiard hall (2,000*l.*); Mr. J. F. Edmondson, Burnley road, Nelson.

Crichton (Edinburghshire). — Additions, Crichton Royal Institute (5,000*l.*); Messrs. Mitchell & Wilson, architects, 13, Young-street, Edinburgh.

Darlington. Ice and cold-storage buildings; Mr. G. Walesby Davies, High row-chambers, Darlington. School, Durham-road; Mr. G. Winter, Surveyor, Darlington Town Council.

Doncaster. — Swimming-baths and washhouses (5,000*l.*); Mr. F. A. Kirby, Surveyor, Doncaster Town Council. Proposed additions to hospital, Mexborough and Doncaster Joint Hospital Board.

Dumbarton.—Lodging-house (3,000*l.*); Mr. J. Bell, architect, 3, Merry street, Motherwell.

Dundee.—Additions to calender, Victoria-road, for Messrs. A. & S. Henry & Co., Ltd. Warehouse and workshop, South-road and Millar's-lane for Messrs. East Brothers, Ltd.

Durham.—Laundry; Mr. L. E. Ekins, Wholesale Co-operative Society, West Blandford-street, Newcastle. Parish hall (2,000*l.*); Vicar, St. Margaret's Church, Durham.

Eastbourne.—A plan has been passed for a garage at "Avila," Prideaux-road, for Mr. Joseph Martin, builder. Plans have been lodged as follows:—Cinematograph hall, seaside; Mr. H. Baker. Six houses, Victoria-drive; Mr. T. H. Sawyer & Sons.

Eccles.—Plans have been passed as follows:—Picture theatre, at junction of Church-street and Corporation road; Eccles Picture Theatre Company, Ltd. Foundry at Barton Hall Engine Works, Hardy-street, Peel Green; Messrs. L. Gardner & Sons, Ltd. Conversion of coach house, 58, Regent-street, into picture theatre; Mr. A. L. Ward. Extensions to bank, Church-street, for the Manchester and County Bank, Ltd.

Edinburgh. — Buildings, Nicholson-square (2,000*l.*); Mr. T. P. Marwick, architect, 43, York-place, Edinburgh.

Erith.—Club and Institute, Valley road. Trustees of the Erith Men's Club and Institute. Extensions to works for Messrs Vickers, Ltd

Featherstone (Yorks). Miners' home. Mr W. H Fearnley, architect, 93, Station-lane, Featherstone.

Fforestfach. Parish hall; Mr. H. A. Ellis, architect, Swansea

Glasgow.—Extensions to Fossil Engineering Works for Messrs. Hugh Smith & Co. 2,000*l.*). Mr. C. I. McNair, 112, Bath street, Glasgow

Glassford, School 3,000*l.*): Mr. Gavin Lennox, 103, Bath street, Glasgow.

Grimscar.—Church: Vicar, St. John's Church. Huddersfield.

Halifax.—School chapel (1,000*l.*); Trustees, Warley-road, Wesleyan Methodist Church, King Cross.

Harwich. — Residence (835*l.*); Mr. E. Saunders, builder, Main-road, Dovercourt.

Hebburn-on-Tyne —Picture hall and theatre: Mr. H. E. Kelvey, 79, Rusholme-road, Manchester.

Heybridge.—School (5 665*l.*); Messrs. J. Farren & Sons, builders, Erith.

Heywood and Winton. — Schools (5,000*l.* each); Mr. R. Littler, County Architect, Preston.

Hull.—Chapel, etc., at cemetery; Mr. J. H. Hirst, City Architect, Town Hall. Huddersfield.

Irvine.—Building, Gailes-road (3,000*l.*), for the Brands' Pure Spelter Company.

Jarrow.—Roman Catholic schools (8,000*l.*); Mr. C. Walker, architect, Newcastle.

Joppa.—Terrace of villas, Brunswick-gardens (8,000*l.*): Mr. G. S. Carfrae, 1, Erskine-place, Edinburgh.

Kelvinside (Glasgow).—Motor garage for Messrs. George Gilmour, Ltd. (2,000*l.*); Mr. A. Leitch, architect. Argyle-arcade, 30, Buchanan-street, Glasgow.

Kinglassie. School (7,800*l.*); Mr. G. E. Campbell, Methill, Fifeshire.

Kirkstall. Reconstruction of Union Methodist School (3,000*l.*); the Trustees.

Leigh (Lancashire).—Pavilion at workhouse (7,000*l.*); Mr. E. Williams, Clerk, Leigh Board of Guardians, Kenyon.

Leigh-on-Sea.—School (3,285*l.*); Messrs. J. S. Hammond & Son, builders, Romford, Essex.

Limbury. — School; Messrs. Gotch & Saunders, architects, Bank-chambers, High-street, Kettering.

Long Four (near Londonderry).—School (3,500*l.*): Mr. D. Conroy, architect, 21, Ship Quay-street, Londonderry.

Lowestoft. — Drill hall and rifle-range, Beccles-road; Mr. F. W. Richards, architect, 14, Stanley-street, Lowestoft.

Luton.—Infirmary (6,000*l.*); Messrs. Gotch & Saunders, architects, Market-place, Kettering

Margam (Glamorganshire).—Public library (3,000*l.*), Mr. J. Cox, architect, Margam.

Millbrex.—Extensions to school (2,000*l.*); Mr. James Cobban, Haddo House, Aberdeen.

Monkton, S.O. (Ayrshire). Additions to school (1,750*l.*); Messrs. J. & J. Armour, architects, 43, Bridge gate, Irvine.

Newcastle.—School (5,000*l.*): Messrs. Harrison & Ash, Newcastle.

Newport (Fifeshire).—Post-office buildings (2,100*l.*); Messrs. McCulloch & Jamieson, architects, 20, Whitehall-street, Dundee.

Northampton.—The following plans have been passed:—Additions to factory, Wellingborough-road; Messrs. Manfield & Sons. Additions to factory, Stimpson-avenue; Messrs. Green & Sons, Ltd. Eight houses, St. Andrew's-road; Messrs. H. Martin, Ltd.

Padiham.—Additions to school (2,100*l.*); Mr. H. Littler, architect, 16, Ribblesdale-road, Preston. Market hall, town hall, fire station, etc., site of old gasworks, Smythgate; Mr. John Gregson, Surveyor, Padiham Urban District Council (architect to be appointed).

Pattiesmuir.—Thirty tenements (1,000*l.* each) for the Pattiesmuir Building Company, Ltd.

Portobello.—Extensions to Harbour Green Pottery for Messrs. A. W. Buchan & Co.; Messrs. Buchan & Carlyle, 42, Brighton-place, Portobello.

Radford.—Proposed enlargement of St. Nicholas' Church (1,500*l.*); the Vicar.

Reading.—Scattered Homes' headquarters (4,000*l.*); Mr. W. H. Oliver, Clerk, Board of Guardians, Reading.

Retford and Everton (Notts).—Schools (6,000*l.* each); Mr. L. Maggs, Shire Hall, Nottingham.

Rosemount (near Londonderry). — School (3,500*l.*); Mr. E. J. Foye, Strand-street, Londonderry.

Rothwell.—Enlargement of National School (900*l.*); the Managers.

Salford.—Plans have been passed as follows: Extensions to works, Greengate, alterations to Nos. 57 and 59, Regent-road; alterations to premises, Springfield-lane and Sandywell-street.

Sheffield.—School (1,265*l.*); Mr. G. S. Baxter, Secretary, Education Committee, Sheffield Town Council.

Siddal (Halifax).—Church; Vicar, St. Mark's Church, Siddal.

Springfield.—Extensions to asylum (3,700*l.*); Messrs. Gillespie & Scott, architects, 4, Queen's gardens, St. Andrews, Fife.

Stirling. — Additions to police-station (1,850*l.*): Mr. A. H. Goudie, Surveyor, Town Buildings, Stirling.

St. Stephen's.—Workmen's dwellings; Mr. J. A. Andrews, Surveyor, St. Germans Rural District Council.

Tinsley (Rotherham).—Works for Messrs. E. Allen & Co.

Walkergate. — School (7,000*l.*); Messrs. Marshall & Tweedy, architects, 17, Eldon-square, Newcastle.

Warrington.—The following plans have been passed:—Seven houses, Ford-street; Mr. W. Rowlands. Forty-three houses off Knutsford-road for the Executors of Mrs. Chappel. Sixteen houses, Longdin-street, for Mr. Thomas Hewitt. Additions to hospital, Aiken-street; Mr. J. P. Booth, builder.

Warsley. — Extensions to St. Mark's Day School: Mr. R. Littler, County Architect, Preston.

Winsley (Bradford-on-Avon).—Extensions to sanatorium (9,000*l.*): Mr. W. S. Skinner. Edinburgh-chambers, Bristol.

Witham.—Proposed fire-station: Mr. W. P. Perkins, Surveyor, Witham Urban District Council

Woodside (South Norwood).—Enlargement of St. Luke's Church (5,000*l.*): Mr W. D. Caröe, architect, 3, Great College-street, S.W.

* See also our list of Competitions, Contracts, etc., on another page.

OBITUARY.

Mr. Joseph Bell.

We regret to record the death of Mr. Joseph Bell, the senior member of the firm of Messrs. William Bell & Sons, builders, contractors, and timber merchants, of Saffron Walden and Cambridge, which occurred at his residence, Dorset House, Saffron Walden, on Saturday, the 30th ult., at the age of seventy-eight years. Mr. Bell was born at Cambridge, the son of the late Joseph Bell, and grandson of William Bell, who founded the business 118 years ago. He established the Saffron Walden branch in connexion with the Cambridge business forty-seven years ago, and shortly after went to reside at Saffron Walden. Mr. Bell had been a member of the Saffron Walden Town Council for the last thirty-nine years, and he has been ten times Mayor of the Borough, and at the time of his death was Deputy Mayor. He was elected an Alderman of the Borough in 1884, a Justice of the Peace for the Borough in 1884, and a Justice of the Peace for the county of Essex in 1895. Mr. Bell had been President of the Cambridge Master Builders' Association since its formation, thirty-five years ago. Mr. Bell has carried out extensive works in all parts of the country. He was one of the founders of the Saffron Walden Lodge of Freemasons, and was its first Master. He married a daughter of the late Emanuel Foster Davy, of Beaminster, Dorset, and they celebrated their golden wedding in 1905. Since then both have died. They have left a family of two sons and two daughters. Mr. Bell was President of the Institute of Builders for the year 1907. The funeral took place at Saffron Walden Cemetery on Wednesday afternoon.

THE ROYAL INSTITUTE OF BRITISH ARCHITECTS:

THE AUTUMN EXAMINATIONS.

Preliminary.

THE Preliminary Examination, qualifying for registration as Probationer R.I.B.A., was held in London and the provincial centres mentioned below on November 20 and 21. The Board of Architectural Education, reporting the results to the Council, state that of the ninety-five candidates admitted thirty-seven were exempted from sitting, and the remaining fifty-eight were examined, with the following results:—

Centre.	Total Examined.	Passed.	Relegated.
London	40	27	13
Bristol	7	6	1
Leeds	3	2	1
Manchester	6	5	1
Newcastle	2	2	0
	58	42	16

The passed candidates, with those exempted, making a total all together of seventy-nine, have been registered as Probationers, and are as follows:—

S. C. Allum, London
H. Andrew, Hull
H. G. Atkin-Berry, London
A. Barley, Westcliff-on-Sea
S. Barlow, Stockport
A. M. Bisiker, Crouch End
J. D. Blackpool, Kidderminster
A. W. Bowman, London
J. Bradshaw, Failsworth
H. C. Bradshaw, Liverpool
S. A. Brinkworth, Corsham
C. J. Brooks, London
H. F. Brueton, Bridgwater
W. Burgord, Holt, Norfolk
J. Caldwell, Penzance
J. G. Cameron, Inverness
E. Carreras, St. John's Wood
M. Cooper, Regent's Park
G. Cooper, Willesden Green
F. Crossley, Bradford
H. Crowther, Elland
L. Curtis, Tufnell Park
Dangerfield, St. Albans
T. Drew, Grove Park, Kent
H. Evans, Moseley
L. Feirn, Windermere
A. S. Forbes, Newlyn, Penzance
G. Foster, Buckfastleigh, South Devon
M. Frame, Larkhall, Scotland
E. Gossling, South Croydon
Gray, Hertford
H. Gutteridge, London
H. Harris, Stoke Newington
St. J. Harrison, Newcastle-on-Tyne
O. B. Hitch, Vauxhall
Hunt, Oxford
Colonel B. Hustler, Castleford
D. Jackson Oxton
[illegible], Salisbury
M. Jeffreys, Maldon
H. J. Jeynes, Birmingham
C. MacA. C. Johnson, Gloucester
H. A. Johnson Heaton Moor
W. D. Key, Upminster
G. A. Langdell, London
I. B. Macbean, Ealing Common
H. Macpherson, Glasgow
G. L. S. Marner, London
E. A. L. Martyn, Redruth
J. F. L. Mercer, Blackburn
F. Milnes, Huddersfield
G. Moerdijk, Battersea Park
A. R. Mosley, Eastbourne
I. Omar, Hampstead
A. J. Palmer, London
H. Paul, jun., Ealing
R. W. Pite, Ealing
F. H. N. Powell, Bournemouth
J. F. Pye, Grimsby
R. M. dos Remedios, Maida Vale
A. D. Rix, Norwich
J. J Robinson, Kentish Town
J. R Rogers, Leamington Spa
L. J. Routley, Taunton
W. Rudman, Chippenham
F. H Shackleton, Luton
A. R Shibley, Merton Park
C. H. N. Smith, Norfolk
G. V. Spurway, Milverton
L. S. Stanley, Cambridge
E. A. D. Tanner, Fulham
D. R. Thomas, Llangadock
H. M. Thomas, Maidstone
J. S. Thomson, Wimbledon
H. B. Tunnard, Denmark Hill
F. Wager, Birmingham
S. E. Walker, Halifax
L. E. Williams, Stockwell
P. J. Williams, Carmarthen

Intermediate.

The Intermediate Examination, qualifying for registration as Student R.I.B.A., was held in London and the undermentioned provincial centres on November 20, 21, 23, and 24. The Board of Architectural Education report to the Council that 100 candidates were admitted and examined, with the following results:—

Centre.	Total Examined.	Passed.	Relegated.
London	59	36	23
Bristol	8	5	3
Leeds	5	2	3
Manchester	23	14	9
Newcastle	5	3	2
	100	60	40

The successful candidates, who have been registered as Students, are as follows, their names being given in order of merit as placed by the Examiners:—

T. P. Bennett, Kilburn
W. N. Thomas, Crewe
W. G. Newton, London
F. Lorne, London
M. R. Hofler, Eastcote
M. D. Robertson, London
K. B. Mackenzie, London
L. G. A. Dubins, London
N. F. Woodroffe, Purley Downs
C. Rowntree, Hammersmith
L. H. Lait, Ravenscourt Park
E. H. M. Ebbs, Harlesden
J. G. Hinton, Winchester
R. A. Walter, Harringay
W. H. Elgar, Folkestone
H. S. Friscott, Plymouth
G. Moerdijk, Battersea Park
R. V. Taylor, Southport
F. Williamson, Manchester
H. A. Gold, Beckenham
N. G. Harland, Stamford Hill
C. E. Hill, Sheffield
J. O. Cheadle, Kensington
E. J. Hart, Manchester
W. G. Pidsley, Pinhoe
P. W. G. Rudhall, London
G. Hemm, Heaton Chapel
G. A. K. Robertson, Belfast
C. J. K. Clark, Newcastle-on-Tyne
E. F. Bothwell, Forest Gate
F. A. Broadhead, Nottingham
S. Clark, Carlisle
A. T Edwards, Liverpool
S. C. Garrett, Brighton
W. S. Grice, Ealing
A. W. Harwood, London
B. de C. Jackson, Beckenham
W. J. Lewis, Pontypridd
R. H. Maddock, Sutton
R. E. Matthews, Coventry
G. McLean, Portmadoc
E. W. Mountford, Guildford
C. E. Nichols, Sheffield
E. B. Norris, Didsbury
J. Palmer, Islington
W. G. Parkin, Hampstead
R. H. Riley, Lower Darwen
A. Silcock, Bath
T. H. Smith, Bolton
M. C. Sunter, Manchester
A. G. Toone, Manchester
A. J. West, Nottingham
P. G. White, Bickley
J. S. Wiggins, Brighton
J. G. Williams, St John's Wood
W. J. V. Williams, Swansea
P. T. Wilsdon, Kensington
A. M. Winder, Oldham
B. W. Woodhouse, Carlisle
L. M. Yetts, London

The following table shows the number of failures in each subject of the Intermediate Examination:

I. Classic Architecture	18
II. Mediæval Architecture	27
III. Renaissance Architecture	34
IV. General Questions	20
V. Theoretical Construction	18
VI. Descriptive Geometry	20
VII. Applied Construction	17

Intermediate Exemptions.

The following candidates, having produced, in accordance with the regulations, satisfactory evidence of previous training, were exempted from sitting for the Intermediate Examination, and have been registered as Students R.I.B.A., viz.:

F. R. Barry, Richmond, Surrey
L. E. Carreras, St. John's Wood
V. H. Hughes, Sandgate
I. Omar, Hampstead
P. E. Webb, London
L. E. Williams, Stockwell

Final and Special.

The Final and Special Examinations, qualifying for candidature as Associate R.I.B.A., were held in London from November 30 to December 8. The Board of Architectural Education report to the Council that of the ninety nine candidates admitted and examined fifty-six passed, and the remaining forty-three were relegated to their studies. The passed candidates, who, subject to Clause 8 of the Charter, have become qualified for candidature, are as follows, the * prefixed to a name indicating that the candidate sat for the Special Examination, which is designed for architects in practice and chief assistants exempted by the Council from the Preliminary and Intermediate Examinations and from submitting Testimonies of Study:—

H. H. Archer, Windsor
H. J. L. Barefoot, Wandsworth Common
R. F. Bargman, Dorking
* J. A. M. Baxter, Edinburgh
T. Bennett, Gravesend
H. S. Besant, Lee
H. W. Brittan, Croydon
* C. Castelow, Leeds
J. M. Clarke, Preston
C. J. M. Cowdell, Leicester
F. A. Crouch, Brighton
* D. S. Cullen, South Norwood
J. Dovaston, Ealing
F. Dowdeswell, Palmer's Green
G. M. Dunn, London
A. M Durrant, Hemel Hempstead
S. J. Edwards, Bayswater
J. K. Ground, London
J. B. Healing, Leicester
P. D. Hepworth, Hampstead
B. Johnston, South Ealing
* J. J. Knewstubb, Penrith
* A. W. Larsen, London
C. H. Lay, Hampstead
F. J. Lenton, Stamford
R. B. Ling, Clapham
* R. G. Lovell, Eastbourne
H. R Martin, Lee
D. L. Meiklejham, Golders Green
F. H. Morley, Liverpool
H. E. Moss, Kingston-on-Thames
F. W. Nicholson, Liverpool
* R. D. Nicol, Calcutta, India
R. Ordish, Derby
G. Owen, London
* W. B. Oxley, Leicester
J. Page, Barnet
A. T. Phillips, Harpenden
H. G. F. Robinson, Hampstead
A. L. Russell, London
E. R. D. Selway, Clapham
R. Shears, Westcliff-on-Sea
W. B. Sinclair, Bexley
C. L. Souster, Lee
W. B. Stedman, Harlington
* H. S. Stewart, London
R. Stockton, Stockport
* F. S. Swash, Llandrindod Wells
C. Voysey, jun., London
* A. Welford, London
C. H. White, Bristol
T. G. Whitehead, Croydon
W. Whymper, London
C. B. Wilcocks, Caversham Heights
J. H. Worthington, Alderley Edge
* R. S. B. Wyld, London

The following table shows the number of failures in each subject of the Final and Special Examination:—

I. Design	31
II. The Principles of Architecture	24
III. Building Materials	11
IV. Principles of Hygiene	25
V. Specifications	18
VI. Construction Foundations, etc.	31
VII. Construction — Iron and Steel, etc.	30

Ashpitel Prize, 1911.

The Board of Architectural Education recommend the Council to award the Ashpitel Prize for 1911 to Mr. Philip Dalton Hepworth, of "Cahirdown," Holford-road, Hampstead Heath, who passed the Final Examination above referred to, he being the candidate who has most highly distinguished himself in the Examinations held during the current year.

The Licentiateship.

We are asked to mention that it is absolutely necessary that all applications for election to the class of Licentiates be in the hands of the Secretary of the Royal Institute by April 30, 1912. No further election to the Licentiateship can take place after June next, but, as it takes some time to examine the applications, it is essential that all the papers be sent in by April 30 at the very latest.

OLYMPIC GAMES, STOCKHOLM, 1912.

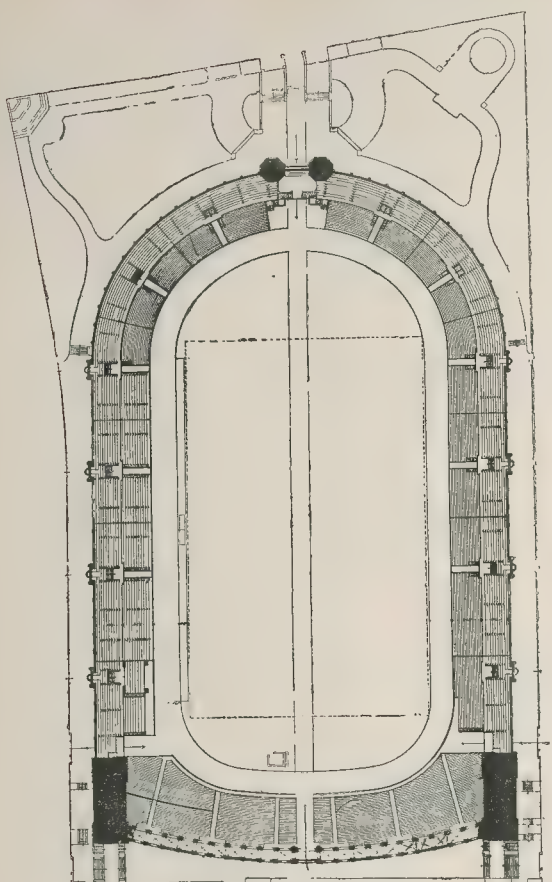
THE Stadium for the Olympic Games of 1912 is now in course of erection. The building, which will be of a thoroughly permanent character, is erected in hand-made purple brick and granite. The plan shows a perfect amphitheatre, all under cover, at the foot of a hill which forms the northern side of the complex. Inside this permanent building extra rows of temporary seats will be arranged for use during the games. The Stadium will then hold about 35,000 spectators. It contains a running track, four laps to the mile, and a grass football ground which in the winter-time will be transformed into a skating rink.

The entrance to the special dressing-rooms, to which long corridors lead, are situated at the foot of the hill.

The gates and arcades are vaulted in the old mediæval Swedish style. On the brick walls there are blocks of granite inlaid, in which a series of Swedish heroes will be sculptured, and the gates to the entrance stairs will likewise be decorated by eighteen heathen gods and goddesses.

Two massive brick towers will stand at the side of the eastern and western gates, and behind them two side buildings, each containing a hall and a number of administration, reading, lecturing, and assembly rooms. At the centre of the northern arcade, which connects the side buildings, is the gate through which all the competitors will march down to the ground on the opening day.

In front of the southern elliptical arcade, outside the Stadium proper, but within the enclosure, is a fine garden of oaks and birches, with paths for the spectators. The paths run the whole way round the building. At the foot of the two big towers, two granite water fountains are to be arranged. From the balconies of the towers trumpet signals for the various races will be given. Above the southern gateway, which forms the main entrance for the spectators and beside which two octagonal brick towers will be erected, is the bandstand, which will be used for the distribution of the prizes. The flags to be hoisted in honour of the



Olympic Games, Stockholm, 1912 : Plan of Stadium.

winners will be placed on the top of the northern entrance. The Royal box is situated alongside the finishing-post.

The money towards the expenses has been granted by the Swedish Government, who will ultimately become the owner of the building and grounds.

The site is situated close to the most fashionable part of Stockholm.

THE LONDON ARCHITECT'S PROCEDURE:

PROCEDURE WITH THE LONDON COUNTY COUNCIL.

Council's Consent to Works Otherwise Irregular.

THERE are many matters which an architect may desire, in his clients' interest, to carry out, but which, "except with the consent of the Council," are contrary to the rules of the London Building Act, 1894. Amongst these may be mentioned questions of frontage (sects. 13 and 22), questions of projections (sect. 73), deviations from certified plans (sect. 43), and special buildings (sect. 82).

We are all familiar with the impatience of building owners, who naturally begrudge the payment of high ground rents during the erection of a building, and we know how that impatience is accelerated by unforeseen delays. A judicious architect will inform his client of all matters requiring the Council's consent, and of the fact that four weeks at least—possibly more—may be expected to elapse between the date of application for such consent and the receipt of the Council's reply; and he will send in the necessary application with the least possible delay. As to the form which it should take, and the plans that should accompany it, the Council's printed regulations will be his guide; but should he be in doubt upon any such matters, a visit to the Council's offices and an interview with some courteous gentleman in the Building Act Department may be found helpful.

Some persons have followed the somewhat hazardous course of first carrying out a desired work in despite of the district surveyor's objection—and then applying for the Council's consent to its retention. By this means, provided the consent be granted, they obtain what they require with less delay than if they had awaited the result of an application to the Council before commencing the work. No doubt there have been cases in which such tactics were successful; but consents of the Council are sometimes accompanied with such conditions as an owner may not care to accept; and it is far better that he should be in a position to decide whether he will avail himself of such a consent or not.

Licences for special buildings and consents for projecting shelters, etc., are usually granted for a limited period; and an architect will naturally remind his client when a renewal of licence or consent must be obtained, or the structure affected be removed.

Means of Escape in Case of Fire.

Under the London Building Acts (Amendment) Act, 1905, new buildings, or buildings which by considerable additions become new for purposes of the Act, are usually subjected to more stringent conditions (under sect. 7) than old or "existing" buildings dealt with under sect. 9. Under the former section, an architect may have some difficulty in getting a scheme approved by the Council which shall serve the interests of the owner, especially when it is not known for what purposes the building will be let or sold. There, as in all cases of application to the Council, it is desirable that all questions should be settled at an early date.

Frequently it has happened that a building has been completed and occupied, and some details of the means of escape have been omitted, because the tenant objects to them. Then the owner or his architect has applied for the Council's certificate, which has been refused, on the ground of non-compliance with the conditions of approval.

The architect should warn his client at an early stage that he is liable to a penalty of 20*l.*, and a daily penalty of 10*l.*, for allowing his building to be occupied without the certificate of the Council; and that if modifications of an approved means of escape become necessary through unforeseen circumstances the modified conditions must be not only approved, but actually carried out before the building can lawfully be occupied.

When an architect is carrying out alterations and additions to an existing building which comes within the scope of sect. 9, he should endeavour to persuade the owner to have a scheme of means of escape approved by the Council, and to give effect to it. Sometimes an owner is deterred from this course by considerations of cost; but he may be reminded that he can, under sect. 20, compel his tenants to contribute to the expense incurred, in proportion to their interest in the building. Should he, however, be still unwilling to provide the means of escape required by the Act, he should not forget that the Council may at any time serve him with a notice requiring certain things to be done, necessitating disturbing the tenants with further building operations. Most persons will agree that it is better in such circumstances not to make "two bites of a cherry."

Under the Factory and Workshop Act, 1901, the conditions are similar in principle to the foregoing. The architect will usually find that the buildings with which he is concerned comes within the scope of sect. 14 (1), to which the arbitration clause (3) is not applicable; and he will take care to comply with all requirements. The certificate of the Council must, of course, be obtained before the building can be occupied.

Council's Notice Served upon Owner.

When an owner has been served by the Council with a notice requiring him to form access to the roof of his building, under sect. 12, or to provide means of escape under sect. 9, of the Act of 1905, he is in a more serious position than formerly. His legal obligations are unaltered, but he is no longer able to plead ignorance of them. If he should disregard the Council's warning, and if loss of life should occur through fire in his building, he might have to face the consequences, not only of a prosecution by the Council, but of an adverse verdict by a coroner's jury. Similarly, if a notice is served under sect. 14 (2) of the Factory and Workshop Act, the penalty of 1*l.* per day for non-compliance is insignificant in comparison with the responsibility in case of death through fire.

Alterations to Buildings Approved by the Council.

When a building or any portion of it has been constructed in accordance with plans approved by the Council, under the terms of any consent or certificate, any alteration which brings it out of conformity with such plans will render the consent or certificate null and void. An architect, therefore, when instructed to plan alterations to a building will ascertain from his client whether it is

ject to any former consent or certificate the Council, and will make the necessary lications for approval of modified condi-s, taking care that the building shall not altered as regards the matters affected il the further approval of the Council shall e been obtained.

intenance of Appliances Approved by the Council.

All means of escape and other things which e been approved by the Council must be intained by the building owner in proper king order. The architect should draw client's attention to sect. 14 of the London lding Acts (Amendment) Act, 1905, as to intaining the means of escape, and to t. 24 (1) (*iii.*) (*f*) as to the penalty of and further penalty of 10*l.* per day for ure to do so, or for permitting such means scape to be rendered less commodious. It uld not be overlooked that sect. 14 applies "All means of escape in case of fire, pro-ed in accordance with the provisions of s Act or otherwise," and is therefore plicable to all means of escape approved by Council, whether to a "certified build-" under the repealed sect. 63 of the Act of 4, or to a factory or workshop dealt with der the Act of 1901.

Similarly, any owner failing to maintain proper condition any iron or other doors, tters, fastenings, etc., provided under the ndon County Council (General Powers) t, 1908, whether by the Council's consent otherwise, is liable to a penalty of 20*l.*, d to "a daily penalty of the like amount."

Conversion of Buildings by User.

A building owner should be made aware t there are circumstances under which a lding cannot lawfully be "converted" thout the consent of the Council being viously obtained; and that unlawful con-rsion may take place without structural eration. An architect who has carefully used sect. 211 of the London Building Act, 4, is in a position to caution his client ainst any of the various ways in which it y be infringed, and to advise him of the cessity of obtaining the Council's consent an intended conversion.

For example, a building erected without the en space at rear required by sect. 41, and ended to be used "wholly or principally as ouses or counting-houses," could not lawfully used principally as a dwelling-house. A elling-house exceeding ten squares in area uld not lawfully be used in any part for rposes of trade without the structural aration required by sect. 74 (2), nor could building of the same extent, hitherto used olly for trade, be used in any part as a elling-house—not even by a caretaker thout such separations.

When a building has been dealt with under t. 12 of the London Building Acts (Amend-nt) Act, 1905, by the provision of proper ans of access to the roof, it cannot lawfully occupied by more than twenty persons; d should this number be exceeded with the ner's knowledge he would be liable to a nalty of 20*l.* and to a daily penalty of 10*l.*

There are cases in which an owner's siness fluctuates, so that at one period of e year he employs less, and at another riod more, than twenty persons. In such a se the architect should comply with sect. 12 providing access to the roof to the approval the district surveyor, and should obtain e Council's approval to a means of escape to provided in compliance with sect. 9. Of urse, if more than forty persons are nployed, the Factory and Workshop Act applicable.

Public Entertainment Buildings.

An architect instructed to design a theatre a building for public dancing, music, or her public entertainment should carefully ruse the Regulations of the Council with spect to the requirements for the protection om fire of all such buildings. The Regula-ons made on July 30, 1901, relate to the anning, means of exit, and general arrange-ent of the buildings; those made on arch 25, 1902, relate to electric lighting nd heating.

One of the earliest questions that will occur the architect is, whether the proposed site suitable for the owner's purpose. In this nnexion attention should be directed to o. 2 of the first-named Regulations, which ovides that one-half at least of the total length of the boundaries of the site shall abut upon public thoroughfares; and, of course, where such conditions do not obtain, the architect cannot advise the acquisition of the site.

Such preliminary questions being settled, the architect will prepare complete drawings of the intended building, showing its extent, its internal arrangement, accommodation, exits, etc., all in accordance with the Regulations, with methods of construction and drainage clearly indicated. Copies of the plans are to accompany a written application to the Clerk of the Council for a certificate under the Metropolis Management and Building Acts Amendment Act, 1878. The sanction of the Council must also be obtained before the installation of the electric light or any electrical work is commenced; and an application accompanied with plans and full particulars has to be made and the result awaited. The various Regulations with respect to heating have to be observed in the design and erection of the building, and each boiler or heating apparatus is required to be tested in the presence of an official of the Council, and subsequently every year by a competent person, whose certificate shall be furnished to the Clerk of the Council.

It is, of course, understood that compliance with the above-named Regulations does not relieve the owner from the obligation to comply with all rules of the London Building Act, 1894, which are applicable to the building.

Tribunal of Appeal.

There are cases in which the approval of the Council is necessary for an intended work, and in which any person dissatisfied with the Council's decision may refer the matter to the Tribunal of Appeal. As to whether it is worth while to do so, will depend upon the circumstances of the case. The expense need not be great, the fees payable to the Tribunal being moderate enough; any considerable cost could only be for professional assistance. The principal objection to going to the Tribunal would probably be the delay involved. Questions as to frontage lines, rearrangements of cleared sites, etc., might involve delay which would mean loss to the owner, as might also questions of variation in means of escape to suit the incoming tenant of a new building. On the other hand, similar questions in relation to an existing building could not injuriously affect the owner by delay, for there is nothing to prevent such a building being occupied pending an appeal. An architect who gives due attention to all the issues in a case should have no difficulty in advising his client for the best.

LEGAL COLUMN.

Rating "Gathering Grounds" for Water.

Some interesting points as to what constitutes "occupation" for rating purposes arose in the case Lord Mayor of Liverpool *v.* Chorley Union and others.

The Corporation, in addition to the land actually occupied by their works, reservoirs, etc., purchased a large tract of moorland, some 1,165 acres, in order to keep the water supply from pollution and to secure the supply.

The farms which were on this land were closed and left unoccupied, and it was only used for sporting purposes — the sporting rights being let — with the exception of 300 acres, which was planted with trees, and 8½ acres which was used as a nursery for young trees. The Quarter Sessions decided that the Corporation were only in ratable occupation of these latter portions of the land; but the Divisional Court held that they were ratable as to the whole. The Court of Appeal have now affirmed this judgment, and the judgments delivered by the Lords Justices contain some interesting observations on rating law. It was held that owners in possession are *prima facie* occupiers for rating purposes, unless they can show someone else to be in occupation, whilst here the Corporation not only did not show anyone else to be in occupation but they were also using the land to exclude a resident population settling thereon, and diminishing the water supply and to secure the water from risk of pollution. They had, besides, let the sporting rights over it. The case was remitted to the Quarter Session, with a further intimation that the price paid by the Corporation was an element to be considered in assessing the ratable value.

There is one further point we may mention in connexion with this decision. Lord Justice Vaughan Williams found some difficulty in distinguishing this case from those where an unoccupied house is exempted from rates, although the owner does not prove other occupation, and he intimated that these cases must be considered as an isolated exception that has grown out of decided cases. Lord Justice Buckley, however, brought this case into line by pointing out that the Corporation were deriving benefit from the land, and it was like those cases where a house is not considered a vacant house if, although uninhabited, it is kept ready for occupation.

Recent Workmen's Compensation Cases.

A case, Rex *v.* Templer, *ex parte* Howarth, which arose under the Workmen's Compensation Act, 1897, but the decision of which applies equally to the Act of 1906, has just been decided by a Divisional Court.

On March 22, 1907, a workman sustained injury by accident, his right hand and part of the arm being torn off. His employers, Sir B. Samuelson & Co., allowed him as compensation half his wages, 12*s.*, and a memorandum was registered. A Committee, representative of employer and workmen, was in existence, with powers of arbitration, under Schedule II., par. 1, of the Act.

About December, 1909, the employers reduced the compensation to 8*s.* 6*d.* a week, and the workman, objecting to this, applied to the Committee. The Committee, after an adjourned hearing, considered that the man should accept an offer of the employers to take him back at his old wages at light work, which the Committee held he was capable of performing, and they stopped his compensation as from December 31, 1909. In September, 1910, the Committee, in order to keep the man's claim alive, made an order for 1*d.* a week, and a memorandum was registered.

In November, 1910, the workman left work, alleging himself to be physically unfit to perform it, and on February 7, 1911, he applied to the County Court for a review of this last order of 1*d.* a week. The employers' solicitors notified him that the Committee would meet on February 24; but on February 19 he gave his employers notice that he objected to the Committee acting.

The County Court Judge, when the application for review came on for hearing, held that he had no jurisdiction to entertain it as the Committee was seized of the matter.

The workman then appealed to the Court of Appeal, but that Court held that the appeal in such a case lay to the Divisional Courts.

The Divisional Court found the question difficult to determine, but they decided that a "review" was a fresh matter or stage in the proceedings, and that if objection were taken in time the jurisdiction of the Committee would be terminated, and the County Court have jurisdiction to hear the review.

We may draw attention to the wording of Schedule II., par. 1, which provides that if a Committee exists any matter is to be settled by such Committee, "unless either party objects by notice in writing sent to the other party before the Committee meet to consider the matter."

Since our last review of these cases under the Workmen's Compensation Act the House of Lords, in Morgan *v.* William Dixon, Ltd., have had to consider whether, where under Schedule I., par. 4, a workman, after giving notice of accident, is required to submit himself for examination by a medical man provided and paid by the employer, he is to be deemed to have refused so to submit himself if he merely makes it a condition that his own medical man shall be present. The Court of Session had held this conditional compliance to amount to a refusal, and had stayed all proceedings. The House of Lords, Lord Shaw dissenting, held that there was no absolute rigidity in the workman to insist on the presence of his medical man, in each case the circumstances would have to be considered, and it would be a question of fact whether there had been a refusal or not, depending upon whether the request was reasonable. The House would not disturb the finding of fact in the case, but intimated that in nearly all cases such a request would be a reasonable one to comply with.

The House of Lords have affirmed the decision of the Court of Appeal in Barnes *v.* Nunnery Colliery Company, Ltd. (the *Builder*, February 3 last).

A boy employed in a mine rode on a corve instead of walking to the place where he was to work, and he was killed by his head coming in contact with the roof of the mine. There was a rule prohibiting workmen from riding on the corves, and the boy knew of this; but there was evidence that in contravention of the rule boys sometimes did ride on the trucks.

LEGAL COLUMN—*Continued on page 24.*

List of Competitions, Contracts, etc.

For some Contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) are advertised in this number:** Competitions, iv.; Contracts, iv. vi. viii. x. xii.; Public Appointment, —; Auction Sales, xxxviii. Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Competitions.

JANUARY 6. — **Bolton.** — Miners' Federation Hall and Offices. Limited to architects within twenty-five miles of Bolton. Premiums, 50*l.* and 25*l.* Assessor, Mr. Jonathan Simpson, F.R.I.B.A. Particulars from Messrs. Fielding & Fernihough, 7, Fold-street, Bolton.

JANUARY 6. — **Stafford.** — PUBLIC LIBRARY.— The Stafford Corporation invite designs for a Public Library. Mr. Henry T. Hare, F.R.I.B.A., assessor. Second and third premiums of twenty and forty guineas. Deposit, 1*l.* Particulars from Mr. W. Plant, A.M.Inst.C.E.

JANUARY 8.—**Banbury.**—WORKMEN'S DWELLINGS.—The Banbury T.C. invite designs for workmen's dwellings. See advertisement in issue of December 8 for further particulars, and Competition News, page 8.

JANUARY 9.—**Magherafelt.**—TECHNICAL SCHOOL. —Particulars from Mr. W. D. Cousins, County Technical Office, Court-house, Coleraine.

JANUARY 9.—**Spennymoor.**—PUBLIC HALL, ETC.—The Spennymoor U.D.C. invite competitive plans and designs for a public hall, market, and offices, etc. Three premiums are offered. See advertisement in issue of December 1 for further particulars.

JANUARY 28.—**Buzau, Roumania.**—TRAINING COLLEGE (16,000*l.*).—Premiums 200*l.*, 40*l.*, 20*l.* Particulars from the Ministère des Cultes et de l'Instruction Publique, Bucharest.

JANUARY 29. - **Montevideo.** - Government palace (premiums, 2,125*l.* and 850*l.*) and town improvement scheme (premiums, 1,060*l.*, 640*l.*, and 425*l.*). Conditions may be seen at the Board of Trade, 73, Basinghall-street, E.C.

JANUARY 31. — **Australia.** — DESIGNS FOR FEDERAL CAPITAL CITY.—The Government of the Commonwealth of Australia invite competitive designs for the laying out of this Federal capital city. See advertisement in issue of September 1 for further particulars. See also page 508, November 3.

FEBRUARY 3.—**Bolton.**—NURSES' HOME AT THE INFIRMARY.—Premiums of 30*l.*, 20*l.*, and 10*l.* Assessor, Mr. John B. Cass, F.R.I.B.A.

* FEBRUARY 15.—**Winnipeg.**—NEW PARLIAMENT BUILDINGS.—The Government of Manitoba invite competitive drawings for new Parliament buildings. See advertisement in this issue and Competition News, page 8, for further particulars.

FEBRUARY 17.—**London, E.C.** -NEW OFFICES — The Port of London Authority invite preliminary sketch designs for new head offices in Trinity-square, and for laying out remainder of land as a building site. See advertisement in issue of November 24 for further particulars

* FEBRUARY 17. -**York.** -SCHOOL.—The York Education Committee invite competitive designs for a public elementary school. See advertisement in this issue for further particulars.

MARCH 15. — **Drammen, Norway.** -RAILWAY-STATION.—Particulars from the Norges Statsbaner, Christiania.

* MARCH 15.—**Prestatyn, North Wales.**—LAYING-OUT ESTATE.—Lord Aberconway and the Trustees of the Prestatyn Estate invite designs for laying-out of the estate. Three premiums are offered. Particulars from 33, Henrietta-street, W.C. See advertisement in this issue for further particulars.

* MARCH 16. -**Harrow.**—PUBLIC OFFICES.—The Harrow-on-the-Hill U.D.C. invite tenders for the enlargement of and alterations to their Public Offices. See advertisement in this issue for further particulars.

MAY 1.—Society of Architects' Travelling Studentship. Design for a Town Hall. 25*l.* and medal.

JULY 1. — **Dusseldorf.** — A plan for the extension of the City of Dusseldorf. Premiums of 1,000*l.* to 375*l.* Conditions on application to the Chief Burgomaster, Dusseldorf. A translation appeared on page 365, September 29.

NO DATE.—**Edinburgh.**—MEMORIAL TO KING EDWARD.—Limited.

NO DATE.—**Jordanhill, Glasgow.**—PROPOSED TRAINING COLLEGE.—Limited to six firms, named in Competition News, December 1, 1911, page 635.

Contracts.

BUILDING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

JANUARY 5.—**Wellingborough.**—SCHOOL, ETC.—Erection of new juniors' school and boarding-house, and new intermediate school. Architects, Messrs. Talbot Brown & Fisher, Burysteed, Wellingborough. Deposit of 10s.

JANUARY 6.—**Berwick-upon-Tweed.**—ALTERATIONS. For alterations to the old infant school in College-place. Plans and specifications with the architects, Messrs. Gray & Boyd, 2, Ivy-place, Berwick-upon-Tweed.

JANUARY 6.—**Camborne.**- SCHOOL.—For additions and alterations to the Camborne Roskear Council School. Plan and specification with Mr. S. Hill, architect, Green-lane, Redruth.

JANUARY 6.—**Chesterfield.**—ALTERATIONS.—For For alterations and improvements to the Council school. Plan and specification from Mr. S. Hill, Architect to the Committee, Green-lane, Redruth.

JANARY 6. — **Chesterfield.**—ALTERATIONS. For alterations to Council-chamber, etc. Mr. Jno. Middleton, Town Clerk.

JANUARY 6.—**St. Minver.**—HOUSE, ETC.—Erection of a master's house, and making improvements and additions to school buildings, offices, and playground at the school. Plans and specification with Mr. B. C. Andrew, Architect to the Committee, Biddick's-court, St. Austell.

JANUARY 8. **London.** KIOSK. Erection of a kiosk at Primrose-hill, Regent's Park. Drawings, specifications, and form of contract with Mr. G. J. T. Reavell, H.M. Office of Works, etc., Storey's-gate, London, S.W. Deposit of 1*l.* 1s. for quantities.

JANUARY 8. **Morley.**—RESIDENCES.—Erection of two residences, Texas-street. Plans and specifications seen, and quantities from Mr. T. A. Buttery, Lic.R.I.B.A., architect, Queen-street, Morley.

JANUARY 8. -**Whitley.** CEMETERY.—Completion of laying out and draining of new cemetery at Hartley, and construction of 18-in. cast-iron sea outfall sewer. Plans and specification seen, and quantities and forms of tender from Mr A. J. Rousell, A.M.Inst.C.E., Surveyor, Council Offices, Whitley Bay.

JANUARY 8. -**York.** ENTRANCE —For erection of a side entrance at the Theatre Royal, York. Plans seen, and specification and quantities from Mr. F. W. Spurr, City Engineer, Guildhall, York. Deposit of 1*l.* 1s.

JANUARY 9. - **Cheltenham.**—BUILDINGS.—The Great Western Railway invites tenders for the erection of station buildings in timber at the racecourse. Plans and specification seen, and forms of tender and quantities from the Engineer at Gloucester Station.

JANUARY 9. — **Newcastle-on-Tyne.** — GREENHOUSE, ETC. -Erection of a greenhouse and hot frames at the Walker park. Specification and a form of tender, and the drawings and general conditions of contract, from the City Engineer, Town Hall. Deposit of 1*l.* 1s.

JANUARY 10.—**Kirkmichael.** -ADDITION.—For addition to school. Plans and specifications with Mr. L. Falconer, architect, Blairgowrie.

JANUARY 10.—**London.** REPAIRS, ETC.—For alterations and repairs to the premises, No. 120, King-street, Hammersmith. Plans seen, and specification and quantities from Mr. H. Mair, Borough Surveyor, Town Hall, Hammersmith, W.

JANUARY 10.—**Macclesfield.** -ADDITIONS.—For alterations and additions to Alderley Edge Council School. Plans and specifications with Mr. H. Beswick, F.R.I.B.A., County Architect, Newgate-street, Chester. Quantities on deposit of 1*l.*

JANUARY 10.—**Morley.**—GARAGE.—For erection of motor garage in Queen-street. Plans and specifications seen, and quantities from Mr. T. A. Buttery, Lic.R.I.B.A., architect, Queen-street, Morley.

JANUARY 11.—**Ashby-de-la-Zouch.**—HOLDINGS. -Erection of four small holdings, Boundary, near Ashby-de-la-Zouch. Drawings from Mr. M. Hunter, A.M.Inst.C.E., surveyor, Bridge-street, Belper. Quantities on deposit of 1*l.* 1s.

JANUARY 11. — **Kendal.** — ALTERATIONS.—For alterations to vagrant wards at the Workhouse. Plans, specifications, and quantities from Mr. Stephen Shaw, F.R.I.B.A., architect, Kendal.

* JANUARY 11.—**London, N.**—ALTERATIONS, ETC. —The St. Mary Islington Guardians invite tenders for certain alterations, etc., at Receiving Homes, Hornsey-rise, N. See advertisement in this issue for further particulars.

JANUARY 11. — **Newbridge.** — CHAPEL, ETC.— Erection of a chapel, schoolroom, and class-rooms. Plans and specifications with Mr. R. L. Roberts, M.S.A., Abercarn.

JANUARY 11.—**Pentrebach.**—DWELLINGS.—Erection of forty-eight workmen's dwellings and contingent works at Pentrebach, Merthyr Tydfil. Plans, and forms of tender, and specification from the Borough Surveyor, Town Hall, Merthyr Tydfil. Deposit of 2*l.* 2s.

JANUARY 12.— **Hinckley.** — EXTENSIONS.—For extension of Hinckley Post-Office. Drawings, specification, and a copy of the conditions and form of contract with the Postmaster, Hinckley Post-Office. Quantities and forms of tender on deposit of 1*l.* 1s., from the Secretary, H.M. Office of Works, etc., Storey's-gate, London, S.W.

JANUARY 12.—**Workington.**—POST-OFFICE.— Erection of new post-office. Drawings, specification, and form of contract with the Postmaster at Workington Post-Office. Quantities and forms of tender, on deposit of 1*l.* 1s., from the Secretary, H.M. Office of Works, etc., Storey's-gate, London, S.W.

JANUARY 13. **Melksham.**—DISPOSAL WORKS.— For construction of disposal works, consisting of balancing tanks, storm-water tanks, Dortmund tanks, filters, pumping station, and other works. Specifications, quantities, and form of tender from the Engineer, Mr. A. E. Adams, M.Inst.C.E.I., A.M.Inst M.E., High-street, Chippenham, on deposit of 2*l.* 3s.

JANUARY 15.—**Chatham.**—NEW BLOCKS. For demolition of water tower, and erection of new administrative, operation, and ward blocks and boiler-house, at the Military Hospital, Fort Pitt. Plans, specification, and conditions of contract with the Director of Barrack Construction, 80, Pall Mall, London, S.W., or Barrack Construction Office, Old Government House, Line Barracks, Chatham. Quantities on deposit of 10s.

JANUARY 15.—**Coventry.**—CLASSROOMS, ETC.— For erection of additional classrooms, gymnasium, etc. Plans and specifications, and form of contract seen, and quantities and form of tender from the architect, Mr. Herbert W. Chattaway, Trinity Churchyard, Coventry. Deposit of 2*l.* 2s.

JANUARY 15. — **Pontypridd.** — SCHOOL. — For erection of Mill-street Higher Elementary School. Plans and specification seen, and form of tender and quantities from the Council's Surveyor, Municipal-buildings, Pontypridd. Deposit of 5*l.*

JANUARY 15.—**Wakefield.**—POLICE QUARTERS.— Erection of new headquarters for the West Riding Constabulary. Plans seen, and specifications with quantities, on deposit of 2*l.*, from Mr. J. Vickers Edwards, West Riding Architect, County Hall, Wakefield.

JANUARY 16. — **Aberdare.** — PREMISES. — For erecting new business premises at Gadlys, Aberdare, for the Aberdare Co-operative Society, Ltd. Plans and specification seen, and quantities, on deposit of 1*l.* 1s., from Mr. E. G. Henton, architect, Aberdare.

JANUARY 16.—**Dubmire.** -SCHOOL.—For erection of a new Council school. Plans and specifications seen, and quantities from Messrs. J. Potts & Son, architects, 57, John-street, Sunderland.

JANUARY 16.—**Ferryhill.**—SCHOOL.—For erection of new Council school at Broom Cottages. Plans and specification seen, and quantities from Mr. C. A. Clayton Greene, architect, 18, Norfolk-street, Sunderland.

JANUARY 16.—**Flint.**—SCHOOL.—Erection of a new school at Flint Mountain, near Flint. Plans, specifications, etc., with the County Surveyor, Mr. S. Evans, F.S.I., County Offices, Mold. Quantities on deposit of 2*l.* 2s.

JANUARY 16.—**Greencroft.**—SCHOOL.—For erection of a new Council school. Plans and specifications seen, and quantities from Messrs. Marshall & Tweedy, architects, 17, Eldon-square, Newcastle-on-Tyne.

JANUARY 16.—**Gwaunfarren.**—VILLAS.—Erection of ten pairs of semi-detached villas, for the Marlborough Building Club. Plans and specifications with the architect, Mr. J. Mann, jun., 27, Lancaster-villas, Merthyr Tydfil.

JANUARY 16. — **London.** — CONVENIENCE.—For erection of an underground convenience at Bruce Grove, Tottenham. Plans seen, and specification, quantities, and forms of tender from Mr. W. H. Prescott, M.Inst.C.E., Engineer, Council-buildings, The Green, Tottenham. Deposit of 10s. 6d. for quantities, and 5*l.*

JANUARY 16.—**Truro.**—GATES, ETC.—For fixing wrought-iron gates and railings, etc. Drawings and specifications by architects, Messrs. T. B. Silcock, B.Sc., F.S.I., and S. R. Reay, F.R.I.B.A., 47, Milsom-street, Bath.

JANUARY 17. **Crakehall.**—SCHOOL.—Erection of a new elementary school. Plans and specifications with Rev. E. T. G. Hunter, Crakehall Vicarage, Bedale, Yorks.

BUILDING—*continued.*

he date given at the commencement of each graph is the latest date when the tender, or names of those willing to submit tenders, be sent in.

JANUARY 17.— **St. Albans.**—COTTAGES.—Ten- are invited for the erection of six cottages Catherine-street, St. Albans. See advertise- in this issue for further particulars.

JANUARY 19.—**Stockport.**—ENLARGEMENT OF T-OFFICE.—The Commissioners of H.M. Works Public Buildings invite tenders for enlarge- of Stockport Post-Office. See advertise- in this issue for further particulars.

NUARY 20. — **Gressenhall.** — REPAIRS.—For irs to the north tower of the Workhouse mary. Mr. W. John Barton, Clerk, Guild- East Dereham.

NUARY 22. —**Birmingham.**—BATHS.—Erection new swimming bath and private baths for en adjoining the public baths, Kent-street. ns of tender and quantities, on deposit of s., from the Superintendent Engineer, Kent- et. Drawings with the architects, Messrs. ins, Peacock, & Bewlay, 83, Colmore-row, mingham.

JANUARY 23.—**East Ham.**—INFANTS' SCHOOL. he East Ham Education Committee invite ers for erection of an infants' school to mmodate 500 children. See advertisement in issue for further particulars.

NUARY 25.—**Rainhill.**—ADDITIONS.—Erection ditions to the nurses' home at the Asylum. ntities from Mr. James Gornall, Clerk and ard, Clerk's Office, County Asylum, Rain- Plans and specifications at the Engineer's e.

NUARY 27.—**Lower Bebington.**—DESTRUCTOR. rection of a refuse destructor. Particulars form of tender from Mr. H. W. Corrie, rict Surveyor, County Offices, Lower ington.

NUARY 30. —**Exeter.**— ROOF.— The Great tern Railway invites tenders for the removal the station roof and the erection of new form coverings, etc., at St. David's Station. ns and specification seen, and forms of der and quantities obtained from the ineer at Taunton Station.

FEBRUARY 6.—**London.** GENERAL WORKS AND AIRS.—The London C.C. invite tenders for eral works and repairs (including jobbing ks), exclusive of works of a mechanical racter, to sewers, engine-houses, buildings, ges, subways, tunnels, etc., for a triennial ract. See advertisement in this issue for her particulars.

EBRUARY 17. **Wrexham.** PAVILION. Erec of a pavilion, with seating accommodation 10,000 persons. Conditions of the contract particulars from Mr. G. Meirion Griffith, ion House, Rhos, Ruabon, N.W., Secretary Pavilion Committee.

PRIL 20. **Valparaiso.** WORKS The Chilean ernment invite tenders for the harbour works Valparaiso. Conditions, specifications, and wings at the Chilean Legation, 48, Grosvenor- are, London, S.W.

o DATE.—**Barnsley.** PREMISES. -Erection of business premises, May Day Green nsley, for Messrs. Hunters, The Teurien, Ltd. W Wrigley, A.R.I.B.A., architect, 2, King- t, Wakefield.

o DATE.—**Cardiff.**—OFFICES. -For proposed block of offices, shops, etc., Queen-street, the Principality Building Society. Quan- s, on deposit of 3*l*. 3s., from Messrs. ershon Fawckner, & Co. F.R.I.B.A., archi- s, 14, High-street, Cardiff, and Newport

o DATE.—**Coleridge.**—HOVELS. For building new hovels. Mr. Charles Cope, builder, sall.

o DATE **Coventry.**—DAIRY.—Erection of a y, Swan-lane, Coventry, for the Co-operative iety, Ltd. Architect, Mr. Wm. F. Edwards, ewhall-street, Birmingham.

o DATE.—**Dudley.** SCHOOL.—Erection of junior and infant school at Netherton. ost of 1*l*. 1s., from the architect, Mr. J. P. orne, 95, Colmore-row, Birmingham.

o DATE.—**Huddersfield.**—EXTENSION. For alteration and extension of the Wesleyan ool, Buxton-road. Messrs. W. J. Morley & architects, 269, Swan-arcade, Bradford.

o DATE.—**Kettering.** SCHOOL. -Erection of a ndary school. Architects, Messrs. Gotch & nders, of Bank-chambers, Kettering.

o DATE.—**North Staffordshire.**—INFIRMARY. or additions to the children's ward at the rmary. Messrs. R. Scrivener & Sons, archi- s, etc., Howard-place, Hanley.

o DATE. **Peaslake.**—SCHOOL.—Erection of a school, etc., at Peaslake and Shere. Mr. H. Lingen Barker, 10, Pembridge-mansions, cow-road, London, W.

o DATE. **Rochdale.** LANTERN LIGHT. For reconstruction of the lantern light over the -class swimming bath at Smith-street. Par- lars from Mr. P. W. Hathaway, A.R.I.B.A., n Hall

o DATE.—**Wakefield.**—ADDITIONS, ETC.—For rations, additions, and converting of present nises premises into an arcade, shops, and aurant from Kirkgate to Springs. Quan- s from Mr. J. Day, architect, 8A, King- et, Wakefield.

o DATE. — **Wakefield.** — ADDITIONS, ETC. - erations and additions to Woodbank houses, ners-street. Mr. J. Day, architect, 8A, King- et, Wakefield

o DATE.—**Wakefield.**—SHED, ETC.—Erection a weaving-shed, washing-room, and store- n at Bective Mills, Alverthorpe, for Messrs. rap Bros. Mr. W. H. Ogden, architect, erson-road, Wakefield.

ENGINEERING, IRON, AND STEEL.

JANUARY 6. **Swansea.**—BOILERS, ETC. For water-tube boilers, superheaters, and mechanical stokers. Particulars and form of tender from the Borough Electrical Engineer, Mr. C. A. L. Prusmann, Electricity Department, Strand, Swansea. Deposit of 1*l*. 1s.

JANUARY 8. **Birmingham.**—CARS.—For erection of fifty electric tramway cars. Form of tender, specification, and drawings from Mr. A. Baker, General Manager, Tramway Offices, 147, Corporation-street, Birmingham. Deposit of 2*l*.

JANUARY 8.—**Manchester.**—ENGINE, ETC.—For erection at the Davyhulme Sewage Works, Urmston, of horizontal steam-engine, and fan or blower. Particulars from the Secretary of the Rivers Department, Town Hall, Manchester.

JANUARY 9. —**Kilnamartyr.**—WATERWORKS.—For the construction of waterworks. Plans and specification with Mr. D. Lynch, Clerk of Council, Boardroom, Workhouse, Macroom. Deposit of 5*l*.

JANUARY 9. **London.**—WAGGONS. For supply of 250 covered goods waggons, 250 high-sided goods waggons, and 100 medium goods waggons. Drawings seen, and specifications and forms of tender from Mr. J. G. Robinson, Carriage and Waggon Superintendent, Great Central Railway Works, Gorton.

JANUARY 10.—**Rotherham.** -CONVERTER. For erection of one 500-kw. rotary converter. Specifications and particulars from the Engineer and General Manager, Rawmarsh-road, Rotherham.

JANUARY 10. — **Rotherham.** — VEHICLES.—For supply of three trolley vehicles suitable for use on trackless tramway route. Specifications and particulars from the Engineer and General Manager, Tramway Department, Rawmarsh-road, Rotherham.

JANUARY 12.—**Chester-le-Street.**- BRIDGE, ETC. —For building concrete retaining walls at Witton Gilbert, and widening Stella Gill Bridge, near Chester-le-Street. Plans and specifications seen, and quantities from the County Engineer, Shire Hall, Durham.

JANUARY 13.—**Radcliffe.**—PUMU.—For erection of electric-driven pump of the centrifugal or turbine type at the sewage-disposal works. Particulars from Mr. W. L. Rothwell, Engineer and Surveyor, Council Offices, Radcliffe.

★ JANUARY 16. — **Truro.** — IRON GATES, RAILINGS, ETC.—The Cornwall C.C. invite tenders for wrought-iron gates and railings, etc., upon boundary walls at new County Offices. See advertisement in this issue for further particulars

JANUARY 17.— **Reigate.** WEIGHBRIDGE For supplying a new or good second-hand weighbridge to weigh up to 5 tons. Alternative tenders may be sent for either a new weighbridge or a second-hand machine. Forms of tender and particulars from Mr. Fred T. Clayton, the Borough Surveyor, Municipal-buildings, Reigate.

JANUARY 29. **Croydon.** PLANT.—For supply of a mixed-pressure turbine plant at the Electricity Works, Factory-lane. Plans and specifications seen, and form of tender from the Borough Electrical Engineer, Factory-lane, Croydon, on deposit of 1*l*. 1s.

FURNITURE, PAINTING, MATERIALS, etc.

JANUARY 6. **Ashton-under-Lyne.**—PAINTING For painting iron and wood work at the car depôt, Mossley-road. Specifications at the depôt. Mr. J. Neal, Borough Comptroller, Town Hall, Ashton-under-Lyne.

JANUARY 8.—**Swansea.** PLATES.—For supply of 100 enamel plates with authorised motor-car fares printed on. Particulars from the Chief Constable, Guildhall, Swansea.

JANUARY 11.—**Hampstead.**—MATERIALS, ETC. For works, materials, or services. Borough Engineer, Town Hall, Haverstock-hill, N.W.

JANUARY 11.—**Salford.**—PAINTING. -For painting bridges. Particulars from Borough Engineer, Town Hall, Salford.

JANUARY 12—**Trinidad.** -RAILS. ETC —The Crown Agents for the Colonies invite tenders for the supply of 3,669 tons of bessemer acid steel rails and angle fishing plates. Forms of tender and particulars from the office of the Crown Agents for the Colonies, Whitehall-gardens, London, S.W. Deposit of 10*l*.

JANUARY 13.—**Leeds.**—RETORTS, ETC.—For the supply of fireclay retorts, fire bricks, fire-brick lumps, and fireclay. Specification and form of tender from Mr. R. H. Townsley, General Manager, Gas Offices, East-parade, Leeds.

★ JANUARY 16.—**Truro.**—SCREENS, PLATFORMS, AND FURNITURE.—The Cornwall C.C. invite tenders for supplying screens, platforms, and furniture for Council-chamber of new offices See advertisement in this issue for further particulars.

★ JANUARY 18.—**Lambeth.** MATERIALS AND SERVICES. The Lambeth B.C. invite tenders for supply of certain materials and rendering of services for a period of one year. See advertisement in this issue for further particulars.

★ JANUARY 18. **West Ham.**—WORKS, MATERIALS, ETC. The West Ham B.C. invite tenders for supply of materials and execution of various works, etc. See advertisement in this issue for further particulars.

JANUARY 20. **Norfolk.**—TOOLS, ETC.—Supply of roadmen's tools and implements. Tender forms from Mr. T. H. B. Heslop, M.Inst C.E., County Surveyor, The Shirehouse, Norwich.

★ JANUARY 24.—**Chelsea.**—VARIOUS MATERIALS AND WORKS. The Chelsea B.C invite tenders for supply of various materials and execution of certain works necessary in the borough. See advertisement in this issue for further particulars.

JANUARY 31. **Manchester. etc.** PAINTING.—For painting at various stations, for the Lancashire and Yorkshire Railway. Specifications and forms of tender from the Engineer's Office, Hunts Bank, Manchester.

NO DATE. **Marston Magna.**—LAMPS.—For erecting lamps. Particulars from Clerk to the Parish Council, Marston Magna, Bath.

ROADS, SANITARY AND WATER WORKS.

JANUARY 6.—**Flushing.** MAIN.—For laying a water main. Specification with Mr. J. H. Cubbb, Belmont, Penryn.

JANUARY 8. **Swansea.**—STREETS.—For private street works. Plans, specifications, and conditions of contract with the Surveyor, Mr. T. T. Williams, Council Offices, Alexandra-road, Swansea.

JANUARY 8.—**Whitley.** SEWAGE.—Construction of a sewer in Marine-avenue, and cast iron storm-water overflow across the sands at Watts' road. Plans and specification seen, and quantities and forms of tender from Mr. A. J. Rousell, A.M.Inst.C.E., Surveyor, Council Offices, Whitley Bay.

JANUARY 9.- **Boston.**—GRANITE.—For supply of 13,610 tons of granite. Forms of tender from Mr H. Snaith, Clerk, 10, New-street, Boston, Lincs.

JANUARY 9.—**Crewe.**—STREET.—For making of Queen-street. Plans and specifications with Mr. G. Eaton-Shore, Borough Surveyor, Earle-street, Crewe. Deposit of 1*l*.

JANUARY 9. **Meriden.**—GRANITE. -For supply of granite. Mr. A. W. Liggins, Clerk, 11, Priory-street, Coventry.

JANUARY 9.—**Northallerton.** MATERIALS —For supply of materials for use on roads. Form of tender and conditions of contract from Mr. W. G. Bryning, County Surveyor, County Hall, Northallerton.

JANUARY 10. —**Belper.** — PIPES. Supply of 5,760 yds. of 5-in. cast-iron pipes. Specification and form of tender from Mr. Joseph Pym, Clerk, R.D.C. Offices, Belper. Deposit of 1*l*. 1s.

JANUARY 10.—**Manchester.**—PAVING.—For paving with tar-macadam the entrance to the administrative block of the Workhouse, and to the Workhouse Infirmary at Crumpsall. Specification and particulars from Mr. A. J. Murgatroyd, architect, 23, Strutt-street, Manchester. on deposit of 10s. 6d.

JANUARY 11.—**Alltmawr.**—ROAD.—For road improvement. Drawings seen, and specification, quantities, and form of tender from Mr. W. L. Harpur, County Road Surveyor, County Hall, Brecon. Deposit of 1*l*. 1s

JANUARY 13.—**Bexley.**—MATERIALS. —For supply of highway materials. Specifications and forms of tender from Mr. W. T. Howse, Surveyor to the Council, Council Offices, Bexley Heath

JANUARY 13.—**Cromption.**—STREETS.—For sewering, paving, flagging, and completing private streets. Plans and specifications seen, and quantities, on deposit of 3*l*., from Mr. F. F. Gartside, Clerk and Surveyor, Town Hall, Shaw, near Oldham.

JANUARY 15.—**Gloucester.** STONE.— For supply of stone for use on main roads. Forms of tender from Mr. E. S. Sinnott, M.Inst.C.E., County Surveyor, Shire Hall, Gloucester.

JANUARY 15.—**Hitchin.**—GRANITE.—For supply of 2-in., 1½-in., and 1¼-in. broken granite. Surveyor, Council Offices, Town Hall, Hitchin.

JANUARY 15.—**London.**—MAIN. The Metropolitan Water Board invite tenders for the laying of a 16-in. main from Stoke Newington to Shoreditch. Drawings, conditions of contract, and specification at the offices of the Board (New River District), 173, Rosebery-avenue, E.C. Quantities from the Engineer, New River District, 173, Rosebery-avenue, E.C. Deposit of 10*l*. to the Accountant at Savoy-court, Strand, W.C.

JANUARY 15.—**Watford.** -GRANITE. -For supply of broken granite. Tender form and specification from Mr. D Waterhouse, Engineer and Surveyor to the Council, Council Offices, 14, High-street, Watford, Herts. Deposit of 1*l*.

JANUARY 16.—**Kingston-on-Thames.**—GRANITE, ETC.—For supply of granites, basalt, tar macadam, etc. Specifications and forms of tender from Mr. A. Dryland, County Surveyor, County Hall, Kingston-upon-Thames.

JANUARY 20. **Halifax.**—ROAD. For private improvement works in New Brunswick street. Plans and specifications seen, and forms of tender from Mr. J. Lord, M.Inst.C.E., Borough Engineer, Town Hall, Halifax. Deposit of 1*l*.

JANUARY 20. **Ince.**—ROADS.—For the sewering, paving, kerbing, flagging, and making good private streets. Plans, specifications, etc., at the Council Offices, Ince, near Wigan. Mr. A. T. Swaine, Surveyor. Deposit of 2*l*. 2s.

JANUARY 20.—**Norfolk.**—GRANITE.—For supply of granite. Specification and tender forms from Mr. T. H. B. Heslop, M.Inst.C.E., County Surveyor, the Shirehouse, Norwich.

JANUARY 20. **Norfolk.**—MATERIALS.—For supply of gravel, flints, chalk, and marl. Specification and tender forms from Mr. T. H. B. Heslop, M.Inst.C.E., County Surveyor, The Shirehouse, Norwich.

JANUARY 22. **Hatfield.** SEWAGE. -For construction of about 1½ miles of sewers, etc., also pumping-station, suction tank, and settling tanks. Plans and specifications seen, and forms of tender and quantities from the Engineer, Mr. G. B. Kershaw, Grosvenor-road, West Wickham, Kent, on deposit of 10*l*

★ JANUARY 22. **Manchester.**—MAIN DRAINAGE, ETC.—The Corporation of Manchester invite tenders for main drainage works No. 9 (new sewers in Hulme), and work No. 16 (new intercepting tank and river improvement at Clayton). See advertisement in this issue for further particulars.

JANUARY 30. **Chislehurst.** MATERIALS.—For supply of materials, etc. Particulars, with forms of tender, from Mr. H. E. Knight, Clerk, Council Offices, Chislehurst.

Auction Sales.

Nature and Place of Sale.	By whom Offered.	Date of Sale.
*DEALS, BATTENS, BOARDS, TIMBER, Etc.—Great Hall, Winchester House, E.C.	Churchill & Sim	Jan. 16
*BRICKMAKER'S AND CONTRACTOR'S STOCK-IN-TRADE—On the Premises	C. & B. Westbrook	Jan. 18
*BUILDER'S PLANT AND STOCK—On the Premises	Fuller, Horsey, Sons, & Cassell	Jan. 18

LEGAL COLUMN—*Continued from page* 21.

As we have explained before, under the Act of 1906, where the consequences of the accident are serious the defence of serious and wilful misconduct is of no avail to the employer, and the only question that can be raised is whether the accident arose "out of and in the course of" the employment.

The County Court Judge had awarded the dependants of the boy compensation, but the majority of the Court of Appeal held that the accident did not arise out of the employment, and the House of Lords have affirmed this judgment. The Lord Chancellor, however, expressed some hesitation. He is reported as having said:—"You cannot say that this boy was employed to be prudent and cautious, and deny him compensation if by reason of his want of prudence and caution he meets with accidental injury. Nor can you deny him compensation on the ground only that he was injured through breaking rules. But if the thing he does imprudently or disobediently is different in kind from anything he was required or expected to do, and also is put outside the range of his service by a genuine prohibition, then I should say that the accidental injury did not arise out of his employment."

Another case of the same description, Pope *v.* Hill's Plymouth Company, Ltd., the facts of which will be found in the *Builder*, July 9, 1910, has also recently been confirmed on appeal by the House of Lords. A rough test often applied has been furnished by answering the question, whether, when the accident occurred, the workman was or was not furthering his employer's business? This seems to provide a working rule, but since the passing of the Act of 1906 the law has been very unsatisfactory. Disobedience to rules should in every case be penalised—rules are for the protection of the workman and his fellow-workmen—and to excuse a workman for his own serious and wilful misconduct and to overlook serious disobedience to rules is to weaken discipline and to render the working of dangerous undertakings more perilous.

LONDON COUNCILS.

Acton.—200*l.* has been voted to the work of repairing footpaths in parts of the district.

Croydon (County).—Application is to be made by the County Council to the Local Government Board for sanction to a loan of 1,050*l.* for carrying out the work of erecting a handicraft centre at Boston-road. Double tramway track is to be substituted for a portion of the existing interlacing line and the existing double track is to be centralised at North End, at an estimated cost of 950*l.* The tender of Mr. William Hall, 23, Colvin-road, Thornton Heath, has been accepted, at 1,755*l.*, for repairing a portion of Tylecroft-road, as has also the tender of Messrs. William Smith & Sons, London-road, Croydon, at 2,449*l.*, for the erection of a disinfecting station and cottage in Factory-lane. A site is to be purchased in Brigstock-road, at a cost not to exceed 800*l.*, for the erection of a fire-station. The following plans have been passed:—Messrs. Higgins & Thomerson, 87, Finsbury-pavement, E.C., six houses, Macclesfield-road; Mr. H. Carter Pegg, London-road, school, The Crescent; Mr. G. W. Wood, 8, Chartham-road, six houses, Chartham-road; Mr. J. W. Hall, 315, Portland-road, eighteen houses, Alderton-road; Mr. G. Poulton, 11, Westbrook-road, six houses, Ardfern-avenue; Stroud Green House, Ltd., 30*a*, George-street, eight houses, Blackhorse-lane.

Croydon (Rural).—The tender of Mr. E. Yewen, Croydon, has been accepted at 849*l.* for making-up Malcolm-road, Beddington, also at 369*l.* and 599*l.* for the drainage and sewerage respectively of Downscourt-road, Coulsdon. They have further accepted the tender of Messrs. E. & E. Iles, at 842*l.* and 955*l.*, for making-up Bencombe-road and Burcott-road, Coulsdon, respectively.

Heston and Isleworth.—Plans have been passed as follows:—Messrs. Yetts, Sturdy, & Usher, alterations to Nag's Head, King's Head, and Lion and Lamb, High-street, Hounslow; Messrs. Nowell, Parr, & Kates, alterations to White Bear, Kingsley road, Hounslow; Messrs. Smee & Houchin, Baptist Chapel, Staines-road, Hounslow; Mr. George Gear, Baptist Chapel, Inverness-road, Hounslow. Plans have been lodged by Messrs. Messom & Sons for additions to Lodge, Nazareth House, Isleworth.

Hornsey.—Tenders are being invited for the erection of new workmen's dwellings at Highgate, also for the erection of a sanitary depôt. The work of constructing a connecting footpath from the boundary of the Midhurst Estate to Woodside-avenue, Muswell-hill is to be proceeded with at an estimated cost of 370*l.* At the last meeting of the Council the report of the Public Health and Hospital Committee, recommending the erection, as soon as possible, of a new steam laundry block and disinfecting chamber at the Isolation Hospital, at an estimated cost of 4,700*l.*, was referred back to the Committee. Extensions of plant are to be carried out at the electricity works at an estimated cost of 8,941*l.* The following plans have been passed:—Mr. G. Taft, Hornsey, three houses, Rokesly-avenue; Mr. A. B. Dewdney, alterations and additions to "Rushacre," Colney Hatch-lane.

Leyton.—Subject to a contribution from the Essex County Council, the footpath of Chestnut Walk is to be paved at an estimated cost of 130*l.* The Surveyor has been instructed to raise the kerb in Church-road and pave where necessary, providing paved channels, and making-up the roadway with tarviated granite at an estimated cost of 1,030*l.* The following plans have been passed:—Mr. J. W. Wyles, twenty houses, Pretoria-road; Messrs. W. A. & J. A. Tharpe, alterations to Cedar Lawn, Knotts Green; Mr. A. Radcliffe, eight houses, Canterbury-road. Plans have been lodged by Messrs. R. W. & I. Puddicombe for alterations to Nos. 668-690, High road, Leytonstone.

Merton.—The Surveyor has been instructed to prepare a scheme and estimate showing the widening of that portion of Kingston-road fronting the whole of the South Wimbledon, Merton, and District Hospital Committee's property and Blakesley in order that early application might be made to the Road Board for a grant in connexion therewith.

Staines.—The Board of Guardians have appointed Mr. G. W. Manning engineer in connexion with the sewering of the workhouse, at an inclusive fee of 55*l.* The system of sewers connecting up with the Staines Urban outfall works has been adopted, and application is to be made to the Local Government Board for sanction to a loan of 1,620*l.*, the estimated cost of the work.

FOREIGN AND COLONIAL.

Hotel, Manitoba.

H.M. Trade Commissioner reports that a large hotel is about to be constructed in the Province of Manitoba. Further particulars may be obtained by British contractors and manufacturers on application to the Commercial Intelligence Branch of the Board of Trade, 73, Basinghall street, London, E.C.

Labour in the Colonies.

From the January circulars of the Emigrants' Information Office (34, Broadway, Westminster, S.W.) we learn that in Sydney, New South Wales, and suburbs the building and iron trades and factory workers have been well employed; and stonemasons, bricklayers, plasterers, carpenters and joiners, and able-bodied labourers are in great demand. The Royal Commission on the shortage of labour in New South Wales has reported that immediate need exists for artisans in Sydney.—In Victoria employment continues to be very good; and assisted passages are now being granted to mechanics. There is a large demand for generally useful men, bricklayers, carpenters, plasterers, boilermakers, blacksmiths, moulders, engine fitters, plumbers, sheet metal workers, and furniture makers.—South Australia grants cheap passages to emigrants. Work of nearly all kinds is plentiful, and there is good demand for bricklayers, masons, plasterers, carpenters, first-class painters, plumbers, boilermakers, ironworkers, moulders, coppersmiths, and, in country districts, unskilled labourers.—The Queenslands Government grants nominated passages to emigrants. The general demand for labour has considerably increased, and wages have risen, on account of the flourishing condition of the agricultural industry and the great extension of railway construction. There has been plenty of employment for most kinds of mechanics. There is a good demand for strong men for railway construction.—Western Australia offers free and reduced passages to emigrants, and free grants of 160 acres.—In New Zealand the demand for mechanics is not so general, but skilled men, such as plumbers, have little difficulty in finding work.—In the Union of South Africa employment in the building trades in Johannesburg continues brisk. In Pretoria the state of trade is fair in building. In the Orange Free State a demand for builders exists at Bethlehem. In the Cape there are openings at Cape Town for a few masons in the stone-dressing industry.

TRADE CATALOGUES.

We have received from the Limmer Asphalte Paving Company, Ltd., London, S.W., a copy of a new book on asphalting, written by the company's Managing Director, Mr. H. Blake. The book, which embodies the results of forty years' experience in asphalting in all its various departments, will be found of considerable interest to architects, engineers, and surveyors who require information in connexion with these matters. The book deals with all the latest forms of asphaltic pavings, and is illustrated with views of the company's factories, mines, works, etc. It gives a good account of the manufacture and uses of the company's mineral rock mastic asphalts, compressed asphalt, lithofalt, and lithomac pavings, insulating bituments, etc.; and we have no doubt it will be of value to architects and others.

Mr. John Tann, of Newgate-street, London, E.C., forwards us his latest catalogue of his well-known "Anchor Reliance" safes, strong-rooms, strong room doors, etc. The firm, which has over forty years' experience in safe-making, patented as far back as 1843 the moisture-generating fireproof composition which in one form or another has become an inseparable necessity of all modern safe design. In 1865 the compound drill-proof unbreakable steel plate was originated by Mr. John Tann. This consists of alternate layers of high carbon steel and tough mild steel, the brittleness of the first being corrected by the toughness of the last, and the whole forming a composition which the test of years has proved to be immune from the burglar's drill. The latest innovation is a device for protection against the oxy-acetylene blowpipe, the newest and most powerful steel-cutting agent. Each "Anchor Reliance" safe is formed from a single plate, bent solid at all twelve corners, the back being riveted to the inside face of the back flange. No higher commendation is needed than the fact that a John Tann safe was selected to have the crown jewels of England on board the *Medina* during her voyage to India with the King and Queen. The firm manufacture complete strong rooms, party wall or "Insurance" doors, and safe locks and accessories of all descriptions. It is claimed that no safe made by Mr. John Tann has ever yet succumbed to fire or thief.

We have received from Messrs. Stanley Jones & Co., Ltd., shopfitters, 8, Gray's Inn-road Holborn, W.C., an illustrated brochure showing contracts recently carried out by the firm. These contracts are representative of various trades, and indicate the ability of the firm to carry out work of this kind. Messrs. Jones's model factory at Shepherd's Bush covers over two acres of ground.

TERMS OF SUBSCRIPTION.

"THE BUILDER" (Published Weekly) is supplied DIRECT from the Office to residents in any part of the United Kingdom at the prepaid rate of 19*s.* per annum, with delivery by Friday *Morning's Post* in London and its suburbs.

To Canada, post-free, 21*s.* 8*d.* per annum; and to all part of Europe, America, Australia, New Zealand, India, China, Ceylon, etc., 26*s.* per annum.

Remittances (payable to J. MORGAN) should be addressed to The Publisher of "THE BUILDER," 4, Catherine-street, W.C.

PATENTS.*

1,208 of 1911.—James Noad and William Arthur McMullen: Floors and the like.
2,263 of 1911.—William Duncan Tucker: Draught excluders for doors and the like.
2,393 of 1911.—William Lawrie: Apparatus for heating water for heating buildings and the like.
2,614 of 1911.—William Polglase: Apparatus for washing sand or the like.
3,203 of 1911.—Jones & Campbell, Ltd., and James Forbes Jones: Domestic ranges.
9,697 of 1911.—Harry Wilkinson: Water-closet seats.
15,245 of 1911.—Arthur Molloy Kennard and David Campbell: Draught-controlling fittings for kitchen range and like ovens.
16,833 of 1911.—Naumann Schefftel: Roof coverings.
28,604 of 1910.—Douglas George Hartley: Fasteners for window sashes or the like.
28,743 of 1910.—Francis Gascoign Lynde and Everard Richard Calthrop: Apparatus for vibrating, tamping, or punning wet concrete and similar material.
30,357 of 1910.—George Bailey: Boilers for kitchen ranges and the like.

TO CORRESPONDENTS.

NOTE.—All communications with respect to literary and artistic matters should be addressed to "THE EDITOR" (and not to any person by name); those relating to advertisements and other exclusively business matters should be addressed to "THE PUBLISHER," and *not* to the Editor.

All communications must be authenticated by the name and address of the sender, whether for publication or not. No notice can be taken of anonymous communications.

The responsibility of signed articles, letters, and papers read at meetings rests, of course, with the authors.

We cannot undertake to return rejected communications; and the Editor cannot be responsible for drawings, photographs, manuscripts, or other documents, or for models or samples sent to or left at this office, unless he has specially asked for them.

All drawings sent to or left at this office for consideration should bear the owner's name and address either the face or back of the drawing. Delay and inconvenience may result from inattention to this.

Any commission to a contributor to write an article, or to execute or lend a drawing for publication, is given subject to the approval of the article or drawing, when received, by the Editor, who retains the right to reject it if unsatisfactory. The receipt by the author of a proof of an article in type does not necessarily imply its acceptance.

N.B.—Illustrations of the First Premiated Design in any important architectural competition will always be accepted for publication by the Editor, whether they have been formally asked for or not.

PRICES CURRENT OF MATERIALS.

* Our aim in this list is to give, as far as possible, the average prices of materials, not necessarily the lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

BRICKS, &c.

	£ s. d.
Per 1000 Alongside, in River.	
Best Stocks	1 14 0
Picked Stocks for Facings	2 7 0
Per 1000, Delivered at Railway Depôt.	
	£ s. d.
Bluettons	1 12 0
Best Fareham Red	3 12 0
Best Red Pressed Ruabon Facing	5 0 0
Glazed Bricks—	
Best White, Ivory, and Salt Glaz'd Str'tch'rs	11 7 6
Headers	10 17 6
Bullnose, Angle, and Plinths	14 17 6
Squints and 4½ in. Flats	14 17 6
Double Stretchers	16 17 6

Second Quality £1 10s. per 1000 less than best.

	s. d.	
Best Blue Pressed		
Staffordshire	3 15	0
Do. Bullnose	4 0	0
Best Stourbridge Fire Bricks	4 0	0
Double Headers	13 17	6
One Side and two Ends	17 17	6
Two Sides and one End	18 17	6
Splays & Squints	16 7	6

	s. d.	
Flaxmans and Pit Sand	6	9 per yard, delivered.
Flaxmans Ballast	5	6 " "
Best Portland Cement	31	0 per ton, "
Best Ground Blue Lias Lime	19	0 " "

NOTE—The cement or lime is exclusive of the ordinary charge for sacks.

Grey Stone Lime	13s. 0d. per yard delivered.
Courbridge Fireclay in sacks 27s. 0d. per ton at rly dpt.	

STONE.

Per Ft. Cube.

	£ s. d.
BATH STONE—delivered on road waggons, Paddington Depôt	1 6½
Do. do. delivered on road waggons, Nine Elms Depôt, or Pimlico Wharf	1 8½
PORTLAND STONE (20 ft. average)—	
Brown Whitbed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2 3
White Basebed, Delivered on road waggons Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2 4½

* All these applications are in the stage in which opposition to the grant of Patents upon them can be made.

STONE (*Continued*).

Per Ft. Cube, delivered at Railway Depôt.

	s. d.		s. d.
Ancaster in blocks..	1 10	Closeburn Red Freestone	2 0
Beer in blocks	1 6	Red Mansfield Freestone	2 4
Greenshill in blocks	1 10	Talacre & Gwespyr Stone	2 8
Darley Dale in blocks	2 4		
Red Corsehill in blocks	2 3		

YORK STONE—*Robin Hood Quality.*

Per Ft. Cube, Delivered at Railway Depôt. s. d.
Scappled random blocks 2 10

Per Ft. Super., Delivered at Railway Depôt.

	s. d.
6 in. sawn two sides landings to sizes (under 40 ft. super.)	2 3
6 in. rubbed two sides ditto, ditto	2 6
3 in. sawn two sides slabs (random sizes)	0 11½
2 in. to 2½ in. sawn one side slabs (random sizes)	0 7
1½ in. to 2 in. ditto, ditto	0 6

HARD YORK—

Per Ft. Cube, Delivered at Railway Depôt.
Scappled random blocks 3 0

Per Ft. Super., Delivered at Railway Depôt.

	s. d.
6 in. sawn two sides landing to sizes (under 40 ft. super.)	2 8
6 in. rubbed two sides ditto	3 0
3 in. sawn two sides slabs (random sizes)	1 2
2 in. self-faced random flags	0 5

SLATES.

Per 1000 of 1200 at Railway Depôt.

	£ s. d.		£ s. d.
In. In.		In. In.	
20×10 best blue Bango	13 2 6	20×10 best Eur'ka unfading green	15 17 6
20×12 ditto	13 17 6	20×12 ditto	18 7 6
20×10 1st quality ditto	13 0 0	18×10 ditto	13 5 0
20×12 ditto	13 15 0	16×8 ditto	10 5 0
16×8 ditto	7 5 0	20×10 permanent green	11 12 6
22×10 best blue Portmadoc	12 12 6	18×10 ditto	9 12 6
16×8 ditto	6 12 6	16×8 ditto	6 12 6

TILES.

At Railway Depôt.

	s. d.		s. d.
Best plain red roofing (per 1000)	42 0	Best "Hartshill" brand, plain sand-faced (per 1000)	50 0
Hip and Valley (per doz.)	3 7	Do. pressed (per 1000)	47 6
Best Broseley (per 1000)	50 0	Do. Ornamental (per 1000)	50 0
Do. Ornamental (per 1000)	52 6	Hip (per doz.)	4 0
Hip and Valley (per doz.)	4 0	Valley (per doz.)	3 6
Best Ruabon red, brown, or brindled (Edw'ds) (per 1000)	57 6	Staffords. (Hanley) Reds or Brindled (per 1000)	42 6
Do. Ornamental (per 1000)	60 0	Hand-made sand-faced (per 1000)	45 0
Hip (per doz.)	4 0	Hip (per doz.)	4 0
Valley (per doz.)	3 0	Valley (per doz.)	3 6

WOOD.

BUILDING WOOD. At per standard.

	£ s. d.	£ s. d.
Deals: best 3 in. by 11 in. and 4 in. by 9 in. and 11 in.	14 0 0	15 10 0
Deals: best 3 by 9	13 10 0	14 10 0
Battens: best 2½ in. by 7 in. and 8 in., and 3 in. by 7 in. and 8 in.	11 10 0	12 10 0
Battens: best 2½ by 6 and 3 by 6	0 10 0	less than 7 in. and 8 in.
Deals: seconds	1 0 0	less than best.
Battens: seconds	0 10 0	"
2 in. by in. and 2 in. by 6 in.	9 10 0	10 10 0
2 in. by 4½ in. and 2 in. by 5 in.	9 0 0	10 0 0
Foreign Sawn Boards—		
1 in. and 1¼ in. by 7 in.	0 10 0	more than battens.
¾ in.	1 0 0	"

Fir timber: best middling Danzig or Memel (average specification)	At per load of 50 ft. 5 0 0	5 10 0
Seconds	4 10 0	5 0 0
Small timber (8 in. to 10 in.)	3 17 6	4 0 0
Small timber (6 in. to 8 in.)	3 5 0	3 10 0
Swedish balks	2 12 6	3 0 0
Pitch-pine timber (30 ft. average)	5 5 0	6 0 0

JOINERS' WOOD. At per standard.

White Sea: first yellow deals, 3 in. by 11 in.	24 10 0	25 10 0
3 in. by 9 in.	22 10 0	23 10 0
Battens, 2½ in. and 3 in. by 7 in.	17 0 0	18 0 0
Second yellow deals, 3 in. by 11 in.	19 0 0	20 0 0
" 3 in. by 9 in.	18 0 0	19 10 0
Battens, 2½ in. and 3 in. by 7 in.	14 0 0	15 0 0
Third yellow deals, 3 in. by 11 in. and 9 in.	14 0 0	15 0 0
Battens, 2½ in. and 3 in. by 7 in.	11 10 0	12 10 0
Petersburg: first yellow deals, 3 in. by 11 in.	21 10 0	22 10 0
Do. 3 in. by 9 in.	18 10 0	19 10 0
Battens	14 0 0	15 0 0
Second yellow deals, 3 in. by 11 in	16 10 0	17 10 0
Do. 3 in. by 9 in.	15 0 0	16 0 0
Battens	11 10 0	12 10 0
Third yellow deals, 3 in. by 11 in.	13 10 0	14 10 0
Do. 3 in. by 9 in.	13 0 0	14 0 0
Battens	10 10 0	11 0 0
White Sea and Petersburg—		
First white deals, 3 in. by 11 in.	15 0 0	16 0 0
" " 3 in. by 9 in.	14 0 0	14 10 0
Battens	11 10 0	12 10 0
Second white deals, 3 in. by 11 in.	14 0 0	15 0 0
" " 3 in. by 9 in.	13 0 0	14 0 0
Battens	10 10 0	11 0 0
Pitch-pine: deals	19 0 0	21 0 0
Under 3 in. thick extra	0 10 0	1 0 0
Yellow Pine—First, regular sizes	44 0 0	upwards.
Oddments	32 0 0	"
Seconds, regular sizes	33 0 0	"
Oddments	28 0 0	"
Kurai Pine—Planks per ft. cube.	0 3 6	0 5 0
Danzig and Stettin Oak Logs— Large, per ft. cube	0 3 0	0 3 9
Small "	0 2 6	0 2 6
Wainscot Oak Logs, per ft. cube	0 5 6	0 6 0
Dry Wainscot Oak, per ft. sup. as inch	0 0 9	0 0 11
¼ in. do. do.	0 0 8	—

WOOD (*Continued*).

JOINERS' WOOD (*Continued*)—

	£ s. d.	£ s. d.
Dry Mahogany—Honduras, Tabasco, per ft. super. as inch	0 0 10	0 1 1
Selected, Figury, per ft. super. as inch	0 1 6	0 2 6
Dry Walnut. American, per ft. super. as in ch	0 0 10	0 1 0
Teak, per load	18 0 0	22 0 0
American Whitewood planks, per ft. cube	0 4 0	0 5 0
Prepared Flooring, etc.—	Per square.	
1 in. by 7 in. yellow, planed and shot	0 13 6	0 17 0
1 in. by 7 in. yellow, planed and matched	0 14 0	0 18 0
1¼ in. by 7 in. yellow, planed and matched	0 16 0	1 0 0
1 in. by 7 in. white, planed and shot	0 12 0	0 14 6
1 in. by 7 in. white, planed and matched	0 12 6	0 15 0
1¼ in. by 7 in. white, planed and matched	0 15 0	0 16 6
¾ in. by 7 in. yellow, matched and beaded or V-jointed brds.	0 11 0	0 13 6
1 in. by 7 in. " "	0 14 0	0 18 6
¾ in. by 7 in. white " "	0 10 0	0 11 0
1 in. by 7 in. " "	0 12 9	0 15 0

6 in. at 6d. to 9d. per square less than 7 in.

JOISTS, GIRDERS, &c.

	In London, or delivered Railway Vans, per ton. £ s. d.	£ s. d.
Rolled Steel Joists, ordinary sections	7 10 0	8 0 0
Compound Girders, ordinary sections	9 10 0	10 0 0
Steel Compound Stanchions	11 0 0	12 0 0
Angles, Tees, and Channels, ordinary sections	9 10 0	10 0 0
Flitch Plates	9 10 0	9 10 0
Cast Iron Columns & Stanchions, including ordinary patterns	7 10 0	8 10 0

METALS.

	Per ton, in London. £ s. d.	£ s. d.
IRON—		
Common Bars	9 0 0	9 10 0
Staffordshire Crown Bars, good merchant quality	9 5 0	9 15 0
Staffordshire "Marked Bars"	11 0 0	—
Mild Steel Bars	9 5 0	9 15 0
Hoop Iron, basis price	10 0 0	—
" " Galvanised	17 10 0	—
(*And upwards, according to size and gauge.)		
Sheet Iron Black—		
Ordinary sizes to 20 g.	10 5 0	—
" " 24 g.	11 5 0	—
" " 26 g.	12 15 0	—
Sheet Iron, Galvanised, flat, ordinary quality—		
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15 10 0	—
Ordinary sizes to 22 g. and 24 g.	16 0 0	—
" " 26 g.	17 0 0	—
Sheet Iron, Galvanised, flat, best quality—		
Ordinary sizes to 20 g.	18 10 0	—
" " 22 g. and 24 g.	19 0 0	—
" " 26 g.	20 10 0	—
Galvanised Corrugated Sheets—		
Ordinary sizes, 6ft. to 8ft. 20 g.	15 0 0	—
" " 22 g. and 24 g.	15 5 0	—
" " 26 g.	16 15 0	—
Best Soft Steel Sheets, 7 ft. by 2 ft. to 3 ft. to 20 g. and thicker	12 10 0	—
Best Soft Steel Sheets, 2 g. & 24 g.	13 10 0	—
" " " 26 g.	15 10 0	—
Cut Nails, 3 in. to 6 in.	11 0 0	11 10 0
(Under 3 in., usual trade extras.)		

LEAD, &c.

	£ s. d.	£ s. d.
LEAD—Sheet, English, 4lb. and up	19 7 6	—
Pipe in coils	19 17 6	—
Soil pipe	22 17 6	—
Compo pipe	22 17 6	—
ZINC—Sheet— In casks of 10 cwt.		
Vielle Montagne	33 10 0	—
Silesian	33 5 0	—
Zinc, in bundles, 1s. per cwt. extra.		
COPPER—		
Strong Sheet per lb.	0 1 0	—
Thin "	0 1 1	—
Copper nails	0 0 10	—
Copper wire	0 0 10	—
BRASS—		
Strong Sheet "	0 0 11	—
Thin "	0 1 0	—
TIN—English Ingots	0 2 0	—
SOLDER—Plumbers'	0 0 8½	—
Tinmen's	0 0 11	—
Blowpipe	0 1 2	—

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

15 oz. thirds	2½d.	26 oz. fourths	3½d.
" fourths	1½d.	32 oz. thirds	5d.
21 oz. thirds	3d.	" fourths	4½d.
" fourths	2½d.	Fluted Sheet, 15 oz.	3½d.
26 oz. thirds	4d.	" 21 oz.	4½d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

¼ Hartley's	2d.	Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white	3½d.
⅜ "	2½d.		
½ "	2½d.	Ditto, tinted	5d.

* Not less than three crates.

OILS, &c.

	£ s. d.
Raw Linseed Oil in pipes per gallon	0 3 4
" " in barrels	0 3 5
" " in drums	0 3 7
Boiled " in barrels	0 3 7
" " in drums	0 3 10
Turpentine in barrels	0 3 2
" in drums	0 3 4
Genuine Ground English White Lead, per ton	26 0 0
Red Lead, Dry	22 10 0
Best Linseed Oil Putty per cwt.	0 10 0
Stockholm Tar per barrel	1 12 0

VARNISHES, &c.	Per gallon. £ s. d.
Fine Pale Oak Varnish	0 8 0
Pale Copal Oak	0 10 6
Superfine Pale Elastic Oak	0 12 6
Fine Extra Hard Church Oak	0 10 0
Superfine Hard-drying Oak, for seats of Churches	0 14 6
Fine Elastic Carriage	0 12 0
Superfine Pale Elastic Carriage	0 16 0
Fine Pale Maple	0 10 0
Finest Pale Durable Copal	0 18 0
Extra Pale French Oil	1 1 0
Eggshell Plating Varnish	0 18 0
White Pale Enamel	1 4 0
Extra Pale Paper	0 12 0
Best Japan Gold Size	0 10 6
Best Black Japan	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Knotting	0 10 9
French and Brush Polish	0 10 6

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than* 10 a.m. on *Thursday*. [N.B.—We cannot publish Tenders unless authenticated either by the architect or the building owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is stated, nor any list in which the lowest Tender is under 100*l.* unless in some exceptional cases and for special reasons.]

* Denotes *accepted*. † Denotes *provisionally accepted*.

DUNFERMLINE.—For buildings proposed to be erected on the site of Halbeath-road, for Messrs. The Dunfermline and West Fife Laundry, Ltd. Mr. E. H. Motion, architect, 39, Bridge street, Dunfermline.

Roadwork: J. Baxter, Inverkerthing*	£1,372 5 3
Joinery: Brown & Templeman, Cemetery-road, Dunfermline*	824 7 8½
Slater and Rough Casting: J. Robertson, Campbell-street, Dunfermline*	158 19 4
Plaster and Cement: H. & J. Ramsay, Dunfermline*	200 0 0
Painter: J. Cousin, Kirkgate, Dunfermline*	118 0 1½
Plumbers: A. Thomson & Co., New-row, Dunfermline*	215 4 0

EAST KIRKBY.—For branch stores, Cemetery-road, East Kirkby, for the Kirkby-in-Ashfield Industrial Co-operative Society, Ltd. Mr. Walter H. Woods, Lic.R.I.B.A. architect and surveyor, Central-chambers, High-street, Long Eaton, near Nottingham. Quantities by the architect:—

W. Bains	£1,520 0	E. Coleman	£1,350 0
A. W. Hoole	1,365 0	Tate & Son*	1,329 10

[All of Kirkby-in-Ashfield.

GREAT YARMOUTH.—For art school, Great Yarmouth, for the Education Committee. Mr. J. W. Cockrill, M.Inst.C.E., A.R.I.B.A., Borough Surveyor:—

W. J. Porter	£5,197 0	J. Balls	£4,624 0
J. Youngs & Son	5,197 0	Moore & Sons	4,605 0
J. Legget	4,775 0	C. Wiseman	4,570 0
Carter & Wright	4,730 0	Wright	4,370 0
J. Eastoe	4,700 0	F. Grimble	4,369 0
C. Roper	4,698 0	B.G Beech, Alderson-road, Great Yarmouth	4,355 19
J. E. Postell	4,6 5 0		
J. D. Harman	4,625 0		

HAMMERSMITH.—For the alterations at Hammersmith police-station. Mr. J. Dixon Butler, F.R.I.B.A., Surveyor to the Metropolitan Police District, New Scotland-yard, S.W. Quantities by Messrs. Thurgood, Son, & Chidgey, 8, Adelphi-terrace, Strand, W.C.

W. Eyre	£5,697	Holloway Bros. (London), Ltd.	£5,516
J. Mowlem & Co., Ltd.	5,694	G. Godson & Sons	5,457
J. Willmott & Sons	5,648	Prestige & Co., Ltd	5,435
Lole & Co.	5,625	Holliday & Greenwood, Ltd.	5,389
Killby & Gayford, Ltd.	5,579	Patman & Fotheringham, Ltd.	5,383
Holland & Hannen	5,573	T. H. Adamson & Sons	5,371
Sabey & Sons, Ltd.	5,550		
F. & H. F Higgs	5,540		

HOUNSLOW.—For hospital architect, 11, Pancras lane, E.C. Fleetwood, Son, & Eversden, 3, New-court, W.C.

T. W. Hampton	£5,89[illegible]	W. J. Wilkinson	£4,942
H. W. Hiscock	5,785	F. & G. Foster	4,909
W. E. Blake, Ltd.	5,695	S. N. Soole	4,887
Fitch & Cox	5,518	Lawrence & Co.	4,879
H. Burfoot & Son	5,434	L. H. & R. Roberts	4,870
General Building Co.	5,343	J. Millman	4,860
Kearley	5,259	J. E. Whiter & Co.	4,852
Pittard & Son	5,257	H. & G. Taylor	4,794
Rice & Son	5,220	Kirk & Kirk	4,780
W. I. Dickens	5,214	F. G. Minter	4,770
Knight & Son	5,172	Myall Bros.	4,757
Batley, Sons, & Holness	5,066	Mattock Bros	4,730
Fastnedge & Son	4,955	J. Dorey & Co., Ltd.	4,624
S. E Moss	4,950	W. Lacey, Bath-road, Hounslow	4,431

OLD TRAFFORD.—For the extension of the Technical Institute in Stratford-road. Messrs. John Bowden & Co., architects, Manchester:—

J. W. Wildgoose	£5,459	M. Stone & Sons	£4,850
C. H. Normanton & Sons	5,367	A. Hodkinson	4,846
Tinker & Young	5,059	R Carlyle	4,757
A. Fenton	4,976	J. T. Hollingworth	4,740
J. H. Billings & Co.	4,885	W. Thorpe & Sons, Chester-road, Old Trafford*	4,674
J. Gerrard & Sons, Ltd	4,885		

TORQUAY.—For erection of the Homelands Council school, for Torquay Education Authority. Messrs. E. Appleton & Son, architects, Torquay:—

Coles Bros.	£7,728 7 11	Bovey & Son	£6,397 0 0
T. Vanstone & Sons	6,989 0 0	G. Pollard	6,321 0 0
A. N. Coles	6,815 10 0	H. W. Pollard & Son	6,300 0 0
Wilkins & Sons	6,687 0 0	H. Pittard & Son	6,249 0 0
G. Shellabear & Son	6,656 0 0	W. Watson & Son	6,235 0 0
W. E. Blake, Ltd	6,640 0 0	H C. Jackman, Windsor-rd. Torquay*	6,232 0 0
J. E. Fursland	6,580 0 0	R. F. Yeo & Sons	5,994 0 0
Wakeham Bros.	6,452 0 0		
R. E. Narracot	6,436 15 2		

WINCHESTER. For eighty-two houses, Fulford Housing Scheme. Messrs. Colson & Nisbett, architects, Winchester:—

Wise & Lansdell, Ltd., 9A, Jewry-street, Winchester £15,500

ST. NEOTS.—For alterations and additions to the Council school. Mr. H. Lecte, County Surveyor, Huntingdon.—

Kidman Bros.	£1,400 0 0	F. B. Thackray & Co., Ltd.	£1,228 0 0
W. Wade	1,399 14 0	H. F. Bull	1,224 16 6
W. J. Allen & Son	1,338 4 0	G. Wrycroft & Sons, St Neots*	1,155 0 0
H. Rooke & Sons	1,328 0 0		
G. Page & Son	1,307 0 0		

Ham Hill Stone.
Doulting Stone.
Portland Stone.
The Ham Hill and Doulting Stone Co., Limited
(incorporating the Ham Hill Stone Co. and C. Trask & Son, The Doulting Stone Co.).
Norton, Stoke-under-Ham, Somerset.
London Agent:—Mr. E. A. Williams, 16, Craven-street, Strand.

Asphalte.—The Seyssel and Metallic Lava Asphalte Co. (Mr. H. Glenn), Office, 42, Poultry, E.C.—The best and cheapest materials for damp courses, railway arches, warehouse floors, flat roofs, stables, cow-sheds and milk-rooms, granaries, tun-rooms, and terraces. Asphalte Contractors to Forth Bridge Co. T.N. 2644 Central.

SPRAGUE & CO.'S, Ltd.,
"INK-PHOTO" PROCESS,
4 & 5, East Harding-street,
Fetter-lane, E.C.

OGILVIE & CO., Telephone: DALSTON 1388. Many years connected with the late firm of W. H. LASCELLES & Co., LTD., of Bunhill Row.
Amhurst Works, **DALSTON LANE, N.E.**
EXPERTS IN HIGH-CLASS JOINERY.
ALTERATIONS AND DECORATIONS. ESTIMATES FREE.

J. J. ETRIDGE, Jr. LTD.
SLATE MERCHANTS.
EXPERTS IN
SLATING, TILING.
BEST WORK ONLY.
Telephone 2685 Wall, or write—
BETHNAL GREEN SLATE WORKS,
BETHNAL GREEN, LONDON, E.

ASPHALTE
For Horizontal & Vertical Damp Courses.
For Flat Roofs, Basements, & other Floors.
The best materials and workmanship are supplied by
THE
French Asphalte Co.
Whose name and address should be inserted in specifications.
For estimates, quotations, and all information apply at the Offices of the Company,
5, LAURENCE POUNTNEY HILL,
CANNON STREET, E.C.

EWART'S
Cures in 19 cases out of 20.
"EMPEROR"
Write to-day for Illustrated Catalogue Free to
EWART & SON Ltd.,
346-350, Euston Road, London, N.W.
Established 1834.
Telephone: 2570 North.
SMOKE-CURE

THE BUILDER

VOL. CII.—No. 3597. JANUARY 12, 1912.

CONTENTS.

	PAGE
The Architectural Societies of France	27
The Policy of the R.I.B.A.	28
Notes	29
Contemporary Architects and their Work: Mr. Cass Gilbert (with Illustrations)	30
The Architectural Association First Spring Visit	35
General News	36
Correspondence	37
Intercommunication Column	37
Editorial Summary	38
Meetings	38
Architectural Societies	38
Fifty Years Ago	38
Notes to Illustrations	38
Competition News	38
Monthly Review of Construction: The Children's Hospital, Paddington-green, W.: Outpatient Extensions (with Illustrations)	39
Dry Rot in Timber	42
Notes (with Illustration)	42
The Building Trade: Discounts	44
The Penalty Clause	44
Projected Building Works	44
The Building Trade Unrest	44
The Wood Trade	45
General Building News	45
Projected New Buildings in the Provinces	46
Australian Commonwealth Offices	46
Illumination as a Study for Architects (with Diagrams)	47
Southwark Cathedral	49
Obituary	49
Foreign and Colonial	49
An Old Highland Town (with Illustrations)	50
Books	50
Legal Column	52
London Councils	52
Trade Catalogues	52
List of Competitions, Contracts, etc., Open	53
Patents	55
Prices Current	55
Tenders	56

Illustrations.

Works by Mr. Cass Gilbert, of New York and St. Paul:—

Festival Hall, St. Louis Exposition.

Capitol, St. Paul, Minnesota.

Ditto. House of Representatives.

Design for Legislative Building, Regina, Saskatchewan.

Essex County Court House, Newark.

Library, University of Texas, Austin.

Customs House, New York.



Design for the International Bureau of American Republics. By Mr. Cass Gilbert. (*See page* 30.)

THE ARCHITECTURAL SOCIETIES OF FRANCE:

I.—L'ACADÉMIE ROYALE D'ARCHITECTURE; LA SOCIÉTÉ CENTRALE DES ARCHITECTES FRANÇAIS.

IN fulfilment of a promise which we made to our readers in a recent article, we propose to devote a little space in the present and two subsequent issues to a brief review of the constitution and organisation of some of the leading architectural societies which have their central offices in Paris. It is not uninteresting to cast our eyes across the Channel in this matter, for it is to France that we must look for the parent of all architectural corporate bodies, and for a hierarchy of organised architectural effort established in advance of any other country. Since the foundation of l'Académie Royale d'Architecture by Colbert, under the reign of Louis XIV., in 1671, the continuity has been preserved until the present time, with the exception of the stormy years of the Revolution, when this society, with other established institutions, was suppressed by a decree of the National Convention. It would be beside our present purpose to pay more than a passing tribute to this parent association, which, with François Blondel as its first Director and Professor, formulated an organisation which has provided the basis of initial procedure for all subsequent architectural societies. L'Académie Royale was always numerically a small body. At first consisting of six members, chosen by the King, this number was increased (in 1699) to seventeen, with a professor and a secretary. Subsequently the Académie, being granted letters patent, became entitled to elect its own members (in 1717), who were then increased to twenty-four, divided into two classes, of which the first consisted of ten architects, a professor, and a secretary. These numbers were from time to time increased, but never reached a larger total than sixty, of which twenty-eight were either Honorary Academicians or corresponding members. Meetings were held twice a week; on Tuesdays to hear the lectures and receive instruction from Professor Blondel; on Thursdays to discuss matters either of immediate practical importance, or of an abstract kind connected with architectural art and history. The records of the work and studies of the Académie, contained in ten volumes of MS., consisting of 5,000 folio pages, are preserved at the Institut de France. Only occasional extracts from these papers have been published. Among other things it is interesting to note that the foundation of the Grand Prix de Rome was established under the patronage of l'Académie Royale in 1720, Antoine Desgodetz being the Professor at the time, the name of the Director, or President, not being ascertainable at the moment of our research. Inclusion within the ranks of the Académie conferred great distinction, just as the attainments of its various members brought distinction to the corporate body. Until its extermination by what Professor Blomfield calls the brutal pedantry of the decrees of Republican Government in 1793, l'Académie

Royale occupied a powerful, even brilliant position. Its history covers a period of architectural achievement which the recent publications of Mr. Blomfield and Mr. Ward have assisted to elucidate in works which are an ornament to British scholarship. Its membership was small, but in artistic associations it is the quality of the unit which gives strength to the whole bundle. The methods of architectural practice have changed both in France and elsewhere since the days of Louis XIV., and the foundation of l'Académie Royale, although Blondel and his *confrères* were largely protagonists of the practising architect as we know him to-day. The title of architect was indeed just then coming into vogue, replacing that of master of the works.

To descend, however, to later times, there are at present two architectural societies of power and influence established in the French capital; and there is also l'Association Provinciale, an influential organisation whose administrative offices are at Versailles. To a certain extent the efforts of these various societies may at moments clash, although each is established on a logical basis independent of the other. In addition to the three Parisian societies -that is to say, the Société Centrale des Architectes Français, the Association des Architectes Diplômés par le Gouvernement, and l'Association Provinciale des Architectes Français—there are some thirty-four provincial societies, the majority of which are federated with the Association Provinciale, but not all; but all of which are *en correspondance* with the Société Centrale. The Société Centrale is the oldest of these bodies; it claims more or less to carry on the tradition of the old Académie Royale, and is jealous of its power and the prestige of its members; the Société des Architectes Diplômés par le Gouvernement was founded in 1877, and its membership is restricted to those who have obtained the architectural diploma at l'École Nationale et Spéciale des Beaux-Arts; the Association Provinciale does not consist of individual members, but of numerous federated societies, from whose members its President and other officers are elected.

The Société Centrale des Architectes was founded at a meeting of architects on June 9, 1840, convened to promote means by which common action might be taken to remedy the condition of affairs resulting from the absence of any available testimony to distinguish an architect from the man who assumed the title without possessing adequate qualifications. On November 15 following—the meeting aforesaid having drawn up a report—it was decided that a Society of Architects should be formed having for its principal objects:—

1. To seek to unite and bring together at a common centre architects who possess the testimonies and the necessary guarantees of instruction, experience, capacity, and morality.

2. To exercise over its members a power of control and discipline.

3. To concern itself with questions of art, of practice, of mutual agreement, of law and administration, which are of importance to architecture and to architects.

The Société Centrale was thus founded, beginning with about 100 members, and held its first general meeting under the Presidency of M. Pierre Baltard on January 24, 1841. The two following years were occupied in the elaboration of statutes and rules, and in taking the necessary steps to establish its legal existence. On May 27, 1843, the Society, having then doubled its membership, received from the Ministry of the Interior the necessary legal confirmation. From that time it proceeded to issue its bulletins, so as to keep its scattered members in touch with its affairs. In 1888 the well-known weekly journal, *l'Architecture*, was established. The Society is composed of titular members, honorary members, corresponding members, and free Associates (*d'associés libres*). The latter class are chosen from persons who, without being architects, encourage or patronise the arts, or the sciences, or institutions which have some useful connexion with the profession of an architect. But members of this class, as well as the corresponding members, are not entitled to take any part in the elections or the administration of the Society.

Briefly put, then, we have here a constitution and an organisation incorporated pretty much after the manner of the Royal Institute of British Architects. And the comparison may be carried further when we proceed to consider the formulation of principles of professional practice. These are elaborated with truly Gallic precision in *les devoirs professionnels*, under the following heads:—(1) The duty of the architect towards himself; (2) towards his professional brethren; (3) towards his clients; and (4) towards his contractors or builders. The professional and moral obligations which have always been the rule of conduct and honour of architects "*véritablement digne de ce nom*" are put into plain terms. The conditions of membership are registered unmistakably, so as to guide the public, the architect's clients, and governing authorities, with regard to what they have a right to expect from reputable architects in the honourable exercise of their profession. And, with the characteristic respect of the French for clearness of thought, the propagation of these principles is prefaced by the definition of an architect taken from the *Dictionnaire de l'Académie Française*, which is a little difficult to translate because it applies terms of general applicability to artistic work, but which are not usual in English as applied to architecture. But let us take the definition as it stands. An architect, then is "the artist who composes buildings, arranges their various parts and decoration, controls their execution, and verifies the accounts." This is, however, only a rough paraphrase of the original, which reads as follows:—"L'artiste qui compose les édifices, en détermine les proportions, les distributions, les décorations, les fait exécuter sous ses ordres et en règle les depenses." And further, to elucidate the position, the programme continues:—"Consequently an architect is at once an artist and a professional man," which in its frank recognition of the various kind of duties which devolve upon a man responsible for the creation and carrying out of building prevents any misconception as to his status in the social economy. For the rest, the obligations which are defined are those which govern English practice:—An architect must not advertise, receive secret commissions, be concerned in any trade transactions connected with his work, and so on.

It would require a special article to deal with the various Boards and Committees which organise and give effect to the general work of the Société Centrale, or to the labours of the special committees which deal with technical matters, with materials and their application, with law, sanitation, and other subjects always more or less in a state of flux or evolution, likely to provide cause for useful discussion.

The Société Centrale is the most influential architectural association in France. As we have said, it has largely continued in the tradition of its great predecessor, l'Académie Royale, while extending its membership and bringing its scale of operations more into line with the democratic expression of a later age. Admission to its ranks is controlled by a standard of honourable practice and achievement. The history of the Académie Royale during its century and a quarter of existence was tranquil; its influence perhaps more powerful than that of any subsequent society; its membership extremely limited. Under present conditions such a limited association is not desirable, and could not be considered adequately representative of the increasing number of those who are engaged in the design and carrying out of building work in France. A society on a broader basis was both necessary and inevitable, but the membership of the Société Centrale is by no means promiscuous or all-embracing. The actual numbers are:—Membres résidants, 339; non-résidants, 138 -total 577.

We shall deal in our next article with the constitution and organisation of the Société des Architectes Diplômés par le Gouvernement, an organisation of growing importance, which brings into collective operation a group of architects united by a system of scholastic training and examination.

THE POLICY OF THE R.I.B.A.

TIME brings its revenges. Who would have anticipated, some five years back, when the younger members of the Institute were lashing the governing body into action over the Registration question, that in the few brief years these same juniors would be putting on the brake and pulling up the Council team on the ground of its attempting to force the pace and pledge itself too definitely to a Registration Bill?

Youth on the side of caution and revered age sitting rebuked for rashness is such an unusual state of affairs that one may well hold one's breath and wonder how such a position has come about; but, to be candid, the expressions youth and age in this case are purely symbolic, for the protagonists of the Government and the Opposition are not to be

istinguished in the matter of years. It is herely in the popular conception that the wo classes have been thus differentiated; n reality the average age of the member f Council is much the same as that of is critic, and we are not so sure that he movement to hold the Council in heck does not owe more to those who would, a year or two back, have been egarded as reactionary, than to those who claim to belong to the "advanced" ection.

At all events, whatever fundamental ifferences may exist in the inner mental rocesses of those composing these two roups, they have proved themselves n accord on the question at present ppermost in the R.I.B.A., and as a result he Council must needs adopt more radual methods in their progress towards ulfilling the instructions of their constituents in obtaining a legal qualification or architects.

While many important factors in the ase do not seem, so far, to have been resented to those outside the joint ounsels of the R.I.B.A. and the Society f Architects, we can naturally understand that it is difficult to disclose these without a risk of prejudicing negotiations hat may be regarded as still in progress. t is easy to see that without these disclosures the case of the "Opposition" nay appear inconclusive in some particulars. This is, however, of slight importance, as it seems to have been brought forward on the fairest possible lines of broad principle, with all petty details omitted as being of little moment at the present time.

The principle enunciated is this: That the R.I.B.A. would be unwise to pledge itself to the form a Registration Bill should take, contenting itself with an undertaking that a Registration Bill should be promoted. Now, as a sketch draft of such a Bill formed part of the terms in the proposed amalgamation with the Society, it becomes a question as to whether such an amalgamation can be carried through without it, and it remains to be seen whether the Society will be content with an agreement which leaves the details of a Registration Bill to be threshed out at a future date.

We congratulate the Institute on the way in which the pros and cons were placed before the meeting on Monday last. The deliberate abandonment of all the factors not essential to the main question at issue, but which might none the less exercise considerable influence on the relative position of individual members, is a pleasant feature in such a debate, in which minor issues might have been exploited to obscure the main principles involved.

The Council can have no cause for complaint against its critics, who uniformly dealt with its efforts in a sympathetic spirit, and solely with regard to the general line of policy best calculated to maintain the position of the Institute on a firm basis.

MEMORABLE LONDON HOUSES.

Commemorative tablets will shortly be affixed on No. 32, Craven-street, Strand, the home in 1827 of Heine, and No. 36, Onslow-square, S.W. (on the south side of the square, near Sumner-terrace), where Thackeray lived in 1853-62, before he built his house on Palace-green, Kensington.

NOTES.

The Lay Press and Architecture.

We are always glad to welcome the criticism of the lay press on matters architectural, and an article on "Architecture of 1911," with a sub-title, "Progress in the Rebuilding of London," which appeared a day or two ago in the *Evening Standard and St. James's Gazette* is almost wholly appreciative in its estimation of the year's work. Even when we read such phrases as, "The torch lighted by Inigo Jones in the XVIIth century has never been quite extinguished. It blazed forth in glory, and was a light to the feet of Wren, showing him the path on which to lay out his new London and build its great and abiding glory, Paul's dome (*sic*), which hangs co-equal with the clouds, for ever. Throughout the XVIIIth century the torch burned, only with less lustre"; and so on. Even when we read such phrases we are not dismayed; we are even grateful to our contemporary for discovering that there is such an art as architecture. The writer is hopeful about modern work; he tells us how its scale "has grown or put on, as it were, imperial wings," and he proceeds to illustrate his point by the scale of the new buildings in Regent-street! We shall not refer particularly to the "floors which are embraced by columns," or to the "play of imagination which touches art as with a transforming wand," because these are probably not more foolish than most efforts at appreciation which make for the general good of a cause that matters. And the *Evening Standard* states a truth of inestimable significance when it says that "art patrons change. Princes have forgotten their privileges, and to-day we look for patronage to shopkeepers of wide outlook. It promises to be good for architecture that they are awakening to the fact that building rivalry must enter into their other and more immediate trade competition." Out contemporary talks about scale and imperial wings, but many of the finest buildings of classical times which have come down to us are comparatively small buildings. Greatness of scale is a small matter compared with the balance of parts which one calls proportion and which establishes the rhythm which our critic bless him!—styles "petrified music." Our architectural lapses are accounted for by the same writer by the fact that our best men are engaged in fruitless competitions, and that the bulk of work is given to the men who do not count, with the proviso that "the remedy lies with the public!"

Old Houses at Guildford.

It may be said concerning the demolition of definitely ancient structures to meet the exigencies of modernity that each case must be "judged upon its merits." But unless a guiding principle be established there will always be a tendency in this—and perhaps in any—country to act on unfounded assumptions, usually unavowed or unstated also, and therefore difficult to dismiss. On each occasion, besides the customary protest, the housebreaker is encouraged at the outset by prodigious sighs of regret from the instigators themselves ("What a pity! But needs must . . . . ."); and it would seem as though persons, of whom one would not have thought it, take a subtle pleasure in this delicate form of self-mortification. If appears also that a more positive and quite ferocious emotional delight may be derived from destruction, desecration, and wild laceration of the sensibilities of those too refined to stoop to actual power in matters of this kind. These tendencies, together with mere muddle-headedness, and on the other hand an obstreperous, flaunting of modernity in despite anything that is old, may only be obviated by a clear recognition of the factors involved.

The Case in Point.

In the first place, old buildings have the absolute value of the irreplaceable—a brief tour in Australia or Canada would establish a comprehension of this—and there are all sorts of subsidiary qualities, historic, picturesque, artistic, and—dare we say?—atmospheric, with which a civilised community should not lightly dispense. Against these properties, which are great, of indefinite possessions, there are ranged the needs incident to growth and the aspirations of the present. And it is upon a right estimation and clear balance of these qualities when ranged in opposition that a right decision must be based. *Only when what is old positively and demonstrably throttles the life of to-day may demolition be condoned.* But in the case of the old houses, in the narrow street from the station to the Portsmouth road at Guildford, to quote Mr. G. S. Davies' letter to the *Times* of January 2:

"On the north (the other) side there are houses of no such value which could be removed without anyone regretting them." And, "It is quite admitted that the removal of these houses on the north side presents no difficulty, and entirely meets the need"—a need which is, after all, chiefly that of the transient motor.

The Immurement of Ashes in Church Walls.

A faculty was recently applied for in the Consistory Court of Llandaff Cathedral for the immurement in the wall of a parish church of the cremated remains of a deceased parishioner. The Chancellor stated that this was only the second application of this nature that had ever been made in this country, but on evidence being given that the building of the church would in no way be affected he granted the faculty prayed for. If such applications became very common, and the practice became universal, there would seem ground for apprehension that the structure of churches in populous districts might suffer.

The Wallace Collection.

As Lord Redesdale remarks in a letter to the *Times* of the 4th inst., replying to Mr. Bell's animadversions on the management of Hertford House, "to cover up the beautiful works of art with glass would . . . largely detract from the pleasure and interest afforded by the collection." But is this the only way? He says: "It will not alter the

composition of the air inside the glass, which must, of course, be the same as that outside." By no means "of course"—a simple chemical operation could purify the air inside (remove the harmful ingredients, that is to say) and airtight cases could maintain its condition. The cases would undoubtedly be unpleasant, however. But is not the whole building a "case"? It is heated, if we remember rightly, by hot air. Is not *that* the air which should be purified?

Sootfall. We may refer our readers to some interesting statistics recently published in the *Lancet* as to the sootfall in the Administrative County of London. The experiments were carried on from June, 1910, to May, 1911, at four stations, one in the City area, two in the S.W. district, and one at Sutton, in Surrey. The soot gauges represented an area of 4 sq. ft., and from the city area the deposit calculated for the whole county (117 square miles) represented a sootfall of 76,050 tons. If the gauges in the S.W. district were taken as the basis of computation for the whole area the deposit would average 53,820 tons. The Sutton gauge gave comparatively small deposit. The report will be of interest to architects and builders from a twofold point of view, as the composition of the deposit itself is analysed, and its corrosive influence on building materials must be considered; secondly, the existence of the deposit at all points to faulty combustion and the "domestic hearth" is a considerable offender in this respect.

CONTEMPORARY ARCHITECTS AND THEIR WORK:

MR. CASS GILBERT, OF NEW YORK AND ST. PAUL.

Very few American architects have found it consistent with success to establish practice as individuals. "Two heads are better than one" is too generally accepted as a maxim to be easily driven from the mind of the business man who has the giving out of nearly all the work that finds its way to an architect's office. The few that have achieved a very large practice and carried it on with more than ordinary success over a period of many years may be counted on th fingers of one's hand. There were Thomas Walter, Richard Morris Hunt, Henry Hobson Richardson, and Bruce Price, and there still is Mr. Cass Gilbert. There are a few others who have designed a great many good buildings, but none who have ranked among the half-dozen leading men or "firms" over a period of fifteen years or more.

The "artistic," or inventive, scientific, executive, financial, and legal aspects of the modern practice of architecture offer such diversity of problems and such complex solutions that none but a person with great resolution and confidence in his own prowess and versatility can hope to cope with all of them in dealing with even a moderate amount of work; and it is only the man of exceptional mental balance who ever realises such hope.

Four of the five branches of practice mentioned above are beyond the scope of a review, such as this, of an architect's work; and it is only with the artistic, or purely architectural, side of Mr. Gilbert's work that we can attempt to deal. Bearing this in mind it is not unworthy of remark that Mr. Gilbert has, without the aid of a partner to relieve him of the worries of business and care of technical detail, developed a practice which is larger than that of any other single architect in the United States, and, with the exception of one or two of the great "firms" or "associations," such as McKim, Mead, & White and Burnham & Co., it is probably unrivalled in extent. The character of work entrusted to him by the keen business men of America is a sufficient guarantee that his buildings have been well executed, and good judgment displayed in the dispensation of funds. His popularity among his *confrères* is indicated by the numerous offices he has held in professional societies and his frequent nomination as member of jury in competitions. His "all-round" position as an architect and as a man is implied by the fact that he is one of the three architect members of the National Committee of Fine Arts, which corresponds almost to a Ministry in the United States Government.



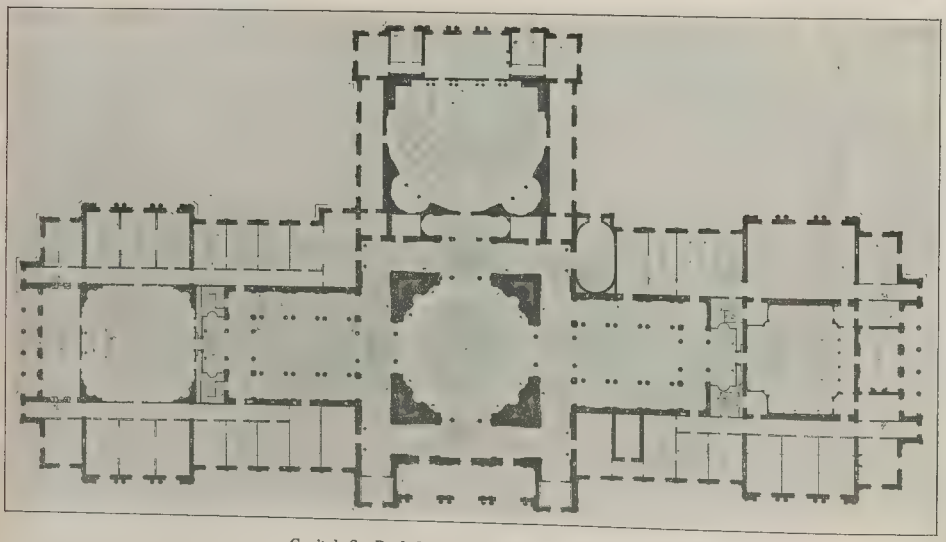
[*Photo. by Pach.*

Mr. Cass Gilbert.

Mr. Gilbert, though an American, born of American parents, whose four or five generations of antecedents were also American, comes of English stock—from Devonshire, whence came also Sir Humphry, Adrian, the designer of the gardens at Wilton House, Francis, the inventor and the ancestors of Sir John, Sir William, and Alfred, the sculptor, and most of the other distinguished English men of arts and letters bearing the name of Gilbert.

The American branch of the Gilbert family settled at Zanesville, Ohio. The great-grandfather of Cass Gilbert was a colonel in the American Revolutionary Army; the grandfather one of the early graduates of Yale University and the first Mayor of Zanesville; and the father a brigadier-general and Government engineer in the United States Army. Cass Gilbert was named in honour of his great-uncle, Lewis Cass, a former Governor of the State of Michigan, Secretary of State in President Buchanan's Cabinet, Minister to France, and Democratic nominee for President of the United States.

Mr. Gilbert began his training in an architect's office at St. Paul, Minnesota, in



Capitol, St. Paul, Minnesota: Plan of First Floor.
Mr. Cass Gilbert, Architect

876, and about a year later became connected with a railway survey party. In 1878 e entered the Massachusetts Institute of echnology to take a special course in rchitecture under the guidance of the late rofessor Eugene Letang. He won the nstitute Prize for the year 1878-79. The ummer of the following year he was appointed to the Coast Survey and sent to Vest Point, New York, to measure and plot he Point, upon which the National Military Academy is located. In January, 1880, he et out to travel and study in Europe with he intention or finding employment in some f the English offices and spending his acations upon the Continent measuring, rawing, and sketching. He made the equaintance of Street, Waterhouse, Pearson, nd Burges, but, not finding employment, ent on to Paris, where he was attracted by he work of Viollet-le-Duc and the theories f the Ecole des Beaux-Arts. He remained n Paris until the spring, when he went on a our through Italy; on his return from the atter country to France he set out with map nd compass from Lyons with the intention f going over the mountains of Auvergne on ot; but after a few days was arrested on uspicion of being a Russian Nihilist. Fortunately, he carried a letter from Alexander Ramsay to Lowell—who was then United States Minister to Spain—which secured his release; but the incident caused him to change his plans, and after a trip along the Loire he returned to Tours, and thence, by way of England, back to the United States. In September of the same year, 1880, he entered the office of McKim, Mead, & White, shortly after Mr. White had become a partner in that firm. He worked upon the designs for the Newport Casino, Drayton House, and Charles Barney House as White's personal assistant, and jointly with White designed the Tiffany House in New York and the Ross Winans House at Baltimore, and then upon the Villard House with Wells. He was afterwards sent to Baltimore to take charge of the work of McKim, Mead, & White in that city. In December, 1882, he went to St. Paul and formed a partnership with Mr. James Knox Taylor (now Supervising Architect of the United States Treasury Department at Washington), which continued during the next ten years. The partnership was dissolved in 1892 by mutual consent and on the friendliest of understandings, both partners continuing in independent practice. During the partnership Messrs. Gilbert & Taylor designed several houses and a number of small stations and other buildings for the Great Northern and the Northern Pacific Railway Companies, the Dayton Avenue Presbyterian Church, and the Swedenborgian Church; nearly all of which were built in a free, picturesque style, displaying great charm in composition and adaptation of local materials. The Endicott building, erected in 1888, is an architectural work of distinction and refinement. It is an office building, containing an arcade, designed wholly to meet requirements, but in the style of the Italian Renaissance as regards composition and detail. It had an important influence for the betterment of "style" in American architecture, as it was perhaps the earliest building in the country—certainly the West—to confirm the broad, simple character which Wells had imparted to the Villard House, which up to that time had been the best work to the credit of McKim, Mead, & White.

Much of the early work of the latter firm in the Renaissance style, though picturesque, refined in detail, and often admirable in certain features, and, sometimes, as an entire composition, suffered from a picayune prettiness and delicacy—the use of ornament suitable to an interior decoration applied externally, and also to the meaningless introduction of "features," unnecessary to express anything as regards interior



Capitol, St. Paul, Minnesota: Main Stairway.
Mr. Cass Gilbert, Architect.



Design for State Library and Supreme Court, Connecticut. By Mr. Cass Gilbert.

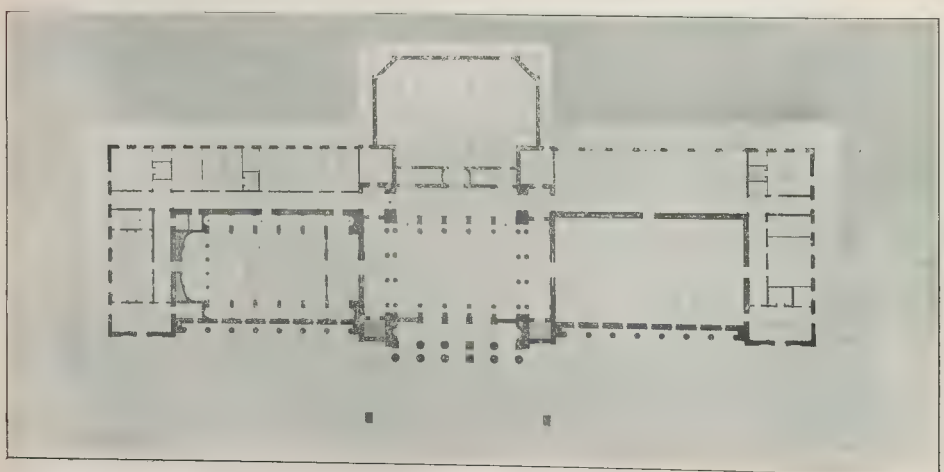
arrangement, and distracting as decorative composition, as exemplified in the Century Club, the "Judge," Warren, and Goelet buildings, the Yosemite Apartment House, New York Life building at Kansas City, and several others.

It may be that the Villard House design suggested the adaptation of the Bramantesque detail of the Endicott building—a mere personal surmise, however, on the part of the writer; and, likewise, it is probable that the simplicity of the Endicott building suggested in its turn the straightforward fenestration of the Metropolitan and University Clubs at New York, in which the work of McKim, Mead, & White rose to an uncommonly high plane as architecture, regardless of questions of style. The Endicott building is to-day, as it was when just erected, the most dignified and elegant building for its purpose in America—a work that is remarked upon by every architect who visits St. Paul.

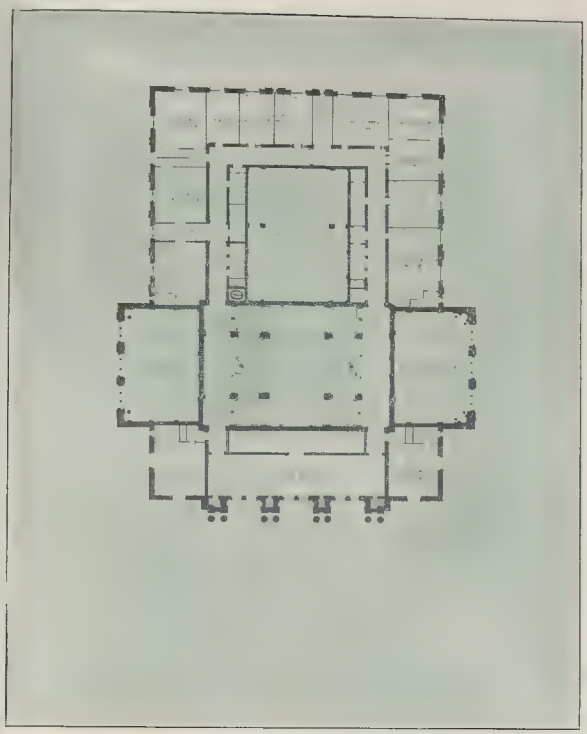
The Shattuck School at Fairbault, Minnesota, and five buildings for the Roman Catholic Seminary at St. Paul, built for Mr. J. J. Hill, were among other important works carried out by Messrs. Gilbert & Taylor before each branched out in independent practice. Mr. Gilbert rose to national prominence in 1896, when he won, in competition, the Minnesota State Capitol building at St. Paul, which was a notable building in many ways. It was one of the earliest, and one of the very few State legislative buildings to be the subject of a proper architectural competition carried to satisfactory completion. The design differed essentially from the prevalent types, most of which were inventions of ex-Army engineers and designed along the lines described by Stevenson's hero, Loudon Dodd, in "The Wrecker." In elevation it differed especially in the adoption of the round, full dome, following the general lines of that of St. Peter's at Rome, but studied to suit the smaller diameter and smaller scale; and, secondly, in the refinement of the architecture itself, which, like the Endicott building and some of Mr. Gilbert's student work, displayed direct derivation from the work of Bramante. The World's Fair of Chicago had just manufactured the "brand new" taste for "classic architecture," and architecture was a popular subject at that time. That fact accounts, in a measure, for the material white marble—of which the whole superstructure, including the dome and lantern, is built.

Throughout, internally as well as externally, the building is as consistent in scale as it is in refinement; it is well studied, workmanlike, and highly skilful in the arrangement of its parts. It is a building that on the whole finds favour with the architectural student and delights the lay mind.

As regards domes generally, and high domes in particular, that is to say, domes with a drum, such as Santa Maria at Florence, should not a feature such as this always be the principal roof of a building or group of buildings? The low dome, such as employed in the Pantheon and in the Library of Columbia University, is usually so employed, and the pleasure one derives from beholding them is due to the obvious natural completion which they make to the form of the structure below, the expression of the great rotunda with mere appendages surrounding it. But as an architectural mass a low dome can be a satisfactory termination only to a low substructure, and when this condition does not obtain—as was the case with the completion of the cathedral at Florence—the elevation of the curve and introduction of the drum becomes, from the æsthetic point of view, necessary; and we cease to look upon the dome simply as a beautiful roof, and think of it as something between a domical roof, the primary object of which arises from necessity, and a steeple which is purely an object of beauty, whether it is or is not used for some other purpose than giving pleasure to the eye. Experiment in art proves that any structure which does not seem stable is wanting in beauty, that it does not satisfy the attentive eye; and the importance of the structure determines the importance of its apparent stability. Thus, when the dome is very small, reduced to a mere ornamental termination to a high drum, so that it becomes "a pepper-box on a table," it is only the stability of the "table" that concerns us; but if it is very large—the dominating mass—it is absolutely necessary that the tower upon which the dome rises, and of which the drum is merely the superstructure, should have visible support extending from the ground. Brunelleschi, Michelangelo, Longhena, and Soufflot recognised the necessity of an octagonal base to give direction to, and, in effect, "buttress" the drums of their domes in order to prevent the drum from appearing to



Design for State Library and Supreme Court, Connecticut. By Mr. Cass Gilbert.



Essex County Court House, Newark: Plan of Second Floor.
Mr. Cass Gilbert, Architect.

ınd upon the roof. Wren perhaps felt the ıdency his dome would have to "spin und" when he introduced the solid points 'tween the columns which give it direction ld also cause the drum to appear polygonal. is original design agreed with the others in at he desired to make nave, transepts, and oir mere appendages to a central rotunda. ıother point to note in considering the fect of high domes is the awkward com- nation of lines which results when a diment is placed in front of the dome; the ping lines of the latter uniting with the rves produced by horizontal courses in the me produce effects of distortion, as though e drum of the dome were bent. The ihappy combination of pediment and high me is the usual rather than occasional ror. As instances there are La Superga at ırin; Santa Maria della Salute at Venice; .. Paul's, London; the Pantheon, the Val- -Grace, and the church of the Sorbonne at aris—instances which are due to the esence of the nave.

The American legislative type of building esents a somewhat different problem from ıy of the fine old domed buildings of urope. It consists of two large chambers, ch surrounded by corridors and offices and bbies connecting the groups with a central tunda. Now, had the conditions of com- ətition for the Minnesota Capitol been ideal erhaps a more monumental solution might ave been found in such a plan as Michel- ngelo's for St. Peter's, used as a central ock, and two low structures, such as the de wings of the present design, connected ut not attached to the sides of it. But, of ourse, the conditions were not ideal, and an estimate of cost" had to be submitted. ot only that, but also there is the United tates Capitol to be remembered as the type hat every young American has been brought p to admire and regard as proper effect for a "capitol" building, and the architect of the Minnesota Capitol found himself "up against"

> "The common problem yours, mine, everyone s,
> Is not to fancy what were fair in life
> Provided it could be; but, finding first
> What may be, then find how to make it fair
> Up to our means."

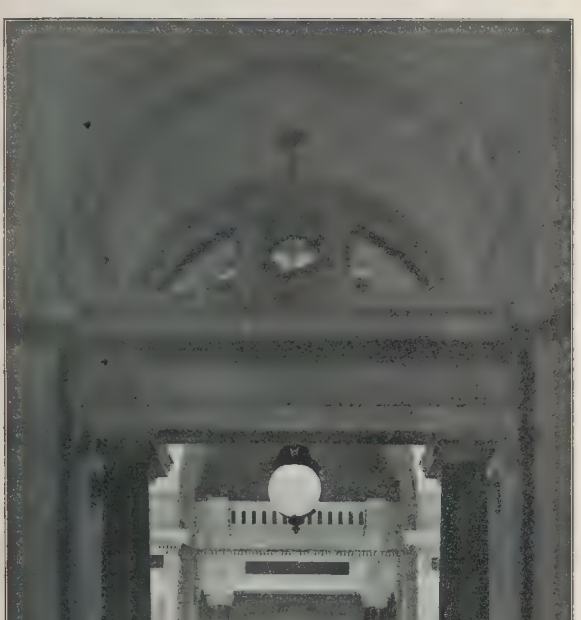
In the west front of the United States Capitol the central feature consists of a colonnade extending between two *avants-corps*, supported on a rusticated basement story. Above the colonnade is a high attic story, and on a plane with the wall behind the colonnade and rising above the attic story is the front face of an octagonal plinth to the circular drum of the big dome above. Seen from the east, or principal front, it appears as a strange excresence above the small pediment over the entrance portico; but on the west front, seen in conjunction with the attic story, it gives the effect of a receding wall plane rising behind the colonnade and forming a plinth to the drum; the two sides of the octagon perpendicular to the front plane continue the line of the inner side of each of the *avants-corps*, and in order that the diagonal sides of the octagon may not project too far and appear to cut off the circular base of the drum the octagon is made the size required by returning short side walls from each of the four principal faces. This device serves to give the dome a direction, enables the eye to locate the central axis of the building, and creates the impression that the outer walls buttress the dome. The same idea has been used by Mr. Gilbert in the Minnesota Capitol; but, whereas the colossal dome of the national Capitol is of such extent in diameter that it actually extends beyond the east wall, Mr. Gilbert has inscribed his dome in a square and kept a corridor all round, the result being the common one of a circular building over a square one; that though the dome seen from any side parallel with the building successfully dominates as the principal feature, from the diagonal view it seems small, and appears, as most of the great examples do, to "stand on the roof"—in this case, fortunately, a flat, plinth-like roof, instead of being the principal roof.

As a whole there is probably no other State legislative building that can be compared to it in general architectural excellence, and as it was constructed promptly and thoroughly it brought the name of Cass Gilbert into the "limelight." Important commissions followed, the Brazer office building at Boston being the first, then came the Broadway Chambers, at the corner of Broadway and Chambers-street, New York, which was completed in 1898. It was one of the first attempts to make "a design" of an office building structure, instead of merely "clothing an iron skeleton." The simile of "a column with base, shaft, and capital" was applied to it to indicate the divisions which represented the original scheme of horizontal divisions, which were to contain shops, offices, and clubrooms respectively. Then in 1899 came the first great competition among architects for a United States



Suffolk Savings Bank, Boston, Mass.
Mr. Cass Gilbert, Architect.

Government building after the passing of the Tarsney Act, which required this method of obtaining designs. The competition was for the great Customs House for New York City. Twenty of the leading architects representing the best talent in the country "had a shot at it." After long deliberation the expert jury, in conformity with instructions from the Government, placed two designs in "first rank," three or four more in "second rank," and so on. After doing so they were directed to examine into existing conditions at the old Custom House and recommend a design for adoption. The designs placed in first rank proved to be by Mr. Cass Gilbert and Messrs. Carrère & Hastings, and the design finally adopted was by Mr. Gilbert. The method adopted by the Government was by no means perfect, and gave rise to hope in several of the competitors for which there was no justification. A great deal of disappointment ensued and unwarrantable aspersions were freely cast upon the members of the jury, who, fortunately, were men whose integrity was above suspicion. At that time Messrs. Carrère & Hastings had, by virtue of their successes in two or three very important competitions, become, for the time being, the leading firm of architects in New York, and Mr. Gilbert was only just beginning to be known in the east, and the announcement of his victory over the leaders was received with amazement, especially by the young "following" of Carrère & Hastings. When the designs were published the surprise was increased, because, looking at the plans and elevations casually, the plans seemed to be pretty much the same, while as to elevations Carrère & Hastings had quite surpassed themselves. The writer was one of a good many who believed, and still believes, that their elevations were better than those submitted by Mr. Gilbert; but as to the plan there could be no question of the vast superiority of Gilbert's scheme. The question then arose, as it often does: Is architecture a matter of plan or of elevation? But the answer became another question: Out of which of these two schemes, taking plans and elevations together, can the best result be obtained? And the answer, by a large majority, confirmed the judgment of the jury. Really great plans are few and far between; they "happen" about ten or fifteen years apart, at different points all over the world, but usually at Paris; but the plan of the New York Custom House is one of the few that have "happened" in America. In the development of the elevations Mr. Gilbert revised them in several respects, but adhered to his original scheme, retaining an order running through three stories, and keeping to the giant scale upon which he began. In the course of his studies he changed from the Doric to the Corinthian Order, eliminated a story from the frieze, and changed the slope of the roof; but the scheme—the design proper—is the same as submitted in the competition, yet it has been so much improved in the study that it is beyond anything his best friends could have hoped for in the result. The writer has, since beginning this article, had the opportunity of seeing the actual building, and is able to subscribe to the opinion of another architect who had told him: "You can get no idea of it either from the drawings or photographs; it has to be seen to realise the scale." As regards scale, it is not as heavy as a photograph leads one to suppose; it is, as its designer expressed his intention to make it, a "kind of elephant among a lot of giraffes"; but a better description of it would be as a great gateway to the luxuries of the world that is what it suggests itself as being.



Custom House, New York: View of Main Hall.
Mr. Cass Gilbert, Architect.

During the year 1900 Mr. Gilbert won in competition the Essex County Court House at Newark, N.J. The other competitors being McKim, Mead, & White; Carrère & Hastings; Babb, Cook, & Willard; and George B. Post & Sons. And, in association with Mr. John Dufois, he won the Union Club of New York against another field of New York's brilliant young talent—Morgan, Barber, Hornbostel, and others. Also, shortly afterwards, the American Insurance Company's building at Newark. He entered an excellent design in the competition for Washington University in St. Louis the plan of which was in a good many respects better than the adopted design.

In 1901 he became one of the members of the Board of Architects of the St. Louis Exposition, and jointly with Mr. C. Howard Walker, of Boston, and the late John M. Carrère, devised the preliminary plan for the Exposition. He made a sketch independently which, in the opinion of the writer, was more practical than that which was adopted, as it conformed better to the contours of the site and brought the principal buildings nearer together. He was appointed architect of the Fine Arts Building, the only permanent building erected in connexion with the Exposition, which he designed in a very dignified Roman classic style; and of the Temporary Buildings for Art Exhibits, which were executed in "staff" and in an adaptation of the Spanish Renaissance style. The Festival Hall became a part of the Fine Arts Group, and Mr. Gilbert designed this to conform to Mr. Masqueray's general scheme for the treatment of the "crowning group" of buildings on the hilltop, which included the Restaurant Pavilions, Colonnade of States, Festival Hall, and the Grand Cascades, all of which formed the "central picture" at the head of the main avenue in the Exposition grounds. The Festival Hall was a masterpiece; it reflected exactly the spirit of the Exposition, and especially the taste of the people of the "middle west" of the United States. Elaborate, gay, enormous in size and scale, it held its own as the *pièce de résistance* at the top of a hill 70 ft. high and between two restaurants which were a quarter-mile apart. In perfect scale with Masqueray's work, it seemed to grow up from and to be a part of the hill upon which it stood.

In 1904 he won the Madison High School, Wisconsin, and the Wisconsin State Capitol; the latter competition, however, miscarried. The same year he was appointed architect of the Suffolk County Savings Bank at Boston, which he executed in very monumental fashion, fitting a semicircular room into an irregular plot of land and making an interesting front with a row of Greek Doric columns.

In 1906 he was commissioned to design the West-street building (see our issue of May 26, 1911), a twenty-four story office building in Lower New York, which is one of the most interesting of that city's high—or comparatively high—commercial buildings. In the detailing of this building, which suggests Gothic in style, he took a special interest, even going so far as to model parts of it himself.

Since the West-street building his commissions have included the St. Louis Public Library, which, as decorative architecture, is even better than the Boston Library by McKim, and as practical planning is a model

future libraries. The St. Louis Library, Library of the University of Texas at stin, and the group plan of the University Minnesota at Minneapolis represent his ncipal successes in competitions during last two or three years. He was com-ssioned in 1909 to complete the Arkansas te Capitol, and has practically rebuilt it. ong his works, which have extended over eriod of some years, are the improvement ns for the city of St. Paul, Minnesota, and city of New Haven, Connecticut, the mer having been developed between the rs 1902 and 1909, the latter having been igned in conjunction with F. L. Olmstead, dscape architect. Among his smaller rks may be noted the Loney Tomb at neateles, N.Y., 1900; the Ward Tomb Newark, 1906; the Ives Library at New ven, 1908; the Industrial Art School at nton, N.J.; and several small stations for New York, New Haven, and Hartford ilroad. His designs for the station at New ven, the McKinley Monument at Canton, Grand Army Memorial at Pittsburg, and Boston Stock Exchange are among the st noteworthy of his studies. The above omplete list indicates the principal works cuted during the course of a career of ich perhaps this record is a mere "first ." At present he is engaged upon the struction of his design for the Woolworth ilding—the highest skyscraper in America e our issue of May 26, 1911).

Though actively engaged at all times, as must have been upon such a great volume work, he has managed to find time to take leading part in the organisation and ministration of societies for the advance-nt of architecture and the allied arts. He was one of the founders of the Architec-al League of New York, and during many ars has been an active member of the iety which formed the nucleus of the ganisation of architectural societies known the Architectural League of America. He s chosen a member of the Jury of Selection the section of Fine Arts of the Columbian position in 1893, and of the Paris Exposi-n of 1900; and as member of the jury upon competitions for the New York Public brary, 1897, and West Point Military ademy, 1903; as member of Jury of Award the section of architecture of the Pan-nerican Exposition at Buffalo. In 1906 he s elected an honorary corresponding mber of the Royal Institute of British chitects. During 1905-6 he served as ce-President of the American Institute of chitects, and was subsequently elected esident, serving two terms from 1907 to 09, and has since been a director. In the ar 1907 he was elected an Associate of the tional Academy of Design, and two years er was made an Academician. The Archi-tural Society of Liverpool University and e Royal Canadian Institute of Architects ve bestowed honorary membership upon n.

He was appointed by President Roosevelt member of the Council of the Fine Arts, ose action in constituting this body was e first official action looking towards vernment control of art works. In June, 10, he was appointed by President Taft a member of the National Commission of ne Arts, which is devoting its energies wards the completion of the L'Infant plan Washington.

THE LONDON ALMANACK, 1912.

The "Calendarium Londinense," produced at he Dial House, Amersham, has for headpiece n etching of the Old Dick Whittington Inn, loth Fair. This almanack is the work roughout of Mr. W. Monk, R.E., and forms n artistic broadsheet. This is the tenth year f publication, and while some of the head-iece etchings of previous years—such as "St. ames's Palace," "Clifford's Inn," "The ower"—have had more definite architectural nterest, the present one shows a fragment of ld London which has considerable charm.

THE ARCHITECTURAL ASSOCIATION:

FIRST SPRING VISIT.

ST. PAUL'S GIRLS' SCHOOL, Hammersmith, was built about ten years ago for the purpose of extending the educational foundation of Dean Colet in the XVIth century. Originally for boys only, increased returns from the endowments in the hands of the Trustees rendered the extension possible. A fine site on the south side of Brook Green and adequate funds produced conditions favourable to the creation of a really satisfactory educational building, and the influence of such a building as Mr. Horsley has produced must be a considerable asset in the formation of character. Mr. Horsley explained that, in planning, it was a chief object to minimise corridor and passage space as much as possible, and in the result this has been so effectively achieved that one main cross-corridor, 14 ft. wide, is practically all that exists, and this is in great contrast to the mean passages so often suffered in similar buildings. Its ample width and admirable architectural treatment make it quite the finest and most distinctive feature of the School. The plan is quite simple in scheme, and is said to work excellently in practice. The main entrance occupies a central position on the front, and conducts directly to the cross-corridor above mentioned, past a porter's office on the left, and a waiting-room communicating with the head mistress's room on the right. Facing the entrance is the central hall, round which are classrooms in two stories directly approached from the hall, those on the upper floor being reached from a gallery boldly bracketed out into the hall. The two main staircases are to right and left of the entrance next the cross-corridor, from which they are approached, the pupils entering at the basement level, where their cloakrooms are situated, and reaching the classroom floors by these staircases without traversing the main entrance. In the basement are also a large dining-hall and kitchen under the classrooms to the left of the hall, and a covered playground in the corresponding position on the right. The gymnasium and swimming-bath (the latter by Mr. Saxon Snell) are detached buildings on either hand, also entered from opposite extremities of the main corridor in the basement. At either end of the ground-floor corridor are lofty one-storied wings containing the science-rooms and library respectively. On the first floor above the centre block are a small cookery school and a number of spare rooms, at present used as music-practice rooms; on the second floor the whole of the front block is occupied by a large art-room. Rooms for the caretaker are in the basement, beneath the science block. The central hall, 80 ft. by 45 ft. and 40 ft. high to the crown of its enriched plaster barrel ceiling, is a very fine room. It is panelled in oak throughout, and the refined design, coupled with excellent workmanship, make this panelling a joy to the eye. The scheme has recently been completed by the installation of a large organ on the platform, with excellent carving in low relief by Mr. Aumonier. The classrooms are admirable in arrangement and lighting, and means are provided for extraction of air to the roof space, whence it is drawn by fans to the central turret for discharge. This turret properly marks the crossing of the two axes of the plan, and contains a domed skylight, which plays no mean part in the design and effective lighting of the cross-corridor and approach to the hall.

In the external treatment of the building Mr. Horsley has hardly been so successful when judged by the high standard of his internal effects. The central block and wings seem not perfectly in scale one with another, and the low relief carvings in the gables of the wings by Mr. Pegram—"Science" and "Art"—though admirable in themselves, seem scarcely in accord with the rather bold projections of the architectural members. There is also a doubt engendered in the mind as to



Art Gallery, St. Louis, Mo.: Main Entrance.
Mr. Cass Gilbert, Architect.

whether the building is of brick with stone dressings or *vice versâ* a condition which produces a feeling of unrest.

After the lapse of ten years it is possible to pay unstinted tribute to the excellent workmanship of Messrs. Holloway Bros., by whom the building was erected. That the services of all connected with the work—architect, clerk of works, foreman, and all alike—have been rightly appreciated was pleasingly shown by an inscription which the School authorities have caused to be placed in the library—an excellent precedent.

GENERAL NEWS.

The New Capital of India.

Reuter's correspondent, telegraphing to the London Press from Bombay, says:—"The Indian Government has practically decided to employ the services of a town-planning expert from Europe in connexion with the alterations at Delhi involved in the change of capital."

Guildford's Ancient Cottages.

As a result of the opposition to the proposal of the Guildford Town Council to demolish a number of ancient cottages in the town for purposes of street improvement the Mayor has suggested a conference between representatives of the Town Council, the County Council, the West Surrey Society, and the Society for the Preservation of Ancient Buildings, with a view to ascertaining how far each body would be prepared to go to preserve the cottages.

British Museum and Victoria and Albert Museum Lectures.

Mr. Banister Fletcher, F.R.I.B.A., is continuing a course of University Extension Lectures on "Ancient Architecture" dealing with the Roman, Early Christian, and Byzantine styles, at the British Museum (by permission of the Trustees), on Tuesday, January 9, at 4.30 p.m. Also a course of twelve lectures on "Renaissance Architecture," at the Victoria and Albert Museum (by permission of the Board of Education), embracing the Elizabethan and Jacobean periods in England and the later Renaissance, on Monday, January 8, at 5 p.m. These courses are to be fully illustrated by lantern slides, photographs, diagrams, and models. Particulars can be had from Miss Gaudet, 120, Cheyne-walk, Chelsea, S.W.

Lectures on Illuminating Engineering.

A course of ten lectures on Illuminating Engineering will be given on Tuesday evenings at Northampton Polytechnic Institute, St. John-street, London, E.C., at 7.30 p.m., commencing January 16. The lectures are intended for a technical audience, and each lecture will be given by a specialist in the particular subject.

Windsor Castle.

During the King's absence in India opportunity has been taken to renovate and redecorate many of the State apartments and to clean the paintings in the Vandyck Room. The Guard Chamber and Vestibule are repaired, and the sanitary system throughout the Castle has been inspected for the purpose of laying down larger water-mains from the private reservoirs in the Cranborne Tower and of making plans of all the pipes in the terraces. An inventory has been made of all the articles in the Palace, and the most valuable have been photographed. Mr. A. Y. Nutt, M.V.O., is resident architect and clerk of the works at Windsor Castle.

A Swiss National Monument.

The designs of M. E. Zimmermann have been selected out of five sets submitted in a strictly limited competition for the national monument to be erected at Schwyz, distant 22 miles from Lucerne. The complete designs provide for a statue of Liberty, in front of the main building, upon a terrace, at the rear of which will be a large open space for public resort and festivals. The wings of the main building will bear bas-reliefs depicting the battles of Morgarten (1315) and Sempach, and the interior will contain many national busts and statues to be sculptured by Swiss artists, together with mural and decorative paintings illustrative of scenes and episodes of the nation's history and progress.

The Royal Sanitary Institute.

A public meeting to inaugurate arrangements for the Congress and Exhibition of the Royal Sanitary Institute, to be held at York from July 29 to August 3, has been convened by the Lord Mayor of York in the Mansion House, on Wednesday, January 10. The arrangements already made include the following:—Engineering and Architecture: President—J. Walker Smith, M.Inst.C.E., Chief Engineering Inspector, Local Government Board for Scotland; Recording Secretary—A Saxon Snell, F.R.I.B.A., 22, Southampton-buildings, Chancery-lane, W.C. Engineers and Surveyors to County and other Sanitary Authorities: President—A. F. Greatorex, M.Inst.C.E., Borough Engineer and Surveyor, West Bromwich; Recording Secretary—J. S. Brodie, M.Inst.C.E., Borough Engineer, Blackpool. Sanitary Inspectors: President—T. G. Dee, Sanitary Inspector, Westminster; Recording Secretary—A. E. Drummond, Chief Sanitary Inspector, York. The President of the Congress will be his Grace the Lord Archbishop of York.

The Equitable Life Insurance Building, New York.

The Equitable Life Insurance Building, New York, was totally destroyed by a fire on Tuesday, with the loss of six lives, and a total monetary loss variously estimated at from 3,000,000*l.* to 6,000,000*l.* In addition to the total destruction of the Insurance Company Buildings, the New York Clearing House, which is close by, was smoked out, and a state of panic prevailed, as, in the early hours of the morning, the flames threatened to extend to numerous banking institutions in the neighbourhood of Wall-street. It is believed that the fire started in the basement, in the storeroom of a safe deposit company. The Equitable Life Insurance Society's building covered an acre of ground and was built of granite before the era of fireproof construction became general. It contained, says the *Daily Telegraph*, the Lawyers' Club and a law library of 13,000 volumes, together with several valuable paintings. Erected in 1869, the original building was extended and remodelled in 1887, the additions made producing a structure eleven stories high, with approximately 160 ft. of frontage to Broadway and 310 ft. in depth. Its most notable feature after the remodelling was the arcade of polished granite, which was opened in 1887. This is composed of a court 100 ft. long, 44 ft. wide, and 30 ft. high. Plans were made in 1908 to pull down the building and erect a sixty-two-storey structure, 909 ft. high, at a cost of 5,000,000*l.*, consisting of a main building 489 ft. high, of thirty-four storeys, and a tower of twenty-eight storeys, with a cupola 420 ft. high. These plans were temporarily abandoned.

The British Fire Prevention Committee.

Recent testing operations of the British Fire Prevention Committee comprised two high temperature tests, *i.e.*, with a thin metal fire-resisting partition and with two thin metal fire-resisting doors, the former for the one-and-a-half-hour standard fire test, and the latter for the two-hour standard fire test, both followed by the application of water from a steam fire-engine. There was a large attendance, including representatives from the Home Office, Admiralty, H.M. Office of Works, London County Council, and other public bodies, and the American Consulate was represented by its Vice-Consul, as the object under test was of American origin. The members and subscribers were received by Mr. Edwin O. Sachs, Chairman, and Mr. Horace Folker, Hon. Treasurer, and the testing operations were conducted by a Sub-Committee, with Mr. Ellis Marsland, District Surveyor, as directing member, which comprised Messrs. J. Herbert Dyer, J. W. Brooker, C. T. Cuss, and Bertram Chatterton.

Church Building Society.

The Incorporated Church Building Society held its usual monthly meeting on the 21st ult. at the Society's House, 7, Dean's-yard, Westminster Abbey, S.W., the Rev. Canon C. F. Norman in the chair. Grants of money were made in aid of the following objects, viz.:—Building a new church at Furness Vale and Newtown, St. John the Baptist, Cheshire, 80*l.*; rebuilding the church of St. James, Manston, Yorks, 125*l.* for the first portion; and towards enlarging the churches at East Hanney, St. James the Less, Berks, 10*l.*; and Hoole, All Saints, near Chester, 60*l.* Grants were also made from the Special Mission Buildings Fund towards building mission churches at Caergeiliog, St. David, Anglesey, 10*l.*, making in all 40*l.*; Leeming Bar, Bedale, Yorks, 25*l.*; Oswestry, St. David's Welsh Church, Salop, 30*l.*; and Two Mile Hill, St. Michael, near Bristol, 50*l.* The following grants were also paid for works completed:—Halifax, St. Hilda, 200*l.*; Caversham, St. Andrew, Oxon, 50*l.*, making in all 150*l.*; Gwytherin, St. Eleri and St. James, N. Wales, 20*l.*; Blackrod, St. Katherine, Lancs, 80*l.*; Cockfield, St. Mary, County Durham, 60*l.*; Slade Green, St. Augustine, Kent 100*l.*; Friern Barnet, St. John, Middlesex, 105*l.*; Clifton, Campville, St. Andrew, Staffs, 50*l.*; Chillington, St. James, Som., 10*l.*; Millbrook, St. Nicholas, near Southampton, 15*l.*; Walton-on-the-Hill, St. Mary, Liverpool, 50*l.*; Ilkeston, St. John, Derbyshire, 70*l.*; Birmingham, St. Basil, 130*l.*; Furzedown, St. Paul, Surrey, 50*l.*; and Edmonton, St. John, Middlesex, 40*l.* In addition to this the sum of 300*l.* was paid towards the repairs of fifteen churches from Trust Funds held by the Society.

"Who's Who."

The 1912 edition of *Who's Who*, with which is incorporated *Men and Women of the Time*, contains in its 2,364 pages about 24,000 biographies—a statement which gives some idea of the extent of the work. The accuracy, too, of its pages can be inferred from the fact that every biography is submitted for personal revision, the knowledge of which makes reference to the volume a greater pleasure than it might otherwise be. It is published by Messrs. A. & C. Black, Soho-square, London (cloth, 10s. net). *Who's Who Year Book* (price 1s. net) is also issued by the firm. It consists of the table forming the original nucleus of *Who's Who* itself. These tables supply exactly the kind of information which is needed to enable any one to take full advantage of the information in *Who's Who*. Another valuable reference book issued by Messrs. A. & C. Black is *The Englishwoman's Year-Book and Directory* (price 2s. 6d. net), this being the thirty-first year of issue. The work is edited by G. E. Mitton, with the assistance of an honorary consultative committee. The contents cover every department of life. Apart from its usefulness the book is highly interesting, as the articles are **not only** thoroughly practical, but are most readable.

An Architects' Diary.

The "Architects' and Surveyors' Diary, Directory, and Price Book" for 1912 has just been issued by Messrs. Waterlow Bros. & Layton, Ltd., Birchin-lane, E.C. (price 3s. 6d. and 6s., according to binding and diary space). This well-known diary is an excellent production, containing not only the information usually found in a diary, but much information of particular use to architects and surveyors. It is a very neat work, and we have pleasure in calling attention to it.

Wembley Hill Estate.

The sale of the Wembley Hill Estate, the property of the Wembley Park Estate Company, has this week been carried out by Messrs. Gibsons, of Avenue-chambers, Bloomsbury-square. The property is about 2 miles nearer London than Harrow. The hill is noted for the panoramic view it commands, ranging over five different counties, Windsor Castle being easily discernible on a clear day. The purchasers are a Bedfordshire syndicate, who will lay out the property in plots for the erection of small freehold ideal homes, costing, with the land, about 350*l.* to 400*l.*, and a few positions will be reserved for shops. The purchasers have retained the services of Messrs. Gibsons to carry out the scheme of development.

"Willing's Press Guide."

The thirty-ninth annual issue of "Willing's Press Guide" (James Willing, jun., Ltd., 125, Strand, W.C.) has just been issued after revision. We have previously noticed this admirable work, the arrangement of which leaves nothing to be desired. It is one of the handiest and best Press guides we know.

CORRESPONDENCE.

ckingham Palace and the Victoria Memorial.

SIR,—In the bird's-eye view of an Imperial ondon published in the current number of our journal Buckingham Palace is shown built. Three of the main points in the plan the new Palace are, firstly, it is placed to e west of the present one; secondly, the ntre road of Eaton-square is brought into e scheme and a tower placed where its axis ntersects that of the Mall; thirdly, a large en quadrangle is placed towards the Mall. These are three of the points of the plan for building the Palace which you did me the nour of publishing in your issue of Novem- er 5, 1910.

The intersection of the axial lines of the all and Eaton-square is decidedly the archi- ctural key of the site. In a suggested heme for the Victoria Memorial, which the en Editor of your paper accepted for publica- on in 1901, but which never appeared, I roposed it as the site of the actual monu- ent, with the Palace rebuilt around it.

To refer again to the scheme in your rrent number. It is proposed to alter the e of Constitution-hill so as to make it rial with the Victoria Memorial (as it should), which would then be the centre of a nd-point. In the number of your paper for pril 27, 1901, I published a suggested heme in which the memorial is thus made centre, being placed where the existing ds of Constitution-hill intersects the Mall; e approach from the Buckingham Palace- ad is brought in at the same angle, a road taken northward to Piccadilly, and another uthward to Birdcage-walk. This plan had e advantage of placing the memorial where terminated the vistas of five roads, and in- olved only a slight alteration to the Palace ilings at the bottom of Constitution-hill, id on the other side. It has practically been ecuted, the only change being the placing the memorial rather nearer the Palace, nsequently just missing the axes of Con- itution-hill and the approach from the uckingham Palace-road, and thus only rminating three vistas instead of five.

The road leading northward to Piccadilly as first suggested in my scheme, and addi- onal interest has recently been given to it y the selection of the upper end as the site f the King Edward Memorial.

I am glad to see you have overcome the bjection to a central tower which you raised hen you kindly published my scheme in ovember, 1910.

PLAN THE BASIS OF DESIGN.

The Policy of the R.I.B.A.

SIR,—I have read your leading article in his week's *Builder* with great interest. There e some points, however, to which I, as an ssociate, feel bound to draw exception.

The advice offered to Associates to heal hemselves is truly admirable. But, sir, you eem to overlook the fact that the great ajority of Associates can never expect to ualify themselves for the Fellowship, seeing obtain that dignity they must first have een principals for at least seven years. And, gain, your argument that in order to voice heir grievances as Associates they should dvance to the Fellowship is somewhat beside he point, and seems, moreover, to savour of he Irish bull. What we are asking for is greater representation of "Associate mem- ers" on the Council.

Surely the R.I.B.A. exists for some better urpose than the carrying out of a constitu- ion, though it be never so good or never o antiquated. And surely the good of the reponderant section of the members ought to utweigh any antiquarian interest we may ave in that august document.

JOHN F. SCHOFIELD, A.R.I.B.A.

Architectural Assistants and the Office of Works.

SIR,—Surely the justice of the claim of he Architectural Assistants in the Office of Works to be put on the establishment needs o bolstering up by exaggerated statements nd unfounded assertions such as are put for- ward by "Labour Member" in your issue of December 22.

I feel sure that I am voicing the sentiments f the majority of the class referred to in dissociating myself entirely from such statements. So far from the Junior Assistant Architects "riding rough-shod" over the Architectural Assistants, the two classes work harmoniously together, and the former generally are wholly in sympathy with the claims of the latter to establishment.

The unwarranted assumption of "Labour Member" that the Junior Assistant Architects are "taught on their entry into the Department" by the Architectural Assistants needs no comment. Such statements (though merely the opinion, I am convinced, of a small minority) are calculated to do harm, not good, to the cause which we are trying to advance.

FIAT JUSTITIA.

SIR,—It is a significant fact that two Labour Members of Parliament consider it needful, not only to inquire into the much-discussed methods of this department in the House of Commons, but also to seek the powerful aid of your columns, although it was foreseen that so soon as the full extent of the injustice to these professional men became known to them they would be sure to see the matter through. These methods are all the more reprehensible when we consider the misleading reply furnished by them to Mr. Dudley Ward in Parliament on the eve of the recent prorogation, and our best thanks are due to your correspondent, "The Whole Truth," for exposing it in your recent issue, when the fact that an entire class of architects, to the number of no less than forty, and known in the service as "Architectural Assistants," most of them holding diplomas of the Royal Institute of British Architects and allied societies, and have been employed for a considerable number of years (I learn some have twenty years' service), was withheld from the member for North Norfolk, who, be it noted, did not ask for the number of "established" architects only, but the total number engaged in the department, and so the only explanation within the scope of those who supplied it is nullified, and in the public interest an explanation is due to them from the secretary.

These are the men who in their memorial to the Board dated November, 1906, made the statement that their daily duties consisted to the full those of a practising architect, and included—"(*a*) Sketch designs; (*b*) surveys; (*c*) preliminary estimates; (*d*) contract drawings; (*e*) details; (*f*) specifications; (*g*) superintendence of building (in some cases)," and, be it noted, not one fact therein contained was denied by them; and yet the rate of pay for these services, as previously supplied by your correspondents, to the majority amounts to a scandal. They cannot leave and obtain employment in outside offices, for it is obvious that, after being accustomed for years only to special work never seen outside, no practising architect would employ them, and this the Government, who are supposed to be model employers, are well aware of.

I understand from your able correspondent "Labour Member No. 2" in last week's issue that this class do not become architects in the eyes of their Board until they reach the age of thirty, when a technical certificate is issued to them, stating that the recipient is capable of doing all the architectural work of the department, but, as it does not hitherto appear to have been put to any useful purpose, I venture to suggest that it should be removed from its official pigeon-hole at Storey's-gate, and presented to the Commissioners of the Civil Service at Burlington House, when it would be honoured by their issuing, in exchange, one of their own, which will be found all provided for in "the Order in Council, June 4, 1870," and, judging from those who hold this veritable "Aladdin's Lamp" (the "Assistant Architects of the Second Class"), their salaries would be doubled, official status created, holiday leave increased, annual sickness up to six months allowed, together with an old age pension long in advance of the recent Act.

But the "Architectural Assistants," one and all, look with confidence to their First Commissioner of Works, who has now been made aware of their disabilities, and has promptly promised establishments in the House of Commons, that he will see their very reasonable demands are granted them, and that the scales of justice are no longer tampered with.

ARCHITECT.

Failure of Buildings Caused by Drought.

SIR,—The article contained in this week's issue (5th inst.) on the above subject is of great interest. Enough forethought and care is not generally taken when dealing with foundations on clay.

One of the most frequent causes of subsidence, other than long spells of dry and hot weather, is the presence of drain trenches, sewers, etc., at lower levels than the foundations of the walls. Notwithstanding the filling in of the trench with concrete abutments, the clay adjoining is drained of its natural moisture, which latter finds its way to the bottom of the trench, and the adjoining clay shrinks, the inevitable result appearing above

A paved area round a building has its advantages certainly, but it also has its disadvantages, as it prevents the clay from receiving any replenishment of moisture by the percolation of rain.

As stated in the article, the necessity of one absolutely uniform depth of foundation, irrespective of light or heavy portions of a building, cannot be too strongly emphasised.

T. G.

Statue of Achilles.

SIR,—I have to thank you for inserting my letter on page 9 of your current issue. May I, however, be permitted to make a correction therein? In the sentence, "That to Helen in St. Paul's Cathedral, Calcutta, has its duplicate in St. Paul's Cathedral, London," the word printed "Helen" should have been printed "Heber."

WILMOT CORFIELD.

Porch of St. Mary's Church, Oxford.

SIR,—Your report (December 1) of Mr. A. T. Bolton's paper, "Some Thoughts on Jacobean Architecture," is illustrated with a view of the porch. Mr. Bolton says: "There seems no reason to refuse the authorship of the porch of St. Mary the Virgin to him [Inigo Jones] as well." In the Stone MSS., annotated by Vertue (Soane Museum), is, in one "account book," a list written by Charles Stoakes (or Stokes) of "Some of the most Eminentt Workes that my Vncle Mr. Nickcolas Stone, Senior, did in England. in Holland, and Scotland." One item is: "The Noble Fronttispeece with Twisted Collums hee desined and built att St. Mary's Churche att Oxford." Other entries in the account books show that Stone worked upon the porch when he was employed at Cornbury, 1631-1633. The words "hee desined" frequently occur in the list; we cannot always give to them their present signification. Stone writes:—"I mad," or, "I set up"; though he writes:—"In 1631 Agreed with the . . . Lord Earell of Danby for to . . . desine a new hows for him at Corenbury . . . and to deRuckt the workmen and mak all thar . . ."

W. E. D.-MILLIKEN.

INTERCOMMUNICATION COLUMN.

Cost of Schools.

SIR,—The voluntary schools in the country districts are in many cases not up-to-date, and are being condemned by the Local Education Authorities.

Will you kindly open your columns to an inquiry as to the cost per head for which schools from 100 300 can be built, excluding such items as fences and asphalting playground, which must vary?

The difficulty of raising funds for voluntary schools in the existing unsettled state of affairs demands the most rigid economy, and there appears to be an opening for some such material as concrete.

Will anyone who has had experience in putting up thoroughly sound, substantial, plain, inexpensive buildings give statistics of actual cost?

HON. SECRETARY OF A VOLUNTARY SCHOOLS ASSOCIATION.

Quick-Setting Plaster.

SIR,—Could you inform me where I could get a quick, hard-setting plaster suitable for slabbing tile curbs and panels? I know of Bassetts and Wood Brothers; I want a harder material than these firms make. Do you know of any other firm I could try? Is there any book on plasters and cements published which I could get?

H. WINTERBOTTOM.

EDITORIAL SUMMARY.

The leading article, the first of a short series on "The Architectural Societies of France," deals with the Académie Royale d'Architecture and La Société Centrale des Architectes Français.

"The Policy of the R.I.B.A." is the title of our second article (p. 28) in reference to the future action of the Institute in regard to Registration.

In "Notes" Column (p. 29) are comments on: "The Immurement of Ashes in Church Walls"; "Old Houses at Guildford"; "Sootfall"; "The Lay Press and Architecture"; "The Wallace Collection."

An appreciative article on the life and work of Mr. Cass Gilbert, of New York and St. Paul, is given on p. 30, under the heading of "Contemporary Architects and Their Work." The article is illustrated.

A notice of the first Spring Visit this year of the Architectural Association, to St. Paul's Girls' School, Hammersmith, is given on p. 35.

In our Correspondence columns (p. 37) are letters on: "Porch of St. Mary's Church, Oxford"; "The Policy of the R.I.B.A."; "Statue of Achilles"; "Buckingham Palace and the Victoria Memorial"; "Architectural Assistants and the Office of Works"; "Failure of Buildings Caused by Drought."

The Monthly Illustrated Review of Construction (p. 39) contains: "Paddington Children's Hospital Extensions"; "Dry Rot in Timber."

The Building Trade Section (p. 44) includes: "Discounts"; "The Penalty Clause"; "Projected Building Works"; "The Wood Trade"; "The Building Trade Unrest."

A meeting of the Society of Architects was held on Thursday, when a paper by Mr. J. Darch, F.S.I., on "Illumination as a Study for Architects," was read. An abstract appears on p. 47.

A proposal put forward by Mr. A. H. Henderson-Livesey for opening up Southwark Cathedral is dealt with on p. 49.

Book Reviews (p. 50) include: "Reinforced Concrete Construction"; "Reinforced Concrete Compression Member Diagram"; "Architectural Hygiene"; "Stresses and Thrusts"; "Chemistry for Engineers and Manufacturers"; "Boiler Draught"; "Smoke Prevention and Fuel Economy"; "Bricks and Tiles"; "Manufacture of Varnishes and Kindred Industries"; "Pyrometry," etc.

In Legal Column (p. 52) some observations will be found on: "Acts in Interference of Trade."

MEETINGS.

FRIDAY, JANUARY 12.

Battersea Polytechnic (*Lectures on Illuminating Engineering*).—Mr. J. S. Dow, B.Sc., on "The Measurement of Light." 7.30 p.m.

MONDAY, JANUARY 15.

Architectural Association.—Mr. E. F. Strange on "Alfred Stevens." 7.30 p.m.

University of London (*Victoria and Albert Museum*).—Mr. Banister Fletcher on "Heidelberg Castle and Later Renaissance Buildings." 5 p.m.

Liverpool Architectural Society.—Mr. F. E. G. Badger on "Housing and Town Planning in England and Germany." Some notes and comparisons. Lantern slides.

TUESDAY, JANUARY 16.

University of London (*British Museum*).—Mr. Banister Fletcher on "The Fora and Rectangular Temples of the Romans." Lantern illustrations. 4.30 p.m.

Institute of Metals (*at the Institution of Mechanical Engineers*).—Annual general meeting. 3 p.m. Third annual dinner in the evening.

Illuminating Engineering Society (*at the Royal Society of Arts, John-street, Adelphi*) Mr. Thomas E. Ritchie on "Colour Discrimination by Artificial Light." 8 p.m.

Northampton Polytechnic Institute (*Illuminating Engineering*). -Mr. S. D. Chalmers, M.A., on "The Nature of Light and of Radiation." 7.30 p.m.

Institution of Civil Engineers.—Ordinary meeting. 8 p.m. Papers: "Reinforced Concrete Wharves and Warehouses at Lower Footung, Shanghai," by Mr. Somers Howe Ellis, M.Inst.C.E.; "The Direct Experimental Determination of the Stresses in the Steel and in the Concrete of Reinforced Concrete Columns," by Mr. William Charles Popplewell, M.Sc., Assoc.M.Inst.C.E.; "Composite Columns of Concrete and Steel," by Mr. William Hubert Burr, M.Inst.C.E.

WEDNESDAY, JANUARY 17.

Royal Society of Arts.—Sixth ordinary meeting. "Illuminated MSS.," by Mr. Cyril Davenport, F.S.A. 8 p.m.

The Institute of Metals.—Annual general meeting concluded. Eight papers will be read and discussed. 10.30 a.m.

THURSDAY, JANUARY 18.

Society of Architects.—Students' section. Smoking concert, to be held at 28, Bedford-square. 8 p.m.

The Institution of Municipal Engineers.—Western District meeting at Birmingham. (1) Mr. Henry Hulse, Borough Surveyor and Engineer, Droitwich, on "The Institution and its Benefits to Members"; (2) Mr. J. Brook on "The Proper Disposal of Domestic Wastes in Rural Districts." At the conclusion of the meeting a visit will be paid to the Star Sanitary Ware Works of Messrs. W. E. Farrer, Ltd., Cambridge street. 1 p.m.

Society of Antiquaries. 8.30 p.m.

Institution of Electrical Engineers.—Adjourned discussion on Mr. A. H. Seabrook's paper on "Residence Tariffs." 8 p.m.

Royal Society of Arts (*Indian Section*).—"The Old District Records of Bengal," by the Rev. Walter K. Firminger, B.D., Senior Chaplain H.M.'s Bengal Establishment, will be read by the Rev. J. A. V. Magee, M.A. 4.30 p.m.

FRIDAY, JANUARY 19.

Royal Institution.—Professor Sir J. Dewar, M.A., LL.D., D.Sc., on "Heat Problems." 9 p.m.

Battersea Polytechnic (*Lectures on Illuminating Engineering*).—Mr. J. S. Dow, B.Sc., on "Illumination and its Measurement." 7.30 p.m.

Glasgow Technical College (*Architectural Craftsmen's Society*).—Mr. J. M'Kissack on "Rothenburg on the Tauber." 7.45 p.m.

Institution of Mechanical Engineers 8 p.m.

Institution of Civil Engineers (*Students' Meeting*).—Paper to be read: "The Turbo-Blower and Turbo-Compressor," by Mr. George Ingram, Stud.Inst.C.E. 8 p.m.

ARCHITECTURAL SOCIETIES.

Royal Institute of the Architects of Ireland.

A meeting of the Council of this Institute was held at No. 31, South Frederick-street, Dublin, on Monday last. The President, Mr. A. E. Murray, R.H.A., F.R.I.B.A., was in the chair. There were also present: Messrs. F. Hayes, J. H. Webb, L. O'Callaghan, A. G. C. Millar, W. A. Scott, H. Allberry, W. Kaye-Parry, F. G. Hicks, and C. A. Owen, Hon. Secretary.

The minutes of the regular and special meetings of December 4 and 18 were read and signed. The proposed date of the annual dinner was under discussion. A large amount of correspondence was dealt with.

A satisfactory report from the Publication Committee was received and adopted. A vote of thanks to Mr. Allberry, Hon. Secretary to the Committee, was passed by the Council.

A report from the Professional Practice Committee in connexion with the importation of shop fronts was received and adopted.

The Standing Committees were appointed as follows: -Professional Practice: Messrs. W. Kaye-Parry, F. Batchelor, L. O'Callaghan; Arts Committee: Messrs. G. C. Ashlin, W. A. Scott, G. P. Sheridan. Publication Committee: Messrs. F. Hayes, R. C. Orpen, J. H. Webb; Examination Committee: Messrs. H. Allberry, R. C. Orpen, F. G. Hicks.

FIFTY YEARS AGO.

From the *Builder* of January 11, 1862.

The Thames Embankment Commission.

THE Commissioners appointed to inquire as to the propriety of embanking the south side of the Thames have been sitting, with the Lord Mayor presiding. One witness, Mr. Crosby, of the Metropolitan Board of Works, said he would carry out an embankment along the whole side of the river; whether on the present line or not must depend on the conveniences of trade. At Lambeth an embankment, such as Mr. Cubitt made at Pimlico, he should recommend; at Rotherhithe a wall only. On the question of taxation, he should suggest tonnage dues on all articles coming into the port of London. By this plan the trades benefited by the embankment would pay. Mr. Pegg, of Bankside, who had premises abutting on the river, recommended an embankment and roadway. He was one of a Commission some years ago appointed to raise Bankside. They did not raise it so much as they intended owing to the opposition of the wharfingers.

ILLUSTRATIONS.

The Work of Mr. Cass Gilbert.

OUR illustrations this week represent many of the buildings designed and executed by Mr. Cass Gilbert, reference to whose work will be found on page 30.

COMPETITION NEWS.

Salford Union Offices Extension.

Mr. Paul Ogden, A.R.I.B.A., has assessed the fourteen designs submitted in this competition. The result is:—First premium, 20*l.*, Messrs. Topham & Adshead, Manchester; second premium, 10*l.*, Mr. J. Bushell, Manchester. It is estimated that the extensions will cost from 4,000*l.* to 5,000*l.*

Baptist Church and Schools, Nottingham.

In this competition, for a church and schools, costing about 7,000*l.*, the design submitted by Messrs. Ernest R. Sutton, F.R.I.B.A., and F. W. C. Gregory, of Bromley House, Nottingham, has been placed first by the assessor, Mr. Herbert W. Wills, A.R.I.B.A., of London. Building operations are to be proceeded with at once.

Saxon Snell Prize.

Fifty guineas and the Silver Medal of the Royal Sanitary Institute is offered for an Essay on "Suggestions for Improvements in the Ventilating, Lighting, Heating, and Water Supply Appliances and Fittings for an Operating Room and Its Accessory Rooms for a General Hospital of 400 Beds (no Students)." The essay, to consist of not more than 5,000 words, is to be illustrated by drawings or sketches. Two competitors of different professions or crafts may join in sending in an essay and plans. Essays must be delivered before 4 p.m. on or before August 30, 1912, addressed to the Secretary of the Royal Sanitary Institute, 90, Buckingham Palace-road, London, S.W.

Town-Planning Competition, Hale.

The Hale U.D.C. invite competitors to prepare plans for laying out their district of 1,283 acres for residential purposes. The drawings are to be made on $\frac{1}{2500}$ Ordnance sheets provided by the competitors. The premiums of 50*l.* and 25*l.* seem somewhat inadequate, considering the work involved, and we do not quite like the invitation to tender for the fees for subsequent work. The undertaking in regard to an assessor should also be more definite. We trust the Competitions Committee of the R.I.B.A. will look into these and other details before members of that body decide to compete.

Banbury Workmen's Dwellings Competition.

The Council of the R.I.B.A. are of opinion that the conditions of this competition are very unsatisfactory, but, in view of the near approach of the date for sending in, they do not see their way to inform members that they must not take part in it, but they express the hope that members will refrain from doing so.

Greenock Burgh School Competition.

Members and Licentiates of the Royal Institute are asked not to take part in this competition.

Town-Planning Scheme, Halifax.

Professor Adshead will adjudicate shortly in the competition dealing with the development of the belt of country surrounding Halifax. Eight sets of designs have been sent in.

BOOKS RECEIVED.

A HISTORY OF THE CHURCH OF ST. GILES, NORTHAMPTON. By the Rev. R. M. Serjeantson, M.A., F.S.A. (Northampton: W. Mark & Co. 7s. 6d. net.)

ARTISTIC AND DECORATIVE STENCILLING. By George Ashdown Audsley and Berthold Audsley. (London: Geo. Allen & Co. 4s. 6d. net.)

ORNAMENTAL CEMENT WORK. By Oliver Wheatley. (London: Scott, Greenwood, & Son. 5s. net.)

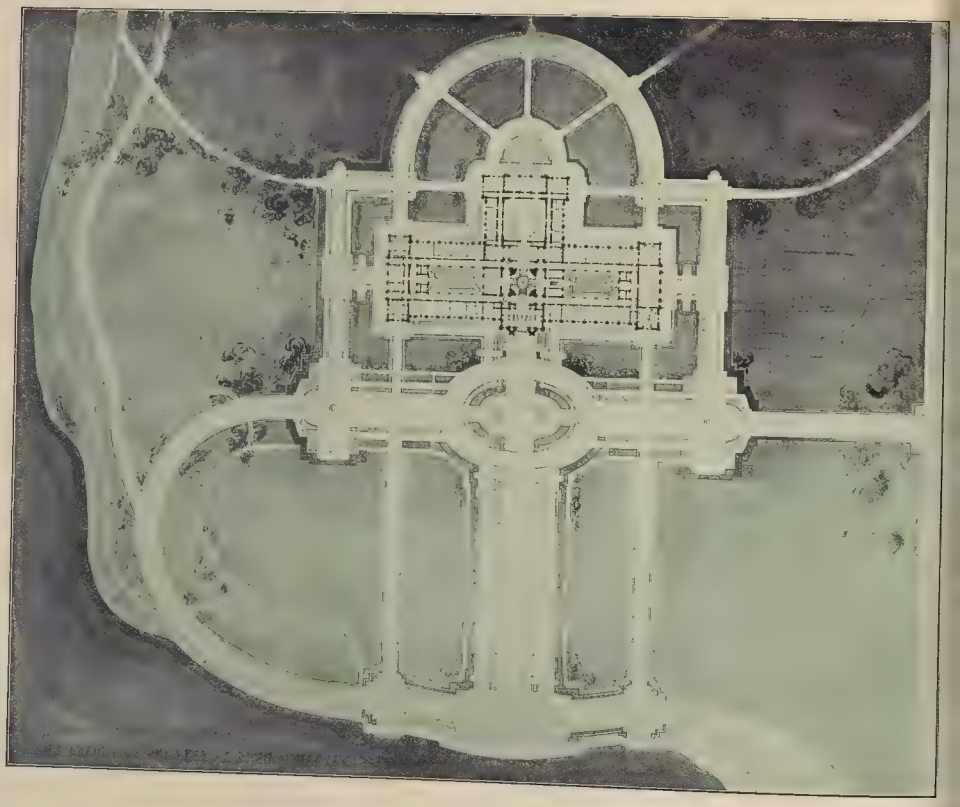


LIBRARY, UNIVERSITY OF TEXAS, AUSTIN.—Mr. Cass Gilbert, Architect.

Sprague & Co., Ltd., Printers, 4 & 5 East Harding St., E.C.



ELEVATION.



GROUND PLAN.

DESIGN FOR LEGISLATIVE BUILDING, REGINA, SASKATCHEWAN.—By Mr. Cass Gilbert.

Sprague & Co., Ltd., Printers, 4 & 5 East Harding St., E.C.



FESTIVAL HALL, ST LOUIS
(THE CASCADE, SETTING AND



CAPITOL, ST. PAUL, MI



R. CASS GILBERT, ARCHITECT.
TES BY MR E. L. MASQUERAY.



Sprague & Co., Ltd., Printers, 4 & 5 East Harding St., E.C.

ASS GILBERT, ARCHITECT.



ESSEX COUNTY COURT HOUSE, NEWARK.—Mr. Cass Gilbert, Architect.



Sprague & Co., Ltd., Printers, 4 & 5 East Harding St., E.C

CAPITOL, ST. PAUL, MINNESOTA, HOUSE OF REPRESENTATIVES. Mr. Cass Gilbert, Architect.



CUSTOMS HOUSE, NEW YORK.—Mr. Cass Gilbert, Architect.

Sprague & Co., Ltd., Printers, 4 & 5 East Harding St., E.C.

MONTHLY REVIEW · *of* · CONSTRUCTION.

THE CHILDRENS HOSPITAL PADDINGTON GREEN. W. OUTPATIENT EXTENSIONS.

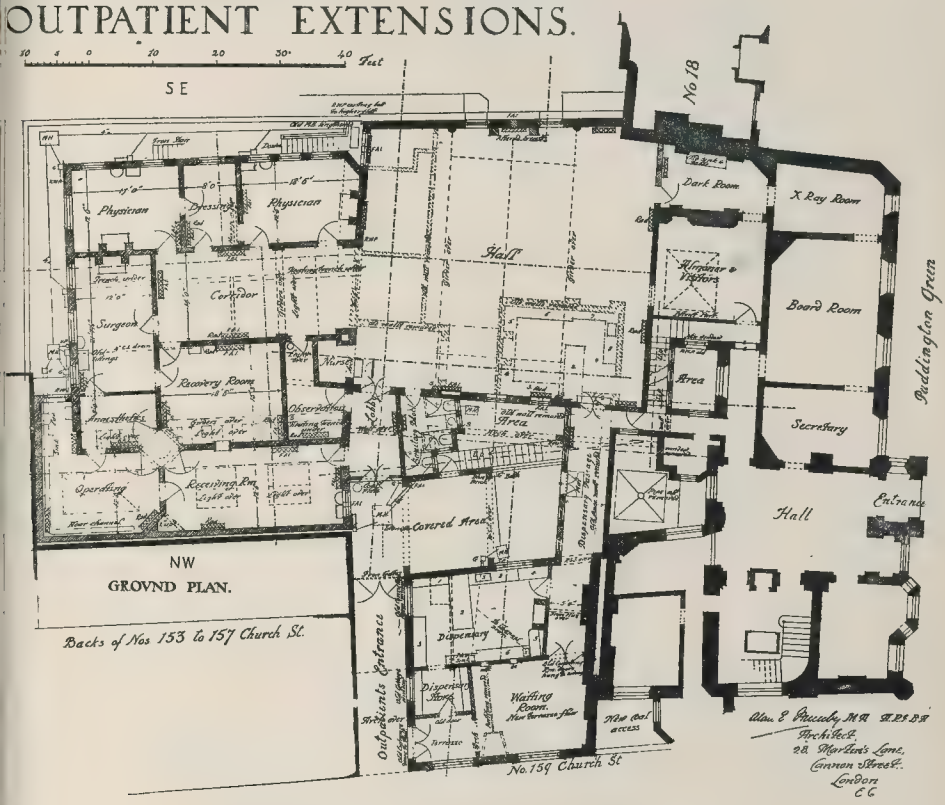


Fig. 1. Plan showing Old Buildings and Extensions.

ESTABLISHED in 1883, the Children's Hospital in Paddington-green provides for the treatment of nearly 900 indoor s a year, while the work of the out-patient artment covers more than 18,000 cases some 54,000 out-patient attendances. h view of the importance attaching to the er department, the Council of King ard's Hospital Fund suggested a year or two that the buildings should be extended, since then have contributed 2,250*l.* towards cost of the works, which have recently h completed from the plans of and under direction of Mr. Alan E. Munby, M.A., I.B.A., by Messrs. T. Henwood & Son. extensions were formally opened by the ness Louise, Duchess of Argyle, on ember 16 last.

ig. 1 is a ground-floor plan of the out-ents' department, where the extensions indicated in cross-hatching, the previously ting buildings being in solid black. The ensions consist mainly of a new block ering the area formerly occupied by Charlotte-e and replacing cottage property. A se in Church-street has also been acquired, ween the main building and the out-patients' ance passage, to facilitate the remodelling he ground floor and basement stories.

he requirements comprised a larger hall, e roomy consulting and operating rooms, a new dispensary, accommodation for pathological research, and nurses' quarters.

The site indicated above and on the plan was a particularly awkward one to deal with, being all "back land" only approached by a passage 8 ft. wide, and the house taken over in Church-street. This house, it may here be mentioned, has been worked into the scheme pending a more use of the frontage, when additional wards become necessary.

General Arrangement and Structural Features.

On the ground floor the main hall for out-patients remains a one-story building, but has been provided with a new roof at higher level and increased to nearly double its former size by throwing into it the space formerly occupied by consulting-rooms and the old dispensary, and by squaring it out by an extension at the entrance. Windows have been provided on three sides in addition to a large roof lantern. The hall measures 45 ft. by 42 ft. in plan, and, being without columns or any projections below the ceiling line, air can be efficiently extracted from every part with great rapidity.

The basement has been extended and re-arranged, and benefits by the construction of a new area giving increased light and air and direct area communication between the front and back of the building.

The new block, projecting at the left hand of Fig. 1, is approached by a wide corridor from the main hall, and comprises on the ground floor two physicians' consulting-rooms, one surgeon's consulting-room, anæsthetic, operating, recovery, and receiving rooms, and an observation-room for possible infectious cases. The rooms shown as recovery and receiving rooms can have their uses reversed, but as designated on the plan they meet the needs of urgent casualty cases, which demand immediate contact with the operation theatre. For ordinary routine the reversed arrangement is more convenient, as recovered patients can obtain direct egress from the building as rapidly as possible.

The house in Church-street has been modelled so as to provide accommodation on the ground floor for a new passage for out-patients, having independent access to the main part of the hospital, and for the new dispensary and waiting-room.

This and all other parts of the extensions has been carefully planned to comply with that important element of success in an out-patients' department—adequate and convenient means of circulation. In this matter the position of the dispensary and facilities for storing and re-storing perambulators are vital points for consideration by the architect.

The satisfactory manner in which Mr. Munby

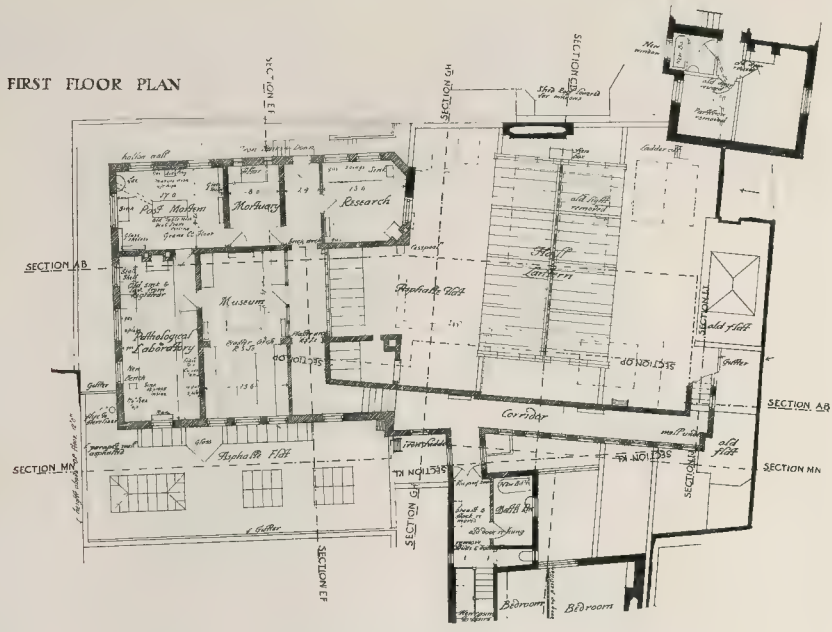


Fig. 2. Plan of First Floor.

has dealt with the problem is evidenced by the following summary of the routine adopted at the hospital.

Patients enter the hall lobby immediately opposite the street entrance, and are divided into medical and surgical cases by the sister in charge, or casualty official, who has a recess near the doorway. After treatment, medical cases return to the hall, pass round at the back to the almoner's room, and thence to the dispensary by the new passage, adjoining which is the covered area devoted to the storage of perambulators. Surgical patients can follow the same route or alternatively may pass out directly into the hall lobby through the room designated "receiving-room" in Fig. 1, the second course being adopted on occasions when the room in question is being employed as the recovery-room. The observation-room, for suspected cases of infectious character, gives access to the lobby without requiring patients to return to the hall.

The first floor of the building has no direct communication with the ground floor below. This story extends over the ground floor new block at the left hand of Fig. 1 and the ground floor of the house in Church-street, the main hall and buildings at the right hand of Fig. 1 being of one story only.

In the new block are situated the post-mortem room and mortuary, the latter treated in the style of a chapel, a large pathological laboratory, a second laboratory, and a museum, the whole forming a suite of rooms clearly indicating the appreciation shown by the Hospital Committee of the growing importance attached to pathological research. This part of the building is connected with the main block by a corridor hung on the side of the out-patients' hall. It also has an outside covered stairway from the mortuary passage, and is finished with a flat roof to facilitate the future construction of a second floor. Branching from the main corridor is a connexion to the upper part of the house in Church-street, where the nurses' quarters are situated and entirely cut off from the out-patients' department.

The nature of the site naturally precluded and rendered unnecessary anything in the nature of architecture, as judged from the artistic standpoint. But from the point of view of technical design and construction the works have involved a great deal of difficulty, architecture, for which Mr. Munby deserves much credit.

Structural Materials and Equipment.

The walls are in London stock and red bricks, the copings and sills being of Blue Pennant stone. As the façade of the first floor corridor will some day be seen from numerous ward windows in the contemplated Church-street extension, sand-faced bricks and arched windows have been adopted so as to make this part of the work pleasing to the eye.

All suspended floors and flats are constructed on the Kleine system of reinforced hollow brick. The floors of the hall and various public rooms are finished in terrazzo laid by the Mosaic Manufacturing Company, of King's road, N.W., and the floors of the consulting rooms are finished in asphalt and covered with linoleum. The steelwork, of which particulars are given below, were constructed by Messrs. H. Young & Co., of Nine Elms.

Care has been taken throughout to obviate dust traps by the adoption of rounded angles

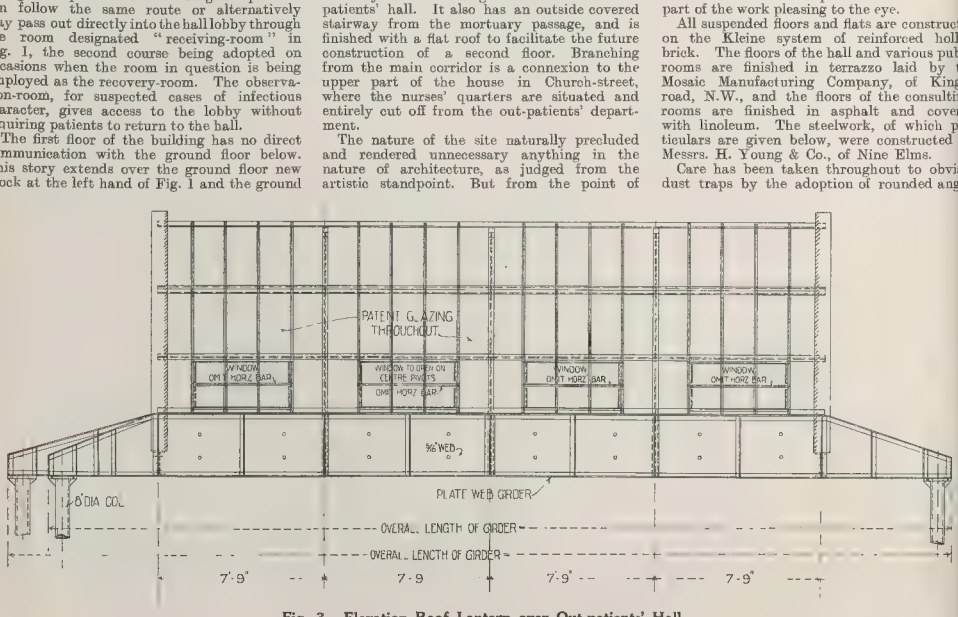


Fig. 3. Elevation Roof Lantern over Out-patients' Hall.

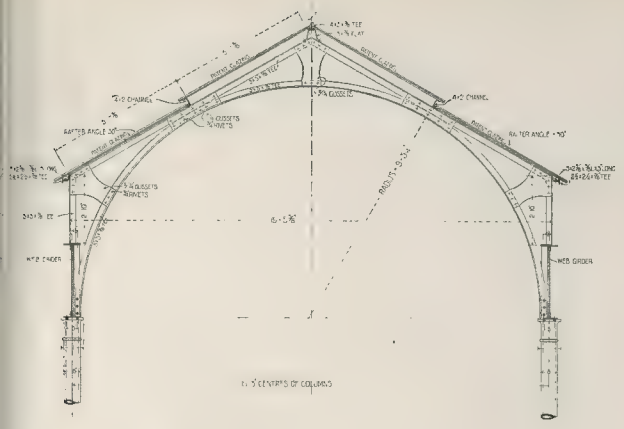


Fig. 4. Section of Roof Lantern over Out patients' Hall.

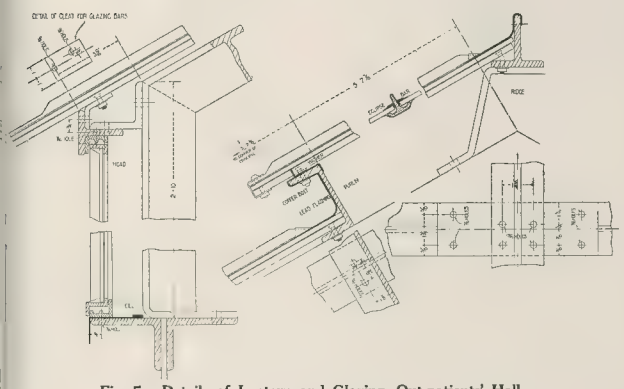


Fig. 5. Details of Lantern and Glazing, Out-patients' Hall.

floors, walls, and joinery, the rounded ges of the window-frames having been made the solid to avoid the risk of shrinkage cks.

The buildings are warmed throughout by water installed by Messrs. J. T. Boulting Sons, of Union-street, the operation theatre ng on an independent system, which can be d in summer-time apart from the system ving the remainder of the buildings, with object of reducing the labour of cleaning; fireplaces are in glazed stoneware, the hot- ter radiators are fixed on brackets clear of floors, the radiators and pipes are painted enamel, and the gearing to roof lights is ced outside on the flats. The buildings furnished with a complete system of secret- vice telephones installed by Messrs. W. & J. yer, Ltd., of Paddington, the electrical o-contractors.

The general contractors were Messrs. T nwood & Son, of Portman-square, who com- ted the work in a most satisfactory manner the period of twenty weeks, despite con- erable difficulties and unavoidable delays.

Structural Steelwork.

The employment of structural steel in the ent extensions is practically limited to the ofs of the out-patients' hall and the operating atre in the new block, and, as mentioned ove, the whole of the steelwork was con- ucted and erected by Messrs. Henry Young Co., Ltd., of Nine Elms Ironworks, S.W.

Fig. 3 is an elevation of the new lantern er the out-patients' hall, which has brick lls on all four sides to the height of about ft. above floor level. The two side walls, aced 46 ft. apart, are parallel; the back ll is at right angles to them, and the front ll is not parallel to the wall at the back, it follows the building line, which causes the hall to vary in length between front and back from 40 ft. at one side to 44 ft. 6 in. at the other side.

The new lantern extends from front to back along the middle of the hall, and is carried by two plate web girders, spaced 19 ft. 3 in. apart and measuring 41 ft. 10½ in. and 43 ft. 10½ in. long over all respectively. For the greater part of their length the girders are 36 in. deep by 8¼ in. wide, the ends tapering down to the depth of 6 in. over the supporting cast-iron columns.

The ends of the parallel parts of the girders, 31 ft. long, are connected by two 14-in. by 6-in. 46-lb. rolled-steel I-beams, upon which are built the two brick walls forming the ends of the roof lantern, the roof framing being carried by these walls and three intermediate steel trusses of the form illustrated in Fig. 4. The circular arched intrados of the truss is struck to the radius of 9 ft. 3½ in., and springs from the top of the cast-iron columns, the truss measuring 19 ft. 3 in. between the centres of the columns and 19 ft. 5⅜ in. over all.

The roof slope is at the angle of 30 deg. with the horizontal and is covered throughout by "Eclipse" glazing. In each roof bay at either side of the lantern is a window, 4 ft. 6 in. wide by 2 ft. 3 in. high, opening on pivots and providing for efficient natural ventilation of the hall. One range of four windows may be seen in Figs. 3 and 4.

Details of the roof truss construction and glazing are given in Fig. 5 to enlarged scale. At the left-hand side is a part section of one main-plate girder supporting the lantern, together with part of the truss and details of the connexions for the glazing bars. Other details are given at the right-hand side where the lead flashings and glazing bars are shown in section.

The "Eclipse" glazing bar, made by Messrs. Mellowes & Co., Ltd., of Westminster and Sheffield, consists of a steel core entirely surrounded by lead sheathing on each side of which are three webs, two rubbed down upon the glass from the outside and the third rubbed up to the glass from underneath. Thus a perfectly watertight joint is formed without packing of any description, and a safeguard against

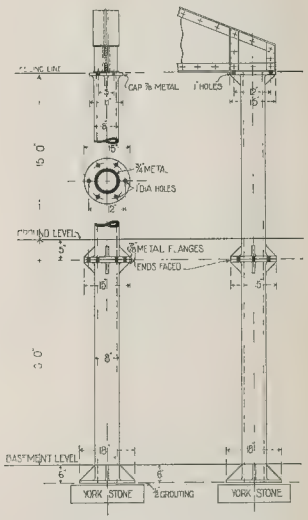


Fig. 6. Columns supporting Roof Lantern, Out-patients' Hall.

the breakage of glass by expansion is provided by the special form of the bar.

Particulars of the cast-iron columns supporting the roof lantern are given in Fig. 6. Having an extended base seated on a block of York stone below basement floor level, each column extends through the basement story up to the general ceiling line of the hall. The columns are of 8 in. diameter outside, the metal being ¾ in. thick. The flanges for connexions are of 15 in. diameter, each secured by six bolts, and the column ends are lathe-faced to ensure perfect alignment. The cap measures 11 in. by 15 in., and to it the main girders are connected by four bolts.

Fig. 7 is an elevation of the roof lantern over the operation theatre in the new block. Like the analogous construction in the

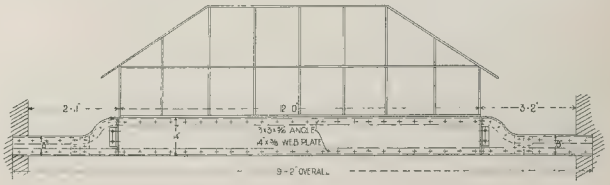


Fig. 7. Elevation of Roof Lantern, Operation Theatre.

out-patients' hall, the lantern is carried by two plate girders, one 19 ft. 2 in. long and the other 19 ft. 5 in. long over all. The ends of the girders are 8 in. deep and the middle portion 14 in. deep, the width being 3½ in. throughout. Upon the girders is built the lantern frame, 12 ft. long by 6 ft. wide, with a central ridge, the sides, ends, and slopes being glazed so as to provide abundance of light for operations.

DRY ROT IN TIMBER.

INVESTIGATIONS have recently been made on the Continent into the decay of timber in houses and particularly into the best means of preventing destruction by the most active fungoid enemy of timber—the *Merulius lacrymans*—causing the form of decay termed dry rot in this country.

M. Karel Havelik points out that the decomposition of timber is produced by two classes of fungus—(1) Those attacking the wood from the outside and causing deterioration of the surface; and (2) those attacking the interior, where the work of destruction goes on without showing on the surface, the same kind of fungus being incapable of living in the tissues of the wood and upon its surface.

Interior decay is chiefly due to *Leuzites*, but these scarcely ever occur except in buildings where affected timber has been employed.

Exterior decay, however, which is caused by the *Merulius lacrymans*, the *Polyporus vaporarius*, the *Coniophora Cerebella*, and similar growths, may result from infection at any time. The two last named fungi are only capable of growing in damp places, while the *Merulius* flourishes in dry situations, because it is able to abstract water chemically combined in ligneous tissue, and is a particularly dangerous enemy, because it is able to propagate itself indefinitely throughout any building wherein a foothold has once been obtained. Moreover, this fungus flourishes under the conditions obtaining in most buildings, where variations of temperature and humidity are less marked than outside and currents of air are never very strong.

From the investigations of M. Falcz, it appears that the mycelium of the *Merulius* cannot be produced at the temperature of 27 deg. to 28 deg. C., the most favourable temperature interval being that between 16 deg. and 22 deg. C., which corresponds to the mean of the temperature variations in buildings. It follows that of all destructive fungi the *Merulius* is one that finds specially favourable conditions for growth. The mycelium is able to traverse walls, even where these are dry, because it is sheltered from currents of air.

As it appears impossible to stop the propagation of the fungus by any means hitherto adopted, after it has once taken hold, M. Falcz proposes the novel method of destroying it by heating any building affected beyond 40 deg. C., this being the temperature at which the *Merulius* is killed. Owing to the fact that timber is a poor conductor of heat, it is considered necessary to bring the whole building up to 42 deg. C., and to maintain this temperature for at least two hours. A very important matter is to be quite certain as to the nature of the growth before having recourse to heat treatment. For instance, if the decay were due to fungi growing inside the wood, the application of heat would only intensify the work of destruction, because fungi of this class flourish more actively at the temperature which kills the dry rot fungus.

CONSTRUCTION NOTES.

Collapse of a Building in Indianopolis.

A THREE-STORY reinforced concrete building which collapsed during construction in December last once more points the moral that green concrete must be adequately supported. The designs appear to have been perfectly sound, and the disaster is attributed by engineers who have investigated the matter to the removal of floor centring and supports before the concrete had hardened sufficiently to carry its own weight and small incidental superloading. A good deal of attention is being devoted just now to regulations for the safe design of reinforced concrete buildings, a development against which we have nothing to say. But as practically all failures in the past have occurred during construction it is highly important that regulations of the kind should deal satisfactorily with the question of removing temporary supports. This point, we may add, has received attention in the R.I.B.A. Report, but not in the L.C.C. draft Regulations.

Transmission of Heat by Linoleum.

SOME experiments as to the passage of heat and cold through linoleum and other materials have recently been made by Professor Hoffmann, at Halle. The experiments made with linoleum of various thicknesses have shown, as was anticipated, that heat and cold are transmitted less quickly by thick than thin linoleum; and different results were obtained with pieces of the same thickness, but not of similar manufacture. Heat and cold are transmitted less quickly by layers of wood than by linoleum. The experiments made with wood covered with linoleum, are particularly important, as this combination corresponds with the common use of these materials. It was found that it was almost exclusively the layer of wood which determined the resistance to the cold. Similar tests were made with other materials—bitumen, gypsum, béton—which, in a general way, gave results very similar to those obtained with linoleum. The experiments made by the Professor are of special interest at the present time, in the light of their bearing upon the question of dry-rot in floors, and the effect that the covering of wood floors with linoleum may have. The opinion has been expressed that this covering tends to produce dry-rot; and the fact that linoleum excludes the air almost entirely, and may at the same time subject the wood to rapid changes of temperature, would appear to confirm this view. Linoleum is a good conductor. It absorbs the warmth of the body much more quickly than wood, which will never become of so low a temperature as linoleum. Whilst a person standing upon a wood floor during cold weather may experience no discomfort, as soon as a layer of linoleum is used as a covering to the floor a sensation of cold is felt—often in a marked degree. The plan which has been advocated of putting linoleum directly upon concrete, in the case of workmen's cottages and the like, though it may be a cheap method, cannot, with the results of these experiments before us, be considered a good one from a hygienic point of view.

Rock Asphaltum and its Uses.

M. H. CRUMP, in the *Journal* of the Royal Society of Arts, describes a Kentucky rock asphaltum that occurs 10 miles east of the celebrated Mammoth Cave. The material is a fine-grained, sharp siliceous sandstone containig from 5 per cent. to 25 per cent. of maltha or bitumen. The sand is very hard, and each grain is coated with from 8 per cent. to 15 per cent. of bitumen; the commercial product must contain at least 8 per cent. For use in roadmaking the material is put through a jaw-crusher, and then through two sets of rolls, and is thus disintegrated into separate grains. The ground material is spread cold on the prepared macadam surface to a depth of 2 in., and rolled until the interstices of the broken stone are filled. The cost of bringing a road to grade with 4 in. of broken stone, rolling once, covering with a layer 1½ in. thick of rock asphaltum, and thoroughly rolling, was 2s. per square yard. The asphalt is an excellent binding material for the wearing course, and gives a dustless waterproof surface which resists deformation under load, and is sufficiently plastic to break the blow of a horse's hoof. A mastic is also made by heating 75 per cent. of crushed rock asphalt, 20 per cent. of ground limestone, and 5 per cent. of pure bitumen to about 250 deg. Fahr., and moulding the mixture into 50-lb. blocks, which are used for waterproofing breweries, subways, etc. The cost of surfacing macadam streets is 5d. to 10d. per square yard higher than with ordinary macadam.

Straightening Brick Chimney Shafts.

TWO CHIMNEY shafts, 120 ft. high, built in 1859 at the pumping station of the Louisville Waterworks, near the Ohio River, inclined to a dangerous extent during construction, and were afterwards straightened by work on the foundations, in the manner described in an article by the late Mr. Charles Hermany, recently published in the *Rose Technic*. Owing to the softness of the soil both chimneys began to settle long before completion, and then inclined, one towards the east and the other towards the south-west, the overhang being about 3 ft. in one case and 4 ft. 8 in. in the other.

To remedy the defect a trench, 4 ft. wide by 21 ft. deep, was dug along the foundations opposite the sunk side, and vertical pits, 18 in. by 9 in. by 6 ft. deep, were sunk 6 ft. below the bottom of the trench, spaced 30 in. apart. Almost as soon as the pits had been completed one of the chimneys began to straighten, and after ninety-one days the top was only 3 in. from the vertical. The ground was then filled in, and in a few days the shaft became perfectly straight. The other chimney was more troublesome, and had to be moved by the aid of screw-jacks, in conjunction with artificial means of causing the soil to yield in the required direction. The chimney was eventually brought vertical, although 213 days were occupied in the process. The weight of each shaft is stated at 800 tons, and the foundation pressure at about 2 tons per square foot.

Repairing Concrete Injured by Freezing.

IT is stated by an American journal that concrete which has been exposed to frost before hardening can be successfully repaired where necessary in the following manner:—Pick out the concrete affected by frost and wash the surface with water. Apply a 1 : 3 solution of hydrochloric acid, wash again, and apply a very wet mixture of new concrete. If this this kept damp for a week it bonds perfectly with the old surface.

Tungsten and Electric Lighting.

ONE October night, in the year 1781, a German scientist, working in his laboratory, discovered a metal which he found impossible to melt in his crude charcoal furnace. He called the new metal tungsten, from the Swedish "tung" (heavy) and "sten" (stone), because the heavy ores had come from Sweden. Little did the old man know that his find would one day completely revolutionise electric lighting. The filaments of incandescent electric lamps were made of carbon, because no other material could be found which would withstand the intense heat. Every well-known metal was tried, but melted before reaching the required temperatures. Then the inventors began to experiment with the more uncommon metals, and again a German scientist took up the study of tungsten. At first the great trouble was to secure pure tungsten. This difficulty was overcome with the aid of an electric furnace, but the product, in the form of a gray metallic powder, proved so refractory that it could not be melted into ingots or drawn out into wire. An experimental filament was made by mixing the fine powder with a paste and squirting the mixture through a die, much the same as a spider spins his web. This thread was in turn heated in an electric furnace till the powder was fused into the form of a fine wire. With the melting-point of tungsten so much higher than any other known metal, it was possible to heat the filament to greater incandescence, producing more and better light with less waste of current in useless heat. The advent of the new tungsten lamp, or metallic filament lamp, as it is popularly known, was startling to the users of electricity for lighting purposes, for they at once saw that the metallic filament lamp would easily give the same light as the common incandescent lamp for one-third the cost. A home that was lighted by electricity for 8s. a month could be lighted with the new lamps for 2s. 6d. Not only that, but the light from the new tungsten lamps proved to be pure white, very nearly akin to actual sunshine. When the metallic filament lamp made its appearance it was thought the apex of achievement in incandescent electrical illumination had been reached. Yet the present year has witnessed a still further advance in the manufacture of electric lamps. In the early autumn it was announced that a British firm of electrical engineers had succeeded in rendering tungsten into a ductile form and drawing it into a wire one-thousandth part of an inch in thickness, and were making filaments of electric lamps out of it. Thus has the last and perhaps the only defect of tungsten for electric lamp filaments been removed.

National Theatre, Boston (U.S.A.).

THIS theatre, in Tremont-street, Boston, has seating accommodation for 3,000 persons, and represents a form of building construction which is unusual in this country, the frame being partly of steel and partly of reinforced concrete. The foundations are carried by concrete piles, the columns are of steel, the girders are of reinforced concrete, and the floors and roof are of the same material.

lvance in ber Values.

TEN years ago timber, in spite of its grand quality, was a drug in British Columbia. A capitalist who built a railway ancouver Island received from the Province nsiderable timber tract as a bonus on his prise. Though a shrewd man, he bewailed ot in being thus saddled with such poor Not long since this very timber realised 00*l.* The denudation of the forests of the ed States has proceeded at a gallop in the quarter of a century. In the Central State chigan less than twenty years ago timber little commercial value, yet in fifteen years reats have been cut down to bare stumps. e year Michigan timber rose 12s. 6d. per ft. on the stump. The best-informed er-men said that values must come back a ut they never dropped one penny. Up to in the Western State of Minnesota white Norway pine was obtainable at 4s. to 8s. ,000 ft. on the stump—*i.e.*, uncut. Eleven later no such wood could be had under to 48s. per 1,000 ft., and there was little ooming even at those prices. Twenty- years ago timber in Michigan was only n 1s. to 2s. per 1,000 ft. on the stump; to such timber fetches 48s. to 60s. if any ens to be offering. There, as elsewhere in rica, the few timber belts left are held by nen for the fancy prices which the approach- mine must bring.

ngthening athedral Tower ndations.

THE foundations of the two towers of St. John's Cathedral, Denver, Colorado, were reinforced last year in order to remedy injuries due to settlement and to prevent future from the same cause. As constructed, the dations were intended for a much smaller than that afterwards placed upon them, esult being that serious injury was caused stonework of the towers. After considering native methods of treatment the engineers ulted recommended the strengthening he original foundations by building a rced concrete ring around the foundation ch tower and bracing the ring by four of reinforcing bars arranged in the form ross, and embedded in concrete deposited our triangular spaces between the old dations and the new work. The bars were d through four steel tubes forced under the nal foundations by means of screw-jacks. Although the reinforcement of the foundations as carried out is not considered to be so effective as entire reconstruction would have been, the work as executed will safeguard the towers against excessive settlement and obviate the risk of further injury. The bearing surface has been almost doubled, and the average pressure on the soil reduced to 3,980 lb. per square foot, as compared with 6,666 lb. per square foot in the case of the original foundations.

Test for the Penetration of Preservatives into Wood.

A SIMPLE method of determining the penetration of inorganic preservatives into timber is described in a circular issued by the United States Forest Service. In this method visual inspection of prepared specimens is adopted for determining the depth to which the preservative agent has penetrated. A specimen disc of the treated wood is cut, and in the case of zinc chloride the freshly-cut surface is immersed for ten seconds in a 1 per cent. solution of potassium ferro-cyanide. It is dried with blotting-paper, dipped in a 1 per cent. solution of uranium acetate, and allowed to dry. Unimpregnated portions of the wood then exhibit a dark-red colour, and treated portions are whiter than the natural wood. It is stated that chemical tests show that proportionate amounts of zinc chloride as small as 0·2 lb. per cubic foot can be detected in this manner. In the case of copper salts, the specimen discs need only be dipped in potassium ferro-cyanide solution, and the penetration zone is marked by a deep-red stain. The same test for iron salts is followed by a dark-blue stain. Mercury perchloride is made visible by a solution of hydrogen sulphide resulting in a black stain. A great advantage of the method is that it can be quite readily applied by anyone desiring to ascertain whether treated timber has been adequately impregnated.

Earthquake-proof Dwellings at Messina.

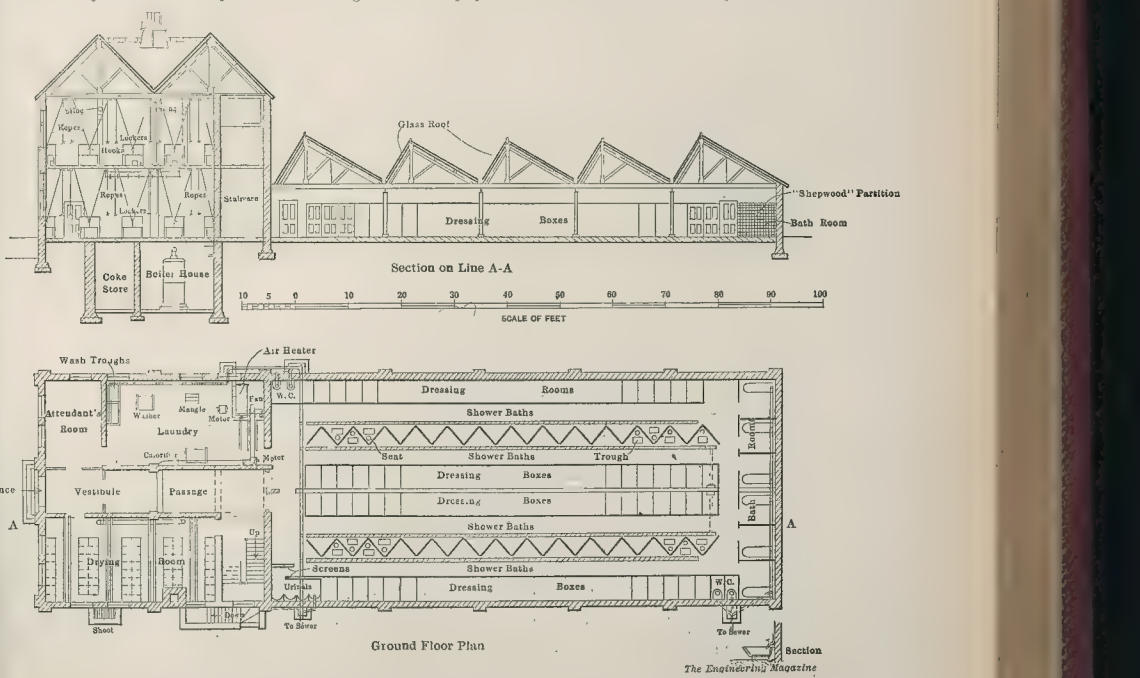
ALTHOUGH reinforced concrete is excellent for the construction of buildings to resist earthquake shocks, this material does not always furnish the most economical means of affording safety, especially in countries like Italy, where steel bars are relatively costly. This consideration has decided the authorities of the Italian State Railways to adopt timber-framed buildings for the housing of their employees at Messina. The new dwellings, to the number of 700, replace the temporary barracks constructed after the recent earthquake. These houses contain four or six rooms, all on one story, and are covered with a flat roof. Ample space is left between them, so as to minimise risk and to provide land for gardens. The exterior and partition walls consist of expanded metal, covered with cement mortar and supported by pitch-pine standards treated with a preservative solution. The walls are constructed with an interior air space, 25 centimetres wide, which reduces the transmission of heat and sound. The timber standards are connected by steel brackets to the foundation sills and roof beams, and are braced suitably to insure rigidity. The roof is of generally similar construction, and covered by a composition of wood and cement coated with tar. The floors are finished with coloured cement tiles.

Tall-Building Risks.

THE fall of a stone minaret from the tower of the Trinity Building, New York, emphasises the necessity for exceptional care in the design and construction of lofty structures. In this case the minaret weighed about 200 lb., and fell from the height of 275 ft. above the street. On reaching the pavement it was smashed into numerous fragments, which flew in all directions, causing injury to some innocent pedestrians. As it is stated that the minaret was torn from its pedestal by a large flag, it is obvious that the element of contingent risk had not been taken into account so fully as could have been desired.

Miners' Baths and Bath Houses.

AN article by Mr. G. B. Walker in the *Engineering Magazine* gives a well-illustrated account of the facilities provided for bathing and washing by typical British and Continental mining companies. Among examples furnished by this country special attention may be directed to the elaborate bathing establishment of Messrs. Brunner, Mond, & Co., at Winnington, and the baths proposed to be erected for the Wharncliffe Colliery Company from the designs of Mr. L. W. Ensor, A.R.I.B.A. As it is proposed in connexion with the new Mines Bill that similar facilities shall be provided if demanded by the men, this article is one that may be usefully borne in mind by our readers.



Plan of Baths, Winnington, Cheshire. Mr. L. W. Ensor, A.R.I.B.A., Architect.

THE BUILDING TRADE.

DISCOUNTS.

IN a recently-published work Mr. C. R. Ashbee incidentally introduces the question of discounts of the type so generally adopted among manufacturers of building goods, and in so doing displays a misapprehension as to the real purport of this practice which is shared by a large proportion of his professional *confrères*.

It would be idle to contend that discounts have never been used to hoodwink the inexperienced as to the value of an article, but we should be sorry if it were generally imagined that this was the intention and purpose of a system so general in trade transactions. No, the origin of the practice was to provide a quick and easy method of dealing with market fluctuations and it answers this purpose very efficiently. Mr. Ashbee, in his implication that the discount necessarily goes into the builder's pocket as additional profit, is very wide of the mark. Though the lack of uniformity in the practice of architects sometimes results in this, it also not infrequently operates to the builder's detriment.

We may admit the architect is in a difficult position owing to the varied customs among different manufacturers as regards discounts. Suppose he specifies "list price," the builder in his competitive estimate will be bound to allow, say, 25 per cent. off this, while among the various firms the rate of discount may vary from 20 to 33 per cent., and he has no knowledge as to the one whose goods the architect will select. If, on the other hand, "nett" prices are specified there are still firms who will manage to allow the contractor 10 per cent. below the price quoted to the architect as nett. The distinction between "builders' firms" and "architects' firms" is quite well known, but it does not necessarily operate to the builder's advantage. If, for instance, he gives a low price, trusting to secure 10 or 15 per cent. off nett prices, and an "architect's firm" is selected who will allow him nothing, he is short on his estimate by the amount in question, while if the architect is easy-going the builder may make quite a comfortable little sum on the "nett" prices. In either case the element of uncertainty, where the builder and the architect are strangers to each other, is unsatisfactory and liable to produce friction. We are quite sure that both parties would welcome a greater uniformity in practice with a view to the elimination of avoidable risks in contracting. A business in which there are so many unavoidable risks could well be relieved of those which more system and uniformity in business practice would eliminate.

It is easy to say that "nett" means "nett," and no discount will be permitted, but when a manufacturer is not pressed to the utmost competitive limit there is always a temptation to reserve a discount to propitiate a contractor who is probably working on a very small margin of profit, while as a result of this contractors are apt to tender rather lower than they otherwise would, trusting to get a small recoupment from discounts. All may go well unless the architect is one of those tough and unsympathetic specimens who believes in competition all through, pits the manufacturers against each other, until they have had to pare off their discounts, and leaves the contractor at most just the 2½ per cent. for cash. Unless those tendering were well posted in this architect's rigidly conscientious attitude, we may hazard a guess that the profit on the contract will be a disappointing one.

THE PENALTY CLAUSE.

CLAUSE 24 of the conditions of the R.I.B.A. Form of Contract provides that the contractor shall pay the employer a certain sum as damages should he fail to complete his work before a stipulated date, and this is usually referred to as the "Penalty Clause."

Many builders treat this clause lightly on the score that it is very seldom enforced, yet it may lead to a great deal of trouble, if not to litigation. No claim can be made against builder for delay arising from causes over which he has no control, and these are set out in detail in Clause 25 of the contract. It is unfortunate that few foremen are well acquainted with the contract, and a builder would be well advised to draw the attention of his foreman to this clause, so that he should be in a position to prove his non-liability for delay under any of the terms contained therein. A foreman should be careful to keep a record in his diary of the time lost owing to inclemency of the weather, and should not forget that every hour lost is of importance. Very careful note should also be made by him of the loss of time arising through disputes with adjoining owners.

A considerable amount of delay is often caused by the employment by the building owner of sub-contractors whose work is not included in the contract. There are also sub-contractors whose work is included in the contract, and, though appointed directly by the employer, are paid by and become the builder's employee. In these cases a builder should for his own protection insist upon a contract being made between himself and the sub-contractor, and a form of such contract is now issued by the London Master Builders' Association.

Variations on the contract, whether they are in addition or omission from the contract, usually mean a loss of time, and a careful account of the time so lost should be kept. The builder should bear in mind that under the reference to "strikes or lock-outs" in this clause he must at once notify the employer, and that this part of the clause refers not only to his own business, but to every trade that affects him.

The builder should be careful to note Clause 2 of the conditions of the contract, and give the architect notice in writing of all details he requires; delay is often caused by these not being supplied, and the date when all details are received should be carefully noted.

PROJECTED BUILDING WORKS.

A LARGE proportion of the 111 Private Bills for next session contemplate constructive works of some kind or another, such as railways, docks, waterworks, tramways, etc., and a few contain proposals for strictly architectural work. For instance, in the Swansea Corporation Bill Mr. G. T. Hine, architect, is responsible for an estimate of 282,700*l.* for a new asylum, made up as follows: Land, 16,200*l.*; erection of asylum, including the laying out of the grounds, 245,500*l.*; furnishing and equipment, 16,000*l.*; contingencies, 5,000*l.* Mr. G. Moxham, architect, has also prepared an estimate of 13,000*l.* for erecting shops on part of the market property of the Swansea Corporation. It is further proposed in the Bill to spend 225,000*l.* on sewage works and 98,850*l.* on street works, and also to lay down regulations regarding the area of habitable rooms in all new buildings. The floor space of the living-room is to be not less than 132 sq. ft., and of one bedroom not less than 110 ft., and no bed or habitable room is to be less floor area than 70 ft. The Sheffield Corporation seek to spend 294,368*l.* on street works and 60,000*l.* on the conversion of the existing privies into water-closets. The Keighley Corporation are desirous of spending 27,000*l.* on improving the Keighley Institute and 27,150*l.* on street improvements, and have also inserted in their Bill various model clauses dealing with the building by-laws. Amongst other things the Shipley Urban District Council have a clause enabling them to make special rules in regard to the erection of steel and reinforced concrete buildings, and also to lay down the area of habitable rooms. In regard to the living-room the area is only to be 115 sq. ft. The Port of London Authority are asking for compulsory powers to purchase a considerable block of property in Crutched-friars, French Horn-yard, Seething-lane, Catherine-court, Savage-gardens, and Trinity-square, to enable them to build offices, etc., which will involve the closing up of Catherine-court and French Horn-lane. The Hull Corporation ask power to spend 96,000*l.* on a new bridge and 61,000*l.* on street improvements. The City Corporation have an estimate of 17,500*l.* for the construction of subways in connexion with St. Paul's Bridge at Queen Victoria-street and Cannon-street. The Dover Corporation purpose pulling down insanitary property in Pier Ward and widening Limekiln-street, Bulwark-street, and Beach-street. Birmingham Corporation are desirous of erecting a new electric generating station, the cost of which, exclusive of the land and equipment, is set down at 124,000*l.* It is further proposed to erect several new transforming stations and to carry out street widenings, the cost of the latter being 122,300*l.* Hertford Corporation are taking a lease of Hertford Castle from the Duke of Bedford for a term of seventy-five years at a rent of 2s. 6d. a year, and propose adapting it for public uses. The Commissioners of Works are taking lands at Westminster bounded by the Horse Guards'-avenue, the Embankment, and Montagu House and garden for the extension of the public offices; land in Holborn to extend the Patent Office; and part of Clifford's Inn for the extension of the Record Office. The London County Council, amongst other matters, are seeking to rebuild Lambeth Bridge at a cost of 240,000*l.*, and to develop part of the White Hart Estate at Tottenham, which some years ago was acquired for the erection of working-class dwellings on garden city principles. The Manchester Royal Exchange have proposals for acquiring land to extend the Exchange buildings which involves the making of a new street. The Tees Conservancy Board seek to make new roads and raise the river training walls at a cost of 96,000*l.*

THE BUILDING TRADE UNREST.

IN view of the demands put foward by London carpenters and joiners and cabinet-making trades for an increase of 1½d. an hour in wages, a reduction of summer hours, and double pay for overtime, an interview with the Secretaries of the two trade unions concerned will be read with interest. The opinions expressed are those of Mr. S. Stennett, District Secretary of the Amalgamated Society of Carpenters and Joiners, and Mr. Alex. Gossip, General Secretary of the National Amalgamated Furnishing Trades Association—both concurring in the answers given to questions—and may, therefore, be taken as an official statement on the men's case.

"What led up to the alteration of your rules in which you seek for improved conditions?" was the first question.

"In the first instance," was the reply, "the London Building Industries Federation and the branches were asked to send in suggested alterations, and their suggestions, afterwards embodied in the new rules, were agreed to by an almost unanimous vote of the union members of the trades affected. The men are behind the new proposals, and are determined to stand by them."

"But have not both the societies you represent an agreement with the London Master Builders' Association?"

"No; at the present time the cabinetmakers have not an agreement, and during the last few years there have been such a change in the system of manufacture of joinery and fitments that members of both societies work together in a very large number of shops. As a consequence it would be as much to the employers' interest as ours to have an agreement with both societies, so that we do not expect any difficulty in that direction."

"Is it at all possible that other sections of the building trade will seek to improve their conditions?"

"Yes, it is quite possible, as some sections are now taking a vote of their members on the question—such sections as the bricklayers, plasterers, masons, etc."

"Do you think there is a possibility of a strike?"

"No. We have a very good opinion of the members comprising the London Master Builders' Association, and there is no reason to doubt that we shall arrive at an amicable arrangement. We know that the employers themselves are perfectly well aware of the increased cost of living, and that it is absolutely necessary that the standard of life should

n no way reduced. They know from rience that the better paid class of work- are without exception the best producers. was recognised by the Engineers and Ship airers' Association of London when they ted to the joiners working on the Thames amount which we are asking from the er Builders' Association. We consider the reduction of hours is a question of eme and vital importance in these days of dier methods of production and consequent ase in the ranks of the unemployed. is recognised by every thinking man as of the greatest evils which we have to with in this country. It is a well-known that the firms who have adopted the er working day are in a much better posi- to compete than those who work the r hours. This we have on the authority nany large employers themselves. This ion of the reduction of hours of labour the standard of living is, of course, not ed to our trades, but affects the whole ry. A shorter working day means more oyment, a greater distribution of wages, better work."

in view of the tendency to fix a time limit ntracts, how do you propose to obviate ecessity of working overtime?"

Ve think there will be very little difficulty ost jobs in arranging for two shifts of This would be to the interest of both es, and it must be obvious that a man relatively accomplish more work and a r quality of work in eight hours than he is working twelve hours, for which ceives the extra rate."

What is the strength of your unions?"

is almost impossible to say from one to another. There are 110 branches of arpenters' and joiners' societies, and ten hes of the cabinetmakers' societies, and e making new members every week. The ers are realising their position and are ng into the unions."

n the event of a dispute, how many men ikely to be involved?"

would be not merely our own members. he sections of the building industry are ated with the London Building Industries ration, with one exception, and immey one section was involved in a dispute, uld involve all other sections, according s rules of the federation."

Would you be willing to confer with the r Builders' Association on the subject?"

es, we are quite willing to meet them w way to discuss the situation."

A Builder's Views.

Howell J. Williams, builder, of Bersey-street, interviewed on the subject,

think myself the time is not opportune ncede the requests of the societies. The hey ask for is pretty stiff, and, in view state of trade, not very welcome. It is nly not a matter for threats of strike or ng of that kind, but essentially one for ence. There is a certain class of builder, ecial reputation, whose operations are ed very largely to large rebuilding works entral London, who have had a fair nt of work lately. But the building trade not depend upon this class; it depends the enterprise work initiated on speculaines, either in the suburbs or on large or the erection of warehouses or offices. to the difficulty of obtaining finance for ind of enterprise, such work has been g during the last few years. People an aversion to locking up large sums ilding enterprises which are not readily able. Consequently, a large amount of which used to go in building is now diverted to more quickly negotiable ties.

difficulty is now that while some classes lders and their clients can well afford to he rise, there is a very large class of rs and their clients to whom any subl rise would seriously handicap work. tition is so keen amongst the builders ng that the margin of profit has almost eared. The number of failures in the ng trade in the last three or four years that some of the firms who do the most are those who go the sooner to the wall. ly the cautious ones who are just holdeir own. Frequently builders are to for this competition.

sympathies are very much with carrs, because I was put to the carpentering myself, and I think that carpenters ave to find their tools considerably more n most other trades—have some ground reasonable advance, especially having to the absence of continuity in their ment. In any event, it is essential that dard wage for all trades should be in agreement by conference, so that ployers are placed on the same basis. ld be impossible for some employers to concede an advance and others to refuse it, when all are tendering for the same work. I think the question of the overtime is one capable of adjustment when representatives of the men and the employers get round the table.

If a strike came next year, it would certainly give the trade—to the injury particularly of the workmen themselves—a more serious blow than any previous strike, because we are hoping for a revival of enterprise building, upon which, in the main, the building trade really depends. It is for the men to make out their case, and I hope personally it will be met sympathetically."

THE WOOD TRADE.

MESSRS. FOY, MORGAN. & Co., in their wood report for 1911, state that "the importation of sawn and planed wood goods into the United Kingdom has fallen away considerably during the past year, not merely in comparison with the two preceding years, or even with an average of the previous five years, for which statistics are given and on which the decrease amounts to at least seven per cent., but on a wider survey is found to have been by far the smallest recorded during any of the previous fifteen years, with the single exception of 1908. For this result there have been many contributing causes, among the chief of which, the increasing international competition for all kinds of raw materials and the resulting high average cost combined with a low consumption, for which the depression in the building trade is mainly responsible, are at all events not peculiar to the past year, although their influences seem to have been more acutely felt. But in addition to these, the trade has recently had to confront special and unforeseen difficulties, such as the dislocation of trade through the protracted series of labour troubles causing a further restriction in normal consumption, and secondly, the great increase in freights leading directly to an increase in the cost, and eventually curtailing the volume of supplies. These undoubtedly have been the crucial factors in determining the restricted and unprofitable character of the past season's business. The average import cost remains at the high level attained in 1910, which would be remarkable, in view of the admittedly reduced consumption during the past year, except for the fact that the reduction in the supply has more than kept pace with the retrograde movement of the demand, with this result, however, that the ratio between the two is probably more favourable to a steady market during the present closure of the navigation than could have been said to be the case a year ago. High prices, however, particularly when resulting, as is the case now, from causes entirely disconnected with the state of internal trade, are a severe handicap to profitable business while trade remains depressed, and in fact help to perpetuate the evil by encouraging the use of ferro-concrete and those other substitutes which detract from the ordinary demand for wood. The latest returns of the general trade of the country are, however, so encouraging that an extended inquiry for wood may be fairly anticipated in the near future. . . . But no really wholesome impetus in consumption will be forthcoming (without which there can be no great increase in turnover, which is now the great desideratum from the timber-merchant's point of view) until the belated improvement in the building trade has actually taken place. The best indications of such a consummation, although these cannot be accepted as conclusive, are found in the reports by the Board of Trade, showing that the number now unemployed in the building trade is only one-third of what it was a year ago, and still less than two years ago. Some speeding up of the consuming power of the United Kingdom markets in the interval between the present and next midsummer would appear to be a matter almost of necessity if the increased supplies during the coming year, prophesied by some as the consequence of hanging over a portion of the past season's manufacture, are to be absorbed without jeopardy to prices."

GENERAL BUILDING NEWS.

EDINBURGH CHRISTIAN SCIENCE CHURCH

The First Church of Christ Scientist, Inverleith-terrace, Edinburgh, has just been dedicated. The architecture, says the *Scotsman*, is founded upon the late mediæval buildings of Scotland. Simplicity of mass has been aimed at rather than elaboration of detail. On the north front abutting on the terrace, where the principal entrance is placed, the elevation shows a central oblong tower with flanking circular turrets, in which the gallery staircases are placed. In the centre of the main tower is a three-light window, below which is the entrance porch with simple wrought-iron grills. In the gablet of the main tower is carved a cross, surmounted by a crown; at the angles are respectively the Lion of St. Mark and the Eagle of St. John. About the porch are many bits of symbolic carving. Owing to the fall of the ground to the south, towards the Water of Leith, the building is planned in two stories. On the street level, entered from Inverleith-terrace through the porch already referred to, is a vestibule, on each side of which are the staircases to the gallery. Beyond the vestibule, and separated from it by an oak glazed screen, is the hall, 70 ft. in length by 50 ft. in width, and about 40 ft. to the roof. The hall has a large barrel-vaulted ceiling, and is lighted by five windows on each side. There is only one gallery—that at the north end, over the entrance vestibule—so that the whole of the church otherwise is clear of supporting columns of any kind. The flooring is of wood blocks arranged in patterns, and the seating is accomplished by means of cathedral chairs. The platform, with two reading desks, is at the south end of the church. At this end of the building is a large structural arch, 38 ft. across, with flattened panel. Between the piers of the windows the spaces are lined with oak. From the lofty roof depend two rows of electroliers. Beneath the church is a small hall, seated for 130, also eight rooms for use as business and class rooms, and cloakroom accommodation. Annexed to the south end of the building is a small block, which contains two studies for the readers and a small service-room. The church is also fitted with a full service of telephones. In the basement is the heating boiler, the chimney of which has been so designed as to make an ornamental feature of the south-east elevation, where has been placed, approached by a flight of stairs, a subsidiary entrance to the church. Mr. Ramsay Traquair was the architect. The cost of the church, including furniture, fittings, etc., was 9,700*l*.

SCHOOL, DARLINGTON.

The Higher Elementary School, erected by the Darlington Education Authority, in Gladstone-street, was opened by Sir Hugh Bell, Bart., on the 8th inst. The building was designed by the Borough Surveyor (Mr. G. Winter), in the Gothic style in harmony, generally, with the Technical College adjoining. The exterior is built with hand made plastic bricks, with buff terra-cotta dressings. The interior woodwork is of varnished pitch-pine. The floors of the halls and vestibule are formed with marble terrazzo paving, and all the other floors of pitch-pine wood blocks. The accommodation is for 320 scholars, in eight classrooms, in addition to which there is on the ground floor a central hall, 44 ft. by 33 ft., and a manual instruction-room, 58 ft. 6 in. by 24 ft., with accommodation for forty boys, together with the necessary storeroom for same, two teachers' rooms, cloakrooms, and lavatories. On the first floor, which is constructed of fireproof material and approached by two stone staircases, are two landings leading on to a gallery in the upper part of the central hall. Around this gallery are placed five class rooms, together with a chemical laboratory, 35 ft. by 24 ft., with places for twenty-four scholars, balance-room, storeroom, etc., with a lecture-room, 24 ft. by 23 ft., adjoining. The building is lighted throughout with electricity and heated with hot water on the low-pressure system special attention having been paid to the ventilation. The total cost of the building, including large cemented playground, latrines, etc., for same, has been about 8,000*l*., exclusive of furniture. The contractors were:—Excavators, bricklayers, carpenters, and joiners, Messrs. J. Guthrie & Son, Darlington; slating, Messrs. Lancaster Brothers, Darlington; plastering, Messrs. Smith & Boyle, Darlington; plumbing and glazing, Mr. Emerson Smith, Darlington; painting, Messrs. Scott & Armistead, Darlington; smith and founder, Mr. R. N. Golding, Darlington; heating, Messrs. G. Denham & Co., Darlington; electric lighting, Messrs. Cox-Walkers, Darlington; terra-cotta, the Hathern Station Brick and Terra-Cotta Company, Ltd., Loughborough; fireproof flooring, Messrs. Homan & Rodgers, Manchester. The clerk of works was Mr. J. Dalton, of Darlington.

NEW SCHOOL, BLACKBURN.

Messrs. Cooper & Slater are the architects for this school, which is being erected at a total cost of 14,500*l*., and which will provide accommodation for 905 scholars. The contractors for the works are Messrs. Thomas Higson & Son, of Blackburn.

NEW INSTITUTE, LLANYSTUMDWY.

This institute, which is a gift to the village from Mr. Lloyd George, has been erected from the designs of Mr. T. Taliesin Rees, F.R.I.B.A., of Liverpool. The large hall will provide accommodation for over 300

people. The building includes a reading-room, recreation-room, kitchen, and stores. The contract was carried out by Mr. John Humphreys, of Criccieth.

NEW CHURCH HALL, PLYMOUTH.

The foundation-stone of the new hall for the church of St. Matthias was laid last week. The building is being erected from the designs of Messrs. Carder & Carder, architects, of Plymouth. The estimated cost of the work is 3,000*l.*, and the hall will be about 81 ft. by 42 ft., with a portion of the northern end divided into two classrooms. The building will be lit by electricity and heated by hot water.

NEW UNIONIST CLUB, POLRUAN.

The foundation-stone of this club was laid last week by Lady Beatrice Pole-Carew. The building is to be erected from the plans prepared by Mr. C. W. Parkes Lees. The estimated cost of the work is 400*l.*, and the club will include billiard, reading, smoking, and ladies' rooms.

NEW PREMISES FOR ROWNTREE & CO., YORK.

A large building, containing dining-rooms, domestic school, and gymnasia, is being erected for the employees of Messrs. Rowntree & Co. in the district of Haxby road. The plans were prepared by Mr. W. J. Swain, the works architect, and accommodation will be provided for over 3,000 persons. This building will be connected with the factory by means of an 18-ft. wide subway under the Haxby-road.

TRADE NEWS.

Messrs. Ashwell & Nesbit, Ltd., hot water and heating engineers, etc., of Leicester, London, Manchester, and Glasgow, have issued a useful tear-off date indicator.

Under the direction of Mr. Edmund A. Fermaud, architect, 17, Dartmouth Park-road, N.W., the "Boyle" system of ventilation (natural), embracing Boyle's latest patent "air-pump" ventilators and air inlets, has been applied to the Free Library and Institute, Dolgelly.

The Dutton Isolation Hospital, near Runcorn, is being supplied with Shorland's warm-air ventilating patent Manchester stoves with descending smoke flues and grates, by Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester.

PROJECTED NEW BUILDINGS IN THE PROVINCES.*

BIRKENHEAD.—Proposed baths (8,400*l.*); Mr. C. Brownridge, Surveyor, Birkenhead Town Council.

Birmingham. — Rebuilding scheme, New-street (16,000*l.*); Messrs. Nicol & Nicol, architects, Colmore-row, Birmingham; foundations by Messrs. Barnsley & Sons, 102, Ryland-street, Birmingham.

Blantyre.—Extensions to Calder-street School (2,000*l.*); Mr. James Cowie, architect, 123, Main-street, Wishaw.

Blaydon.—Extensions to school; Messrs. S Fenwick & Co., builders, Northumberland road, Newcastle.

Boothstown.—Alterations and additions to premises for the Boothstown Manufacturing Company.

Broadclyst.—Rebuilding farm buildings for Sir D. T. Acland; Messrs. E. H. Harbottle & Son, architects, Queen-street, Exeter.

Brough. — Police-station and court-house (2,850*l.*); Mr. J. H. Fenwick, builder, 180, Albert-avenue, Hull.

Carlisle.—Additions to Catholic schools, Union-street (2,000*l.*); Mr. H. Foxall, architect, 54, Lowther-street, Carlisle.

Caerlon.—Training college (25,000*l.*); Messrs. A. Swash & Son, architects, Newport; Mr. F. Bond, builder, Cardiff.

Chester-le-Street.—Plans have been lodged by Messrs. J. G. & F. Lawson for 107 houses.

Chorley.—School (500 places); Mr. J. Mills, Secretary, Education Committee, Chorley Town Council.

Darlington.—Hall (2,000*l.*); Messrs. J. Taylor & Minor, 53, Northgate, Darlington.

Dunston-on-Tyne.—Infants' school (4,000*l.*); Mr. W. Rushworth, architect, Shire Hall, Durham.

East Hetton.—School (4,000*l.*); Mr. W. Rushworth, architect, Shire Hall, Durham.

Edinburgh.—Extensions to McLagen & Cumming's factory, Warriston-road (3,500*l.*); Mr A. Hunter Crawford, architect, 10, Randolph-place, Edinburgh.

Falmouth.—Adaptation of market house for post office; H.M. Office of Works, Storey's-gate, Westminster, S.W.

Folkestone.—The following plans have been passed:—Addition to "Erinmore," Shorncliffe-road, for Mr. J. Abbott; addition to the Lodge, Castle-road, Sandgate, for Mr. F. H. Miller; additions to Hermitage, Castle-road, Sandgate, for Mr. M. Van Praagh.

Fort Augustus.—Church for the Benedictine Monks; Mr. A. Gilbertson, architect, 13, Harrington-street, Liverpool.

Fulford.—Eighty two houses; Messrs. Wise & Lansdell, Ltd., builders, Jewry-street, Portsmouth.

Hapton.—Additions to printing works for Messrs. A. Drew & Son, Ltd.

Harsforth.—Proposed enlargement of police-station; Mr. J. V. Edwards, architect, West Riding of Yorks County County, Wakefield.

Hawarden.—School; Messrs. Wright & Son, builders, Hawarden.

Henley.—Grammar school; Mr. H. T. Hare, architect, 13, Hart-street, Bloomsbury-square, W.C.

Horsley Woodhouse.—School (225 places); Mr. E. W. Small, Secretary, Education Committee, Derbyshire County Council, Derby.

Houghton-le-Spring.—Enlargement of isolation hospital (520*l.*); Messrs. Cowieson, builders, Glasgow.

Hove.—Plans have been passed as follows:—Eight houses, Langdale-gardens, for Mr. G. H. Burstow, on behalf of Mr. W. Perrin; garage, Pembroke-crescent, for Mr. S. James, on behalf of Mr. C. Blandford.

Hull.—Warehouse, Whitefriargate, for the Trustees of Trinity House.

Kingseat. — Proposed threshing mill at Asylum; Asylum Committee, Aberdeen Lunacy Board.

Laughton. — Hotel; Mr. W. Edwards, Dinnington, Rotherham.

Leeds.—Factory, Woodhouse-street (6,000*l.*), for Messrs. Jackson Stones, Ltd.; Messrs. Garside & Pennington, architects, Ropergate, Pontefract.

Llanystundwy. — Institute; Mr. J. Humphreys, builder, Criccieth.

Maidstone.—Enlargement of school, Tonbridge-road (1,000*l.*); architect, care of Mr. S. L. Monckton, Secretary, Education Committee, Maidstone Town Council.

Malmesbury Park (Bournemouth). — Additions to school (350 places); Mr. F. W. Lacey, Surveyor, Bournemouth Town Council.

Marple.—Nursing home (3,000*l.*); Secretary, Crippled Children's Help Society, 55, Cross-street, Manchester.

Maryport.—Additions to school (3,000*l.*); Mr. J. Foster, Earl-street, Carlisle.

Methley.—Alterations to Coneymoor Working Men's Club for the Leeds City Brewery Company, Ltd.

Oban.—Kippering houses for Callendar and Oban Railway (4,500*l.*); Mr. A. Paterson, Engineer, Callendar Railway Offices, Buchanan-street, Glasgow.

Oldham.—Six shops, The Market (170*l.*); Messrs. W. Henshall & Son, builders, Barker-street, Oldham.

Penzance.—School (5,000*l.*); Mr. F. Latham, Borough Engineer, Town Hall, Penzance.

Pool (near Leeds).—Corn mill for the Wharfedale Farmers' Trading Association.

Preston.—Catholic chapel (2,500*l.*); Mr. J. H. Mangan, 3, Guildhall-street, Preston.

Rainforth.—School (9,000*l.*); Mr. T. Collinge, Surveyor, Town Hall, Mansfield.

Rotherham.—A plan has been passed for a motor garage in Clifton-lane for Dr. J. R. Anderson.

Reyton.—Cotton mill; Mr. A. Turner, architect, 25, Clegg-street, Oldham.

Sheffield.—Filter house, Low Bradfield (2,235*l.*); Messrs. W. & A. Forsdike, Ltd., 24-32, St. Mary's-road, Sheffield. The following plans have been passed:—Eight houses, Myton and Ribston roads, for Mr. B. Baggaley; additions, Harold Hotel, Harold-street and Hardy-street, also additions and alterations, Weston Park Hotel, Weston and Summer streets, for Messrs. Tennant Brothers, Ltd.; four houses, Horndean-road, for Mr. J. H. Smith; three houses, Manor-lane, for Mr. E. Martin; additions to premises, Jenkin-road, for Trustees of Brightside Primitive Methodist Chapel; warehouses, Cumberland street and Well-lane, for Messrs. T. & J. Roberts; five houses, Chesterfield and Bingham roads, for Mr. A. Davidson; eight houses, Shirland-lane, for Mr. G. D. Wright; additions to premises, Tinsley Park-road, Coleridge-road, West Don-street, and Lock-street, for Sheffield Corporation Education Committee; works, Alma-street, for the Sheffield Forge and Rolling Mills Company, Ltd.

Shotley Bridge.—Hospital; Messrs. Newcombe & Newcombe, architects, Pilgrim-street, Newcastle-on-Tyne.

Skipton.—Warehouse, Belle Vue Mills, for the English Sewing Cotton Company, Ltd.; Mr. James Hartley, architect, Swadford-chambers, Skipton.

Spalding.—Factory for Messrs. Osmond Son (2,500*l.*); Mr. H. C. Scaping, architec Court-chambers, Town Hall-square, Grimsby.

Stockton.—Workhouse infirmary (10,000*l.*) Mr. J. Rodham, Finkle-street, Stockton.

Sunderland.—Rope factory (2,500*l.*); Mr. Eltringham, architect, West Sunnyside, Sunderland.

Thurnscoe (Yorks).—Fire-station, Counc offices, etc. (2,000*l.*); Surveyor, Thurnsco Urban District Council.

Torquay.—Extensions and improvements baths (15,000*l.*); Mr. H. A. Garrett, Enginee Town Hall, Torquay. Plans have been passe for six houses, Redden Hill-road, for Mr. Cruse, and eight houses, Mallock-road, f Messrs. Smith & Johnson. A plan has be lodged for the erection of a parish hall at t rear of Torwood street, for the Council Trinity Church.

Trowbridge. — School, Timbrell - stree (3,690*l.*); Mr. E. Linzey, builder, The Hall Trowbridge.

Truro. — Extensions to post-office; M Leonard Winn, Boscawen-street, Truro.

Wallsall.—A plan has been passed for alter tions to the Rose and Thistle Inn, Wednesbur road, for Mr. J. Cleobury.

Wallsend.—Offices (2,500*l.*); Messrs. Ca Steel, & Caws, architects, 22, Fawcett-stree Sunderland.

Warrington. School, Oakwood-avenue; M J. M. Murray, Secretary, Education Com mittee, Warrington Town Council (architect be appointed).

West Hartlepool.—Power-station: Mr. W Barrs, Engineer, Town Hall, West Hartlepoo

Whitefield (Manchester).—Restoration Stra Paris Church (3,000*l.*); Mr. R. B. Preston, South King-street, Manchester.

Winchcombe (Gloucester).—Alterations workhouse (2,000*l.*); Mr. H. W. Stevens, Cler Board of Guardians, Winchcombe.

Ynysmudw (Pontardawe). — St. Mary Church (2,900*l.*); Mr. J. Cook Rees, architec St. Thomas'-chambers, Neath, Glam.

* See also our list of Competitions, Contracts, etc., on another page.

AUSTRALIAN COMMONWEALTH OFFICES IN THE STRAND.

THE Australian papers to hand contain r ports of the discussion in the Federal Parli ment on December 5 on the following moti with reference to the erection of new Co monwealth offices in the Strand:—

"That this House approves of the purcha of the following site and the erection o permanent building thereon for Commo wealth offices, viz., that part of the Lond County Council's property included wit the Strand, Aldwych, and Melbourne pla London."

The motion was moved in the House Representatives by Mr. J. H. Thom Minister for External Affairs. The site w (said the Minister) practically in the cent of London, being equidistant between t Bank of England and Westminster. T frontage to the Strand was 195 ft. 6 in., Aldwych 197 ft., and to Melbourne-pla 191 ft. 6 in. There were two proposals und consideration in connexion with the proper One embraced the whole block, and cover an area of 24,326 sq. ft. The other co sisted of that part of the block having frontage to the Strand, and covering an a of 13,632 ft. The London County Coun was invited to submit terms on which ea of these areas could be acquired. The pri asked were as follow: For the whole blo leasehold, 14,000*l.* per annum ground re or freehold at twenty-six years' purcha 364,000*l.*; and for the Strand frontage, the same terms, 9,542*l.* per annum, 248,092*l.* The Government, after inqui decided to recommend the larger scheme (the whole block), which provided for the p chase of the freehold for 364,000*l.*, and erection thereon of a block of offices e mated to cost 223,000*l.*, totalling 587,00 or, allowing for contingencies, 600,000*l.* round figures. The purchase money inclu the site of the existing Victorian Gove ment Offices, which had been erected leasehold. According to plans which h been prepared under instructions from High Commissioner (Sir George Reid) building will consist of a basement and se storeys, and would include a congress- and a lecture-room. It was explained in Federal Parliament that the design wo have to be approved by the County Cou but the Commonwealth would certainly build a "skyscraper." The resolution agreed to.

THE SOCIETY OF ARCHITECTS:

ILLUMINATION AS A STUDY FOR ARCHITECTS.

A MEETING of the Society of Architects was held on Thursday evening at No. 28, Bedford-square, W.C., when Mr. John Darch, F.S.I., read a paper on "Illumination as a Study for Architects," of which the following is an abstract :—

"The governing factors of illumination may be classed under the following heads :—(1) Physical; (2) Physiological; (3) Æsthetic; and (4) Economic.

"We have to see what these factors demand and what are the principles deducible therefrom.

"The physics of light in its more modern form is built upon theories essentially different to those which held place in our younger days, and afford a much better explanation of the forces and phenomena involved in illumination. The ever-present difficulty in artificial lighting is the preponderating companiment of heat (or ultra-red) rays, while the activity of the actinic (or ultra-violet) rays; both are invisible, but their power over human economy for good or ill is, nevertheless, very real, while the luminous part of the spectrum of radiation for all illuminants is very small one.

"Dr. Drysdale, in a recent article, has given particulars of the enormous waste of energy principally in heat—necessary for an exceedingly small percentage of light, and which I have put into the following table :—

Energy Expended in	Percentage of Yield of Light (approx.).
Candle	0·1
Oil lamp	0·2
Gas flame	0·2
Incandescent gas	1·0
Carbon glow lamp	2·5*
Nernst ...	5·0*
Metallic filament	10·0*
Ordinary arc	20·0*
Vacuum tube	40·0*
Firefly	99·9

"The last item has been inserted for comparison. If we only knew the firefly's little secret, we should be able to put all our energy into pure light and save both our eyes and our pockets. At the present time our method of getting a larger proportion of luminous rays is to increase the temperature of the radiating body by which the rate of frequencies are increased and forced towards the luminous part of the spectrum.

"Modern life and modern lighting have already given an abundance of work to an increasing army of ophthalmic surgeons, and called a state of things that loudly demands that those who deal with the forces of radiation should understand the powers and powers of that which they handle, and the possibilities of those organs for which it is intended.

"Much information has recently been forthcoming as to the behaviour of the eye under various applications of light, and the architect would find that even a brief inquiry into these matters, particularly that relating to the perception of colour, would be useful to him in his study of the art of illumination.

"We have to realise that the eye, as it is, has been formed under the influence of nature's environment during untold ages, that it is, therefore, easier for us to adapt the lighting to the requirements of the eye than the eye to the lighting. The eye more particularly resents upward or horizontal direction, and low-placed lights may have an effect not unlike snow-blindness.

"The conditions of good artificial lighting, therefore, should approximate to those of day light, which may thus be stated :—A sufficiency of light, perfect steadiness, effective direction, freedom from violent contrasts, a downward direction (preferably oblique), and as near as white as possible.

"Unfortunately, these conditions are violated in nearly every lighting installation, and we suffer more or less, unconsciously suffer therefrom.

"Injury may be caused either by an insufficiency of light or by an excess, which really means an excess of the wrong sort or of wrongly-applied radiation.

"Insufficiency of illumination is a leading cause of eye-strain with its train of nervous disorders. Dr. Kerr, in a report upon some London schools, found that in children under six years of age the eyes of 3 per cent. were defective, at eleven years the proportion rose to 11 per cent., and in the older classes to 25 per cent. It was also pointed out that 18 per cent. of the schools were badly lit. The conclusion is obvious. Amongst the studious, clerical, and the close worker, from 50 per cent. to 70 per cent. have defective eyesight, largely myopia, and yet myopia is said to be unknown in savage life, and rare amongst seamen and farmers.

"Light is a good servant, but a bad master; if properly controlled, we cannot have too much of it, for, in common with any other power distribution, it can be so much more effectively and suitably applied when there is an abundance of power behind.

"Sunlight often reaches 8,000-ft. candles, and we find that a diffused daylight of 2,000-ft. candles is both comfortable and healthy, while from that to 100-ft. candles is our daily experience. Such intensities are far in excess of anything we ever get in artificial lighting, for a general illumination of 5-ft. candles would be considered quite brilliant; nevertheless, if the light is properly diffused, there is no available intensity that is too great, and I quite differ from those who maintain that a high general illumination is necessarily fatiguing. I have sat under 22-ft. candles with comfort and pleasure, and for the same reason that people unconsciously gravitate to the light, so a high diffused illumination will come to be generally appreciated.

"The evils of excess arise chiefly in exposed lighting, and in intensely brilliant surfaces; for while diffuse reflection would seldom exceed 1-candle-power per square inch, the intrinsic brilliancy of sources are, by comparison, excessively high. Thus the

	C.p. per sq. in.
Candle flame	averages 2
Gas flame	,, 3
Oil lamp	,, 4
Incandescent gas ...	,, 25
Carbon glow lamp ...	,, 450
Metallic filament do.	,, 1,000
Limelight	,, 5,000
Flame arc	,, 5,000
Arc lamp crater	,, 20,000
Sun at zenith	,, 600,000

"and it should be remembered that it is the intrinsic brilliancy, and not the total flux, that counts physiologically.

"The infra-red rays reach the retina just as readily as light, and give trouble accordingly, but the more destructive are the ultra-violet rays, the effects of which have been fully detailed in several recent medical essays. Happily, ordinary glass absorbs certain frequencies of these rays, and a special glass all. Glass globes are, therefore, essential to high-power lamps. Quartz glass, however—used for its refractory qualities—is no protection.

"Contrast has an important bearing on the economy of the eye. Sensation, according to Fechner's law, is relative and not absolute. A bright light against a white background may be, at least, tolerable, and in the daylight it may even pass unnoticed; but the same light on a dark background would, probably, be very painful. In such circumstances, the pupil of the eyes is alternately endeavouring to open to discern surrounding details and spasmodically closing against the bright light, fatiguing both the muscles and the retina. Professor Weber gives 100 to 1 as the safe limit of contrast.

"Æsthetics are frequently the sole *raison d'être* of an architect's employment, and that would be for the satisfaction of one sense only sight; and seeing that form and colour are a mental sensation due entirely to illumination, it follows that the character and direction of that illumination entirely governs the situation.

"Let it be noted (1) that a white light and that only will reveal a complete range of colours; (2) that flat decorated surfaces require a uniform and sufficient illumination and so as to avoid gloss; and (3) that the natural means of exhibiting architectural features and sculpture is a partly diffused downward or oblique light.

"The Greek architects well knew that it was upon the lights and shadows that their superb art depended. An architectural feature in any other light than that for which it was designed becomes an abortion; and yet how often do we apply ourselves with painful precision to design features that never will and never can be seen as drawn. Go into any church or public hall at night, and proceed to study the architectural features by its artificial lighting, and see what a travesty stands before you. When we illuminate an interior, our obvious duty is to apply a literal "lamp of truth," so that we may not only see all that is intended to be seen, but that it may produce its intended effect. The advice of an architect who could so illuminate an important building as to clearly and readily display its true character and full beauty would be very valuable.

"The commercial instincts of both makers and users of light lean to that which affords the most economical results, and while both the gas and electrical engineer have recently shown us how we can treble our output of light without further cost, there is no one to show that there is also an economy of distribution and application, to say nothing of the personal factor. The art of illumination teaches how to save waste of light by methods of calculation and tests that, so far, have been seldom applied.

"There is another aspect of economy which some employers of labour have already put into practice, viz., on the principle that "the health of the worker is the wealth of the employer," that money spent in good illumination is a profitable investment by reason of the better quality and quantity of work turned out.

General Principles.

"The whole case of good lighting is embodied in a very simple axiom, viz. :—The purpose of artificial lighting is to make readily and properly visible the things required to be seen.

"This may be made more definitive by the following rules :—

1. The lamps or other sources of light to be so disposed that they do not occupy the field of vision.
2. The illumination to be sufficient to cause the objects to appeal at once and with comfort to the eye.
3. For general illumination the light to be well diffused with a preponderating downward direction, freely flooding ceilings and walls.
4. Local lighting to such as desks, benches, exhibits, etc., to be specially suitable and in most cases adjustable in position and power.
5. The colour to be as pure and white as possible. Monochromatic light, as a rule, to be avoided.

"The relative merits of general and local lighting have been the subject of much discussion. Thus, a bank may have a general illumination sufficient for desks and all purposes, or the desks may be locally illuminated with desk lamps, from which a small amount of light may escape into the gloom overhead; or, again, there can be a combination of both. Daylight has been quoted as an exemplar in favour of general lighting only, but when it becomes practicable to provide artificial light equal in quality and abundance to that of freely admitted daylight, nothing could be said against it. It is a question of sufficiency of light and of what has to be illuminated; each case needing special consideration. In the average public hall general lighting only would be the best, because the illumination at the working level, which would usually be sufficient at 1-ft. candle, could easily be obtained, and because it is desirable to exhibit the decorative features. A school or reading-room would be a different matter, for 3-ft. to 5-ft. candles would be necessary, and to get this in general lighting may mean a fatiguing blaze of light and a large expenditure, while any varying local needs could not be met. There are cases where all needs are best met by local lighting only, but the most economical and satisfactory results are usually obtained by a small measure of general lighting combined with an adequate and well-shaded local lighting.

"General illumination may be broadly considered as of two kinds, direct and indirect, but there may be modifications and combinations of both.

---

* 1 is in lamps only, and is exclusive of loss in ion from coal to electric mains, which will t it 80 or 85 per cent.

Direct lighting is that in which the light radiates immediately from the source to the objects to be viewed. Where glass shades are used it would still be considered direct lighting. This method is usually economical and convenient, but it should be used only where it can be made to accord with the foregoing rules, as for example :—

(*a*) Ceiling lights in lofty rooms, where the eyebrows, which are designed to screen the eyes from the sky, will serve the same purpose at night, and in such cases no lights should subtend an angle greater than 30 deg. from above the eye.

(*b*) Direct lighting would also be used in places that are normally viewed in one direction, as shop fronts, churches, public halls, picture galleries, etc., in which the lamps may be recessed or screened.

(*c*) In any circumstances where the lights do not come before the eyes.

The art of shading consists in the use of shades that will afford complete protection to the eyes, with a minimum loss of total light, to produce better illumination and to increase visual acuity.

The word "shade" implies some protection, but what are commonly called "shades" are ridiculous misnomers. They may be classified into transparencies, diffusers, and real shades.

It must be obvious that a globe, bell, or screen of glass that is transparent, or so lightly figured or finished as to be nearly so, can afford no protection to the eyes, particularly to those who seek to find something "pretty" in it; and yet, the greater part of the stock of the average fittings manufacturer consists of this sort of thing.

In diffusers and translucencies the object is to distribute the intrinsic brilliancy of the light over the visible area of the globe or shade. Nothing does this more perfectly than opal glass, although with considerable loss by absorption. Prismatic glass aims at the same object, and, although it passes more light, is usually less successful. Frosted or ground, iced, opaline, and the like are improperly counted as diffusers, for the light remains as a brilliant centre.

Real shading is effected by opaque or semi-opaque screens—the latter passing not more than one-tenth candle-power per square inch—just enough to cover the bare lights and no more. By far the greatest proportion of light will, by this means, fully and directly flood the ceiling, walls, and other objects, and the practical result will be a pleasing and soft effect with easy discernment of detail.

Indirect lighting is that in which the illumination is obtained from surfaces illuminated by concealed lights. It usually presupposes a white ceiling and upper walls or other extensive diffusing surfaces—the larger the better. The results are great uniformity of lighting, approaching practical daylight more nearly than with any other system, while admitting of greater distinction of vision and affording comfort to the eye.

It has been objected to this form of lighting (1) that it has a cold and cheerless effect; (2) that there is a flatness and an unpleasant absence of shadow; and (3) that light is wasted by absorption.

With regard to the first, if by "cold" is meant whiteness of light, it is a point gained; nothing but prejudice could prefer coloured light; the ruddy glow of evening may be very beautiful, but we should not like to have it all day.

As to the second, that it is flat and shadowless, it is really not true. Indirect lighting does no more than to relieve the blackness of shadows just as daylight does, while it puts a soft gradation on reliefs.

With regard to the last, it is a fact that of the total flux of light a considerable percentage is absorbed, but it is also a fact that more light enters the eye than by a higher intensity of direct illumination and, as stated, vision is much easier.

The means that may be employed are arc lamps—providing they are of the right kind—tungsten glow-lamps or incandescent gas in inverted bowls or reflectors on pendants or brackets, or lights may be hidden behind cornices, screens, or in many other forms. Where there is not a suitable ceiling, downward reflectors will be required, but to maintain the principle they must be large and with a diffusing surface. It is absurd to put them under a good ceiling as is often done.

Photometry and Illuminometry.

Photometry, as we have known it for a good many years, has been confined to the laboratory, and consisted mainly in the determination of the candle-power of lamps; but in respect of illumination the practical work of the architect or illuminating engineer has been much facilitated by the recent introduction of very convenient measuring instruments known as "illuminometers." There is one, almost pocket size, by which the intensity of any illumination falling on a surface may be ascertained from any distance by directing the telescope towards it, when the intensity of the illumination in foot-candles may be read directly from a scale. Surface brightness or reflection and the candle-power of lamps may be just as easily obtained. The value of this and other similar instruments must be obvious from the following :—

Case 1.—In giving instructions for a lighting installation the architect may, and should, specify in foot-candles the actual illumination he wants on desks, walls, or working surfaces, and with such an instrument he can see that he gets it. The present procedure is for the engineer to provide him with a schedule of lamps which affords him no information.

Case 2.—In preparing reports of premises it will provide the architect with definite data.

Case 3. In ancient light cases, the rule of thumb methods of determining amounts of light that creates such contradictory expert evidence can now give place to indisputable fact.

Case 4.—In rendering legislation intelligible. At present the Factory Act Regulations of 1908 require that certain rooms be "efficiently" lighted, an expression that is better adapted to bewilder a magistrate than to be of service to any building. Had those Regulations required a minimum illumination of 1-ft candle or otherwise, the illuminometer would have placed the matter beyond dispute.

Standards, Units, and Nomenclature.—We have two illuminating engineering societies, respectively in London and New York, each with a large Continental membership, where gas and electrical engineers meet and smile on each other, and architects and ophthalmic surgeons confer with both. Amongst other good things, they have done much to unify and establish a common and international understanding upon standards, units, and nomenclature—a primary necessity to discussion.

In England, America, and France the international candle (the bougie decimale has the same value) is the standard; in Germany it is the Hefner candle (HK). On the Continent the lux or meter candle is used in measuring illumination; in England and America the foot-candle.

Lamps and Polar Curves.

Where the choice of an illuminant is possible, preference is largely a matter of circumstances, and not always one of cost. The hygienic question, so much disputed, may be set aside, for, while there are cases where gas would be objectionable, there is nothing to fear therefrom in the ordinary ventilated room.

Although the lamp is an engineering device it is so intimately concerned with architectural considerations that the onus of its choice should be upon the architect, and he would therefore do well to acquaint himself with the various distinguishing features of the leading lamps now before the public. To set out comparisons would create dispute, but the architect is advised to accept no statement from interested parties without guarantee of independent proof.

Then there are the sizes of the lighting units to be decided upon, not on mere opinion however experienced, but on carefully prepared figures. Finally, there is the form of lamp and the question of polar curves.

The nominal candle-power of a lamp although correct in one direction, affords no idea of its total yield; hence the actual duty of a lamp is more truly stated in mean spherical candle-power or given in lumens.

Fig. 1 is a polar diagram of the light from an ordinary glow-lamp. The light flux in a horizontal section may be taken as symmetrical, but in vertical section the intensity varies greatly. The nominal value of the lamp is 16-candle-power; this has been found to be correct in a horizontal direction only; directly upwards it is nothing, because of its own shadow; downwards it is but 7-candle power, and in other directions the intensity marked off on the radial lines enables the polar curve to be drawn, as shown, and which indicates the distribution at a glance. The mean spherical candle-power is 13·2. Metallic filament lamps have an even greater diversity, 23-candle-power, horizontally, having been found to give but five downwards. The polar curve of any lamp is much modified by frosting or by the use of shades or reflectors, hence, a lighting unit should include the lamp and its adjuncts.

Fig. 2 is a polar curve of an ordinary open arc-lamp, showing how preponderating is the light in an oblique downward direction.

Polar curves can be made of any kind of light, and purchasers of new types of lamps should demand a polar curve from the manufacturer.

In lighting a large room it may be desirable to obtain a general illumination on a working plane, say 3 ft. from floor. This, obtained from a given number, candle-power and polar curve of lamps should be marked on a plan in foot-candles at convenient intervals, or in contour lines if preferred. The intensity of local lighting on platforms, desks, etc., if any, should be also stated. In working it out the first result may need to be adjusted until it is satisfactory, but this done the architect may know beforehand exactly what he is going to get at any point and the expenses of experiments and rectification of failures should become a thing of the past.

Effective lighting depends upon two factors :—(1) The illumination as expressed in foot-candles or lumens, *i.e.*, the light falling on a surface, irrespective of the nature of that surface; and (2) the light-absorbing power of the surrounding surfaces.

Practical Application.

In conclusion, a few notes on the practical application of the foregoing to church

LIGHT AROUND GLOW LAMPS.

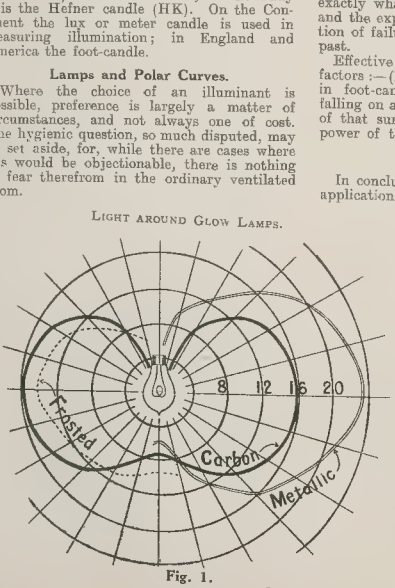


Fig. 1.

Polar Curves.

OPEN ARC.

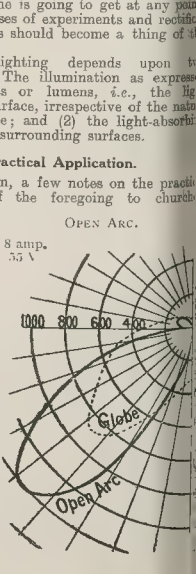


Fig. 2.

…, hospitals, public libraries, and …es may be of service. The important …of domestic illumination was too large …ncluded in this paper.

… simple-minded person would suppose …the beautiful decorations of many …es are placed there to be seen; but go …e first church you may meet during …vening service, and you will probably …at the upper two-thirds will be lost in …n that is heavy and depressing, while …wer third will be largely obscured by …g points of light, and the chancel …y visible; every face will have a hard, … appearance due to want of diffusion, … the preacher is at all interesting two …ble pulpit lights will send you home …marting eyes. It is not a question of …t lighting *versus* the mystic gloom, …some architects have advocated as con…to worship. The "dim religious light" …horning service may have its charms, …usually relieved by softly-illuminated …s that can be seen with comfort; but …curity of an evening service, pierced …nsively brilliant points that dominate …ng and refuse a haven of rest to the …eyes, is not likely to be helpful to …—excepting by way of penance. This … one point of consideration amongst …be found in church lighting.

… number of modern board schools I …und the artificial lighting to be (*a*) …ent: (*b*) too uneven, having usually …r gas or six electric glow lamps to a … forty children, and these too near …re of the room; (*c*) in the classrooms …ected lights in nearly every case in the …ange of vision of both scholars and …; and (*d*) the blackboard, which …more, really had less light than else…

…g with the classroom only, there are …ethods of lighting, either of which …made satisfactory: (1) Indirect illumina… high-power lamps illuminating a white …t and frieze. Direct lighting from …lights pendant about 2 ft., to get … light from ceiling and not placed …t, but nearer the left-hand window. …ants, reaching to 6 ft. 6 in. or 7 ft. … or, are continued to be used, there …be eight or ten of them where there … four or six, and each should have …shades in which the light can be …recessed. The desks should have a …n of 3-ft. candles. For pencil draw… needlework special desks or tables …ave an illumination of 8-ft. candles.

… been my privilege to inspect many …rincipal London hospitals with special …to their lighting arrangements, and …verything else is so very admirable. …icial lighting reminded me of Miss …gale's trenchant observation that "the …g requirement in a hospital is that it …to the sick no harm." There is, …, a universal want of discrimination …nodes of lighting, the fittings were … found to be inappropriate, and the … afforded no relief to the stinging …f light exposed to the eyes of the … patient.

… the ward unit of, say, twenty beds …e provided with a general illumina…bout 0·5-ft. candles, with protected …ect illumination. The sisters' and …ables should have lamps adjustable …k dusty cords—to from 3-ft. to 8-ft. … the latter for dark needlework. …k shades that will entirely recess …—preferably dark green opal. The … lights are too often conspicuous by …ence, the nearest light, usually a …w or gas lamp, being 12 ft. or 14 ft. … There should be a screened light at …of each bed, placed low behind, and …de of the head, giving an illumina…-ft. candles, and adapted for use for …xamination.

…pensary is usually the worst served; … have complained of the worry of …he prescriptions in the inadequate …le many bottles stand in semi-gloom. … light, giving 4-ft. or 5-ft. candles, …d to each man; the shelves should …nated with screened lights, while …ilities are desirable for reading the … measuring glasses.

…rating theatre calls for special con… for there is a large amount of …ork done after dark. Here, again, there is no established form of lighting; each hospital having its own arrangement, not all satisfactory. The essentials to success may be thus summarised:—(*a*) White ceilings and walls, pale grey or green dado, and darker floor; (*b*) separate general illumination, with screened lamps over the sinks and sterilisers; (*c*) the lights to the operating table should not be clustered together as they commonly are—forming black shadows—nor be placed directly over the table whereby the surgeon's work is obscured by his own head and hands; (*d*) lamps must not radiate heat on the patient or on the surgeon's head; and (*e*) all septic risks must be avoided; therefore, there must be no dust-creating cords and pullies or fittings, and glass must be smooth and easily cleaned. Well-made arc lamps may be used, either (*a*) direct lighting white flame arcs placed over a diffusing ceiling light, or, where there is no skylight, indirect lighting … both affording a splendid light. There is an excellent scheme in practice in Germany, wherein isolated beams of light are concentrated on the table from a projector lamp outside the room, whereby dust, heat, and the intrusion of workmen are quite precluded.

There is perhaps no greater tax on nervous energy than continuous reading of educational literature; it is important, therefore, that in libraries the further burden of eye strain should not be imposed on the reader by misplaced and inadequate lighting. Better the plainest building where the books can be read in comfort than a marble mausoleum of literature that chills enthusiasm and worries the eyes of the student. I have seen many handsome libraries, but not one properly illuminated. The ordinary library requires a small measure of well-diffused general light …ng—0·5-ft. to 0·75 ft. candles. The principal feature, however, is the local lighting, which should consist of (1) a separate light to each reader—on his left—with an opaque or semi-opaque shade; (2) every desk lamp should be adjustable so as to permit of a modification of from 2-ft. to 10-ft. candles, and under the reader's control anxious librarians may have them made "fool-proof"; and (3) the reader should be expected to switch on and off his own light, which would effect a great saving.

Holland is the only country that has framed an Act that properly stipulates the amount of light to be provided, and where such as embroiderers, jewellers, and draughtsmen are required to have a minimum of 15 bougie metres (about 1½-ft. candles), and all others 10 bougie metres. British legislation is confined to enamelling shops and underground bakehouses, which are respectively to be "efficiently" and "adequately" lighted, expressions which mean nothing in particular, and are therefore useless. Definite legislation is urgently necessary, for there is still an overwhelming majority of workers under conditions that are ruinous to eyesight and health. In machine shops the majority of accidents are said to occur after 4 p.m., and no wonder, for brilliant points of light against a dark background must baffle the eyes and deceive as to distances. What is wanted is a well diffused general light, aided by whitened and illumined ceilings and walls. Nothing is better for this purpose than indirect lighting. Screened local lighting should then be added to all points requiring the attention of operatives, and to benches, desks, etc.

In conclusion, I am glad to have had the opportunity of bringing this subject before the members of this Society, for I am convinced that until the architect makes the subject his own little good will be done. True progress is at present blocked by the rivalry of competitive systems and the jealousy and greed of commercialism. The client needs an independent authority, and who more suitable than an architect who thoroughly understands the art of illumination, for, as no one can better know how to light his picture than the artist who painted it, so no one can better appreciate good lighting of an interior than the architect who designed it."

THE GALLARD ALMSHOUSES, SOUTHBOROUGH.

These almshouses are being erected from the plans prepared by Mr. W. Harmer, architect, and the buildings will consist of three blocks, the centre block for four married couples, one outside block for men, and one for women. The houses are being built under the will of the late Mr. John Gallard, who was a builder and contractor, of Southborough.

SOUTHWARK CATHEDRAL.

We are glad to know that the proposal put forward by Mr. A. H. Henderson-Livesey for opening up Southwark Cathedral is assuming practical shape, and that a Committee is being formed with the Bishop of Southwark at its head with a view to obtaining the necessary financial support to enable the work to be commenced.

The proposal is to clear a well-defined area several acres in extent immediately surrounding the Cathedral, and bounded on the north by the river, on the east by the southern approach to London Bridge, and on the south and west by the railway viaduct in its curve from London Bridge to Cannon-street.

The proposal does not involve any interference with the railway.

The entire area of the ground which it is proposed to clear is not entirely covered by permanent structures; it is on the northern part of the site, along the river front, that most of the clearing would have to be done. To the south and south-west of the Cathedral the land is in the occupation of the Borough Market, and the only structures are zinc sheds of a quite temporary character.

It is a remarkable fact that only a very few Londoners are aware of the existence of Southwark Cathedral, and yet a large portion of the existing structure is considerably older than Westminster Abbey, and ranks in point of age immediately next the White Tower of the Tower of London and the Choir of St. Bartholomew at Smithfield among the ancient buildings of London. The building itself is in an excellent state of repair, over one hundred thousand pounds having been spent on its careful restoration during a comparatively recent period, but for all the beauty of the structure itself and for all its intensely interesting historical association it is not and cannot be adequately appreciated by the people of the country until its sordid environment is swept away.

The part of Southwark in which the Cathedral is situated, although known as South London, is geographically the very centre of the metropolis, and no really comprehensive plan for the improvement of London as a whole can be carried out without affecting this neighbourhood. It is much to be desired that when the details of the scheme are widely known the response to the appeal of the promoters will be adequate to enable them to carry out what will certainly constitute a splendid London improvement.

OBITUARY.

Mr. R. M. Brereton, C.E.

The death, on December 7, at Woodstock, Oregon, U.S.A., is announced of Mr. Robert Maitland Brereton, C.E., aged seventy-seven years. Mr. Brereton, a son of the Rev. C. D. Brereton, Rector of Little Massingham, Norfolk, was a pupil of Brunel, and was his assistant in the construction of the terminus at Paddington and the line of the Great Western Railway. In the interval, 1857-70, he was employed upon the Great Indian Peninsula Railway. He then practised as a consulting engineer in Nevada and California for mine-irrigation and other works. Returning to England, he became County Surveyor for roads and bridges, Norfolk; in 1886-9 he was Commissioner to the late Duke of Sutherland, and a director of the Highland Railway Company. He then went back to America and resumed practice as a consulting engineer for irrigation and mining undertakings and landed properties in the States, British Columbia, and Canada.

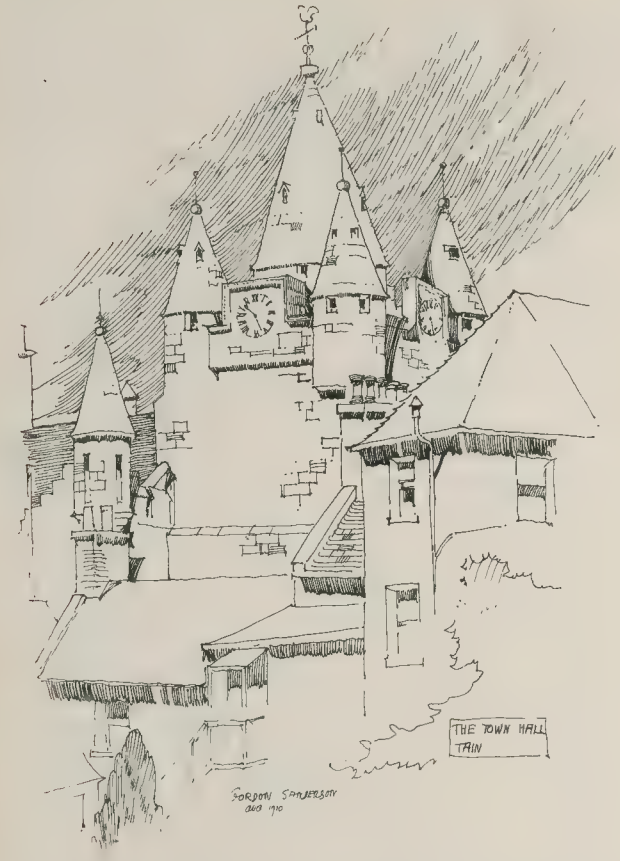
FOREIGN AND COLONIAL.

Works in Spain.

Tenders will be opened on February 9 at the offices of the "Alcaldía Constitucional de San Sebastián," San Sebastián, for the erection of a building intended for the courts of justice. The upset price is put at 560,759 pesetas (about 21,000*l.*).

The *Gaceta* of December 20 notifies that the Ministry of Fomento will open tenders on January 25 and 27, respectively, for making the permanent way of the first and fifth sections of the Ripoll to Puigcerdá railway, province of Gerona. The total upset price is put at 3,078,000 pesetas (about 114,000*l.*).

Although the contracts will doubtless be awarded to Spanish firms, the carrying out of the work may necessitate the importation of certain materials from abroad.



AN OLD HIGHLAND TOWN.

THE architecture of the Highlands is full of interest, especially to the Englishman. Tain, which may be instanced as a typical North of Scotland "burgh," is full of charming architectural features. The town itself centres round the Town Hall, which, with its conical spire and circular angle turrets, is a most striking piece of work. There are some nice old churches in the vicinity, one of these at Portmahomack being especially interesting. Bolone Castle is also worth a visit. The domestic architecture is, like the inhabitants, reposeful and unobtrusive in its character. Unfortunately, many of the old cottages are not in their original state. Thatch has given place to corrugated-iron, and the absorption of small holdings into larger farms has resulted in the abandonment of the smaller old houses, and their consequent decay.

BOOKS.

Reinforced Concrete Construction in Theory and Practice. By HENRY ADAMS, M.Inst.C.E., and ERNEST R. MATTHEWS, A.M.Inst.C.E. (London: Longmans, Green, & Co. 1911. Pp. 311. 10s. 6d. net.)

IN this volume the theory of reinforced concrete construction is somewhat lightly treated, theoretical principles being discussed only to the extent required to enable the reader to follow the calculations necessary in practical design. The greater part of the book is occupied by a collection of particulars relating to examples of construction embodying the chief British, American, and Continental systems, and covering the typical buildings and structures coming within the province of architects, as well as structures occurring in engineering practice. The illustrations are very numerous, but many of those reproduced from photographs might have been omitted without disadvantage, as mere pictures are of little or no practical value. It should be made clear, however, that a large proportion of the illustrations have been taken from working drawings, and, in most cases, the illustrations are accompanied by brief details of the actual construction. The authors have obviously spent a considerable amount of time in the collection of information, and the records presented will undoubtedly be found of service for the purposes of reference and comparison.

Reinforced Concrete Compression Members Diagram. By CHARLES F. MARSH, M.Inst.C.E. (London: Constable & Co. 3s. 6d. net.)

THIS diagram has been prepared to facilitate the design of columns and struts in accordance with the recommendations and formulæ contained in the R.I.B.A. Committee's Report and the regulations proposed by the London County Council. One good feature of the diagram is that it is of such dimensions that values can be read with sufficient accuracy for practical requirements. Although termed a diagram, the sheet really contains four diagrams, three of them combined for convenient use and the fourth printed separately. The diagrams are accompanied by instructions for use and two tables, and can be employed either for designing or for checking members already designed. Those who have frequent occasion to apply the formulæ mentioned should find this series of diagrams of considerable value.

Reinforced Concrete Construction: Elementary Course. By M. T. CANTELL, Lic.R.I.B.A. (London: E. & F. N. Spon, Ltd. 1911. Pp. 136. 4s. 6d. net.)

As a simple presentation of the general principles of reinforced concrete construction, this little book is one that can be readily followed by the beginner in the class of work indicated. In addition to chapters on materials, the work includes formulæ for beams with single and double reinforcement, and for columns under axial and non-axial loads. There are numerous worked examples, making quite clear the application of the formulæ, which are very conveniently summarised near the end of the book.

Architectural Hygiene. By BANISTER F. FLETCHER and H. PHILLIPS FLETCHER. Fourth Edition, revised. (London: Whittaker & Co. Pp. 269. Illustrations, 30. 5s. net.)

THIS book is now so widely known that the publication of a fourth and revised edition comes as no surprise; in the continual developments which are taking place in every branch of building science the sphere of hygiene has attracted very large attention, and the authors have taken advantage of the opportunity afforded by reprinting to bring the book thoroughly up to date. In the legislative section, for instance, reference is made to the Housing and Town Planning Act of 1909; under floor construction, reinforced concrete is touched upon, and air-gas, perfected since the last edition of the book was published, is now included in the artificial light section.





Dealing as it does with a subject directly ffecting the lives of the people, the book ppeals to a large public, and we have no oubt that this latest edition will receive the elcome which it deserves.

resses and Thrusts. By G. A. T. MIDDLE-TON, A.R.I.B.A. Fourth Edition, revised and enlarged. (London: B. T. Batsford. 1911. Pp. 209. 4s. 6d. net.)

the present edition of this book, hapter VII., on the "Method of Designing Steel-Plate Girder," and Chapter IX., on Framed Cantilevers," have been consider-bly revised, and additional matter in hapter VIII. deals with the design of a eel joist used as a stanchion. A noteworthy dition is represented by Chapter XIV., iving fully detailed calculations for a steel of, and will prove valuable to students eparing for the R.I.B.A. Licentiateship amination. The book is even better adapted the requirements of architectural students an its predecessors.

emistry for Engineers and Manufacturers. By BERTRAM BLOUNT and A. G. BLOXAM. Vol. I. Second Edition. (London: Charles Griffin & Co. 14s.)

his volume is divided into two parts. art I. discusses the chemistry of the chief aterials of construction, the chemistry of the rces of energy, the chemistry of steam sing, and the chemistry of lubrication and bricants. Part II. is devoted to metallurgy, d contains information concerning the pro-ction and uses of the common metals. It o includes some interesting paragraphs ating to the rarer metals, such as tungsten, talum, and vanadium.

The first chapter of the book is of most erest to the majority of the readers of this rnal, for it is this chapter which deals h the chemistry of iron, steel, brass, stone, te, concrete, and the preservation of build-materials.

The book is written in an interesting style, thout the use of complex formulæ, and with-much theorising, and will therefore be ful to architects, builders, and engineers o have only a superficial knowledge of emistry. The authors are chemists of high ute in the commercial world, and we find this second edition of their book abundant dence that they have kept themselves well ormed with regard to the developments ich have taken place in industrial chemistry ring the last decade.

ler Draught. By H. KEAY PRATT, M.I.Mech.E. (London: Constable & Co. 911. Pp. 138. 4s. net.)

PARENTLY recognising the fact that what is monly termed natural draught has already n sufficiently discussed in technical litera-e, the author devotes the greater part of manual to artificial draught, and its lication to land and marine boilers. The information collected is distinctly useful as a review of modern apparatus for producing forced and induced draught, and its value is augmented by a comparison of the three principal methods of producing draught steam for boilers.

Smoke Prevention and Fuel Economy. By WM. H. BOOTH and JOHN B. C. KERSHAW. Second Edition, revised and enlarged. (London: Constable & Co., Ltd. Pp. 224. Illustrations, 79. 6s. net.)

THE subject of smoke prevention is one of vital importance to the city dweller, who has suffered so much from breathing smoke-laden air, and few of us can afford to ignore possible means of effecting economy in fuel; but this book, first published seven years ago, is designed primarily to assist the manufacturer and heating engineer. The domestic fire problem is referred to only very briefly, the greater part of the book being devoted to the generally-employed and more recent methods of burning, stoking, draught regulating, etc., which are all dealt with in an extremely clear and practical way with the help of a large number of well-drawn illustrations.

There is a chapter on the legal position of the movement, and of the work of voluntary agencies, which demonstrates the necessity for a thorough revision of the existing law before the public can hope to secure the benefits which scientific methods have now made possible.

Bricks and Tiles. A Rudimentary Treatise on Their Manufacture. By EDWARD DOBSON. Twelfth Edition, revised and enlarged. By ALFRED B. SEARLE. (London: Crosby Lockwood & Son. Pp. 273. Illustrations, 118. 3s. net.)

THE methods employed in brickmaking have undergone so many changes during recent years that there is constant need for new books on the subject in order that those who control the selection and use of bricks in building operations may be able to equip themselves to specify the brick best suited for its purpose and to detect any attempt wittingly or unwittingly made to substitute in use a brick of inferior quality.

Mr. Searle has submitted this book to a very full revision; some of the chapters have been entirely rewritten, descriptions of processes no longer used are eliminated, and much new information, especially regarding the use of machinery, is added. The various operations ordinarily necessary in brick manufacture and the processes peculiar to particular localities are well described, and chapters are included on firebricks, tiles, encaustic ware, land drains, and special bricks. The arrangement of the matter is not ideal, and there is some repetition, but the information given is just such as is needed by those who, as architects or engineers, are indirectly interested in the art of brickmaking.



The Manufacture of Varnishes and Kindred Industries. Vol. III.—Spirit Varnishes and Materials. By JOHN G. MCINTOSH. Second Edition, revised and enlarged. (London: Scott, Greenwood, & Son. Pp. 490. Illustrations, 64. 12s. 6d. net.)

THE publication of a greatly enlarged edition of this book, of which the first English issue appeared in 1899, will add a valuable contribution to the bookshelf of the specialist and manufacturer; but the nature of the subject matter is of too highly technical character to appeal to those whose interest is in the building trade as a whole, and these will find it useful only as a book of rare reference. The first three parts of the book treat in great detail of the nature and application of the materials used in the industry; the fourth with the processes of manufacture and the recipes of the various classes of varnish; and the fifth with tests and analyses. Besides a full general index there is an index of recipes which greatly adds to the usefulness of the book, and the numerous illustrations included leave nothing to be desired.

Pyrometry. By CHARLES R. DARLING, Wh. Ex., F.I.C. (London: E. & F. N. Spon, Ltd. 1911. Pp. 196.)

BASED on a course of Cantor Lectures delivered by the author before the Royal Society of Arts. this treatise is welcome as embodying a discussion of pyrometry from the practical standpoint. Rapid advances have been made during recent years in the construction of pyrometrical instruments, and the increasing number of those called upon to measure and control high temperatures is a sufficient justification for this useful book, where the reader will find particulars and illustrations of numerous pyrometers, together with an explanation of the fundamental principles of each type.

The Stereophagus Pump and Special System of Pumping. By the Hon. R. C. PARSONS, M.A., M.Inst.C.E. (Published by the author.)

THIS is a pamphlet describing and illustrating a special form of centrifugal pump capable of raising liquid containing large quantities of solid matter, and it also describes the application of the pump to the drainage of level districts, where the flow of sewage and drain water by gravitation is impracticable. It is claimed that the Stereophagus system is superior to the hydraulic and pneumatic systems of drainage hitherto employed for draining level areas, in respect of first cost and operating expenses.

Butterworth's Workmen's Compensation Cases. Vol. IV. (New Series). Edited by His Honour JUDGE RUEGG, K.C., and DOUGLAS KNOCKER, Barrister-at-Law. (London: Butterworth & Co. 1911.)

THE fourth volume of this useful "annual" comprises the cases determined under the Workmen's Compensation Act between November, 1910, and October, 1911. That litigation arising out of this Act is not diminishing seems proved by the fact that this volume contains some 150 cases, the report of which are comprised in 444 pages. In our review of Vol. III. of this series we commented upon the arrangement of the cases, as in that volume they were grouped according to the date of hearing, and neither alphabetically nor following the sequence of the sections of the Act. In this latest volume we are pleased to see that this slight defect has been overcome by the introduction of an outline digest, the references to such sections of the Act as have been construed by decisions being set out in the order in which they appear, with the names of the cases and references to the pages in this volume printed beneath. The names of all cases reported in both series of these reports are given in the table of cases, but the index is confined to cases reported in this volume. The comprehensive index to all the volumes has not been continued in this volume or in Vol. III. Possibly, now the volumes number thirteen, this form of index or digest would prove too bulky, and the older cases on the Acts which preceded that of 1906 are not now so important. These reports are a valuable guide to the intricacies of this branch of the law, and the only matter for regret is that two or three statutes should have involved such a mass of case law.

Ship Wiring and Fitting. By T. M. JOHNSON. (Constable & Co. 1s.)

THIS is a compact pocket-book giving hints on installations for lamps, telephones, ventilators, etc., on ships of average size. It does not cover special appliances used on warships. Difficulties of vibration and penetrating spray are considered, and other points are explained with the help of diagrams.

LEGAL COLUMN.

Acts in Interference of Trade.

An interesting point arising out of some of the recent strikes was raised before the Police Magistrate at Hull. The defendant was charged under sect. 7 of the Conspiracy and Protection of Property Act, 1875, as having, "with a view to compel any other person to abstain from doing or to do any act which such other person has a legal right to do or abstain from doing," done certain acts in contravention of sub-sect. 3, which makes it unlawful with the above objects for any person to "hide any tools, clothes, or other property owned or used by such other person, or deprive him of, or hinder him in, the use thereof." The complainant was conducting a lorry and horse, and had been hindered by the defendant, who had cut the ropes which held the cattle cake, with which the lorry was loaded. It was contended that the above sub-section only applied to things *ejusdem generis* with those specified in the sub-section "tools and clothes"; but the Magistrate declined so to limit the words "other property," which, he decided, embraced any property which was capable of being hidden, or of which a person might be deprived of the use of, or hindered in the use of, and therefore applied to this horse and lorry. This decision is of importance, as there must be some remedy for acts of interference with trade of the above description, and this was clearly not an act protected by the Trade Disputes Act, 1906, as done by way of peaceful picketing.

LONDON COUNCILS.

Battersea.—The roadway of Ramsden-road, between Thurleigh-road and Nightingale lane, is to be repaired with granite macadam at an estimated cost of 110*l.* No objection is to be raised to the proposal of Messrs. T. & W. Farmiloe, Ltd., to erect a building in Kirtling-street, for use as a colour factory.

Ealing.—The Borough Surveyor reports that he had had a satisfactory interview with the Local Government Board with reference to sanction to a by-law specifying Portland cement as one of the constituents for concrete for the foundations of houses, and had also, since the interview, arranged with the Surveyors of the four surrounding districts to go into the whole matter of the by-laws with a view to submitting same to the Local Government Board, to be either improved or approved, so that there should be a general by-law in operation throughout the four districts.

East Barnet.—Plans have been passed for Mr. Noakes for additions to the tie factory in Leicester-road.

Finchley.—Tenders are to be invited for the provision and erection of a refuse destructor, and tenderers to be requested to submit designs of the proposed work with the usual guarantees of efficiency. At the last meeting of the Council the report of the Plans, Town-Planning and Open Spaces Committee was adopted for the provision of an open-air swimming-bath, at a cost, including land, of 2,750*l.*, and application is to be made to the Local Government Board for sanction to borrow this amount.

Greenwich.—The following roads are to be repaired at the estimated costs mentioned:—Albion-hill, 121*l.*; Fingal-street, 170*l.*; portion of Shooter's-hill-road, 243*l.*; portion of Claremont-street, 185*l.* Four other roads are to be repaired at a total estimated cost of 190*l.* The tender of Messrs. John Mowlem & Co., Ltd., has been accepted at 939*l.*, for forming and paving as a new street a portion of Bramshot-avenue. Plans have been passed for Messrs. G. H. Gunning & Son for the erection of ten houses in Anchor and Hope-lane.

Hackney.—The tenders of Mr. George Porter, 54, Millfields-road, Clapton, N.E., at 529*l.* and 247*l.*, have been accepted for carrying out ne street works at Holmbury-view, Upper Clap ton, and in a portion of Hawkwood-moun respectively. The edge kerbs and flat channe are to be laid with Cornish granite in bot cases. Plans have been passed for Messr Rowlandson & Co. for the erection of factory in Darnley-road, also for Mr. S. Tee for the erection of a sawmill in Leasid road. Plans have been lodged by Messr Edmondsons, Ltd., showing the frontage lin for buildings proposed to be erected in Stan ford-hill.

Hendon (Urban).—Instructions have bee given the Surveyor to carry out the followin works:—(1) To bring up estimates of the co of kerbing, channelling, and making-up portion of the footway in Lawrence-stree Mill Hill; (2) scheme for kerbing, channelling and forming the footway with gravel in portion of Edgware-road; (3) estimates f carrying out the kerbing, channelling, and pa ing works in Green-lane, and certain drainag works; (4) preparation of preliminary plans accordance with the requirements of the Loc Government Board, showing the area propose to come under the Council's town-plannin scheme. Application is to be made to th Local Government Board for sanction to a loa of 11,288*l.* for carrying out widening works Brent-street, opposite the West Golder's Gree Estate. The Council have adopted artificia stone-paving, the margins on either side to b with red-bricked paving, as the style to b adopted for the footpaths in the making-u of Tennyson, Shakespeare, and Milton road Montpelier Rise, and Langley Park. Th following plans have been passed:—Mr. Johnson, seven houses, Finchley-lane; M S. J. Aish, fourteen houses, Wroughton-terrac and Babington-road; Dr. Owen Stuart, add tions to "Westover," West Heath-road Golder's Green; Mr. C. W. B. Simmonds four houses, Finchley-road, Golder's Green Messrs. Edmondsons, Ltd., twelve shop Cheapside. The following plans have bee lodged:—Hampstead Garden Suburb Trus Company, garages and flats, Corringham-road Mr. W. R. Bertie, six houses, Flower-lane an Sylvan-avenue; Mr. Charles Phillips, s houses, Uphill-road, Mill Hill; Messrs. Harve & Potter, development of land in Finchle road.

Islington.—Electricity mains are to be e tended at an estimated cost of 370*l.*

Watford.—The Board of Guardians hav instructed Mr. Syme to prepare plans an estimates for the erection of a mortuary land adjoining the present mortuary.

West Ham.—Beckton-road, between Barkin road and Trinity-street, is to be repaved wi second-hand granite setts at an estimated co of 700*l.* The following plans have bee passed:—Mr. J. H. Gladwell, alteration "Freemasons' Tavern," Freemasons roa Custom House; Gas Light and Coke Company motor garage, Union-street, Stratford; M T. P. Blower, five houses, Preston-stree Silvertown. The following have been lodged: Mr. C. Living, jun., adaptation of Salisbur Hall, Romford-road, Stratford, for cinemat graph hall; Mr. A. Monk, alterations to cin matograph hall, New Barn-street, and Beckto road, Canning Town; Mr. W. T. Walke paper bag factory and store at works of th Lampson Paragon Company, Fords Par Canning Town.

Wimbledon.—Directions have been given th Surveyor to prepare plans and estimates the cost of making-up Langham-road, betwee Warple-road and Pepys-road, also Marryat road. He has further been directed to subm plans and estimates for making-up a portio of Broadway-mews. Alternative schemes f the provision of a suitable building ne the Isolation Hospital, to contain about twen beds, are to be prepared by the Borough Surveyor. The Baths Committee have decide to apply to the Local Government Board f sanction to a loan of 2,630*l.*, the estimated co of extensions to be made to the public bath for which the Committee have also approve plans. A plan and estimate amounting 5,000*l.* submitted by the Surveyor have bee approved for laying-out and fencing the pr posed extension of the cemetery. Vario repair works are to be carried out in four roa at an estimated cost of 234*l.*

TRADE CATALOGUES.

In our notices of "Trade Catalogues" la week we stated that Mr. John Tann, Newgate-street, E.C., had had over forty year experience in safe-making, whereas we unde stand the firm has had 117 years' experien in the trade. We might add that we stat that the firm patented as far back as 1843 th moisture generating fireproof composition.

List of Competitions, Contracts, etc.

For some Contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) are advertised in this number:** Competitions, iv.; Contracts, iv. vi. viii. x.; Public Appointments, xviii.; Auction Sales, xxiv. Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Competitions.

JANUARY 28.—**Buzau, Roumania.**—TRAINING OLLEGE (16,000*l.*).—Premiums 200*l.*, 40*l.*, 20*l.* articulars from the Ministère des Cultes et de instruction Publique, Bucharest.

JANUARY 29. — **Montevideo.** — Government lace (premiums, 2,125*l.* and 850*l.*) and town improvement scheme (premiums, 1,060*l.*, 640*l.*, and 5*l.*). Conditions may be seen at the Board of rade, 73, Basinghall-street, E.C.

JANUARY 31. — **Australia.** — DESIGNS FOR EDERAL CAPITAL CITY.—The Government of the ommonwealth of Australia invite competitive esigns for the laying out of this Federal capital ity. See advertisement in issue of September 1 r further particulars. See also page 506, ovember 3.

FEBRUARY 3.—**Bolton.**—NURSES' HOME AT IE INFIRMARY.—Premiums of 30*l.*, 20*l.*, and 10*l.* ssessor, Mr John B. Gass, F.R.I.B.A.

FEBRUARY 15.—**Winnipeg.** -NEW PARLIAMENT UILDINGS. The Government of Manitoba invite ompetitive drawings for new Parliament buildngs See advertisement in this issue and Competition News, January 5, for further particulars.

FEBRUARY 17. **London, E.C.** NEW OFFICES.—he Port of London Authority invite preminary sketch designs for new head offices Trinity-square, and for laying out remainder land as a building site. See advertisement in ssue of November 24 for further particulars.

FEBRUARY 17.—**York.**—SCHOOL.—The York ducation Committee invite competitive designs r a public elementary school. See advertisenent in this issue for further particulars.

MARCH 15.—**Drammen, Norway.**—RAILWAY-ATION.—Particulars from the Norges Statsaner, Christiania.

MARCH 15. — **Prestatyn, North Wales.** — AYING-OUT ESTATE.—Lord Abereonway and the rustees of the Prestatyn Estate invite designs r laying out of the estate Three premiums e offered. Particulars from 33, Henrietta-reet, W.C. See advertisement in issue of nuary 5 for further particulars.

MARCH 16. -**Harrow.** — PUBLIC OFFICES. The arrow-on-the-Hill U.D.C. invite tenders for the nlargement of and alterations to their Public ffices. See advertisement in issue of January 5 r further particulars.

MAY 1.—Society of Architects' Travelling udentship. Design for a Town Hall. 25*l.* d medal.

JUNE 28 — **Hale, Cheshire.** TOWN PLANNING HEME.—Premiums 50*l.* and 25*l.* Particulars om the Council Offices, Hale.

JULY 1.—**Dusseldorf.**—A plan for the tension of the City of Dusseldorf. Premiums 1,000*l.* to 375*l.* Conditions on application to e Chief Burgomaster, Dusseldorf. A translaon appeared on page 865, September 29.

AUGUST 30. — SAXON SNELL PRIZE. — Fifty uineas; with medal, is offered for essay on a spital subject. Particulars from the Sanitary stitute, 90, Buckingham Palace-road, S.W.

No DATE.—**Edinburgh.**—MEMORIAL TO KING OWARD.—Limited.

No DATE.—**Jordanhill, Glasgow.**—PROPOSED AINING COLLEGE. Limited to six firms, named Competition News, December 1, 1911, page 635.

Contracts.

BUILDING.

The date given at the commencement of each ragraph is the latest date when the tender, or e names of those willing to submit tenders, ey be sent in.

JANUARY 12. — **Mallow.**—COTTAGES.—For erecn of sixty-nine single cottages. Plans and ecifications at office of the Council. Mr. urice Regan, Clerk of Council.

JANUARY 13. **Thornton Hough.**—COTTAGE.—ection of an engineer's cottage at Thornton ough Sewage Works Specifications and antities from, and plans seen at, the office of Surveyor, Mr. W. W. Shennan, F.I.S.E., ton-road, Moreton.

JANUARY 15. **Birmingham.** — ALTERATIONS, -For alterations and sanitary accommodan at the Parish Offices, Edmund-street. ns and particulars from the architects, ssrs. W. H. Ward, Paradise-street, Birmingm.

JANUARY 15.—**Scotsgap.**—SALE RING.—Erection a new covered-in sale ring, for the Scotsgap rmers' Auction Mart Company, Ltd. Particulars from the Secretary, Mr. L. Robson, tsgap.

JANUARY 16.—**Aberavon.** -SHED, ETC. —For construction of a brick well, boiler-shed, etc., at the rear of the slaughter-house. Particulars from Mr. J. Roderick, Borough Surveyor.

JANUARY 16. **Dewsbury.**—ALTERATIONS, ETC.—For enlarging and altering Excelsior Confectionery Works. Messrs. W. Thornton & Sons, architects, Pond-street, Dewsbury.

JANUARY 16.—**Marton.**—HOUSE, ETC.—Erection of a house and farm buildings at Newham Grange Farm, Marton, near Middlesbrough. Plans with, and quantities and particulars from, Mr. H. S. Higginson, Estate Office, Jervaulx Abbey, Middleham, Yorks.

JANUARY 16.—**Pudsey.**—HOUSES. Erection of a pair of semi-detached houses in New-street. Drawings, etc., seen, and quantities from Messrs. C. S. Nelson & G. Birkinshaw, architects, Sun-buildings, 15, Park-row, Leeds.

JANUARY 16. — **Seabrook.** — ALTERATIONS. For alterations to the court-house at the police-station. Plan and specification with Mr. Frederick W. Ruck, County Architect, 86, Week-street, Maidstone.

JANUARY 16.—**Truro.**—RAILINGS, ETC.—For supplying and fixing wrought-iron gates and railings, etc. Drawings and specifications by the architects, Messrs. T. B. Silcock, B.Sc., F.S.I., and S. R. Reay, F.R.I.B.A., 47, Milsom-street, Bath.

JANUARY 17. — **Bournemouth.** — DRIVE. —For construction of overcliff drive at Southbourne. Forms of tender, specification, and quantities from Mr. F. W. Lacey, M.Inst.C.E., Borough Engineer and Surveyor, Municipal Offices, Bournemouth. Deposit of 1*l.* 1s.

JANUARY 17. — **Glamorgan.** — SCHOOLS.—For new boys' school at Llanbradach, near Caerphilly; alterations and additions to the infants' school at Pontlottyn; improvement of playground at the Penybank Council School, near Bargoed. Plans, specification, etc., with Mr. W. E. R. Allen, Deputy-Clerk of the County Council, Glamorgan C.C. Offices, Westgate-street, Cardiff.

JANUARY 17. — **Huddersfield.** HOUSE.—Erection of dwelling-house, Tunnacliffe-road. Plans seen, and quantities from Mr. J. Berry, architect and surveyor, 3, Merket-place, Huddersfield.

JANUARY 17. — **Radcliffe.** — SHED, ETC. — The Lancashire and Yorkshire Railway Company invite tenders for the extension of the grain and cotton warehouse, paper shed, and offices at Radcliffe. Plans seen, and quantities and specification from the Engineer, Hunt's Bank, Manchester.

JANUARY 17. - **St. Albans.** — COTTAGES. —Erection of six cottages, Catherine-street. Drawings, specification, and a copy of the conditions and form of contract with the architect, Mr. H. F. Mence, 11, St. Peter's-street, St. Albans. Quantities on deposit of 2*l.* 2s.

JANUARY 17. — **Sandwich.** — IMPROVEMENTS.—For sanitary improvements at the school. Specifications by the Committee's Architect, Mr. Wilfrid H. Robinson, Caxton House, Westminster, seen at the offices of the Correspondent, Mr. F. S. Cloke, Sandwich, Kent.

JANUARY 17. **Southport.** ALTERATIONS, ETC.—The Lancashire and Yorkshire Railway Company invite tenders for the extension of the roof, construction of loading mounds, and alterations to buildings at West Lancashire Station, Southport. Plans seen, and quantities and specification from the Engineer, Hunt's Bank, Manchester.

* JANUARY 17. — **Tamworth.** — SCHOOL.—The Staffordshire Education Committee invite tenders for new high school for girls See advertisement in this issue for further particulars.

JANUARY 18.—**London.**—ROOF.—For repairs to the roof of relief station, 46, Clarendon-square, for the St Pancras Board of Guardians. Architect, Mr. A. E. Pridmore, 2, Broad-street-buildings, E.C. Deposit of 5*l.* to Mr. J. E. P. Hall, Clerk, Town Hall, Pancras-road, N.W.

JANUARY 18.—**Newport.** LIFT.—For work in connexion with the installation of an electric lift at the Workhouse infirmary. Plans and specifications with Mr. H. J. Griggs, A.R.I.B.A., Metropoliton Bank-chambers, Newport, Mon.

JANUARY 18. — **Ormskirk.** — ALTERATIONS.—For alterations at the small hospital block at the Ormskirk Workhouse. Plans and specification at the Workhouse, and information from Mr. J. Dod, 16, Exchange-buildings, Liverpool.

JANUARY 18. **Southampton.**—BATHS.—Erection of additional slipper baths, etc., at Western Shore Baths. Plans, specification, and conditions seen, and form of tender and quantities at the Borough Engineer's Office, Municipal Offices, Southampton. Deposit of 1*l.* 1s.

JANUARY 19. — **Stockport.** POST-OFFICE.—For the enlargement of Stockport Post-office. Drawings, specification, and conditions and form of contract at Stockport Post-office. Quantities and forms of tender, on deposit of 1*l.* 1s., from the Secretary, H.M. Office of Works, etc., Storey's-gate, London, S.W.

JANUARY 19. — **Sturminster Newton.**—Erection of a new elementary school. Plans, specifications, and forms of tender with Messrs. Fletcher, Son, & Brett, Wimborne.

JANUARY 20.—**Chesterfield.** -RE-ERECTION.—For taking down of the wood and iron buildings used as an infectious diseases hospital and caretaker's quarters now standing on land at Over Newbold, and re-erection of the buildings on the land adjoining the hospital at Spital. Plan and specification with the Borough Surveyor, Salter Gate, Chesterfield.

JANUARY 20. — **Pontypool.** — WORK. - For structural work at the New Park, Pontypool-road. Plans and specifications with Messrs. Lougher & Co., architects, Bank-chambers, Pontypool.

JANUARY 20 — **Whittington.** — FLOOR —Construction of a new floor to the Berghill Bridge. Plans seen, and specification and quantities at the Clerk's Office. Particulars from the Surveyor, Wood Croft, Edward-street, Oswestry

JANUARY 22. - **Porthcawl.** -CHURCH.—For the erection of a church Plans seen, and quantities from Mr G. E. Halliday, F.S.A., F.R.I.B.A., 19, Castle street, Cardiff.

JANUARY 23. — **East Ham.**—SCHOOL.—Erection of Vicarage-lane infants' school. Plans and specifications seen, and forms of tender from the Committee's Architect, Mr. R. L. Curtis, 11 and 12, Finsbury square, London, E.C. Deposit of 50*l.* for quantities.

* JANUARY 23.—**Ilford.**—SCHOOL.—The Ilford U.D.C. invite tenders for public elementary school for 700 children. See advertisement in this issue for further particulars.

JANUARY 23. — **Tewkesbury.**— TANK, ETC —For construction of a concrete filter tank and a brick filter house at the waterworks pumping station. Drawings seen, and quantities, etc., from Mr. J. S. Pickering, M.Inst.C.E., Borough Engineer, Municipal Offices, Cheltenham, on deposit of 3*l.* 3s.

* JANUARY 24. — **Poplar.** — EXTENSION OF ELECTRICITY STATION.—The Poplar B.C. invite tenders for superstructure of extension to main electricity generating station. See advertisement in this issue for further particulars.

* JANUARY 26. —**Croydon.**—ADDITIONS TO BUILDINGS. — The Croydon B.C. invite tenders for additions and alterations to buildings at Surrey-street Waterworks. See advertisement in this issue for further particulars.

JANUARY 26. **Redditch.**—SCHOOL.—Erection of a Council elementary school in Bridge-street. Forms of tender and quantities at the County Education Office, Worcester. Drawings with the architect, Mr. A. V. Rowe, 30, Foregate street, Worcester.

JANUARY 29. — **Funtington.** — ADDITIONS. - Alterations and additions to the Council school. Plans and conditions of contract seen, and specification and form of tender from Mr. Hadyn P. Tebbutt, A.R.I.B.A., County Education Architect, Thurloe House, High-street, Worthing, on deposit of 1*l.* 1s.

* JANUARY 29.—**Purley Oaks.**—SORTING OFFICE. —The Commissioners of H.M. Works and Public Buildings invite tenders for new sorting office. See advertisement in this issue for further particulars

JANUARY 29.—**Rendham.**—SCHOOL.—Erection of an elementary school at Rendham and teacher's dwelling-house at Snape Plans, specifications, forms of tender, and quantities from Mr. J. Webb, the Committee's Surveyor, Education Office, County Hall, Ipswich. Deposit of 1*l.* 1s.

JANUARY 30.—**Cradley.** —ADDITIONS. —The Great Western Railway Company invite tenders for alterations and additions to Cradley Station. Plans and specification seen, and forms of tender and quantities at the office of the Engineer at Wolverhampton Station.

JANUARY 30.—**Swansea.**—OFFICES.—The Great Western Railway Company invite tenders for the extension of the offices at High-street, Swansea. Plans and specification seen, and forms of tender and quantities at the office of the Engineer at Neath Station.

JANUARY 31.—**Okeford Fitzpaine.**—RANGE.—The rebuilding of rifle range at Okeford Fitzpaine. Plans, specifications, and forms of tender with Messrs. Fletcher, Son, & Brett, Wimborne.

JANUARY 31. — **Sherborne.** — RANGE.—For the enlargement of rifle range at Crackmore, Sherborne. Plans, specifications, and forms of tender with Messrs. Fletcher, Son, & Brett, Wimborne, or at the Sergeant-Instructor's Quarters, Acreman-street, Sherborne

BUILDING—*continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

FEBRUARY 1.—**Belturbet.** ADDITIONS, ETC.—For extensive alterations and additions to dwelling-house. Plans and specification with Mr. P. J. Brady, C.E., architect, Broomfield House, Ballyhaise.

* FEBRUARY 2 - **Canning Town.** — LABOUR EXCHANGE.—The Commissioners of H.M. Works and Public Buildings invite tenders for Labour Exchange. See advertisement in this issue for further particulars.

FEBRUARY 5.—**Margate.** — LAVATORIES.—Erection of new lavatories on the new lower promenade at Hodges Flagstaff, and extension of the Fort lavatories. Plans and specification seen, and all particulars from Mr. K. A. Borg, Borough Surveyor, 13, Grosvenor-place, Margate. Deposit of 5*l.*

* FEBRUARY 6.—**London.** GENERAL WORKS AND REPAIRS.—The London C.C. invite tenders for general works and repairs (including jobbing works), exclusive of works of a mechanical character, to sewers, engine-houses, buildings, bridges, subways, tunnels, etc., for a triennial contract. See advertisement in this issue for further particulars.

FEBRUARY 6.—**Luton.** — SCHOOL.—Erection of school buildings in Charles-street. Plans, specifications, and conditions of contract by Messrs. Ewen Harper & Brother, architects, Ruskin-chambers, 191, Corporation-street, Birmingham. Quantities and forms of tender from the Acting Education Secretary, Town Hall, Luton, on deposit of 1*l.* 1s.

FEBRUARY 7.—**Burry Port.** — EMBANKMENT.—For the restoration and repair of Flosfach Embankment. Drawings, general conditions, and specification may be seen with Mr. A. J. Oborn, Engineer, Somerset House, Burry Port, R.S.O.

FEBRUARY 12.—**Wallsend.**—SCHOOL, ETC.—Erection of a new secondary school and technical institute. Deposit of 2*l.* 2s. to Mr. C. Williams, Secretary to the Education Committee, the Moot-hall, Newcastle-on-Tyne.

FEBRUARY 27.—**Dartford.** WORKS.—For the extension of the electricity works. Plans and specification with the Surveyor, Council Offices, Dartford.

No DATE.—**Ardglass.**—HALL.—For erection of new hall, for the Ardglass Masonic Lodge. Messrs. Browne Brothers, architects, Ardglass, Ireland.

No DATE.—**Beamsley.**—HOUSE.—For the erection of a detached house at Beamsley, near Bolton Abbey. Quantities from Mr. J. Harper Bakes, M.S.A., architect and surveyor, Calverley-chambers, Victoria-square, Leeds.

No DATE.—**Bishop Auckland.** -CHURCH, ETC.—For new Wesleyan church and schools. Architects, Messrs. Gordon & Gunton, Finsbury House, Blomfield-street, London, E.C

No DATE.—**Castleford.**—PICTURE PALACE.—For erection of picture palace in Aire-street Plans and specifications with Mr. J. P. Padgett, architect, Carlton-chambers, Castleford.

No DATE. — **Dewsbury.** — ALTERATIONS.—For enlarging and altering Excelsior Confectionery Works, for Messrs. Slade & Bullock, Ltd. Messrs W. Thornton & Son, architects, Bond-street, Dewsbury.

No DATE.—**Llanvapley.**—ADDITIONS, ETC.—For alterations and additions to Llanvapley Rectory. Plans and specifications seen, and particulars from Mr. B. J. Francis, architect, Abergavenny.

No DATE.—**Merthyr Tydfil.**—WALLS, ETC.—For construction of retaining and boundary walls, railings, etc., at the Y.M.C.A. Quantities, on deposit of 1*l.* 1s., from Messrs. Ivor Jones & Percy Thomas, architects, 18, St. Mary-street, Cardiff.

No DATE.—**Southport.** -SCHOOL.—Erection of new Council elementary school in School-road, Churchtown. Quantities, on deposit of 1*l.* 1s., from Messrs. Finchett & Lancaster, architects, 13, Hoghton-street, Southport.

No DATE. — **Torquay.**—VILLAS.—For the erection of two villas at Barton, Torquay. Messrs Smith & Johnson, architects, Arcade-chambers, Torquay.

No DATE. **Watford.** BAKERY. Erection of a new bakery on a site between Brixton-road and the branch railway to St. Albans. Quantities, on deposit of 1*l.* 1s., from Mr. W. H. Syme, F.R.I.B.A., architect, 58A, Vicarage-road, Watford

ENGINEERING, IRON, AND STEEL.

JANUARY 13.—**Clogher.**—WELLS, ETC.—For sinking wells and erecting pumps in the towns of Clogher and Augher. Specification by Mr. F. E. Townsend, C.E., Clogher, Ireland.

JANUARY 18. — **Dublin.** SWITCHBOARDS, ETC. For supply of E.H.P. sub-station switchboards and accessories. Specification and form of tender from the City Electrical Engineer, Electricity Works, Fleet-street, Dublin. Deposit of 1*l.* 1s.

JANUARY 22.—**Nelson.**—VALVE. For erection of an 18-in. Weck's centre purifier valve at the Gasworks. Specification and drawing from Mr. A. Morton Fyffe, C.E., A.M.Inst.M.E., Gas Engineer and Manager, Nelson, on deposit of 1*l.* 1s.

JANUARY 23. — **London.** — RAILS, ETC.—The London C.C. invite tenders for the supply and delivery of about 3,500 tons of steel girder tramway track rails and fastenings and about 1,500 tons of slot rails and conductor tees. Drawings, specifications, quantities, forms of tenders, etc., at the Chief Engineer's Department, County Hall, Spring gardens, S.W. Deposit of 2*l.*

JANUARY 24.—**Nuneaton.** PLANT.—For supply of 500-kw. mixed-pressure turbo-generator, with condensing plant, pipework, etc. Specifications and plans from Mr. S. C. Gibson, Borough Electrical Engineer, Electricity Works, Nuneaton. Deposit of 1*l.* 1s.

JANUARY 29.—**Croydon.**—PLANT.—For supply of a mixed-pressure turbine plant at the Electricity Works, Factory-lane. Plans and specifications seen, and form of tender from the Borough Electrical Engineer, Factory-lane, Croydon, on deposit of 1*l.* 1s.

FEBRUARY 1.—**Middlesex.**—DREDGER.—The Lee Conservancy Board invite tenders, designs, and specifications for a steam grab dredger, 70 ft. long by 13 ft. beam. Mr. Charles N. Tween, M.Inst.C.E., Engineer and Manager to the Lee Conservancy Board, Enfield Lock, Middlesex, N.

No DATE.—**Burnley.**—BATTERY.—For erection of a lighting battery at the Workhouse. Specification from Mr. J. S. Horn, Clerk, Union Offices, Burnley.

FURNITURE, PAINTING, MATERIALS, etc.

JANUARY 15. **Portsmouth.**—PAINTING, ETC. For redecorating the interior of the Carnegie Library, Fratton-road, and redecorating the Grand Jury-room in the Town Hall. Specifications and plans may be seen, and forms of tender from the Borough Engineer, Town Hall.

JANUARY 16.—**Truro.** SCREENS, ETC.—For supplying screens, platforms, and furniture for the Council chamber of the new offices. Drawings, details, and specifications by the architects, Messrs. T. B. Silcock, B.Sc, F.S.I., and S. R. Reay, F.R.I.B.A., 47, Milsom-street, Bath.

JANUARY 17. **Bury.**—PAINTING.—For internal painting at the houses Nos. 6 to 12, Barlow-street. Specifications and forms of tender from the Borough Engineer and Surveyor, Bank-street.

JANUARY 17.—**Oldham.**—PAINTING—For painting work at the Waterhead, Lowermoor, and Hollinwood Baths. Particulars and form of tender at the Borough Surveyor's Office, Town Hall, Oldham.

JANUARY 18.—**Thurles.**—PIPES.—For supply of turned and bored cast-iron pipes. Mr. B. Jackman, Town Clerk, Council Offices, Main-street, Thurles, Ireland.

* JANUARY 18. **West Ham.**—WORKS, MATERIALS, ETC. -The West Ham B.C. invite tenders for supply of materials and execution of various works, etc. See advertisement in this issue for further particulars.

JANUARY 23.—**Halifax.** FENCING.—For fixing about 1,300 lin. yds. of wooden fencing in Pye Nest-road. Plans and specifications seen, and forms of tender from Mr. J. Lord, M.Inst.C.E., Borough Engineer, Town Hall, Halifax. Deposit of 5*l.*

JANUARY 23. — **Romford.** — FENCING.—For inclosing the extension to the cemetery, Crow-lane, with oak pale fencing, also laying-out and draining same. Plans seen, and specifications, quantities, and forms of tender from Mr. Herbert T. Ridge, Council Offices, Market-place, Romford, on deposit of 2*l.* 2s.

JANUARY 27. **Bourne.** TOOLS.—For supply of roadmen's barrows, tools, etc. Particulars and forms of tender from Mr. Thomas Lake, District Surveyor, Council Offices, Bourne, Lincs.

* JANUARY 27. **Chiswick.** — WORKS AND MATERIALS.—The Chiswick U.D.C. invite tenders for execution of works and supply of materials. See advertisement in this issue for further particulars.

* JANUARY 31. — **Woolwich.** — CLEANING AND PAINTING.—The Metropolitan Asylums Board invite tenders for cleaning and painting works and repairs at Brook Fever Hospital, Shooters Hill. See advertisement in this issue for further particulars.

ROADS, SANITARY AND WATER WORKS.

JANUARY 13.—**Honley.**—SEWER. For construction of about 1,150 yds. of 9-in. sewer in Gynn-lane. Plans seen, and quantities and form of tender from the Engineer, Mr. W. H. Radford, C.E., Albion-chambers, King-street, Nottingham, on deposit of 1*l.* 1s

JANUARY 15.—**Barry.** — ROAD.—For construction of a new road, for the Holton Estate Company, Ltd. Plans with Mr. W. E. Knapman, architect and surveyor, Pembroke-chambers, Barry Dock, and quantities on deposit of 1*l.* 1s

JANUARY 16 -**Bushey.** ROAD.—For making-up the road known as Springfields. Plans and specification seen, and quantities and form of tender from the Surveyor, at the Council Offices, on payment of 1*l.* 1s.

JANUARY 17. — **Hesketh, etc.** - PIPES.—For laying about 2,075 yds. of 3-in. cast-iron water pipes in the townships of Hesketh and Tarleton. Plan, specification, and quantities with Mr. R. S. Jemson, Council Offices, Town End, Ormskirk

JANUARY 17. — **Water, Lancs.** — ROAD.—For making an underground haulage road at Nabo Colliery. Particulars and specifications from Messrs. G. Hargreaves & Co., Rossendale Collieries, Newchurch.

JANUARY 18.—**Coulsdon.** -ROAD.—For making-up Red Down-road. Plans and specifications by the Council's Surveyor, Mr. R. M. Chart, F.S.I., Katharine-street, Croydon. Deposit of 1*l.*

JANUARY 18. — **Lambeth.** — MATERIALS.—For services and materials. Specifications and forms of tender from Mr. Henry Edwards, C.E., Borough Engineer, Town Hall, Brixton-hill, S.W.

JANUARY 18. — **West Ham.** — MATERIALS. Supply of paving materials, etc. Forms of tender and particulars from the Borough Engineer's Office, Town Hall, West Ham, E.

JANUARY 19. — **Hale.** SEWER.—Construction of stoneware pipe sewer. Plans, specifications, and conditions of contract seen, and quantities and form of tender from Mr. T. Blagburn, Surveyor to the Council, Council Offices, Ashley-road, Hale. Deposit of 1*l.* 1s.

JANUARY 19. **Skipton.** — DRAINAGE.—For the laying of about 235 yds. of 12-in. surface drain at Glusburn. Plans, etc., from Mr. Ascough Rodwell, Surveyor, Gargrave-road, Skipton.

JANUARY 20. — **Harlow.** SEWAGE.—For construction of sewage disposal works and laying of sewer. Plans seen, and quantities, on deposit of 2*l.*, from the engineers, Messrs. Tooley & Foster, of Queen's-road, Buckhurst Hill, Essex.

JANUARY 20.—**Hindley.**—SEWER.—Construction of stoneware pipe sewer, with manhole, etc., at Hindley Green. Plans seen, and quantities from the Surveyor, Mr. Oswald P. Abbott, Council Offices, Hindley, on deposit of 1*l.* 1s.

JANUARY 20. — **Roydon.** — SEWAGE.—For construction of sewage disposal works and laying sewers. Plans seen, and quantities, on deposit of 2*l.*, from the engineers, Messrs. Tooley & Foster, of Queen's-road, Buckhurst Hill, Essex.

JANUARY 22. — **Hatfield.** — SEWERS.—Construction of sewers and cast-iron pumping main, with manholes, etc.; also a pumping station, suction tank, and settling tanks. Plans and specifications seen, and forms of tender and quantities from the Engineer, Mr. G. Bertram Kershaw, Grosvenor-road, West Wickham, Kent, on deposit of 10*l.*

JANUARY 22. — **Manchester.**—DRAINAGE.—Construction of main drainage works No. 9 (new sewers in Hulme) and work No. 16 (new intercepting tank and river improvement at Clayton. Plans seen, and specifications, quantities, and form of tender from the City Surveyor, Town Hall, Manchester. Deposit of 10*l.* 10s.

JANUARY 22. — **Standish-with-Langtree.** — SEWAGE.—Construction of sewage disposal works, comprising detritus, septic, humus, and storm tanks, percolating filters, etc. Drawings seen, and quantities from Messrs. Myres, Veevers, & Myres, civil engineers, 15, Chapel street, Preston, on deposit of 1*l.* 1s.

JANUARY 22. — **Wakefield.** STREETS. — For private street works in Carter-street. Plan and specification seen, and quantities and form of tender from Mr. J. P. Wakeford, A.M.Inst.C.E., City Surveyor, Town Hall.

JANUARY 24. — **London.** — MATERIALS. For supply of various materials to the Chelsea B C Tender forms from Mr. T. W. E. Higgens, the Borough Surveyor, Town Hall, King's-road, Chelsea, S.W

JANUARY 25.—**Deal.** -GRANITE — For supply of 1,000 tons of blue Guernsey granite. Specification and form of tender from Mr. T. C. Golder, Borough Engineer and Surveyor, 23, Queen street, Deal

JANUARY 27 **Bourne.** GRANITE, ETC. Supply of granite and slag. Mr. Thomas Lake, District Surveyor, Council Offices, Bourne, Lincolnshire.

JANUARY 27.—**Sleaford.**—GRANITE.—For supply of granite and slag for the roads. Specifications and forms of tender from Mr. E. Clements, Clerk, 74, Southgate, Sleaford.

JANUARY 29. — **Wangford.** — MATERIALS —For supply of road materials. Forms of tender from Mr. S. W. Rix, Clerk, Beccles.

JANUARY 30. **Chislehurst.**—MATERIALS. For supply of materials, etc. Particulars, with forms of tender, from Mr. H. E. Knight, Clerk, Council Offices, Chislehurst.

FEBRUARY 5. — **Hatfield.** — MATERIALS. — For supply of materials for the main roads. Forms of tender from Mr. Urban A. Smith, County Surveyor, County Surveyor's Office, Hatfield.

FEBRUARY 13. — **Grangetown.** —PAVING.—For paving with scorie bricks the back streets behind Robert-street and Railway-place, Grangetown. Specification and plan seen, and quantities from Mr. C. McDermid, Council Offices, Whitworth-road, Grangetown.

Public Appointments.

Nature of Appointment.	By whom Advertised.	Salary.	Application to be in
*FOREMAN PLUMBER	Secretary of State for India	See advertisement in this issue	Jan. 24
*PLUMBING INSPECTOR	Secretary of State for India	See advertisement in this issue	Jan. 24
*INSTRUCTORS IN HANDICRAFTS (WOODWORK)	London County Council	160*l.* per annum, etc.	Jan 27

Auction Sales.

Nature and Place of Sale.	By whom Offered.	Date of Sale.
BUILDING MATERIAL, BRIXTON-ROAD, S.W.—On the Premises	Veryard & Yates	Jan. 16
BUILDER'S PLANT AND STOCK, HERNE HILL, S.E.—On the Premises.	Fuller, Horsey, Sons, & Cassell	Jan. 18

PATENTS.

APPLICATIONS PUBLISHED.*

20,849 of 1910.—William Walter Hewitt and Charles Ernest Lovell: Dwelling-houses.

1,840 of 1911.—Joseph Hugh Campbell: Columns and beams.

2,709 of 1911.—Philip Charles Knightley Wolfe Murray and Joseph John Cartwright: Cooking-ranges.

5,542 of 1911.—Ernest Griffiths and Dargue, Griffiths, & Co., Ltd.: Supplying hot water to buildings and the like.

6,016 of 1911.—Charles Robert Horrell and Herbert Benjamin Bowman: Chimney-pots or cops and the like.

7,159 of 1911.—John Switzer Owens: Metallic-sheet piling.

12,992 of 1911.—Herbert Handel Johnson and Alfred Dawson: Caravans, portable houses, structures, and the like.

13,054 of 1911.—Henry James Bell: Locking device or fastener for window-sashes.

16,763 of 1911.—Reichert Manufacturing Company and August Reichert: Concrete building means.

18,445 of 1911.—Willibald Kraus and Mathias Kraus: Air-heating stove.

23,602 of 1911.—Edward Luke Bates: Pavement lights, floor lights, deck lights, roof lights, ceiling lights, partitions, and other similar glazed structures for the transmission of light.

TO CORRESPONDENTS.

NOTE.—All communications with respect to literary and artistic matters should be addressed to "THE EDITOR" (and not to any person by name); those relating to advertisements and other exclusively business matters should be addressed to "THE PUBLISHER," and *not* to the Editor.

All communications must be authenticated by the name and address of the sender, whether for publication or not. No notice can be taken of anonymous communications.

The responsibility of signed articles, letters, and papers read at meetings rests, of course, with the authors.

We cannot undertake to return rejected communications; and the Editor cannot be responsible for drawings, photographs, manuscripts, or other documents, or for models or samples, sent to or left at this office, unless he has specially asked for them.

All drawings sent to or left at this office for consideration should bear the owner's name and address on either the face or back of the drawing. Delay and inconvenience may result from inattention to this.

Any commission to a contributor to write an article, or to execute or lend a drawing for publication, is given subject to the approval of the article or drawing, when received, by the Editor, who retains the right to reject it if unsatisfactory. The receipt by the author of a proof of an article in type does not necessarily imply its acceptance.

N.B.—Illustrations of the First Premiated Design in any important architectural competition will always be accepted for publication by the Editor, whether they have been formally asked for or not.

PRICES CURRENT OF MATERIALS.

* Our aim in this list is to give, as far as possible, the average prices of materials, not necessarily the lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

BRICKS, &c.

Per 1000 Alongside, in River.

	£ s. d.
Best Stocks	1 14 0
Picked Stocks for Facings	2 7 0

Per 1000, Delivered at Railway Depôt.

	£ s. d.		£ s. d.
Bottoms	1 12 0	Best Blue Pressed	
Best Fareham		Staffordshire	3 15 0
Red	3 12 0	Do. Bullnose	4 0 0
Best Red Pressed		Best Stourbridge	
Quarry Facing	5 0 0	Fire Bricks	4 0 0

GLAZED BRICKS—

Best White,			
Ivory, and Salt		Double Headers	13 17 6
Glzd. Str'tch'rs	11 7 6	One Side and two Ends	17 17 6
Headers	10 17 6	Two Sides and one End	18 17 6
Bullnoses, Bullnose, and 4½ in. Flats	14 17 6	Splays & Squints	16 7 6
Angle Stretchers	16 17 6		

Second Quality £1 10s. per 1000 less than best.

* All these applications are in the stage in which opposition to the grant of Patents upon them can be made.

BRICKS, &c. (*Continued*).

	s. d.	
Thames and Pit Sand	6 9	per yard, delivered.
Thames Ballast	5 6	" "
Best Portland Cement	31 0	per ton, "
Best Ground Blue Lias Lime	19 0	" "

NOTE—The cement or lime is exclusive of the ordinary charge for sacks.

Grey Stone Lime	13s. 0d. per yard delivered.
Stourbridge Fireclay in sacks	27s. 0d. per ton at rly dpt.

STONE.

Per Ft. Cube.

	s. d.
BATH STONE—delivered on road waggons, Paddington Depôt	1 6½
Do. do. delivered on road waggons, Nine Elms Depôt	1 8½
PORTLAND STONE (20 ft. average)—	
Brown Whitbed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2 3
White Basebed, delivered on road waggons Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2 4½

Per Ft. Cube, delivered at Railway Depôt.

	s. d.		s. d.
Ancaster in blocks	1 10	Closeburn Red Freestone	2 0
Beer in blocks	1 6	Red Mansfield Freestone	2 4
Greenshill in blocks	1 10	Talacre & Gwespyr Stone	2 8
Darley Dale in blocks	2 4		
Red Corsehill in blocks	2 3		

YORK STONE—*Robin Hood Quality.*

Per Ft. Cube, Delivered at Railway Depôt.

	s. d.
Scappled random blocks	2 10

Per Ft. Super., Delivered at Railway Depôt.

6 in. sawn two sides landings to sizes (under 40 ft. super.)	2 3
6 in. rubbed two sides ditto, ditto	2 6
3 in. sawn two sides slabs (random sizes)	0 11½
2 in. to 2½ in. sawn one side slabs (random sizes)	0 7
1¼ in. to 2 in. ditto, ditto	0 6

HARD YORK—

Per Ft. Cube, Delivered at Railway Depôt.

Scappled random blocks	3 0

Per Ft. Super., Delivered at Railway Depôt.

6 in. sawn two sides landing to sizes (under 40 ft. super.)	2 8
6 in. rubbed two sides ditto	3 0
3 in. sawn two sides slabs (random sizes)	1 2
2 in. self-faced random flags	0 5

SLATES.

Per 1000 of 1200 at Railway Depôt.

In. In.	£ s. d.	In. In.	£ s. d.
20×10 best blue Bango	13 2 6	20×10 best Eur'ka unfading green	15 17 6
20×12 ditto	13 17 6	20×12 ditto	18 7 6
20×10 1st quality ditto	13 0 0	18×10 ditto	13 5 0
20×12 ditto	13 15 0	16×8 ditto	10 5 0
16×8 ditto	7 5 0	20×10 permanent green	11 12 6
22×10 best blue Portmadoc	12 12 6	18×10 ditto	9 12 6
16×8 ditto	6 12 6	16×8 ditto	6 12 6

TILES.

At Railway Depôt.

	s. d.		s. d.
Best plain red roofing (per 1000)	42 0	Best "Hartshill" brand, plain sand-faced (per 1000)	50 0
Hip and Valley (per doz.)	3 7	Do. pressed (per 1000)	47 6
Best Broseley (per 1000)	50 0	Do. Ornamental (per 1000)	50 0
Do. Ornamental (per 1000)	52 6	Hip (per doz.)	4 0
Hip and Valley (per doz.)	4 0	Valley (per doz.)	3 6
Best Ruabon red, brown, or brindled (Edw'ds) (per 1000)	57 6	Staffords. (Hanley) Reds or Brindled (per 1000)	42 6
Do. Ornamental (per 1000)	60 0	Hand-made sand-faced (per 1000)	45 0
Hip (per doz.)	4 0	Hip (per doz.)	4 0
Valley (per doz.)	3 0	Valley (per doz.)	3 6

WOOD.

BUILDING WOOD.	At per standard. £ s. d.	£ s. d.
Deals: best 3 in. by 11 in. and 4 in. by 9 in. and 11 in.	14 0 0	... 15 10 0
Deals: best 3 by 9	13 10 0	... 14 10 0
Battens: best 2½ in. by 7 in. and 8 in., and 3 in. by 7 in. and 8 in.	11 10 0	... 12 10 0
Battens: best 2½ by 6 and 3 by 6	0 10 0	less than 7 in. and 8 in.
Deals: seconds	1 0 0	less thn best.
Battens: seconds	0 10 0	" "
2 in. by m. and 2 in. by 6 in.	9 10 0	... 10 10 0
2 in. by 4½ in. and 2 in. by 5 in.	9 0 0	... 10 0 0
Foreign Sawn Boards— 1 in. and 1¼ in. by 7 in.	0 10 0	more than battens.
¾ in.	1 0 0	"

Fir timber: best middling Danzig or Memel (average specification)	At per load of 50 ft. £ s. d.	£ s. d.
Seconds	5 0 0	... 5 10 0
Small timber (8 in. to 10 in.)	4 10 0	... 5 0 0
Small timber (6 in. to 8 in.)	3 17 6	... 4 0 0
Swedish balks	3 5 0	... 3 10 0
Pitch-pine timber (30 ft. average)	2 12 6	... 3 0 0
	5 5 0	... 6 0 0

WOOD (*Continued*).

JOINERS' WOOD.	At per standard. £ s. d.	£ s. d.
White Sea: first yellow deals, 3 in. by 11 in.	24 10 0	... 25 10 0
3 in. by 9 in.	22 10 0	... 23 10 0
Battens, 2½ in. and 3 in. by 7 in.	17 0 0	... 18 0 0
Second yellow deals, 3in. by 11in.	19 0 0	... 20 0 0
" " 3 in. by 9 in.	18 0 0	... 19 10 0
Battens, 2½ in. and 3in. by 7 in.	14 0 0	... 15 0 0
Third yellow deals, 3 in. by 11 in. and 9 in.	14 0 0	... 15 0 0
Battens, 2½ in. and 3 in. by 7 in.	11 10 0	... 12 10 0
Petersburg: first yellow deals, 3 in. by 11 in.	21 10 0	... 22 10 0
Do. 3 in. by 9 in.	18 10 0	... 19 10 0
Battens	14 0 0	... 15 0 0
Second yellow deals, 3 in. by 11 in	16 10 0	... 17 10 0
Do. 3 in. by 9 in.	15 0 0	... 16 0 0
Battens	11 10 0	... 12 10 0
Third yellow deals, 3in. by 11 in.	13 10 0	... 14 10 0
Do. 3 in. by 9 in.	13 0 0	... 14 0 0
Battens	10 10 0	... 11 0 0
White Sea and Petersburg—		
First white deals, 3 in. by 11 in.	15 0 0	... 16 0 0
" " 3 in. by 9 in.	14 0 0	... 14 10 0
Battens	11 10 0	... 12 10 0
Second white deals, 3in. by 11in.	14 0 0	... 15 0 0
" " 3 in. by 9 in.	13 0 0	... 14 0 0
Battens	10 10 0	... 11 0 0
Pitch-pine: deals	19 0 0	... 21 0 0
Under 2 in. thick extra	0 10 0	... 1 0 0
Yellow Pine—First, regular sizes	44 0 0	upwards.
Oddments	32 0 0	"
Seconds, regular sizes	33 0 0	"
Oddments	23 0 0	"
Kurai Pine—Planks per ft. cube	0 3 6	... 0 5 0
Danzig and Stettin Oak Logs— Large, per ft. cube	0 3 0	... 0 3 9
Small " "	0 2 6	... 0 2 6
Wainscot Oak Logs, per ft. cube	0 5 6	... 0 6 0
Dry Wainscot Oak, per ft. sup. as inch	0 0 9	... 0 0 11
¼ in. do. do.	0 0 8	... —
Dry Mahogany—Houndras, Tabasco, per ft. super. as inch	0 0 10	... 0 1 1
Selected, Figury, per ft. super. as inch	0 1 6	... 0 2 6
Dry Walnut, American, per ft. super. as inch	0 0 10	... 0 1 0
Teak, per load	18 0 0	... 22 0 0
American Whitewood planks, per ft. cube	0 4 0	... 0 5 0

Prepared Flooring, etc.—	Per square. £ s. d.	£ s. d.
1 in. by 7 in. yellow, planed and shot	0 13 6	... 0 17 0
1 in. by 7 in. yellow, planed and matched	0 14 0	... 0 18 0
1¼ in. by 7 in. yellow, planed and matched	0 16 0	... 1 0 0
1 in. by 7 in. white, planed and shot	0 12 0	... 0 14 6
1 in. by 7 in. white, planed and matched	0 12 6	... 0 15 0
1¼ in. by 7 in. white, planed and matched	0 15 0	... 0 16 6
¾ in. by 7 in. yellow, matched and beaded or V-jointed brds.	0 11 0	... 0 13 6
1 in. by 7 in. " "	0 14 0	... 0 18 6
¾ in. by 7 in. white " "	0 10 0	... 0 11 0
1 in. by 7 in. " "	0 12 9	... 0 15 0

6 in. at 6d. to 9d. per square less than 7 in.

JOISTS, GIRDERS, &c.

	In London, or delivered Railway Vans, per ton. £ s. d.	£ s. d.
Rolled Steel Joists, ordinary sections	7 10 0	... 8 0 0
Compound Girders, ordinary sections	9 10 0	... 10 0 0
Steel Compound Stanchions	11 0 0	... 12 0 0
Angles, Tees, and Channels, ordinary sections	9 10 0	... 10 0 0
Flitch Plates	9 10 0	... 9 10 0
Cast Iron Columns & Stanchions, including ordinary patterns	7 10 0	... 8 10 0

METALS.

IRON—	Per ton, in London. £ s. d.	£ s. d.
Common Bars	9 0 0	... 9 10 0
Staffordshire Crown Bars, good merchant quality	9 5 0	... 9 15 0
Staffordshire "Marked Bars"	11 0 0	... —
Mild Steel Bars	9 5 0	... 9 15 0
Hoop Iron, basis price	10 0 0	... —
" " Galvanised	17 10 0	... —

(*And upwards, according to size and gauge.)

Sheet Iron Black—		
Ordinary sizes to 20 g.	10 5 0	... —
" " 24 g.	11 5 0	... —
" " 26 g.	12 15 0	... —

Sheet Iron, Galvanised, flat, ordinary quality—		
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15 10 0	... —
Ordinary sizes to 22 g. and 24 g.	16 0 0	... —
" " 26 g.	17 0 0	... —

Sheet Iron, Galvanised, flat, best quality—		
Ordinary sizes to 20 g.	18 10 0	... —
" " 22 g. and 24 g.	19 0 0	... —
" " 26 g.	20 10 0	... —

METALS (*Continued*).

IRON (*Continued*)—	Per ton, in London. £ s. d.	£ s. d.
Galvanised Corrugated Sheets—		
Ordinary sizes, 6ft. to 8ft. 20 g.	15 0 0 ...	—
" " 22 g. and 24 g.	15 5 0 ...	—
" " 26 g.	16 15 0 ...	—
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	12 10 0 ...	—
Best Soft Steel Sheets, 2 g. & 24 g.	13 10 0 ...	—
" " " 26 g.	15 10 0 ...	—
Cut Nails, 3 in. to 6 in.	11 0 0 ...	11 10 0

(Under 3 in., usual trade extras.)

LEAD, &c.

	£ s. d.	
LEAD—Sheet, English, 4lb. and up	19 7 6 ...	—
Pipe in coils	19 17 6 ...	—
Soil pipe	22 17 6 ...	—
Compo pipe	23 17 6 ...	—
ZINC—Sheet— In casks of 10 cwt.		
Vielle Montagne	33 10 0 ...	—
Silesian	33 5 0 ...	—

Zinc, in bundles, 1s. per cwt. extra.

COPPER—			
Strong Sheet ..... per lb.	0 1 0 ...	—	
Thin "	0 1 1 ...	—	
Copper nails ..... "	0 0 10 ...	—	
Copper wire ..... "	0 0 10 ...	—	
BRASS—			
Strong Sheet ..... "	0 0 11 ...	—	
Thin ..... "	0 1 0 ...	—	
TIN—English Ingots ..... "	0 1 0 ...	—	
SOLDER—Plumbers' ..... "	0 0 8½ ...	—	
Tinmen's ..... "	0 0 11 ...	—	
Blowpipe ..... "	0 1 2 ...	—	

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

15 oz. thirds	2½d.	26 oz. fourths	3½d.
" fourths	1½d.	32 oz. thirds	5d.
21 oz. thirds	3d.	" fourths	4½d.
" fourths	2½d.	Fluted Sheet, 15 oz.	3½d.
26 oz. thirds	4d.	" 21 oz.	4½d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

⅛ Hartley's	2d.	Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white	3½d
⅛ "	2½d.		
¼ "	2½d.	Ditto, tinted	5d.

* Not less than three crates.

OILS, &c.

		£ s. d.
Raw Linseed Oil in pipes	per gallon	0 3 6
" " " in barrels	"	0 3 7
" " " in drums	"	0 3 9
Boiled " in barrels	"	0 3 9
" " " in drums	"	0 4 0
Turpentine in barrels	"	0 3 3
" in drums	"	0 3 5
Genuine Ground English White Lead, per ton		26 10 0
Red Lead, Dry	"	22 10 0
Best Linseed Oil Putty	per cwt.	0 18 0
Stockholm Tar	per barrel	1 12 0

VARNISHES, &c.

	Per gallon. £ s. d.
Fine Pale Oak Varnish	0 8 0
Pale Copal Oak	0 10 6
Superfine Pale Elastic Oak	0 12 6
Fine Extra Hard Church Oak	0 10 0
Superfine Hard-drying Oak, for seats of Churches	0 14 6
Fine Elastic Carriage	0 12 0
Superfine Pale Elastic Carriage	0 16 0
Fine Pale Maple	0 10 0
Finest Pale Durable Copal	0 18 0
Extra Pale French Oil	1 1 0
Eggshell Flating Varnish	0 18 0
White Pale Enamel	1 4 0
Extra Pale Paper	0 12 0
Best Japan Gold Size	0 10 6
Best Black Japan	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Knotting	0 10 8
French and Brush Polish	0 10 6

TERMS OF SUBSCRIPTION.

"THE BUILDER" (Published Weekly) is supplied DIRECT from the Office to residents in any part of the United Kingdom at the prepaid rate of 18s. per annum, with delivery *by Friday Morning's Post* in London and its suburbs.

To Canada, post-free, 21s. 6d. per annum; and to all part of Europe, America, Australia, New Zealand, India, China, Ceylon, etc., 26s. per annum.

Remittances (payable to J. MORGAN) should be addressed to The Publisher of "THE BUILDER," 4, Catherine-street, W.C.

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than* 10 *a.m. on Thursday.* [N.B.—We cannot publish Tenders unless authenticated either by the architect or the building owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is stated, nor any list in which the lowest Tender is under 100*l.* unless in some exceptional cases and for special reasons.]

* Denotes *accepted.* † Denotes *provisionally accepted.*

BARKING.—For electricity works extension, for the Urban District Council. Mr. C. F. Dawson, Surveyor, Public Offices, Barking:—

Thomas & Edge, Woolwich* .. £2,285

BRAUGHING.—For erection of four cottages, for Hadham Rural District Council. Mr. E. T. Watts, surveyor, Bishop's Stortford:—

Markwell & Sons, Bishop's Stortford ... £493 5

For Sinking Well

H. G. Featherby, Bishop's Stortford 35 10

BUGLAWTON.—For erection of a Council school. Messrs. A. Price & Son, architects, Sandbach. Quantities by architects:—

T. & E. Cooke ..	£3,969 0	T. G. Huxley,	
J. Standeven ...	3,687 15	Malpas*	£3,540 0
Birchall Bros ...	3,677 0		

LEICESTER.—For the erection of two villas on the Western Park Estate, Leicester, for Messrs. Benson. Mr. H. Bland, surveyor, 37, Danes Hill-road, Leicester

E. Stephens & Co.	£1,150 0 0	G. A. Phipps ...	£1,015 0 0
Hardington & Elliott	1,148 0 0	E. Elliott	1,010 0 0
W. G. Simons	1,078 0 0	F. J. Bradford	1,009 7 0
Bradshaw Bros.	1,075 15 6	W. Potter, Blaby*	899 15 6

LOUGHREA.—For erection of a new pump-house, etc. Mr. F. Bergin, Borough Engineer, 36, Westmoreland-str et, Dublin:—

R. Smith	£1,684 3 2	J. Donovan,	
P. Blake	1,088 0 0	Ballinasloe* ...	£1,056 12 1

MACCLESFIELD.—For erection at the workhouse of a nurses' home, mortuary, and extension of the infirmary. Messrs. Whittaker & Bradburn, architects, Macclesfield. Quantities by Messrs. F Hewitt & Son, Manchester:—

E. & A. Frith	£7,800 0	Gorton & Wilson	£6,569 0
J. Bland & Son ..	7,224 0	L. Brown & Sons	6,527 0
H. Berry & Son ..	6,799 10	Clayton Bros., Poynton	6,059 0
B. Cooke	6,771 0		
R. Carlyle	6,629 0		

TOWCESTER.—For alterations and additions to Green's Norton Hall, near Towcester, Northants. for Mr. Arthur E. S. Guinness. Mr. C. M. C. Armstrong, architect, Warwick:—

T. Lowe & Sons ...	£1,983	G. F. Smith & Sons	£1,662
Foster & Dickses, Ltd.	1,859	H. Martin, Ltd., Northampton†	1,642
Collins & Godfrey	1,772		

Ham Hill Stone.
Doulting Stone.
Portland Stone.

The Ham Hill and Doulting Stone Co., Limited
(incorporating the Ham Hill Stone Co. and C. Trask & Son, The Doulting Stone Co.).
Norton, Stoke-under-Ham, Somerset.
London Agent:—Mr. E. A. Williams, 16, Craven-street, Strand.

Asphalte.—The Seyssel and Metallic Lava Asphalte Co. (Mr. H. Glenn), Office, 42, Poultry, E.C.—The best and cheapest materials for damp courses, railway arches, warehouse floors, flat roofs, stables, cow-sheds and milk-rooms, granaries, tun-rooms, and terraces. Asphalte Contractors to Forth Bridge Co. T.N. 2644 Central.

SPRAGUE & CO., Ltd.,
PHOTOLITHOGRAPHERS,
4 & 5, East Harding-street, Fetter-lane, E.C.

JOINERY,
Of every description and in any kind of Wood.
CHAS. E. ORFEUR, LTD.,
ESTIMATES ON APPLICATION. COLNE BANK WORKS. COLCHESTER.
Telephone 0155. Telegrams: "Orfeur, Colchester."

J. J. ETRIDGE, Jr.
SLATE MERCHANTS. LTD.,
EXPERTS IN
SLATING, TILING.
BEST WORK ONLY.
Telephone 2685 Wall, or write—
BETHNAL GREEN SLATE WORKS,
BETHNAL GREEN, LONDON, E.

PILKINGTON & CO.
(ESTABLISHED 1838),
DEPTFORD WHARF,
190 & 192, CREEK ROAD, DEPTFORD, S.E.
Telephone No.: New Cross 1102 (two lines).
Registered Trade Mark.
Polonceau Asphalte.
PATENT ASPHALTE AND FELT ROOFING.
ACID-RESISTING ASPHALTE.
WHITE SILICA PAVING.
SEYSSEL ASPHALTE (*Direct from the Mines*).



THE BUILDER

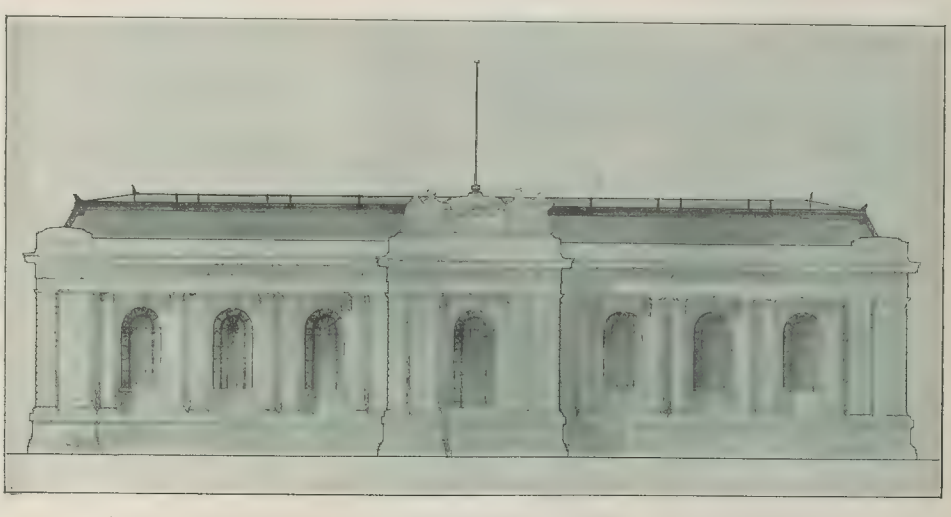
VOL. CII.—No. 3598. JANUARY 19, 1912.

CONTENTS.

	PAGE
The Land Taxes and Building	57
The Teaching of Art	58
Notes	59
The Royal Society of Portrait Painters	60
The Royal Institute of British Architects	60
The Architectural Association	61
Architectural Association Schools (with Illustrations)	63
Architectural Societies	64
Engineering Societies	65
General News	65
Competition News	66
Magazines and Reviews (with Illustration)	66
Correspondence	67
Editorial Summary	68
Meetings	68
Books	68
Notes to Illustrations	68
Fifty Years Ago	68
Monthly Historical Review: —	
The Church of St. George in Oxford Castle (with Plan)	69
Architectural Details in Monumental Brasses (with Illustrations)	69
A Short History of the British School at Athens	71
Notes (with Illustration)	74
The Building Trade:—	
The Time Clause in a Building Contract	76
The State of the Building Trade	76
Hours and Wages in the Building Trade	77
General Building News	77
Projected New Buildings in the Provinces	77
London Councils	78
Tribunal of Appeal under the London Building Act	79
Trade Catalogues	80
Legal Column	80
Law Reports	80
Patents	80
List of Competitions, Contracts, etc., Open	81
Metropolitan Asylums Board	82
Foreign and Colonial	82
Some Recent Sales	82
Prices Current	83
Tenders	84

Illustrations.

Manchester Library and Art Gallery — Design by Messrs. H. Percy Adams and C. H. Holden.



Design for Town Library: Elevation to City Square. By Mr. Raymond C. Stevenson. (*See page* 63.)
(Architectural Association, 1911.)

THE LAND TAXES AND BUILDING.

We seem nowadays to argue on financial and commercial subjects in a vicious circle. If any security or any industry is said to be in a depressed condition and suffering from some special cause, however much the subject is ventilated no attempt is made to analyse the causes or to remove the impediment, but the only reply forthcoming is that other securities or other industries are also depressed. The building industry is one of the principal examples of this; it has been in a continuously depressed condition for a longer period than any other trade in the country. Its members have borne this long-continued adversity with unexampled patience and without resorting to the militant methods which find favour in so many quarters, yet when the condition of this important industry is brought to the notice of Parliament the only result is either a blank negation of facts which can be proved by official statistics, or an entirely irrelevant comparison with other trades or industries.

This attitude is especially to be deplored at the present time, because events have occurred in the past two years which have affected the building trade far more than any other industry in the country, its raw material, the land, has been subjected to a special system of taxation, and the production is also similarly taxed, so that both supply and demand are checked. If this had been the case with any industry which was subject to foreign competition it may be asked, without fear of contradiction, whether careful inquiry would not at once have been made as to the effect produced by the new taxes? We know the excitement produced by the mere suggestion of a protective tariff; but the building trade is not connected with international industrial questions, and hence its condition obtains no attention. The authorities either simply deny that it is prejudicially affected at all, or it is even calmly asserted that building securities are but in the same position as other securities. It is interesting to compare such statements with those made when it was sought to introduce the new land taxes. The public were then informed that one of the objects of such a system of taxation was to develop the land of the country—one of the taxes was even christened the "Undeveloped Land Duty"—and to facilitate the supply and demand for house property. At the time the Bill was being introduced we pointed out that to tax land indiscriminately and house property in particular, to complicate the system of land transfer and to place landowners and householders in an invidious position as to the valuation and taxation of their property was a curious way of encouraging

any industry, and events have fully justified the observations we then made.

The callous attitude which we have referred to above might to some extent be justified were the building trade a trade in a normal position suffering depression from inherent causes; but this is no longer the case, since it is peculiarly affected by the novel principles of taxation and its position is unique.

Holders of consols are owners of a depressed security, and manufacturers of certain articles may suffer from trade depression, but they have not been informed that the value of their security or the selling price of their business is to be arbitrarily fixed as from a certain past date and that any rise in value which may occur since that date will as to some 20 per cent. be confiscated in taxation, whilst at the same time the transfer of the stock or of the business is to be clogged by vexatious conditions.

It may be argued that, as at present the land taxes have only yielded some 600,000*l.*, the taxes levied cannot seriously have affected values; but this is really beside the point. The Report of the Commissioners of Inland Revenue stated that 11,000,000 hereditaments in the United Kingdom had to be valued to determine the site value, a task which the Commissioners estimated would occupy several years. What would be the effect on any other class of security if a tax, uncertain in amount and requiring a technical valuation of the security, were placed upon it as from April, 1909, but which could not be definitely ascertained for five or six years? That security would be seriously depreciated, and if it was not actually unmarketable, dealings in it would be few, and precisely the same result ensues in the case of land and buildings. This class of property liable to an uncertain charge is not dealt in, and the unwillingness of persons to hold it is increased by the vexatious methods of valuation. The Commissioners stated that 10,500,000 copies of Form IV. alone had been served; many of these forms have since been held invalid by the courts, and it is clear that such a chaotic condition of affairs offers little encouragement to investment, and progress in laying out building estates is seriously discouraged.

Thus far we have only denoted general considerations which speak for themselves, as under such conditions enterprise cannot but be checked, and where a trade is depressed it is difficult to deal with the exact loss of business or shrinkage in values due to a specific cause, but we may briefly refer to some of the evidence available.

In the review of the estate market for the year 1911, recently published in the *Times*, it is stated:—"A diminution of capital value is the inevitable result of new taxation of the kind which has in the last year or two been imposed. Mortgagees have called in their money, and in other ways there has been considerable pressure to sell. . . . Investors have an exceptionally wide range of choice, and they are invariably resolved to buy only at prices which amply discount the effect of the recent taxation and of legislation which decreases the advantages of ownership. . . . The increased cost of labour and the rise in the price of commodities have both begun to make their influence felt, and the more so in that the imposition of the new taxes had for some months practically stopped the development of building estates."

The land which has been sold has been principally agricultural land, which is exempt from the new taxes.

The recent Report on Building Societies showed an exceptionally unsatisfactory position.

The plans deposited with the principal urban authorities, according to the latest return available at the time of writing for the first nine months of 1911, showed a shrinkage of expenditure (exclusive of the County of London, as to which figures are not given) of 310,116*l.* compared with the same period in the previous year, a diminution which occurred mainly in connexion with dwelling houses, shops, and other business premises.

With the question of unemployment we recently dealt in our issue of December 29 last. The returns from the *Labour Gazette*, which are so frequently quoted to support the contention that the building trade has not suffered from the new taxation, are not exhaustive, and chiefly refer to trade union joiners, carpenters, and plumbers, and do not take account of such men even of these classes who have dropped out of employment and become so poor that they have suspended their contributions to the unions. The Chancellor of the Exchequer is constantly quoting these figures, but he must be aware that they do not fully represent the case, since, in the actuarial report made for the purposes of the Insurance Act, it is stated that these returns take no account of any persons to whom unemployment benefit is not paid, and do not include bricklayers, plasterers, painters, labourers, etc. The importance of this becomes at once apparent from a study of that report, for the actuary, taking all classes together, estimated the percentage of unemployment as double that of carpenters and plumbers. We dealt with this question in our issue for May 26, 1911.

There is yet one other aspect of the question which can only be briefly referred to here. The site values, when ascertained, although they are calculated on a purely artificial and imaginary basis, are being used, or are proposed to be used, for other purposes, estate duty is being assessed upon them, and a proposal is on foot to use them for rating purposes. As one of our correspondents recently pointed out, the apathy of those affected is somewhat remarkable. No organised movement has been instituted to protect property from a policy which is crippling the building industry, and the example of the medical profession in connexion with the Insurance Act might well be taken to heart by the professions and trades so seriously affected. What is the conclusion of the whole matter? A repeal of the land taxes can hardly be hoped for, but an inquiry into their working has practically been promised, and it behoves those concerned to agitate for the early fulfilment of this promise, and to make some organised and strenuous effort to bring their case fairly and fully before any body that may be appointed to hold such an inquiry.

THE TEACHING OF ART.*

THE remodelling of the scheme of instruction in art proposed by the Department of Education has induced Mr. C. R. Ashbee to anticipate a more comprehensive work on which he is engaged, entitled "The Man and the Machine," by the issue of that portion of his studies in this subject dealing with education.

"Should We Stop Teaching Art?" is the title Mr. Ashbee gives to his essays, and, to put the matter briefly, the conclusion he arrives at is that the right method of encouraging the arts is the endowment of craftsmanship.

Mr. Ashbee is, as we all know, a firm believer in the workshop as the best school, and his experience in the training of the craftsman entitles his opinions to respectful consideration. The subject is introduced by means of a series of axioms mainly concerned with the relationship between life, the arts, and machine production; these recognise the necessity of the latter, but, as one might expect, endeavour to define it within the bounds which, if exceeded, are harmful.

With the main lines of the author's contentions most artists will find themselves in agreement, but when he lays it down as an axiom that a craft cannot be taught in the school we feel that he loses sight of the marked tendency in recent years for the school to approximate to the conditions of the workshop. There is essentially no line of demarcation to be drawn between the two, except that the workshop is, presumably, organised on a profit-earning basis, while the school is not. As this question of profit in no way affects the remaining aspects of the case, we fail to see why the school should be condemned when its methods are in other respects indistinguishable from those of the workshop.

Of course, if Mr. Ashbee intends to limit his definition of the school to those with a different method to this, he is entitled to his axiom, and most will heartily agree that there is no better training than that on the lines of the workshop. The question then becomes, Is it the better course to remodel our school methods or to drop the schools and devise a scheme for the encouragement of the workshop?

Mr. Ashbee is emphatically for the latter alternative, and appears to consider the former as quite out of the question. We think that this attitude is hardly a fair one, as many of the merits he claims as appertaining to the workshop are not unattainable in a skilfully-conducted school. It is stated that "All the school can ever do in craftsmanship is to train character, to point out a method or to provide a formula." We confess we cannot appreciate the justice of this limitation, but, not to labour the point, let it be assumed that Mr. Ashbee refers to schools that have not developed their methods, and whose teachers are not those skilled in workshop practice. As the majority of schools come within this

* "Should We Stop Teaching Art?" By C. R. Ashbee. (London: B. T. Batsford. 1911. Octavo. 3s. 6d.)

category, there is something to be said for his view that:—

"To this teaching of the arts a new vitality must now be given, and the plan which it is the purpose of this book to set forth is *that we should gradually change the system of endowment of our art schools into a system for the endowment of small artistic workshops*, or as I should prefer to put it, that we should transform our art school system into a Guild system, and to these associated workshops the art teaching of the country should be delegated."

Leaving the more general aspects of the question, Mr. Ashbee has something to say to the architect in particular. After referring to the lack of organisation in placing information at the disposal of the profession, the author continues:—

"The profession of architecture is still wedded, and rightly, to the apprenticeship system. As in other occupations that deal with the τέχναι the apprenticeship system is worn out, and all who have gone through it in architecture know that they cannot get from it what they need. The pupil ekes out his lack of knowledge here and there at an institute, or by attending lectures, or going through examinations. *What he really suffers from most is a lack of systematised study and training.* The routine work of the office does not give it him, for it is routine; the Royal Institute examinations do not give it him, for they are examinations; the Polytechnic—even the Central School of Arts and Crafts—classes do not give it, for they are classes; and finally, the art school does not give it, for it is just an art school. What, then, is to be done?

For the great directive art of architecture under modern mechanical conditions we need a special method of training, and we need it so devised that the principle of association, and wherever possible the collegiate principle, is of the essence of our method. Let us postulate to begin with that a certain amount of public money, liberated by the decentralisation of the art schools, will be available for architectural teaching. This money should be allocated by the State to the different schools or faculties of architecture, whether at the Universities or not, that work with the Royal Institute of British Architects, and to this the Universities and the Royal Institute might be asked to contribute. The reasonableness of having the work done in conjunction with the Royal Institute will, I think, be evident if we admit, what to me and I believe to all practising architects is vital, viz.: that *the ultimate direction of architectural teaching should be vested in the architects themselves, not in the State, and not in any senate of university professors.* It should be with the men in whose hands is the shaping of the art. It is they who are working out the problem of architecture in the life of the people, and it is they therefore who should guide the teaching."

Further on, the position given to architecture in the American Universities and the care that is there devoted to this art as a need in national life is eulogised. The respect for architecture as a subject touched by the Humanities is illuminated by a quotation from a lecture delivered by John Ruskin in 1867:—

"There is an impression on the public mind that in order to recover the national power in art some knowledge of its practice should be diffused through the mass of the people. Now what is really wanted is very nearly the reverse of this. It is not to teach the body of the nation to know something of art, but to teach the artists of the nation to know much of other things. It is not to give an artist's education to the populace, but a gentleman's education to the artist."

We must pass rapidly over the remedies suggested for the present unsatisfactory condition of affairs in this country. In brief, Mr. Ashbee recommends, first, study of the progress made in Germany and America; second, closer touch between the art schools and employers of labour; third, the Registration of and combination by *bona fide* craftsmen; fourth, the exhibition of craftsmen's work; fifth, the linking up of the industrial arts with the small holdings; sixth, the extension of the South Kensington circulation department; seventh, drastic revision of the inspection of schools; eighth, endowment of craftsmanship. The exigencies of space preclude us from giving the details of these proposals, and we can only refer our readers to the book itself.

NOTES.

The Villa d'Este. It is announced in Vienna—and there seems good reason for believing the news to be correct—that the Villa d'Este, at Tivoli, is to be given to the Austrian authorities to afford for Austrian artists and students a *pied-à-terre* analogous to the French Academy in the Villa Medici, and, as we hope, our own in the Exhibition building to which we referred a few weeks ago. It has been known for some time that the Archduke Francis Ferdinand, who inherited the Villa from the last Duke of Modena, has found it too expensive to maintain even in a very imperfect manner. There has been talk of selling it, a course discountenanced in high quarters. So that the probability now is that the Archduke will make a generous donation, for which he will be rewarded indirectly, and in a way not relevant to our interests.

The Honours List of the World. The world's greatest men cannot be named to the satisfaction of everyone, and a symposium in the current *Review of Reviews* is the latest proof. Mr. Carnegie's list of twenty is challenged by Mr. Frederic Harrison, whose own list is not beyond criticism. Lord Rayleigh gives us hope when he suggests that sculpture, painting, and music should be represented. Some of the other contributors, who include Leonardo da Vinci and Michelangelo, do not say in what capacity they are named, though we are inclined to say that their work as architects was not considered; for in the epitome of votes, Michelangelo, halfway down, is described as "painter and sculptor." Is this more evidence of the general unconcern about architecture, or cannot an architect be found to rank with the engineers, inventors, soldiers, statesmen, authors, and others who have caught the public eye?

Manitoba Parliament Buildings Competition. We understand that considerable dissatisfaction is felt by Canadian architects with the conditions of this competition, and that there is a probability that the various architectural societies in the Dominion will endeavour to get them amended, failing which the competition may be barred. The time limit is considered altogether inadequate, exception is taken to the method of judging, and to conditions governing the lighting and heating. We gather that there is a reasonable probability of the time limit being extended, so making it possible for English architects to compete, but at the same time there is no doubt that the action of the Government of Manitoba in fixing so short a time limit tends to throw doubt on the *bona fides* of their wish to obtain designs from the best architects in the whole Empire. We shall await further developments with interest.

Burford Priory. We are glad to note that Burford Priory has fallen into such sympathetic hands as those of Mr. E. J. Horniman. Having fallen into a ruinous condition, it was rescued from this state by Colonel B. de Sales La Terriere, its former owner, who did not, however, find it practicable to reconstruct the whole of the house and restore it to its original state, but took in hand the portion still standing and treated it in a conservative spirit, remodelling the arrangements only where necessary to meet the demands of convenience in the use of the house as a home of to-day. The Priory existed in the XIIIth century as an offshoot of the Abbey of Keynsham. The Harman family converted it into a lay residence, and it eventually passed into the hands of Sir Lawrence Tanfield, who was admitted to the Inner Temple in 1597. While Sir Lawrence lived there he entertained James I., and this was commemorated by a great heraldic panel of the Royal Arms, which is in excellent preservation. A later owner was William Lenthal, Speaker of the Long Parliament. After the Restoration Charles II. dined at the Priory, and William III. was also a visitor there. Some measured drawings of Burford Priory, by Mr. H. Tanner, appeared in our issue for October 28, 1899.

The Railways and Socialism. A circular has been issued to the shareholders of the Metropolitan Railway by one of that body inviting his fellow-shareholders to co-operate with him in forming a committee to support the Anti-Socialist Union of Great Britain in its campaign against this branch of Socialism. It is an unfortunate feature of the present methods of labour organisations that they call for counter-organisation on the part of employers and owners of property not only for the purposes of traversing misleading statements circulated by the representatives of labour, but also for resisting actual physical violence. The movement proposed in this circular is directed to the first of these two objects, and some of the statements complained of are dealt with in the circular. The writer addresses himself in particular to a statement originally made in 1907 in "The Census of Wages," by Mr. R. Bell, that "there are over 100,000 employees on the railways of the United Kingdom whose standard wage does not exceed 1*l.* a week." This is characterised as a misstatement; but we venture to think it might more correctly be described as a suppression of the truth. In the Board of Trade returns for 1910 it is stated that information was received by the department which enabled the wages of 90 per cent. of those employed to be estimated, and the average weekly earnings of these 463,000 employees amounted to 25s. 9d. a week per head. Among the employees there are some 43,000 boys and also men employed on light and totally unskilled labour; therefore, although it is possible that there

may be 100,000 persons receiving less than 1*l.*, it is quite obvious that the service is a well-paid one, with extra privileges not computed in earnings, and that the statement in question is a *suppressio veri* calculated to convey a wholly false impression.

Railway Nationalisation.

THE circular also draws attention to a statement by Mr. Ramsay Macdonald that he and his supporters intend by their action to depreciate the value of railway stock until it suits them to consider purchase, and to the fact that the Socialist groups within the railways are really striving by their methods to accomplish nationalisation. The Trade Union Congress has repeatedly passed resolutions in favour of nationalisation, but it remains to be seen whether the action of our own Government in connexion with the recent strike, as well as the action of foreign Governments where strikes have occurred on State-owned railways, may not open the eyes of trade unionists to the fact that a Government Department may be less supine in its methods than public companies. However this may be, it is well that employers and property owners in this country should take steps for the better instruction of the public in such matters and should realise that a *laissez-faire* policy can be carried too far in the face of militant agitation.

THE ROYAL SOCIETY OF PORTRAIT PAINTERS.

THE twenty-second exhibition of the Royal Society of Portrait Painters, which is now on view at the Grafton Galleries, is not restricted to works which have not been exhibited elsewhere. As a matter of fact, most of the prominent portraits have been exhibited elsewhere. We make no complaint about this; we are indeed glad to renew acquaintance with works to which their authors obviously attach more than passing importance. There is, for instance, Mr. Sargent's portrait of Lady Faudel-Phillips, which must be ranked among his most sincere work; there is Mr. Strang's "Milady's Maid," in which the artist discovers harmonies in his definite and uncompromising statement of line and colour which in some of his other pictures strikes us rather as a concession to a sort of didacticism, to a sounding of the war note in a battle against loose drawing and a mitigated use of colour; there is Mr. J. J. Shannon's portrait of two ladies "on the Dunes," and there are other pictures which we are also glad to see again. Sir Edward Poynter's preliminary study for the portrait of King Edward VII. only goes to illustrate an argument in favour of the exhibition artist's first impressions which we have often used in the *Builder* in our criticism of pictures. This is a very finished and accomplished first impression, it is true, and probably the result of even earlier elaboration and arrangement, but what a difference between this small picture, as a work of art, and the large affair at the Academy! Sir Lawrence Alma Tadema's Mr. Whitaker Thompson, a recent portrait, is a perfectly plain and unaffected presentment, painted with the elaborate finish and care which distinguishes all his work. Mr. Lavery has sent some characteristic portraits, and so has Mr. William Nicholson. As Mr. Lavery is a school unto himself, and as Mr. Nicholson is essentially a derivative and eclectic painter, we are unable to envisage either of them in a brief note; any more than we are able to dwell upon the always interesting work of Mr. Greiffenhagen. There is also the portrait by M. Besnard of a French ambassador at a foreign court. As M. Besnard appears to be the only foreign artist of distinction represented we are a little at a loss to explain his presence, but he is welcome. The portrait may be somewhat histrionic, but as a piece of decoration it is the most complete thing at the exhibition. That is to say, you could not very well hang this fine quixotic-looking gentleman, with his cloak and official costume, with his ample background, in any space that was not designed for the purpose. At the same time we have rarely seen any portrait more typical of the dignified and picturesque phase of diplomatic life.

THE ROYAL INSTITUTE OF BRITISH ARCHITECTS:

THE EXAMINATIONS.

The Final: Alternative Scheme of Testimonies of Study.

IN accordance with the notice already published in the R.I.B.A. *Kalendar*, the alternative Scheme of Testimonies of Study for the Final Examination will come into operation at the option of the candidates in November next, and after the end of the year 1913 the existing Testimonies of Study for this Examination will be abolished. Six alternative Problems in Design will be set by the Board of Architectural Education each year, and candidates for the Final Examination must submit designs in answer to at least four of these problems. These alternative problems will be published twice a year—three sets in January and three in July. This is done for the convenience of candidates, but it must be distinctly understood that the time for sending in the designs in answer to these problems is strictly limited. Thus the designs for Subject I. must be sent in to the Secretary R.I.B.A. or to the Secretary of the Allied Society for the district in which the candidate is working by February 29, 1912; those for Subject II. by April 30, and those for Subject III. by June 30. (This time will be extended for students in the Colonies: see dates following list of subjects below.)

The drawings to be on imperial sheets.

The subjects for the first half of the year 1912 are as follows:-

Subject I.—(*a*) A large monument, to commemorate King Alfred's refounding of London one thousand years ago, for a public place in the City, not to cover more than 500 super. ft.

All drawings to be ½-in. scale and shaded.

(*b*) A terrace of five houses 20 ft. frontage, each six stories high, including basement, facing the parade of a small watering-place. Detailed construction of one house to be given and a design for the complete terrace.

Drawings required to be ⅛-in. and ½-in. scale.

Subject II.—(*a*) A large monument to an explorer, to be placed against the wall of a public building.

Shaded drawings required to be ½-in. scale.

(*b*) A cloister with external entrance gateway or tower to a collegiate building round a courtyard 100 ft. square.

Drawings to be ⅛-in. scale, with ½-in. details of the complete construction of one bay.

Subject III.—(*a*) A detached ballroom to a large country house, to be connected with the house by a covered way. The decorations should be specially considered.

Shaded drawings to ½-in. scale, showing both interior and exterior, and a detail of decorations.

(*b*) A landing stage to a river or lake with a restaurant.

Drawings to show complete construction ⅛-in. scale and ½-in.

Dates for Submission of Designs in 1912.

	Subject I.	Subject II.	Subject III.
United Kingdom	Feb. 29	April 30	June 30
Johannesburg	April 30	June 30	Aug. 31
Melbourne	May 31	July 31	Sept. 30
Sydney	May 31	July 31	Sept. 30
Toronto	March 31	May 31	July 31

Construction and Shoring: Memorandum to Masters of Architectural Schools.

The Board of Architectural Education have received a communication from the examiners to the effect that many of the candidates at recent examinations have shown weakness in the subject of construction generally and shoring in particular. They would, therefore, direct the attention of the Masters of the Architectural Schools to the importance of impressing on their students the necessity of studying more carefully this important branch of architectural education.

Institute Prizes and Studentship.

Works have been received for the Institute Prizes and Studentships, 1911-1912, under motto, device, or signature. For the Institute Silver Medal and 25 guineas (Essays), subject: "The Principles to be Observed in Designing and Laying out Towns, treated from the Architectural Standpoint," twelve essays were received.

For the Institute Silver Medal and 10 guineas (Drawings), subject: "Measured Drawings of Ancient Buildings in the United Kingdom or Abroad," five sets of drawings were received; and for the Sloane Medallion and 100*l.* (for Continental travel), subject: "Design for a Guildhall," thirteen sets.

The Owen Jones Studentship (certificate and 100*l.*, for travel, and study of colour).—Application and drawings have been received from Noël H. Leaver and Geo. W. Mason.

For the Pugin Studentship (Silver Medal and 40*l.*, for travel in the United Kingdom), sets of drawings have been received from: 1, C. Peake Anderson; 2, A. M. Durrant; 3, Joseph Hill; 4, W. J. P. Jones; 5, J. R. Leathart; 6, Charles Waite; 7, Jas. Macgregor; 8, R. Norman Mackellar; 9, F. H. Swindells.

For the Tite Prize (certificate and 30*l.*, for travel in Italy), subject: "Design (according to the methods of Palladio, Vignola, Wren, or Chambers) for the Central Courtyard of a Royal Exchange covered with a Roof," eleven sets of drawings have been received.

For the Arthur Cates Prize (40 guineas), drawings have been received from J. B. F. Cowper, Claude V. Hodges, and Maurice Lyon.

For the Grissell Gold Medal and 10 guineas (for Design and Construction), subject: "Design for an Isolated Exhibition Building," four sets of drawings have been sent in; and for the Godwin Bursary (Silver Medal and 65*l.*), drawings have been received from Geoffry Lucas and A. F. Wickenden.

The Annual Exhibition of Designs and Drawings submitted for the Institute Prizes and Studentships opens on Monday, January 22, in the R.I.B.A. Galleries, 9, Conduit-street, W., and closes on February 5.

THE ROAD BOARD AND ROAD CRUSTS.

In a circular addressed to the County Councils of England and Wales the Road Board communicate their Minute of December 8 (which will extend to applications from Scotland), relating to road crust improvements. In making contributions in that behalf the Board will confine their grants to, say, 75 per cent. of the extra cost of improvement after provision out of maintenance account of the cost of renewal. They express their desire to assist the improvement of surface crusts by the use in the future of superior and more durable material, and by the substitution of a bituminous-bound for water-bound material. Their Advisory Committee have framed a code of general directions for surfacing existing roads with steam-rolled, water-bound macadam, which can be obtained, price 6d., post-free, from Messrs. Waterlow & Sons, London-wall, E.C. During the last three months the Board have made advances to a total amount of 33,787*l.*, including 29,045*l.* in respect of road crusts; the total of grants up to the end of last year is 428,834*l.*, inclusively of 347,407*l.* for improvement of road crusts. They have, further, indicated grants aggregating 490,413*l.* to highway authorities towards works of improvement of which the details are still under consideration.



THE ordinary general meeting of the Architectural Association was held at Tufton-street, Westminster, on Monday, Mr. Gerald C. Horsley presiding.

Mr. Hall (Hon. Secretary) announced that the second Spring Visit would take place on January 27, to the new Polytechnic Regent-street, W. (Messrs. C. F. Mitchell and F. T. Verity, architects.)

The President announced that Mr. Theodore Fyfe had been elected to serve as a member of the Council.

On the motion of the President, votes of thanks were accorded Mr. Niel Koch for presenting a book, entitled "Viennese Architecture," by Professor Otto Wagner, together with eight volumes of "Academy Architecture," and to Mr. W. H. Ward for presenting six volumes of "Academy Architecture" to the Library.

ALFRED STEVENS.

Mr. E. F. Strange then gave an address on "Alfred Stevens," his remarks being illustrated by a large number of slides of sketches and models now in the possession of the South Kensington Museum. He said that Alfred Stevens was born on December 30, 1817, at Blandford, and was the son of a house decorator. He began to copy pictures at about the age of ten, and made a most wonderful and excellent portrait of himself reputably at the age of fourteen. These works, of course, in a small town attracted a considerable amount of notice from his neighbours, and one of them introduced him to the Rev. Samuel Best. It was of some little interest to know who it was who was actually responsible for giving Stevens his chance in life; it was a Mr. Henry While, or White. He had seen the name written on two occasions, and it seemed to him that, although the "t" was not crossed, yet it probably was "White." This gentleman introduced Stevens to Mr. Best, whom White mentioned as his principal benefactor, and who seemed to have provided the small sum of money with which Stevens was sent to Italy in October, 1833. He went to Naples first, but the accounts given of his first few years in Italy were not generally correct. Stevens himself stated that he spent eight years working at the Academy of Florence in two periods of five years and three years, with an interval between. Stannus said that Stevens arrived at Florence in the autumn of 1836. In July of 1836 Mr. White wrote to the Director of the Academy stating that he had introduced Stevens to Mr. Best, and he had promised to write home every month, but that for a year they had heard nothing about him, and his parents were naturally distressed. The importance of this from the historical point of view was that Stannus was wrong in saying he arrived at Florence in 1836. Presumably he had been in Florence for considerably more than a year at that date. The Director, in reply, said that Stevens had been working there, although he was not a registered student of the Academy, but at the particular time he was away with Mr. Kinloch, the American sculptor. This again disposed of the idea that Stevens met Kinloch in Rome and accompanied him to Florence, where Kinloch fell sick and died. It also disposed of a further statement that Stevens's father took little interest in him after he had once got rid of him. Stannus also said that Stevens went out to Italy with the advice that he should study Salvator Rosa, but that when he saw his work the badness struck him so forcibly that he would have nothing to do with it. The Director of the Florence Academy, however, said he did copy a picture of Salvator Rosa. During the time he was in Italy Stevens managed to visit the chief towns and to study most of the work that was to be seen in them, and many of the studies and sketches he made were in various collections. Proceeding to deal with the slides, Mr. Strange first showed an authentic picture of Stevens, an Italian landscape in water-colours, a study of rocks at Puzzuoli, and some pencil studies of frescoes. The next slide was that of a black charcoal drawing on brown paper. It was known that Stevens contributed to the second fresco competition for the decoration of the Houses of Parliament, his contribution being a scene from the play of "Richard III." Amongst the drawings which the Museum had acquired from the late Mr. Townrow were four drawings by himself in black chalk on brown paper, and there was a note on one of them to the effect that these were his copies from studies by Stevens for the Houses of Parliament competitions, the originals of which had been destroyed, so that his copies were the only records remaining. In another parcel, however, he found two very battered fragments, which he now reproduced on the screen, which were greatly superior to Mr. Townrow's copies, and at the same time were obviously the things he copied from. Therefore he ventured to think they had got two of Stevens's sketches or studies for the Houses of Parliament competition. But then the question arose—Which competition? The four figures shown represented figures for four corners of a circular composition. The two upper ones were angels, and the two lower ones crouching figures in heavy drapery. Obviously these were not the figures which would have been accepted to decorate a scene from Shakespeare's plays. He went back to the catalogues of the original competition, which was announced in 1842 for full-sized cartoons to be executed in charcoal on brown paper of subjects to be chosen from Milton's "Paradise Lost," Spenser's "Faerie Queene," or English historical subjects. The copy of the catalogue at the Museum belonged to that old collector Mr. Smith, who had the most praiseworthy habit of making pencil notes in the margin, and he found against No. 53 in the competition the pencil note, "Stevens." The subject was the "Expulsion of Sin and Rebellion from Heaven":

> "Headlong themselves they threw
> Down from the verge of Heaven. Eternal wrath
> Burned after them to the bottomless pit."

That, of course, was not conclusive, but he looked further amongst various contemporary periodicals, and in the *Art Union* for August, 1843, he found that the writer of an article had taken the trouble to collect all the names of the competitors, and he wrote as follows:—"No. 53, 'The Expulsion of Sin and Rebellion,' Stevens—a number of headlong figures grouped circularly, as if designed for a bas-relief; the *vis cadendi* is, however, wanting; this and much else has been sacrificed to neatness of arrangement. The features are deficient of all expression of pain, confusion, defeat, and consequent infernal ire and disappointment; as opposed to this, the glory of the Messiah pursuing is insufficiently upheld." That must have been one of the first works exhibited by him on his return from Italy, and before he got his appointment as master of the School of Design. With regard to his position at the School of Design, there was not much to be said about it which had any influence on his later work. Stevens held it only for two years, and left in sympathy with the headmaster. The chief value to them lay in the evidence he gave on the committee of inquiry which was held. Stevens was examined specially on the question of training. With respect to his own training, he said he studied at France with a view to ornamental design, but he emphasised the fact that there was but one course in the Academy—a course intended for painters, and consisting mainly of the study of the human figure. There was no instruction in design. He said, "Pupils generally enter the Academy with the intention of becoming artists; the study of the human figure is therefore the great feature of their education. Some of these towards the completion of their studies are, by their natural disposition or by circumstances, led to turn their attention to ornament with their already acquired knowledge; but little special study is sufficient to make such men excellent ornamentalists. In this manner Italian designs are made. At the Italian academies the average period of studentship was ten years, and in the course of the inquiry this point also was considered. One of the witnesses, Mr. Townsend, had said he thought two years long enough for the acquirement of a sufficient degree of technical skill for the purposes of a designer. Stevens was asked his opinion, and he gave a remarkable and decisive answer. He said, "If by technical skill be understood the power of being able to copy well, either in drawing or painting, a form which is put before you, it appears to me that when a man has attained that he has finished his studies." Again he said, "I think that technical skill depends upon the knowledge of a pupil. I think a pupil will never be able skilfully to put down either in painting or drawing any form which he is not perfectly acquainted with. I hardly think that manual dexterity comes from anything but from a boy being very certain in his own mind what he is about to do." He also said that a preliminary school course of four years at least was necessary for the young designer. One would like to emphasise the insistence which Stevens put on "form," for one of the great characteristics of the whole of his work was his conception of that quality. It was specially interesting to them now, when they saw rather a disposition to make clever drawings for their own sake as drawings, and not as drawings which should specifically represent a particular form. One might spend a whole evening discussing theories of art education, but he would go on and show how Stevens applied the principles he had so clearly formulated in his mind. This evidence was given before he had achieved any single work of any public importance. In 1847, however, he obtained a commission to decorate a portion of Draysbrook House, West Derby. The story was told that Collman, who had the ordering of the work, gave Stevens the commission, and the work had to be finished at a certain time, but only a fortnight remained when he was induced to go to the house. Stannus said that Stevens arrived with a few sketches and set to work with most marvellous dexterity, and finished three rooms within the time, which were certainly amongst the most noble examples of mural decoration in this country. So many careful studies were executed for that work that one was disposed to doubt the statement as to the time spent on it, but Mr. McColl, who had made a special study of the Draysbrook decorations, would doubtless tell them something about it. Having shown a number of sketches for the decoration of Draysbrook, Mr. Strange exhibited a sketch of the design for the doors of the Geological Museum in Jermyn-street—a splendid project which unfortunately never matured. He thought this one of the most splendid pieces of design that Stevens produced. When Stevens first came back from Italy he appeared to have endeavoured to obtain his living as a portrait painter, and at the inquiry he had referred to he was described as a painter. He drifted, partly from necessity and obviously because it was his natural bent, into various forms of design, design in a small sense and design in the very noblest sense in which the word could be used. Some of the things he did were certainly open for criticism. The rose-water sprinkler shown on the screen was beautiful in its detail, but one could not feel that it was good design as a whole. Stevens's use of the figure in industrial design was one of the strongest and most interesting of his characteristics, and certainly no Englishman had ever used the figure in that way to greater advantage, nor had any Englishman ever used it to such

(

ordinary purposes as did Stevens. The speaker showed a table-centre in silver where extraordinarily skilful use was made of the figure, although from their modern view they would say the ornament was too elaborate for design for practical purposes. Stevens applied his talents to all sorts of curious purposes, and they would see designs on the screen for a whole series of Indian knives, one of which was exhibited in the 1851 Exhibition. Several succeeding slides showed designs for candlesticks, and when enlarged it could be seen that one of them was of a monumental character. They were extremely interesting as an example of how fond Stevens was of the device of arranging figures round the central stem, which he used with splendid effect in the memorial of the 1851 Exhibition and several other occasions. Stevens's designs for street-lamps had not been very prominently brought before the public up to the present, but he hoped within the next few weeks to have a whole series of them, which ought to attract a certain amount of attention. Stevens designed some very beautiful street-lamps, and obviously studied proportion very carefully; but he supposed designers of modern street-lamps had to include motor-omnibuses in their calculations. He did not know whether any of the designs were actually carried out, but would be glad to learn if they were. In 1850 Stevens went to Sheffield and made designs for an old firm, which was still flourishing—Messrs. Hoole & Sons. He designed a number of grates and fireplaces and stoves, and things of that kind. Several designs of fire-grates, including the one which made a sensation at the 1851 Exhibition, were exhibited, and also that of the grate and two fire-dogs now in the Victoria and Albert Museum. One of these was absolutely utilitarian, but with the most masterly execution of relative proportions. The other could only be described as the best of the sculptor's art in one of its highest phases—a most exquisite piece of modelling. Two designs for blue-tile panels for a fireplace was exhibited, the effect of which Mr. Strange said was very striking indeed. The original designs were in the Tate Gallery at the present time. Slides were then shown of bronze finger-plates for doors, a lion design for a door-knocker, and the lion design for the British Museum railings, which was probably the best known of Stevens's work. It had also been placed round the Wellington Monument at St. Paul's. Mr. Strange next showed a slide of the original plaster model, designed for the door-knocker at Dorchester House, and also the same design in bronze by Mr. J. Clayton. It lost undoubtedly in the reproduction, and he was afraid the same thing must be said of not a little of Stevens's work. In his designs and sketches and in his models almost up to the last point the execution of Stevens was magnificent, but it must be admitted that sometimes the final result when the work was carried out in the destined material did not entirely fulfil the anticipations which the magnificent sketches had raised. Dorchester House, as they knew, was a splendid mansion, and had come before the public lately in connexion with the fine reproduction of the Stevens chimney-piece which had been placed in the Tate Gallery. Mr. Holford made the acquaintance of Stevens, and gave him the commission to decorate portions of the house, not, as had been stated, in 1858, but in 1856, which was a year before the Wellington Monument controversy had arisen. But he was not such an entirely unknown man as people were led to suppose, for in the *Art Journal* of that day were the following remarks :—

"We are much rejoiced to hear that the internal decoration which is now about to enhance and complete the structure is likely to be in the hands of an Englishman, and of one who we are quite sure will perform his part worthily. Mr. Stevens, 'of Kensington,' is already entrusted with the decoration of the dining-room, with respect to which he is given a 'carte blanche,' and this with the full concurrence with the architect, which speaks well for that gentleman's liberality of feeling. Under these circumstances, there is no fear as to the result, nor, we should think, that the whole of the apartments will not eventually be placed in Mr. Stevens's hands. The exterior of the edifice is highly effective in its unity, and is harmonious and complete in itself from one feeling pervading the whole. The same advantage should be accorded to the interior. We have often had occasion to speak of Mr. Stevens's work in ornamental art with high praise. The style in which he is strongest is Italian (so called), the most appropriate, on the whole, for English edifices of the class of Mr. Holford's house, yet he is no servile copyist—his compositions, though fully imbued with the full and fervid character of the Italian school, are yet no more *refacciamente*—he thinks for himself. In any other European State he would have achieved by this time a much wider celebrity than has as yet fallen to his lot. This arises from no shortcomings on his part, but from the fact of there being no proper 'status' yet for an ornamentalist in this country—at least, for a British one. We trust, however, this will ere long cease to be the case, and that ornament without a strong feeling for which, we reiterate, as we have often done, there can be no true union of the other arts, will have its due rank acknowledged. The success we predict in the present instance will give its aid, which we reckon on, inasmuch as our own impression would not hesitate to venture Mr. Stevens's powers in his own style by the side of those of any living ornamentalist, and this notwithstanding that he may be more generally known to the public by the assistance he has given in the best class of ornament connected with stoves and grates than by his other compositions."

They had to remember that Stevens had come very prominently before the country, and had been bitterly attacked in the House of Commons in regard to the agitation over the National Gallery administration, and there was no doubt his work for the 1851 Exhibition greatly enhanced his reputation. When Stevens came, as he did almost at once, to the performance of some of the great works on which his fame really rested, he was anything but an unknown man. He had not exhibited at the Royal Academy, unless the entry in the 1846 catalogue, "For the Interior of a Church," by "A. Stephens," might be attributed to him, although the name was spelt differently. One trifling matter which seemed to suggest that it might have been him was that he was the only exhibitor of the year who did not take the trouble to communicate his address.

The Dorchester House decorations were not carried so far as the writer of the notice hoped. Not being an American subject, he (the speaker) had unfortunately been unable to obtain admission to Dorchester House, although he had tried very hard. He supposed no one wanted a crowd of people over his house every Saturday afternoon, but, at the same time, it did make one wish that such decorative work as that of Stevens might be made more accessible to the public. He hoped they would give all the assistance they could in the efforts being made for the preservation of Stevens's own house at Haverstock Hill and of Draysbrook House. Another very interesting experiment in design for decoration, and one by no means well known, was the scheme for a pavilion for Queen Victoria at Paddington Station. They had several of Stevens's drawings of this. One was at South Kensington, and Mr. Phené Spiers had the alternative scheme. They were characteristic of the author, but for some reason the work was never carried out. In this matter Stevens was associated with Digby Wyatt. For the Crystal Palace Stevens executed two ceilings in the Italian Courts, and what would be the future of these would also be a matter for serious searchings of heart amongst those who did not want to see good work destroyed. Another of Stevens's activities was found in making designs for Majolica ware. The Museum possessed some specimens of this ware, which they bought in 1864. Stevens was also responsible for the design of the table in the refreshment-room of the Museum, with the exception of the marble top and one of the large heating coils. He did no work for the decoration of the Museum itself, but he had been told that he used to come in almost surreptitiously in the evening and talk with "his boys" and give them hints, and it might be that much of that which was the best of the decoration was due to his suggestions. Mr. Strange showed a reproduction of the Exhibition certificate of 1862, which must have taken considerable trouble, and which he considered the best certificate design ever made. The original design was not adhered to, for Queen Victoria was so affected by the two mourning figures at the bottom that they were omitted, and he thought the final design lost by the omission. Several original sketches for the 1851 Exhibition memorial were reproduced on the screen, for which Stevens was unfortunately not successful. The model which was at South Kensington was one of the most beautiful things Stevens ever did. After all, the chimney-piece at Dorchester House was only one part of the design, and the Wellington Monument was designed in relation to its surroundings. In the model, however, they had Stevens's conception of what a great isolated monument should be. It represented four continents linking hands round a central shaft, and it gave perhaps the finest form in which his favourite device of placing figures around the shaft could be realised. Some criticism had been made as to the size of what might be termed the eaves towards the bottom, but Stevens intended to have a fine series of bas-reliefs running round the shaft, and these eaves were undoubtedly intended to protect them. Moreover, he would undoubtedly have had a much more important base than was shown in the model. They had a plaster model of the famous chimney-piece at Dorchester House at South Kensington, and the figures he looked on as the second best piece of sculpture which Stevens ever made. Whether when used in that way one would like to live with them was not quite certain. To his mind, they conveyed an impression almost of discomfort. He had never felt quite happy in considering the chimney piece as a design, but its execution was simply marvellous. The next slides showed alternative designs for the decoration of the dome of St. Paul's and a tracing made by Professor Stannus, which the speaker thought gave an idea of how magnificent Stevens's conception was. He was not sure, however, how he would have managed the lighting of the dome, and they had been told that Stevens was disappointed in that respect with his "Isaiah" which was executed. Whether Stevens could have really carried out a scheme of colour decoration which would have been effective in that great, magnificent, dusky cap he did not know, but, at all events, he left them some most splendid studies. Mr. Strange proceeded to exhibit a large number of cartoons of the proposed decoration, and said the labour disposed on them must have been enormous. Some of these studies were kept by his pupils and had become the great treasures of collections, but hundreds must have been destroyed. Coming to the Wellington Monument, the speaker said that a sum of about 25,000*l.* was left over from the State vote for the funeral of the great Duke, and the proposal came for a memorial at St. Paul's. There was another sum of 5,000*l.*, and in the first instance Gibson, Baily, Folley, and Marochetti were invited to compete. Gibson was in Rome and refused, and Marochetti was so certain of getting the commission that he did not trouble to compete. The other two sent in competitions, which were not accepted. Then someone woke to the fact that there was the 25,000*l.*, and a new competition was organised, open to the world. Eighty-three competed, with the result that Calder Marshall obtained the first premium, with F. Woodington the second and E. G. Papworth the third. Stevens got one of the lowest premiums of 100*l.* It was very amusing at this time to read what contemporary writers said. One paper said :—

"Mr. Alfred Stevens's is one of the faultiest designs in the competition. An open arch rises upon a picturesque cluster of twelve columns, supporting a rich pedestal, high above which stands the bronze statue of the Duke. Two groups of sculpture at the sides represent Truth crushing Fraud and Valour quelling Cowardice, the two vanquished figures being flung out from the pile with a boldness and terrific spirit. Still, this monument is in the main architectural. It is in three stages—the first an enriched basement made up of twelve insulated columns, which support an entablature bearing an enriched frieze, from which rises a semicircular-headed arch, the soffit of which is elaborately panelled. Over this arch the next stage is supported by four moulded columns, and from the ends of this stage are flung the strange figures we have referred to. Above this stage, on a plain

entablature, but enriched pedestal, is an equestrian statue of the great Duke. If, however, the monument is to be placed beneath one of the arches of St. Paul's Cathedral, this design—arch within arch—will be objectionable. The decoration of this monument is very elaborate, but we do not admire the selection or arrangement of the objects upon the sides of the sort of altar tomb upon which is placed the recumbent figure of Wellington."

Another critic said :—

"A fine piece of Venetian architectural splendour, most admirable in its restrained richness, and well studied in its light and shade. Erected in a provincial square, it would be the pride and crown of the place. The bronze statue high in the air, the open arch below, the pillars, the crown, the crushed figures of war squeezed under his shield, are full of spontaneousness and originality."

That was a serious criticism, and many people took the view that the monument should have been placed in the open air. Having shown the model, Mr. Strange said it was not carried out as it appeared, and he was bound to say he thought it lost seriously in the operation. It might, of course, be unfair to compare a small-scale model with the huge mass now in St. Paul's Cathedral, of which they could hardly get a good view without getting on a staging. In the complete monument the two magnificent groups did not appear to have anything like the value which Stevens must have intended them to have, and the story below the equestrian figure seemed to have become rather heavy, whilst the moulding seemed likely to seriously obscure the effect of the equestrian statue which would be placed there. Mr. Strange showed a photograph of the statue with the model of the equestrian figure in position, and said his point was the piece underneath seemed to have got too heavy and the bronze figures seemed to have been somewhat thrust into the air. He went the previous day to the Cathedral, and came away a little disappointed and with the conviction that one would like to see the whole thing in the open air. He was not sure whether it would not have been better to have left the monument in the Chapel, where it was placed in the early stage of the proceedings. The proposal was to make that a Wellington Chapel and place the monument in the centre. Penrose, who had everything to do with the selection of Stevens to execute the memorial, was to have made the surroundings of the Chapel suitable for the memorial, and artists of eminence were to have executed paintings in it. The actual plaster models for the magnificent groups had been placed in the central hall of South Kensington, and he did not think anything finer was to be seen in any museum in London. Stevens's sketches showed how he was always working through his eyes and his mind. He had so far avoided mentioning the one artist whom it was almost inevitable in any appreciation of Stevens, but he must show at least one piece of Michelangelo's work, which to his mind had more in common with Stevens's finest work and was absolutely free from any possible idea of having suggested any single figure which Stevens ever drew. This was the tomb of Lorenzo de Medici, one of the most beautiful things which Michelangelo ever executed, very much in Stevens's spirit. He put it that way because it was not a question at all of imitation of style. Stevens arrived at the effect of ideality and of abstraction which was not altogether inferior to that of Michelangelo. But he worked under very different conditions. He would say nothing of the troubles of the criticisms he received, but whereas Michelangelo worked in the midst of a community of artists at the most glorious period of Italian art, Stevens was Early Victorian. If ever there was a voice crying in the wilderness it was that of Alfred Stevens. Almost a recluse, a man who lived but for his own art—an art which knew no nationality or geographical bounds—he arrived by a purely natural and personal process at this elevated pitch. Stevens finished very little; he over-studied his subjects; he was hopeless as a business man. Other artists besides Michelangelo and Stevens had these qualities. But Stevens had the love of his own art, and, not unworthily, after the Lorenzo he thought they might look at his superb group on the Wellington Monument.

Sir Charles Holroyd,

in proposing a vote of thanks to Mr. Strange, remarked that he was afraid Michelangelo was rather solitary with regard to the artists he worked with. He hoped that they would be able to save Draysbrook, but they could not do so unless they got the money. The beautiful design, which Stevens was always playing with, of the two children linked together he thought he got from the Sistine ceiling at Rome, and he thought he got his first conception of the twining figures round the candlesticks from the big candlestick in the right transept of St. Mark's. With regard to the Dorchester House fireplace, he always felt he would like to see the model at South Kensington illuminated by the electric light or something. The appreciative notice of Stevens which Mr. Strange had quoted might have been written by Digby Wyatt. So far as the figures of the women on the Dorchester House fireplace were concerned, he would certainly like to live with them, but he would like them in bronze. The only thing which struck him about the Wellington Monument was that the seats ought to be taken away.

Mr. McColl,

in seconding, said that undoubtedly Stevens made careful studies of his Draysbrook work before going to the house, and, having arrived at the conception, he was able with two assistants rapidly to proceed with the work. He agreed as to Stevens overloading his smaller work, but if he was given a big thing to do it came out clear and magnificent in the end. He thought the figures around the candlesticks foreshadowed the big monument of the 1851 Exhibition. Recently Mr. J. Whitelaw, who took the Silver Medal of the Royal Institute of British Architects, came back to England full of what he had seen in Italy, and then went to St. Paul's, and was so overwhelmed with the beauty of Stevens's work that he had made a series of drawings and presented them to the Stevens Society. He agreed that there was a certain gauntness about some of the Wellington Memorial, and one was inclined to think his first design was finer; but it must be remembered that the first intention was for the whole thing to be in bronze, and when marble was decided on it had to be readjusted. Another thing was that he wished to bring the memorial into relationship with Wren's work, and also, knowing that the equestrian figure was not to be allowed at the top, he thought it necessary to move up the side groups a little to make the thing provisionally complete. Further, a certain amount of bareness came from the fact that the face of the arch was to have been covered with bronze hangings.

Mr. W. Strang

said Stevens had one quality which was certainly the rarest in this country, which was that he was a great draughtsman. The other thing which struck him was that, being so much more of a sculptor than a painter, he was the great draughtsman he was. In this country sculptors were prone to put down their ideas quickly in clay.

Mr. Colton

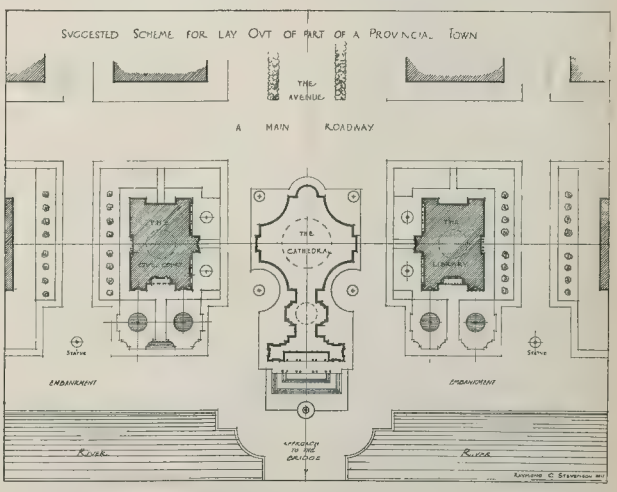
remarked that Stevens did so much in design and colour that if he had a weak point it was probably that he was not very skilled in the final production in marble or other material. He did not think many sculptors would have accepted the British Museum lion railing as a reproduction of their work, for it was cut most brutally in the iron, and he thought Stevens must have been bitterly disappointed. He had a plaster model, which was much more beautiful, and would like to know whether it was one of the original models for the railing. There was, of course, a great difficulty in the sculptor imagining what his design would be when it was enlarged. He thought the genius of Stevens was wonderful in the barren time in which he lived—he was more an idealist, a great designer. For years sculptors and architects had been quarrelling about the matter of scale. Sculptors thought the sculpture should be placed boldly, and the architect wanted to decorate his building with small sculptures for the sake of making it large and broad. It seemed to him they got a criterion for what Stevens did, for he always made his work important, bold, and free, and did not cramp it up in little niches. If they did that they would arrive at something more fine than at the present time.

Mr. Strange briefly replied, and said Mr. Drury had told him that Dalou had criticised Stevens's work with great admiration, but said it always struck him that Stevens did his sculpture like a painter. Stevens always had two admirable friends at Court —Cockerell and Penrose.

ARCHITECTURAL ASSOCIATION SCHOOLS.

THE accompanying plan, by Mr. Raymond C. Stevenson, shows a scheme in outline for the disposition of three public buildings. The central position is occupied by a cathedral, while the two flanking ones might be used as a library and Civil Court respectively. The elevations represent a suggestion for the architectural treatment of the library only.

The style of the design is on lines inspired by certain modern English work, French and Roman methods being employed. An effort has



Lay-Out Scheme. By Mr. Raymond C. Stevenson.
(Architectural Association, 1911.)



Design for Town Library. By Mr. Raymond C. Stevenson. (Architectural Association.)

been made to get the Greek spirit of refinement into the detail generally.

The main entrance façade faces the river, and the flanking pavilions are kept plain to preserve a feeling of dignity and restraint.

On the front facing the cathedral a similar central pavilion projects forward, and is supported on either side with side wings treated with colonnade and arched openings after the Roman method.

The Mansard roof treatment was considered suitable for a library owing to the simplicity in planning and lighting it affords.

The other elevation represents the river front again, but treated in the Grecian-Doric manner.

ARCHITECTURAL SOCIETIES.

The Society of Architects

The third annual meeting of the Society of Architects for the Session 1911 12 was held at 28, Bedford-square, W.C., on Thursday, January 11. Mr. G. A. T. Middleton, A.R.I.B.A., Past Vice-President, presiding.

The ballot was taken and the following candidates were declared to be duly elected :—

As Members.

James Burns, Blackpool.
William Stanley Dean, Bournemouth
Robert Donnelly, Dublin.
Theodore Moorhouse Ellis, London.
Thomas Holt Fogg, F.S.I., Chippenham.
David John Jones, Port Talbot.
Daniel Andrew Levie, Rochestown, Co. Cork.
Frederick Matthews, Stoke Newington.
Thomas Reid Peacock, Quebec.
Brian Edward Fitzgerald Sheehy, Limerick.

As Students.

Albert Leigh Abbott, Upper Norwood.
Donald Henry Butt, Stonehouse.
Francis Clemes, St. Albans.
Charles Henry Elkins, Winchester.
Sydney Fritz Evershed, Northampton.
Alfred Stephen George, Gloucester.
Lawford Raymond Gower, Briton Ferry.
Evan Daniel Jones, Cwmllynfell.
Daniel Roy Lyne, Gloucester.

Mr. John Darch, F.S.I., then read a paper, an abstract of which appeared in our last issue, on "Illumination as a Study for Architects," which was illustrated by diagrams and lantern slides.

Mr. H. Freyberg, F.S.I. (London), in proposing a vote of thanks to the lecturer, said he thought it would be impracticable to have a light for each reader in a library open to everybody and to trust to the readers to switch the lights out when finished with.

Mr. B. R. Tucker, M.R.San.I. (Past Hon. Treasurer), seconded the vote of thanks, and said that one of the chief points which architects had to take into consideration was the question of cost. They were limited to a certain expenditure by their clients, and that limit left very little to be devoted to any special scheme of lighting. Light in its travels diminished in an inverse ratio to the square of the distance, and they could not afford to provide the amount of light necessary for lighting a room by reflection from the ceiling, owing to the great amount of light lost. It might do for public buildings, but for private habitations it was out of the question.

Mr. Justus Eck said, as an electrical engineer, it was to be regretted that Mr. Darch had not referred to daylight illumination. Beautifully decorated buildings were seen to great advantage by daylight, and it was important that the effect produced on the eye should not be destroyed or minimised by artificial light. His experience, when approaching architects with a view to the use of arc lamps, was that they invariably declined to consider their use owing to their appearance, although he saw no reason why arc lamps should not be made an artistic feature.

Mr. H. Mackinnery said that architects could have every confidence in the illuminating engineer, even if they were experts in one particular direction. There was a difference between the actual effect of day light and illumination by artificial light. In daylight the surroundings were very bright and exercised a controlling influence on the aperture of the pupil of the eye, whereas to artificially illuminate a room with many foot-candles would mean the use of a concentrated light producing very dark surroundings.

Mr. J. S. Dow said he felt that there must be many instances where an architect required a certain arrangement of lights on account of the architectural features of a building, and such arrangement would be governed by quite different factors to those which illuminating engineers usually employed.

The Chairman then put the motion to the meeting and it was carried unanimously.

Mr. Darch, in reply, said that the architect was the man who held the key to the situation. If he would turn his attention seriously to questions of lighting he could do more for them than any other person. They would do more good by spreading the gospel of illumination among architects. Mr. Freyberg had suggested that readers could not be trusted to switch off the lights, but he (the speaker) thought they could. Many large public libraries at the present time were fully lit for one or two readers, and he thought that was a greater waste than if one or two were left on by readers under the system he proposed. Mr. Tucker has said that indirect lighting could not be adopted in many cases owing to its cost, but he was of opinion that light for light and effect for effect it could be installed at an equal cost with direct lighting. It was not the fact that light lost by reflection within a room. There were, of course, slight variations, but inside a sphere it had been proved that light was not lost, whatever the size of the sphere. He had also said very definitely that day light should be the guide to artificial lighting.

Leeds and Yorkshire Architectural Society.

A general meeting was held in the Society's Room at the Leeds Institute on January 11, the President, Mr. S. D. Kitson, F.R.I.B.A., in the chair. An interesting paper was read by Mr. G. C. Workman on "Reinforced Concrete Applied to Buildings."

The lecture was illustrated by many slides showing both constructural problems and architectural treatment to interiors and exteriors.

The lecture was concluded by a discussion on which many practical details were debated upon.

A vote of thanks was passed on the motion of Mr. G. S. Grundy, seconded by Mr. W. H. Thorp, F.R.I.B.A.

Nottingham Architectural Society.

Twenty members of this Society attended the third meeting of the Designing Club, held on Tuesday, January 9. As the President was unable to attend, Mr. A. E. Heazell, Past-President, took the chair.

The subject set was "A Detail of a Façade for Business Premises," and six designs were submitted.

Mr. W. R. Gleave, A.R.I.B.A., who had kindly prepared the conditions and set the subject, gave an interesting criticism, which was followed by a general discussion in which the juniors and competitors were especially invited to take part. At the close Mr. Gleave placed the first three as follows : "Dorion" first. "Carbon" second, and "Rooster" third.

The Chairman tendered to Mr. Gleave their best thanks for his criticism, and remearked upon the increasing excellence of the designs submitted in these competitions.

The Ulster Society of Architects : Annual General Meeting.

This Society held its annual general meeting on Monday, January 8. There was a good attendance of members and Associates, including, among others :—Messrs. R. M. Young, F.R.I.B.A.; W. J. Gilliland, F.R.I.B.A.; J. J. McDonnell, J.P.; N. Fitzsimons, F.R.I.B.A.; H. Seaver, B.E.; W. C. Maxwell, A.R.I.B.A.; T. Houston: and J. St. J. Phillips, A.R.I.B.A., Hon. Secretary.

Routine business being disposed of, the Report of the Council for the year 1911 was submitted, discussed, and adopted, as follows :—"During the year 1911 the Council held six meetings of Council, which were well attended. In addition, three general meetings were held, to which all the members, Associates, and students were invited. We regret that these general meetings were not better attended, and the Council hope that in future the members and Associates will give practical support to the Society by taking an active part in the discussions and business arranged for the general meetings.

During the year we received three resignations. It is therefore strongly urged on our junior members that those Associates who are qualified for full membership should seek to be enrolled as "members" and take their proper place and standing in the ranks of the profession.

At no time in the history of our Society has there been greater need, in the interest of the junior members, for co-operation and combined effort, with a view to improving the conditions of architectural practice, particularly in the interests of the younger members of the profession. Every week brings reports of the actions of the numerous district and urban councils who are carrying out, or proposing to carry out, small building schemes for labourers' and workmen's dwellings, and larger schemes for technical and municipal buildings and schools. In the great majority of cases the architectural work in connexion with these schemes is entrusted to road surveyors, builders' clerks, and county surveyors' assistants, or others equally unqualified and incompetent in carrying out the duties of architect. The Board of Works and other controlling Government bodies have sanctioned and approved of such incompetent persons being employed as architects, thus frustrating the purposes and intentions of those who originally framed the provisions of the Labourers' Act. The results of such policy on the part of the Local Government Board are to be read in the report of badly-designed and badly-built houses, necessitating an excessive annual outlay in repairs or reconstructions.

With such warnings in view, we find that during this year several rural and urban district councils have rescinded previous resolutions and have appointed as architects assistant county surveyors, who had already accepted office on condition that their full time should be devoted to their duties as surveyors. Such appointments are remunerated at rates that would be a positive loss to any qualified person who would faithfully and conscientiously carry out the duties attached to these appointments.

During this year the Belfast Corporation Bill has passed Parliament and will in due course result in a revision of the building by-laws in force in this city. Such by-laws

will be likely to affect architectural practice and the interest of building owners. It is of extreme importance, not only to architects, but also to building owners, that competent consideration should be devoted to the framing of such by-laws which will have far-reaching results, either for good or evil, on the future progress, both architectural and commercial, of our city. We have been assured that your Society will have the opportunity of considering the draft by-laws before the same are presented to the City Council for final adoption.

The interests of the members will be safeguarded as far as possible by your Council, but it is earnestly requested that every member of the Society will loyally co-operate with and support the Council in every possible way.

The matter of affiliation with the R.I.B.A. has been further pressed, and it is hoped that within a reasonable time this will be accomplished.

We have to record our acknowledgments to Mr. W. J. Gilliland for his lectures on "Reinforced Concrete Construction" and for a visit to works in progress.

An additional member was added to the Council as a representative of the Derry Corresponding Committee."

The Hon. Treasurer, Mr. Houston, submitted statements of accounts for the year, which showed the Society to be in a satisfactory financial position.

A discussion arose as to the best means of furthering the objects of the Society, and some recommendations were made to that effect to the incoming Council.

Reference was made to municipal undertakings, as the proposed Art Gallery and the proposed competition for workmen's dwellings.

Mr. McDonnell referred to the candidature of Mr. Gilliland for membership of City Council and proposed—"That the Society learns with pleasure of the candidature of W. J. Gilliland, F.R.I.B.A., for Victoria Ward, knowing, as it does, the attention and expert knowledge he will bring to further all the interests of the city in the large expenditure about to be entered into in municipal undertakings, and the Society trusts that Mr. Gilliland will be successful in his candidature."

The motion was seconded by Mr. Seaver and passed with acclamation.

Ballot papers for officers for the coming year were then opened by the scrutineers, resulting in the election of officers as follows—President, H. Seaver, B.E. Vice-President, J. J. McDonnell, J.P. Council: W. J. Gilliland, F.R.I.B.A.; R. M. Young, F.R.I.B.A; and N. Fitzsimons, F.R.I.B.A. Associate Members of Council: T. W. Henry and J. Seeds. Auditors: F. H. Tulloch and James Ferguson. Hon. Treasurer: E. R. Kennedy, A.R.I.B.A. Hon. Secretary: Thomas Houston, Kingscourt, Wellington-place.

The Corresponding Committee of Derry Architects to elect two members of Council in addition to above.

ENGINEERING SOCIETIES.

The Institution of Civil Engineers.

At the ordinary meeting of this Institution on the 9th inst. new members, Associate members, and Associates, transfers of Associate members to members, and admissions of students were reported. There were six elected members, *i.e.*:—L. H. Fry, London; C. H. Gadsby, London; E. Hall-Brown, Govan, Glasgow; E. P. Richards, Madras; G. D. Snyder, New York; Professor E. Wilson, King's College, Strand, W.C. Of elected Associate members there were forty-seven.

GENERAL NEWS.

Professional Announcement.

Messrs. Pepler & Allen have moved to Howard House, 4, Arundel-street, Strand, London, W.C. The telephone number and telegraphic address will not be changed.

British Museum.

Dr. Kenyon, Director of the British Museum, has been appointed a foreign corresponding member of the Académie des Inscriptions et Belles Lettres.

Oxford University.

Canon Driver and Professors Macdonnell and Margoliouth will represent the University at the Congress of Orientalists to be held at Athens on April 7-15, and Mr. D. G. Hogarth will represent the University at the celebration of the seventy-fifth anniversary of the foundation of the University of Athens on April 7. Miss Mary Wallace Shillito has given a sum of 10,000*l.* for the endowment of a Readership in Assyriology.

The Villa d'Este at Tivoli.

It is stated that the Archduke Francis Ferdinand is about to present the Villa d'Este at Tivoli, formerly the seat of the Dukes of Modena, to the Austrian State with a view to the establishment therein of an academy for Austrian art students in Italy, somewhat after the lines of the French Academy of Art in the Villa Medici on the Pincio.

Lincoln College, Oxford.

Mr. George A. Macmillan, Hon.D.Litt., of Lincoln College, and author of a "Short History of the British School at Athens," as founded by the late Professor Jebb, has been elected to an honorary Fellowship at Lincoln College.

Rochester Cathedral.

At his own charges, 200*l.*, Canon J. Wood has caused the marble pillars of the transepts, choir, sanctuary, and presbytery of the Cathedral to be restored to their original beauty. The marble has been cleaned and polished by the removal of the disfiguring black paint applied in 1730, and the treatment reveals some excellent specimens of Purbeck, Petworth, and Bethersden marbles.

Offices for the Insurance Commissioners.

The Office of Works have acquired the lease on behalf of the Insurance Commissioners of the Wellington House Hotel, Buckingham gate, S.W. The premises were erected in 1908-9 by Mr. Charles Gray, of Kensington, at a cost of about 55,000*l.*, from the designs of Messrs. Palgrave & Co. The island site occupies an area of 12,272 ft. superficial, having frontages of 174 ft. and 143 ft. to Buckingham-gate and York-street. The undertaking was bought two years ago by Wellington House, Ltd., at a valuation of 83,700*l.*, exclusively of furniture and equipment; the ground rent is 1,500*l.* per annum.

A College Garden, Dundee.

A college garden, the first of its kind in Scotland, has been opened near Dundee, where the St. Andrews Committee for the Training of Teachers have taken a lease of 4 acres for practical courses in gardening, and have equipped the ground with a lecture hall, hot-houses, and potting-sheds. The scheme is intended mainly for teachers in rural districts and to qualify them to give instruction in gardening to their pupils.

A Museum for Dudley.

In terms of the testamentary dispositions of the late Mr. Brooke Robinson, M.P., of Barford House, Warwick, and Chapel-street, Belgrave-square, S.W., who died on October 20, a trust is erected in respect of two adjoining houses in Wolverhampton-street, Dudley, for the preservation and exhibition of the testator's art collections, to be endowed with his bequest of 30,000*l.* in that behalf which may be applied to the purchase of more land or buildings, or the erection of new buildings, and the general upkeep of the museum.

Local Improvements, Bournemouth.

The County Borough Council have formulated a revised project for the erection of a pier pavilion, upon the site of the Belle Vue Hotel, at a cost not exceeding 60,000*l.*, inclusively of equipment and the laying out of the grounds; the hotel was bought by the Council for 40,000*l.* The Council are carrying out an extension over 5,000 ft. in length to Boscombe of the Marine-parade and Undercliff-drive, with bathing-stations, shelters, and pleasure gardens, and they will proceed with the building of new law courts and auxiliary works, after plans and designs prepared by Mr. F. W. Lacey, F.R.I.B.A., M.Inst.C.E., Borough Architect.

London Schools.

The scheme for the reduction of the size of school classes has, at a conference between the London County Council and the Board of Education, been arranged to be carried out within a period of fifteen years. The report on the subject presented to the Education Committee on Wednesday stated:—

"The Committee will realise that one of the most important points for consideration is the period of years which should be allowed for the completion of the proposed scheme. With regard to this point we are of opinion that a period of fifteen years should be a reasonable one from the Council's point of view, and we have reason to believe that the Board will be willing to agree to this period on certain conditions. These conditions would probably relate to the completion, within a period of from three to five years from the present time, of certain new schools, enlargements of existing schools and reconstructions of old schools to which the Council is already committed, and also to a periodic review by the Board of the progress made by the new scheme. We therefore propose that the Council shall now be asked to instruct the Education Committee to submit a scheme for the completion of the proposed reform within a period of fifteen years from March 31, 1912, provided that the Board will agree that, so long as the Council makes satisfactory progress with the new scheme, the Council shall be immune, during the period named, from any new regulations introduced by the Board reducing the present maximum size of classes.

The Committee are aware that whilst sixty on the register is now the maximum size of the classes in the schools, the average size of the class is much smaller. It is true that in order to keep the size of the classes within the maximum of sixty allowed in Article 14 it is necessary at present in certain schools to utilise the halls as classrooms, and in some other schools to use large classrooms for two classes. The additional school accommodation which has already been sanctioned will, however, enable the Council to dispense with these unsatisfactory temporary expedients, and if an agreement is reached between the Board and the Council on the lines now proposed it will render it unnecessary to have recourse to such expedients in the future.

With regard to the financial aspect of the matter, it may be stated that the "sites and buildings" programme during the proposed period of fifteen years will involve an estimated expenditure of about 4,500,000*l.* on new schools and the enlargement and structural improvement of existing schools. Of this amount, about 2,500,000*l.* may be regarded as expenditure which the Council will incur in any case, as it will be needed for the provision of new school accommodation which the Council has already decided to provide or which will be required to meet the future increase of population in certain districts, and for the modernising of the old schools which have still to be dealt with. The remaining 2,000,000*l.* will be required for the provision of the additional accommodation needed in connexion with the scheme now under consideration for the reduction of the size of classes. We should, however, add that it is possible that we may find it desirable to make some readjustment in the method on which the amount of accommodation required is calculated, and this may result in an increase in the expenditure up to 500,000*l.*"

International Exhibition of Fine Arts, Rome.

The Society of Lovers and Students of the Fine Arts will hold this year in Rome the Eighty First International Exhibition of Fine Arts. The Society set aside a sum for a fixed number of prizes to be spent upon the purchase of submitted works, and—in terms of the bequest of the late Professor Müller the German Embassy in Rome will apportion 480*l.* to the purchase of one or two exhibits by German artists. A large sum is also devoted by the Minister for Public Education to buying works for the National Gallery of Modern Art in Rome. Exhibits will be received in the interval January 25-February 10 at the Palace of the Exhibition of Fine Arts.

The Royal Sanitary Institute.

At an examination in Sanitary Science as applied to Buildings and Public Works, held in London on December 8 and 9, seventeen candidates presented themselves. The following two candidates were granted certificates:—Messrs. S. E. Allen, Kew, and S. T. Puzey, Philbeach-gardens. At an examination in Hygiene in its bearing on School Life, held in London on December 8 and 9, three candidates presented themselves for the certificate, and twenty for only part of the examination. At an examination for Inspectors of Nuisances, held in London on December 8 and 9, seventy-one candidates presented themselves. Thirty-six candidates were certified, as regards their sanitary knowledge, competent to discharge the duties of Inspector of Nuisances under the Public Health Act, 1875.

COMPETITION NEWS.

Design for a Pavilion.

Messrs. Packer & Co., of Bristol, recently instituted a competition for a pavilion on their Recreation Grounds. The cost of the building was not to exceed 3,000*l.* The successful designs are by Messrs. Paul & James, of Bristol. In consideration of the amount of work involved, Messrs. Packer & Co. have decided to give the sum of 5*l.* 5*s.* to each of the next six competitors, namely: Mr. D. A. Beveridge, Liverpool; Mr. W. J. Stenner, Bristol; Mr. G. Walesby Davis, Darlington; Mr. A. J. Dunn, Birmingham; Mr. R. A. Churchward, London; and Messrs. James Brooks, Son, & Adkins, Richmond.

MAGAZINES AND REVIEWS.

THE *Art Journal* begins its seventy-fourth yearly volume, and the articles are of varied interest. From them we quote from "The Work of William Kent at Rousham": -

"The combination of Jacobean with early Georgian Gothic is, with its fine gardens, the special interest of Rousham. The main portion of the house must have been built soon after 1635, but in the peaceful early years of the Georges, 'when everybody was mad on building who could afford it,' General Dormer employed the fashionable architect William Kent to make alterations. Kent's additions consisted of two wings stretching east and west on each side of the central block, to which they were connected by corridors ornamented with the ball-topped finials he so often used. Walpole, when he went to Rousham in 1760, was pleased with its appearance. 'It reinstated Kent with me,' he wrote; 'he has nowhere shown so much taste.'" He also admired the "perfectly classic" gardens, and we give an illustration of the Portico built there.

The *Burlington Magazine* has a brief editorial on Mr. Witt's book "The Nation and Its Art Treasures," and suggests the compromise that 10,000*l.* per annum should be voted for the National Gallery in lieu of the present 5,000*l.*, and that half a million (bearing interest at 3 per cent.) should be allocated on the understanding that the capital sum may be drawn upon for the purchase of a certain selected list of masterpieces should they come into the market. Articles in this magazine deal with Italian medals, Korean tomb wares, tapestries, and other subjects.

Architectural landscape takes up a large proportion of this month's *Studio*. Water-colours by Sir Alfred East, etchings by Mr. Lester G. Hornby, and paintings by Felix Ziem for the most part deal with this class of subject. "Recent Designs in Domestic Architecture" include Staplefield Place, Sussex, by Messrs. Clayton and Black, and some typical modern German work. The work of the Russian sculptor, Innokenti Joukoff, displays marked individuality and a highly metaphysical temperament.

Mr. D. S. McColl in the *Nineteenth Century* reviews, in a well considered article, Mr. Witt's brochure on the National Collections. In the course of his remarks he makes some important suggestions as to the management of the National Gallery. He proposes that:—

"Instead of appointing a keeper and a clerk under the director for the purely business side of the administration when new appointments come to be made, at least two keepers or assistant-directors should be appointed, chosen for their interest in and knowledge of art, to which should be added some technical practice in painting and in the processes of cleaning and varnishing pictures. They should be encouraged to write upon their subject, because that is one of the best ways of learning it, will raise the level of criticism, and will supplement their income. The field of painting, moreover, is so wide that it requires such subdivision. If the director takes Italian art as specially his province one keeper might be responsible for German, Flemish, and Dutch, another for Spanish, French, and modern art, or this order might be reversed. Incidentally this would help to solve the very pressing problem of a supply of curators for provincial galleries. With notable exceptions the status of these men with their committees is at present a mean one, because they have no special-training knowledge or taste to give them authority. Such a rearrangement, by dividing the duties of the present keeper, need cost little more than at present, and would, I believe, secure efficiency, continuity, and authority in the future direction of the National Gallery. Under it the present dependent position of the director would insensibly be changed for one of greater freedom, while the Board would fall back into the position of general control at present exercised by the Board at the British Museum. On one point I am opposed to Mr. Witt's, and, perhaps, to the general view in the matter of the trustees: I mean the proposal to add to or substitute for the present Board a number of experts. The position of a director, however difficult under the present system, would be intolerable, controlled by the votes of rival authorities on his own subject. The proper relation of such



William Kent's Seven-Arched Portico at Rousham.

(From the *Art Journal*.)

experts to the director is that of a consultative group (not committee), to any one of whom he may apply for a confidential opinion when a picture is before him, and it would be an excellent thing, and would strengthen the administration, if some honorary title were applied to the chosen advisers, such as "Associate of the National Gallery." Many willing helpers might be named who would take their place on this list, not excluding dealers, who are ready, to an extent not realised, to aid the Gallery with their knowledge and experience."

In the *National Review* Mr. Austin Dobson gives us a short biography of Philip James de Loutherbourg, R.A., whose versatility is reflected in the varied activities of his career. To us he is best known as a battle painter, but to his contemporaries in England he may have loomed larger in his imaginative treatment of stage scenes. Born in Germany in 1740, he came to Paris in his teens, and became an Academician at the age of twenty-seven. Four years later he migrated to England, and after designing the scenery and effects for several plays at Drury Lane, in addition to exhibiting annually pictures of such merit as to secure him election as A.R.A. in 1780 and R.A. in 1781. Shortly after this he devised the ingenious Eidophusikon, representing by means of scenery any illumination, landscape and locality as subjected to all the changes of light and darkness, heat and cold. His vivid imagination seems to have produced some remarkable scenes; but after a time the public tired of these, and De Loutherbourg returned to his easel. After dabbling in mesmerism and following Cagliostro in a search for the philosopher's stone he once more took up his brush, and remained faithful to his art till his death in 1812.

Scribner's contains a illustrated article on the last mural paintings executed by the late E. A. Abbey, R.A., whose illustrative work, now to be seen at the Royal Academy, has raised so much discussion. Mr. Cortissoz refers particularly to the eight mural decorations executed for the State Capitol, Harrisburg, the great enterprise to which all the previous experience of the artist had led :—

"His programme was framed on an heroic scale, and it is no wonder that he left it unfinished at his death. Looking at it from the point of view of ordinary human effort, the eight paintings put in place in 1908 would seem, by themselves, to fill space enough and to make a monument impressive enough for one man. They adorn the rotunda in the centre of the building. Four of them are gigantic lunettes, placed midway between the drum of the dome and the piers supporting the latter. The other four are set in circular panels in the pendentives. In this part of his work Abbey dealt in general ideas, localised. In the first of his big lunettes he symbolises "The Spirit of Religious Liberty" in a fleet of old sailing ships guided westward by angels. In "Science Revealing Treasures of the Earth" blind Fortune, gliding on her wheel between images of Peace and War, is poised above a group of miners just descending into the earth. The third lunette, entitled "The Spirit of Light," points to the discovery of oil, a host of figures with flames on their uplifted finger-tips soaring into the night against a background filled with the familiar gaunt derricks of Pennsylvania. To show forth "The Spirit of Vulcan" Abbey paints in his fourth lunette a number of brawny labourers in a steel foundry, with their tutelary genius reclining upon a cloud above. Single figures occupy the medallions in the pendentive, figures respectively directing attention to the forces of Religion, Law, Art, and Science. In the rotunda it was his *rôle* to touch the imagination of every one entering the building with a sense of what Pennsylvania has owed to divine inspiration and to the bounty of the earth. These large motives belonged on the threshold, and in the Capitol's grandest, most aerial chamber. The very concrete, personal issues dealt with in the later decorations are explained by their positions. He had now to embellish the walls of the House of Representatives, and there he decided to confront the legislators with paintings recalling those who had before them laboured for the State. Above the rostrum of the speaker he chose to place "The Apotheosis of Pennsylvania," which is really a painting in praise of famous men, a record of high endeavour. For the unification of his noble company of explorers, sea-captains, soldiers, religious leaders, and other constructive pioneers he had to devise some linear web that would not only hold them together, but bind them in the harmony of a room whose scale and character had already been fixed. Across the middle of his canvas and well back of his figures he drew, in a shallow and very beautiful curve, the lines of a classical entablature. Above them he unrolled a spacious sky, thus gaining at once the necessary depth and largeness of atmosphere. We feel rather than see the colonnade enclosing the actors in his scene; it unites them, but does not distract attention from them. So it is with the "Genius of State," enthroned beneath a cupola against the sky, at the apex of the composition. This presence manifests itself, and is, in fact, indispensable, but it is so placed and so kept down in the colour scheme that it leaves Abbey's men to stand forth with no diminution of individuality. Neither are they dimmed nor are their messages muffled by the return to architectural motives in the foreground, by the fluted pillars which mark, as it were, an entrance to the colonnade. Like the latter, these pillars, surmounted by eagles, enormously contribute to the orderliness of the assemblage while they leave it free." A further article on "Labour Exchanges in Germany" contains some valuable figures and information.

In *Harper* an article by Cyrus C. Adams deals with the progress of the international map of the world to a scale of one-millionth. The leading nations of Europe and the U.S.A. having, at the London conference of November, 1909, come to an agreement as to uniformity in method, and Argentina, Brazil, Chile, and Venezuela having since signified their adherence, considerable progress has been made. The meridian adopted is that of Greenwich. Metric measurements are employed, but the various national equivalents may be added in brackets. Shades of blue show the depth of water, and green, buff, brown, violet, and white the altitude of the land. The size of the sheets will demand 2,642 to cover the earth's surface, but, as much of the sea is hardly likely to be required, it is estimated that some 1,500 will suffice. The first of two articles on "Socialism," by H. G. Wells, will interest students of our social organisation on account of the breadth of view displayed. Many will feel their ideas clarified and their opinions better defined who may not necessarily agree with Mr. Wells's views as to the trend of movement in the social organism.

CORRESPONDENCE.

The Policy of the R.I.B.A.

SIR,—Upon the natural assumption that by the inclusion of the two special articles in the *Builder* of January 5 and 12, on "The Policy of the R.I.B.A.," this is a matter of general interest, I venture to ask for the consideration in your columns of the following criticism of one item in your criticism.

In your special article of January 5 appears this expression of opinion :—"We cannot help feeling that the whole situation is somewhat out of drawing and lacking in proportion, and that the older Associates in established practice and eligible for the Fellowship are viewing the matter from a somewhat false position. They might set it in truer perspective if they viewed it from the position to which their qualifications entitle them."

Now, sir, as one of that particular section of the R.I.B.A alluded to, I desire to thank you for the possible compliment (in my own case) conveyed in that subtle phrase—"to which their qualifications entitle them." Further, I should greatly like to express my admiration for the appositeness of the simile employed. Yet, much as it appeals to me in its ability to bring home to the reader the actual or "fancied" issue, it appears to me in the light of a good simile "gone wrong."

How would one like it expressed, then?

Well, something after this style :—"We cannot help thinking that the real trouble lies in that the Council of the R.I.B.A. has not got the real perspective of the matter"; or, differently expressed, "That a 'too adjacent' point of view has been chosen by them, with the undesirable result that certain 'component parts absolutely necessary' for a successful whole have been 'crowded out,' and it would consequently appear more than desirable, *i.e.*, imperative, that the Council should 'recede considerably' in order to enlarge the horizon and by so doing bring in 'certain factors' which (one believes and hopes) would make for the best result."

Well, sir, so much for that.

Is it, one wonders, too much to expect of those whom we have helped to vote into positions of trust and power that they will read between the lines of this letter? Personally speaking, I sincerely hope so. Much more—very much more—could be advanced with reference to your arguments in the two articles I have adverted to, but the calls upon your space forbid my trespassing too far upon your courtesy. Before concluding, however, there is one matter I feel myself forced to hazard an opinion upon, as without it I should not feel I had exhausted to the full criticism upon the particular passage I have quoted.

An old proverb has it that "In the middle course lies safety."

Then, sir, holding this opinion, and strongly, I would postulate the following proposition as one well calculated to advance the best interests of the R.I.B.A., viz. :—That the ranks of the Council should, by a speedily-passed by-law, be increased by the inclusion of at least twenty-four Associates of the standing and qualification suggested in your expression of opinion. Such men, standing in a position midway between the successful close of a matured professional career, on the one hand, and the hope but generally not commission—ful aspirations of the newest created Associate would, in the opinion of many others besides myself, be much "better fitted" and more likely to "hold the scales level" than would or could (by virtue of the disability I have suggested) those of the "superior class."

K. GAMMELL.

The Lay Press and Architecture.

SIR,—As the writer of the article published in the *Evening Standard* on "Architecture in 1911," I have to thank you, sir, for your fine appreciation of my humble efforts in criticism, and for the "blessing" you are god-like enough to bestow. For your knowledge of the classic in literature is only second to your knowledge of it in bricks and mortar, and encouragement from such a quarter must satisfy anyone, let alone a plain architect who has to take, from the lips of giants, such phrases as "petrified music" to express certain qualities in architecture. It is gratifying to find that your august authority is not dismayed by some of my own poor phrases and that you find them distinguished enough to quote at length in your valuable columns. But why write *(sic)* after "Paul's dome"? It would, I doubt it not, have been a more obvious course to have described St. Paul's Cathedral in the diction of a builder or bricklayer. Unfortunately, I did not take it; I was thinking at the time of architecture and not what the Builder would think of it.

J. M. W. HALLEY.

Inigo Jones and the Porch of St. Mary's, Oxford.

SIR,—In reference to Mr. W. E. D.-Milliken's letter in your last issue, the entry regarding Stone is well known, and, as your correspondent probably knows, the same difficulty occurs with the York Gate and also the Dudley Digges monument, at Chilham. The reprinted pamphlet "Jaco Chilham. The reprinted pamphlet "Jaco-Jones in the Eastern Style" will have as frontispiece a large block of the frontispiece of St. John's College, and your correspondent may be able to study the comparative detail therein.

It is worth while to walk direct from the porch to the frontispiece and study this point. Attention may be directed to the pedestals of the porch columns and also to working out of the entablature on the returns. The architectural handling in both instances is unlike the work of a sculptor like Stone. The semi-mediævalism of some of the porch sculptures is, however, analogous to the feebleness of the lions on the York Gate. Stone's powers seem to be somewhat limited in range. Your correspondent does not give an address, but he is probably well acquainted with the doorway of St. Helen's, Bishopsgate, and the idea of proportion that it displays. The idea of St. Mary's porch and that of the monument to Sir Dudley Digges seems to me fairly attributable to Inigo Jones. ARTHUR T. BOLTON.

EDITORIAL SUMMARY.

"Land Taxes and Building" is the title of our leading article, in which the effect of recent legislation on the building trade is considered.

"The Teaching of Art" is the title of a second article, which appears on p. 58. It is a review of Mr. C. R. Ashbee's work, entitled "Should We Stop Teaching Art?"

In Notes columns (p. 59) will be found some observations on: "The Honours List of the World"; "Villa D'Este"; "The Railways and Socialism"; "Railway Nationalisation"; "Manitoba Parliament Buildings Competition"; "Burford Priory."

Some particulars as to the R.I.B.A. Examinations, etc., will be found on p. 60.

A meeting of the Architectural Association was held on Monday, when Mr. E. F. Strange delivered an illustrated lecture on "Alfred Stevens." Our report will be found on pp. 61-63.

Included in our notices of recent meetings of architectural societies (p. 64) will be found: "The Ulster Society of Architects"; "Leeds and Yorkshire Architectural Society"; "The Society of Architects."

Notices of some of the magazines of the month appear on p. 66.

In Correspondence columns (p. 67) will be found letters on: "The Policy of the R.I.B.A."; "Inigo Jones and the Porch of St. Mary's, Oxford"; "The Lay Press and Architecture."

Book Reviews (p. 68) include: "The National Insurance Act, 1911."

The Monthly Illustrated Historical Review (p. 69) includes: "Church of St. George in Oxford Castle"; "Monumental Brasses"; "British School at Athens"; and Notes.

The Building Trade Section (p. 76) includes: "State of the Building Trade"; "Hours and Wages in the Building Trade"; "Time Clause in Building Contracts"; Projected New Buildings in the Provinces," etc.

A meeting of the Tribunal of Appeal under the London Building Act was held on January 11 to hear the parties interested in the decision of the Tribunal respecting the building line in the Euston-road. An appeal by Mr. W. G. Allen and Mr. H. G. Norris against the certificate of the Superintending Architect of Metropolitan Buildings was heard on Friday. Reports appears on p. 79.

In Legal Column (p. 80) will be found observations on: "Workmen's Compensation."

In Law Reports (p. 80) will be found short notices of the following cases: "Harries *v.* Wright"—damage to buildings by poplar-trees; "Measey *v.* the Lord Bishop of Norwich"—accident to workman.

MEETINGS.

FRIDAY, JANUARY 19.

Royal Institution.—Professor Sir J. Dewar, M.A., LL.D., D.Sc., on "Heat Problems." 9 p.m.

Battersea Polytechnic (Lectures on Illuminating Engineering).—Mr. J. S. Dow, B.Sc., on "Illumination and its Measurement." 7.30 p.m.

Glasgow Technical College (Architectural Craftsmen's Society).—Mr. J. M'Kissack on "Rothenburg on the Tauber." 7.45 p.m.

Institution of Mechanical Engineers. 8 p.m.

Institution of Civil Engineers (Students' Meeting).—Paper to be read: "The Turbo-Blower and Turbo-Compressor," by Mr. George Ingram, Stud.Inst.C.E. 8 p.m.

Leicester and Leicestershire Society of Architects.—Address by the President, Mr. W. M. Cowdell. 8 p.m.

SATURDAY, JANUARY 20.

Aberdeen Architectural Association.—Mr. Albert Auer on "Electric Lighting in Town and Country." 7.30 p.m.

Junior Institution of Engineers.—Visit to the works of the Western Electric Company, Ltd., Woolwich 9.30 a.m.

MONDAY, JANUARY 22.

The Royal Institute of British Architects.—(1) To read the deed of award of prizes and studentships for 1911 12. (2) To read a paper on "Coloured Decoration" by Sir Alfred East, A.R.A., and Mr. Edgar Wood. 8 p.m.

University of London (Victoria and Albert Museum).—Mr. Banister Fletcher on "Belgian and Dutch Renaissance." 5 p.m.

Royal Academy of Arts.—Professor W. R. Colton, A.R.A., on "Ideals and Ethics of Sculpture"—I. Lantern slides. 4 p.m.

The Surveyors' Institution.—Mr. Julian C. Rogers (honorary member) on "An Evening in the Institution Library." 8 p.m.

Royal Society of Arts (Cantor Lecture).—Mr. Vaughan Cornish, D.Sc., F.G.S., on "Ocean Waves, Sea-Beaches, and Sandbanks" I. 8 p.m.

TUESDAY, JANUARY 23.

University of London (British Museum).—Mr. Banister Fletcher on "Roman Circular Temples and Basilicæ." Lantern illustrations. 4.30 p.m.

Northampton Polytechnic Institute.—Mr. A. C. Jolley on "Photometry and the Measurement of Light." 7.30 p.m.

The Institution of Civil Engineers.—Ordinary meeting. Papers to be further discussed: (1) "Reinforced Concrete Warves and Warehouses at Lower Pootung, Shanghai," by Mr. S. H. Ellis; (2) "The Direct Experimental Determination of the Stresses in the Steel and in the Concrete of Reinforced Concrete Columns," by Mr. W. C. Popplewell, M.Sc., Assoc.M.Inst.C.E.; (3) "Composite Columns of Concrete and Steel," by Mr. W. H. Burr, M.Inst.C.E. On the conclusion of the discussion, time permitting, the following paper will be read: "The Central Heating and Power-Plant of McGill University, Montreal," by Mr. E. J. Durley, B.Sc., M.Inst.C.E. 8 p.m.

WEDNESDAY, JANUARY 24.

Royal Institute of British Architects.—President and Council's "At Home." Exhibition of drawings submitted in competition for the Royal Institute prizes and studentships, 1912

The Institute of Builders. Dinner, Whitehall Rooms, Hotel Metropole, W.C. 6.30 p.m

Carpenters' Company, London-wall (Lectures on Arts Connected with Building).—Mr. Thackeray Turner, F.S.A., on "The Unity and Difference in Art and Craft" 7.45 p.m.

Royal Society of Arts.—Mr. W. J. Gee on "A New Process of Hydraulic Separating and Grading." 8 p.m.

The Institution of Civil Engineers. Students' visit to the L.C.C. Southern Low-level Sewer Works, New Cross and Camberwell.

THURSDAY, JANUARY 25.

Royal Academy of Arts.—Professor W. R. Colton, A.R.A., on "Ideals and Ethics of Sculpture"—II. Lantern slides. 4 p.m.

Society of Antiquaries 8.30 p.m.

The Institution of Electrical Engineers.—Mr. Miles Walker and Mr. H. D. Symons on "The Heat Paths in Electrical Machinery." 8 p.m.

FRIDAY, JANUARY 26.

Royal Institution.—Professor B. Hopkinson, M.A., F.R.S., M.Inst.C.E., on "The Pressure of a Blow." 9 p.m.

Battersea Polytechnic (Lectures on Illuminating Engineering).—Mr. J. S. Dow, B.Sc., on "Shades and Reflectors." 7.30 p.m.

BOOKS.

The National Insurance Act, 1911. By ORME CLARKE, Barrister-at-Law; with an Introduction by SIR JOHN SIMON, K.C.V.O., M.P., Solicitor-General. (London: Butterworth & Co. 1912. Pp. 338. 12s. 6d.)

THE Insurance Act which, unless it be postponed by Order in Council, will come into force on July 15 next, is an enactment which it is extremely difficult to master; indeed, it has recently been asserted that the effect of its provisions is only really comprehended by comparatively few of those who have assisted in its passage; therefore, when the author of the work now before us asserts that his aim has been to give a clear and accurate exposition of the principles, together with an elucidation of the details, he has set himself a difficult task, and we can only inform our readers of the methods he has adopted, leaving them to judge of the result.

The Solicitor-General, in an introduction of slightly over two pages, asserts that to express a well-founded opinion on the Act it is necessary to devote "a quite inordinate amount of time and trouble to studying it—not less time and trouble than a lady would spend in choosing a new dress, or a man in selecting a new motor-car." We can only observe that if such a comparison were accurate both the millinery trade and the motor-car trade would soon be moribund. He also gives a somewhat belated reason why it is desirable that health insurance and unemployed insurance should come into law not by separate Acts, but in one enactment. Sickness benefit, he says, implies incapacity for work; unemployed benefit, capacity for work; and therefore, if the scheme had been divided, there would have been a temptation for men to declare themselves incapable of work in order to obtain sickness insurance, whilst now they can claim unemployed benefit. Any more open admission of the tendency of this Act to encourage malingering we have never read, and the argument itself is unsound (or should we say "sick"?), for the two parts of the Act do not cover the same classes; unemployment insurance only applying in certain specified trades. The scheme of the work itself is to explain the Act generally in an introductory summary, which is followed by the text of the Act, set out in the order the sections occur, with notes to each section. These notes should prove helpful, and appear to us well arranged and carefully written. On numerous points which will arise under this Act decisions have been given under previous statutes, as, for instance, on such questions as what constitutes a "contract of service," what constitutes "residence," etc., and these decisions have been collected and explained in clear and concise language. Although the schedules are set out in full at the end of the Act, the author has, in our opinion, wisely printed such portions as are material in the text where reference to them is essential, and these and the cross references to other sections are of considerable assistance in construing the Act. Lastly, there is an index, and that alone is of value in mastering the provisions of a new and complicated Act of Parliament.

The author is, moreover, very early in the field, and should be congratulated on the appearance of a work so thorough in so short a space of time. Although the Royal assent was given to the Act on December 16, the author states the final numbering of the sections could only be ascertained by December 24.

It is no use pretending that this Act is a simple measure. It is extremely complicated, and will, no doubt, necessitate considerable litigation before its provisions can be construed with certainty; but the volume before us will prove a useful guide to the Act which will, we imagine, be acceptable to the very large public affected by this measure as well as to the legal profession.

Drainage Work and Sanitary Fittings. By WILLIAM H. MAXWELL, A.M.Inst.C.E. Third Edition. (London: St. Bride's Press, Ltd. 1911. Ddo. Pp. 127.)

THE third edition of this useful handbook for the borough surveyor and sanitary inspector contains additional sections relating to concrete sewers, sewer ventilation and flushing, and the Public Health Acts Amendment Act, 1907. The illustrations throughout are clear and easily read, and the information systematically arranged.

BOOKS RECEIVED.

A REPLY TO AN ATTACK MADE BY ONE OF WHISTLER'S BIOGRAPHERS ON A PUPIL OF WHISTLER, MR. WALTER GREAVES AND HIS WORKS. (London: William Marchant & Co. 2s. 6d. net.)

THE NATIONAL INSURANCE ACT, 1911. By Orme Clarke, Barrister-at-Law. (London: Butterworth & Co.)

LOCKWOOD'S BUILDERS' AND MERCHANTS' PRICE-BOOK. (London: Crosby Lockwood & Son. 4s.)

ARCHITECTURAL ASSOCIATION SKETCH-BOOK. (London: The Architectural Association.)

BAROQUE ARCHITECTURE AND SCULPTURE IN ITALY. By Corrado Ricci. (London: William Heinemann. 25s. net.)

PRACTICAL SEWERAGE AND SEWAGE DISPOSAL. By H. C. H. Shenton. (London: S. Edgecumbe Rogers. 3s. 6d. net.)

ILLUSTRATIONS.

Manchester Library and Art Gallery.

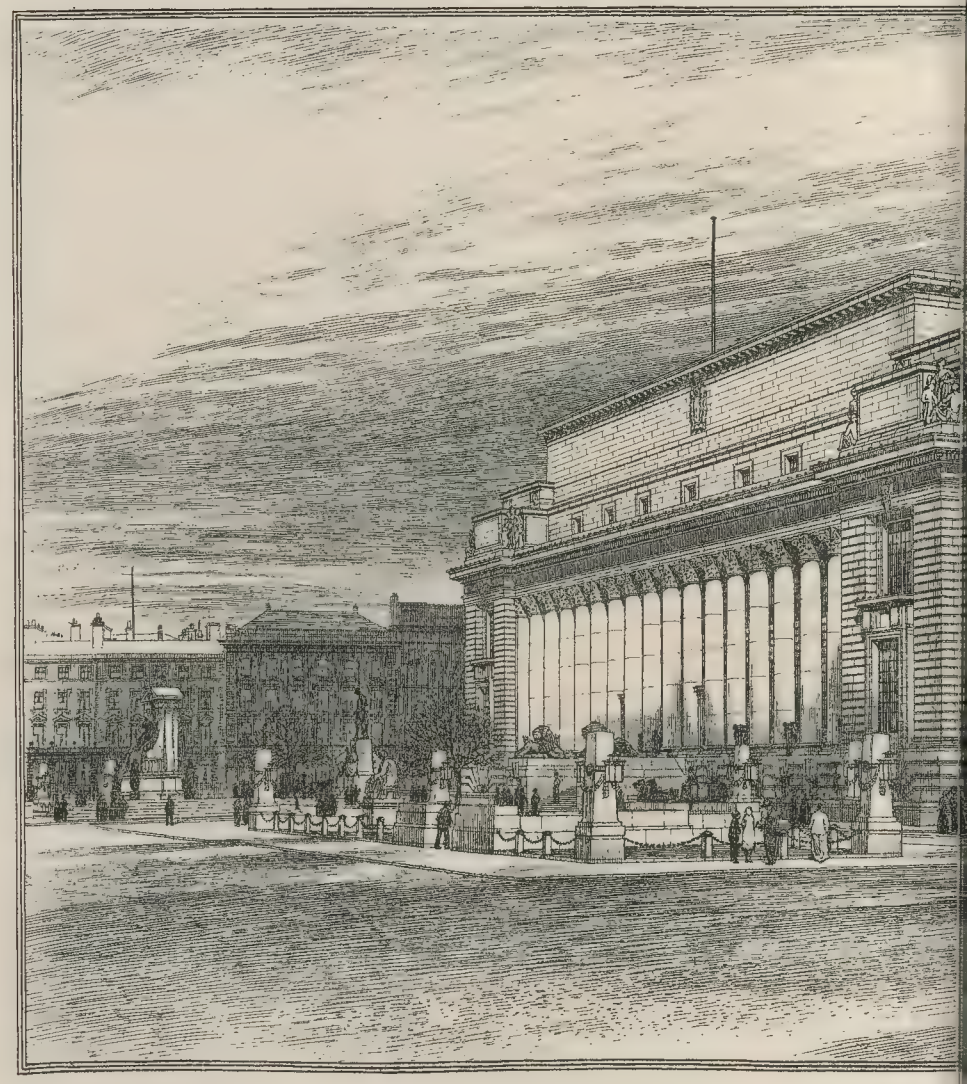
IN our issue of December 15 lengthy reference was made to this competition and to the final designs of the ten selected architects. We now illustrate more fully than was possible then the design by Messrs. Adams & Holden.

FIFTY YEARS AGO.

From the *Builder* of January 18, 1862.

International Colleges.

A PLAN has been suggested by Mr. Eugene Rendu, and is now under the consideration of the French Minister of Public Instruction, for establishing four international colleges of education, at Oxford, Paris, Rome, and Munich, where youths of from eight to sixteen are to receive their education, remaining two years at each of these establishments.



DESIGN FOR THE MANCHESTER LIBRARY AN

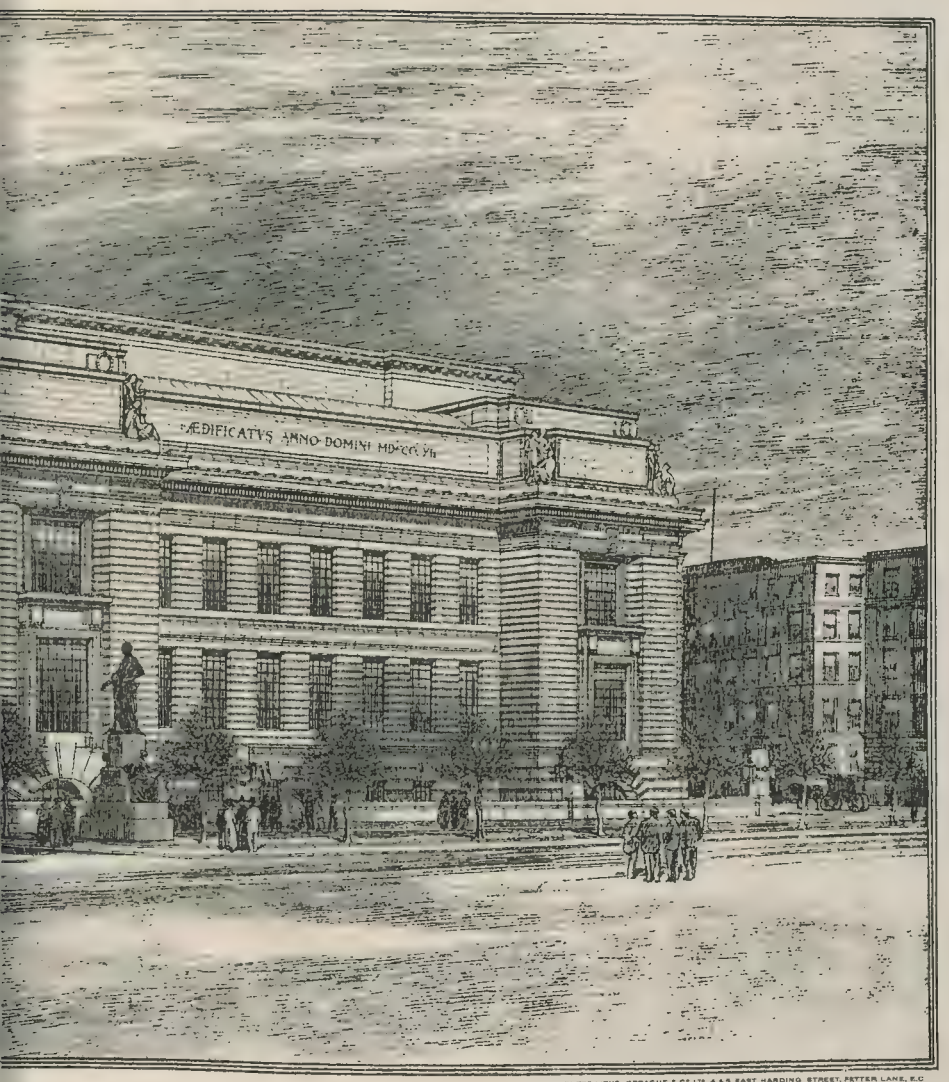
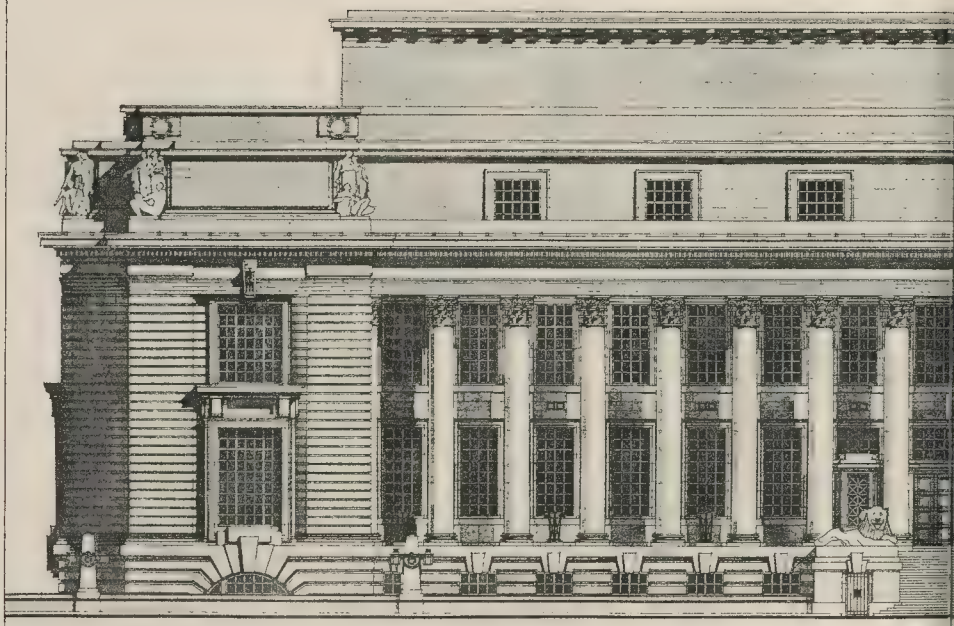


PHOTO-LITHO. SPRAGUE & Cº LTD 4 & 5, EAST HARDING STREET, FETTER LANE, E.C

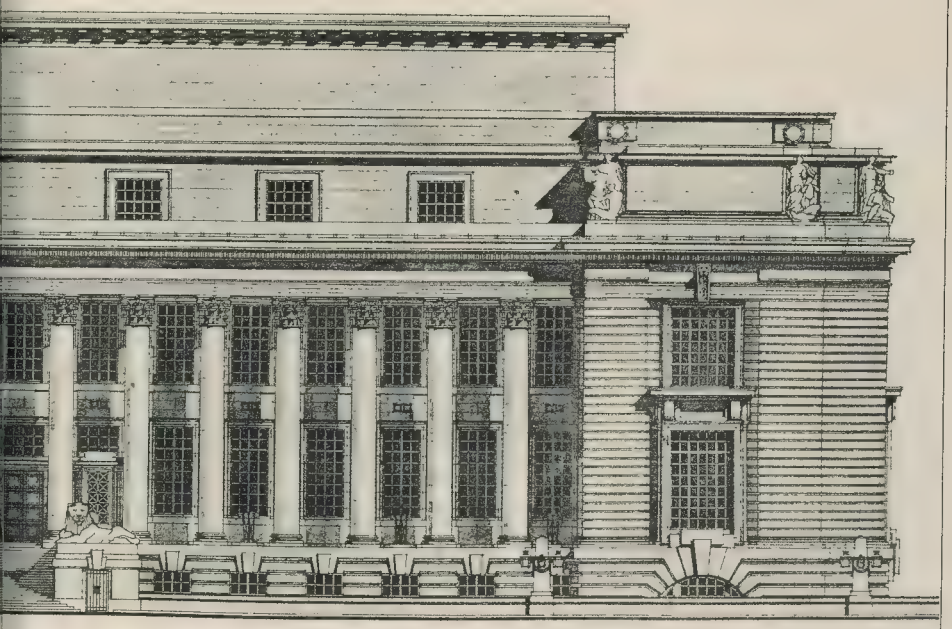
ERY.—By Messrs. H. Percy Adams & C. H. Holden.



ELEVATION

Scale

DESIGN FOR THE MANCHESTER LIBRARY AN

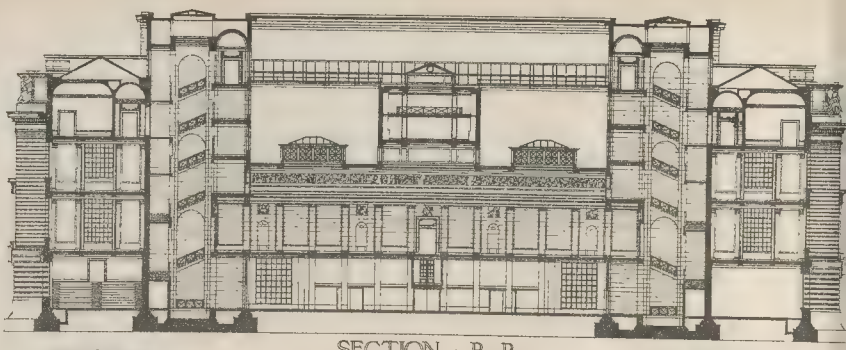


PICCADILLY

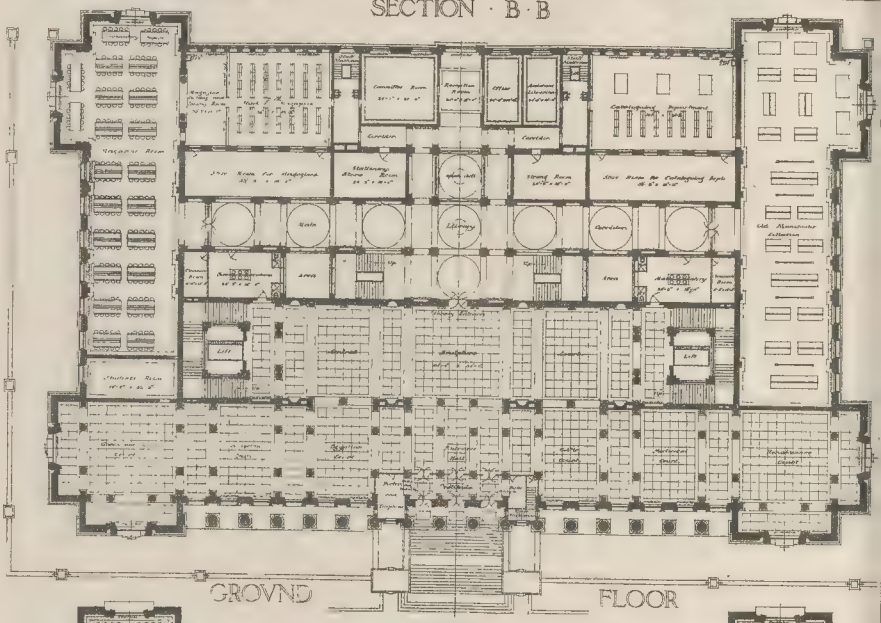
Feet.

INK PHOTO SPRAGUE & Co LTD 4 & 5 EAST HARDING STREET FETTER LANE E C

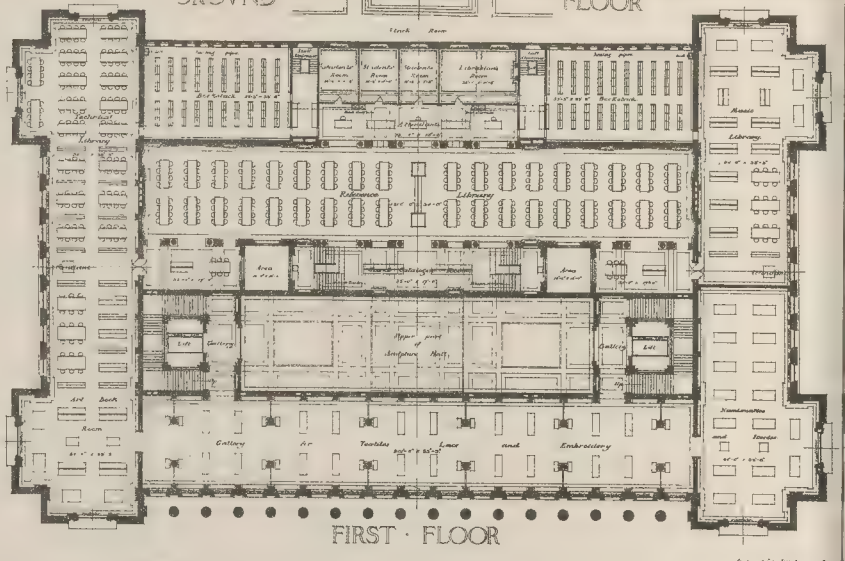
ERY.—By Messrs. H. Percy Adams & C. H. Holden.



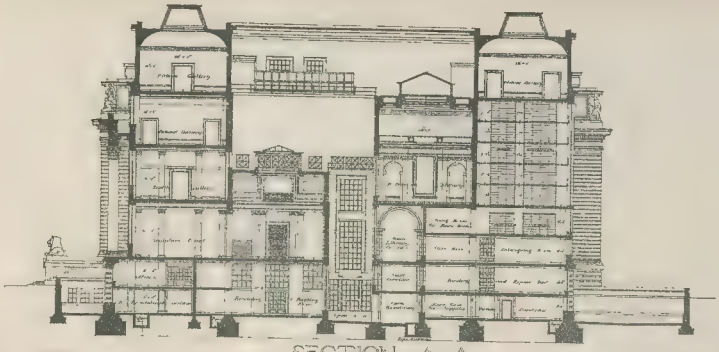
SECTION · B·B



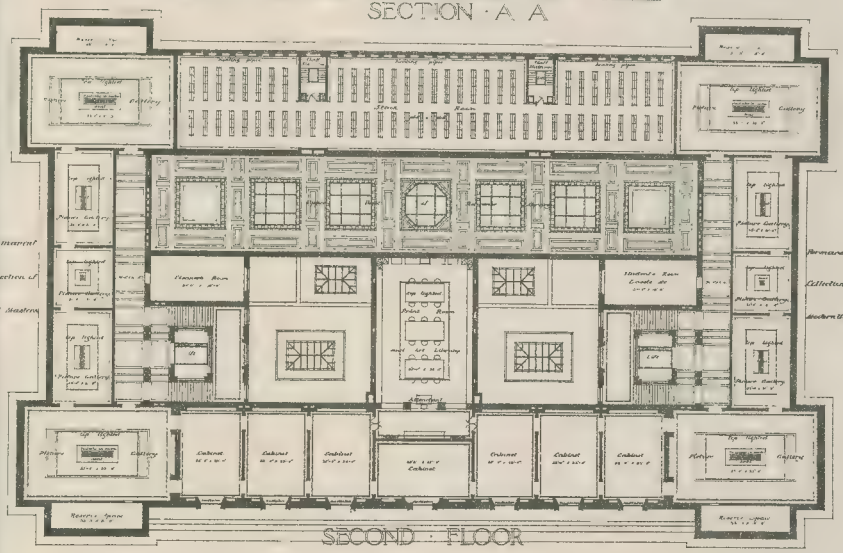
GROVND FLOOR



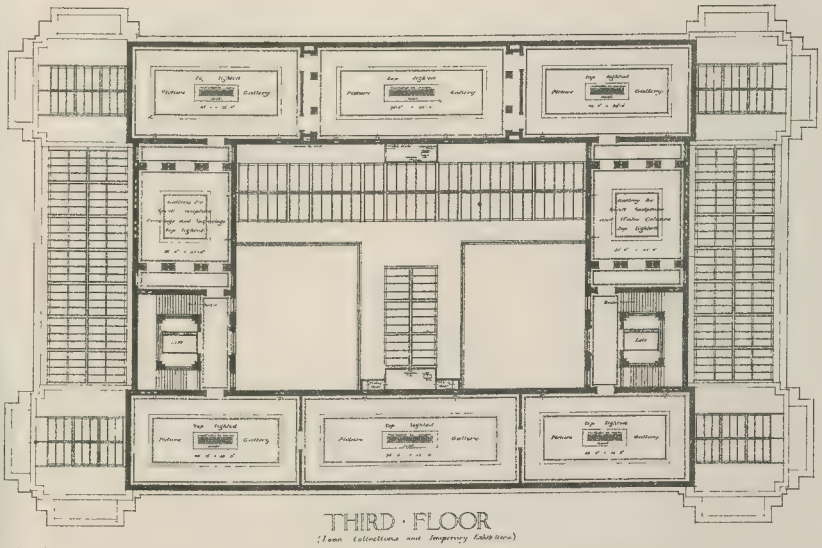
FIRST · FLOOR



SECTION · A A



SECOND · FLOOR



THIRD · FLOOR
(Loan Collections and Imperfect Exhibits)

PHOTO L. THO SPRAGUE & C° 1 2 4 & 5 EAST HARDING STREET FETTER LANE, E.C.

RY.—By Messrs. H. Percy Adams & C. H. Holden.

MONTHLY HISTORICAL REVIEW.

THE CHURCH OF ST. GEORGE IN OXFORD CASTLE.

AT Oxford Castle, under a range of buildings running east from the well-known tower, is a vaulted crypt with early Norman columns. These columns formed part of the Church of St. George, built within the Castle enclosure in 1074. They are thus remnants of considerable interest, for few, if any, of our Norman structures have so early a date. The crypt, which is four bays long and three wide, does not agree with a smaller crypt round-ended to the east, which is described in King's "Vestiges of Oxford Castle." Mr. C. Lynam, in an interesting article on Norman Crypts in the current number of the *Archæological Journal*, seeks to fit the apsidal crypt on to the four-bayed crypt, and to show that the whole formed an undercroft to the chancel and apse of the old church. This incidentally involves raising a doubt as to King's accuracy when he said that the apsed crypt was about 70 ft. away from the tower.

As it happens that I have also been interested in this crypt, I venture, without arguing the matter point by point, to bring forward another view.

In the *Proceedings* of the Oxford Historical Society for 1886 is reported an account of the Castle Crypt, given by the late Mr. Parker, in which he said that it must be borne in mind that the old stones had been reset, and that it was only due to a governor of the gaol that they were preserved. "The architect's design involved sweeping everything away. It would not have cost more to have left the crypt standing *in situ*, but in 1805 all was swept away."

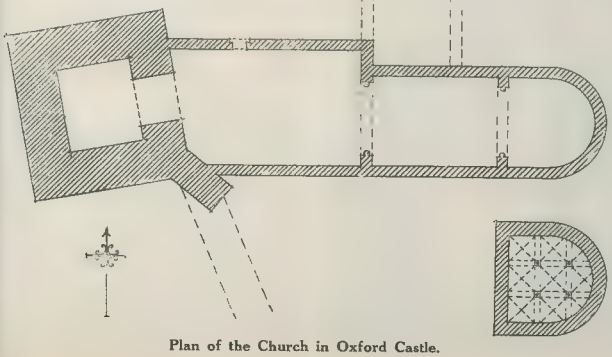
This account agrees entirely with that given by King himself, who says:—"In order to carry on the new building Mr. Harris [the builder] was obliged to disturb the whole [crypt]. He has, however, *replaced the pillars in a modern cellar* as near the spot as possible, and as far as might be in the same relative situation, only in consequence of a new round tower the present little crypt is now made convex inwards instead of being convex as the original was. And each pillar stands about 1½ ft. removed from its pristine situation; the plan will explain the then situation of the remains as they originally stood."

All this will be made quite clear by a reference to Mr. Lynam's accurate drawings. It appears that the old apsidal crypt was destroyed, but that its four columns were refixed in a new four-bayed cellar, and that these columns stand near their old positions. There was originally only the small apsidal crypt at a distance of about 70 ft. from the tower, and, as this position falls within the modern cellar, it is easy to see how some of the refixed columns can be only 1 ft. 6 in. away from their old positions.

King describes the original crypt as having had arches of wrought stone, but "the rough groins [the vaults] were turned with a mixture of rough stone and very hard-burnt brick or, rather, tiles, 9 in. square and 2 in. thick, and there were many such odd bricks in the walls, and others of still more strange dimensions." This is an interesting record of the use of brick as old material so early as 1074. Either these bricks were of Saxon make or they were Roman, but no finds of Roman foundations have ever, so far as I know, been recorded in Oxford.

On the site of what had been the nave of the chapel (about 40 ft. by 25 ft.) were found portions of its pavement "of tiles of different colours with ornamental bearings." What may have been the original nave door still remained in the north wall. The nave is described as "undoubtedly Norman." The part of the work between the nave and the apsed crypt (*i.e.*, the chancel) was said to have been more modern, as well as the chapel over the crypt (that is, the upper story of the apse, which, according to King, had been made into a complete chapel at a later time when the nave was taken for other purposes). The chancel was about 30 ft. long and as wide as the apse—that is, 20 ft. Old views show that the upper apse had three round-headed windows, as in a typical Norman apse, so we may doubt whether it was any more modern than the crypt over which it stood.

W. R. LETHABY.



Plan of the Church in Oxford Castle.

ARCHITECTURAL DETAILS IN MONUMENTAL BRASSES.—I.

BY J. S. M. WARD, B.A., F.R.Hist.Soc.

MONUMENTAL brasses frequently contain a considerable amount of architectural detail in their composition.

Often they were placed on altar tombs below stone canopies, but it is of those details depicted in the brass itself that the author has to speak.

Canopies are by far the most important group, and the magnificence of some of these can be but faintly realised from the illustrations included in this article.

The earliest follow the Decorated style (in fashion when they were laid down).

The first type consists of slender shafts supporting a pediment, of which the upper sides are straight, forming a triangle ornamented with crockets, and terminating in a bunch of foliage. The arch under is trefoil, and the cusps are filled with foliage. This form lasted from *c.* 1300 to *c.* 1325, but unfortunately only one example now survives, that of Joan de Cobham, Cobham, Kent, *c.* 1320. The side shafts are missing (probably they have now been restored), but the rest of the canopy is intact.

This is the second lady to be depicted on a brass, and she leads the magnificent series of nineteen brasses at Cobham. This parish church is unique in its display of really splendid brasses, and well repays a visit. There is no other place where anything like this number can be found. But this low pediment form was soon superseded by



Fig. 1. Archbishop Waldeby, 1397 (Westminster Abbey).

the "ogee" arch, rising to a great height. This is supported by equally tall side shafts.

Robert de Waldeby, Archbishop of York, 1397, who lies buried in Westminster Abbey, is a good example of the simpler form of this canopy (Fig. 1). He was an important man in his time and tutor to Richard II. Above the arch will be seen the arms of England impaling those of Edward the Confessor, who was the patron saint of Richard II.

Part of the marginal inscription is lost. Waldeby wears the pall bestowed by the Pope on archbishops, in addition to the



Fig. 2. Laurence de S. Maur, 1337 (Higham Ferrers, Northamptonshire).

ordinary vestments of a bishop, which have been described in a former article.

The next development was to widen the side shafts so as to form panels or niches containing a canopied saint. Often these are carried above the central arch to a super-canopy.

The brass of Laurence de St. Maur, Rector at Higham Ferrers, Northants (Fig. 2), is a very early example of this type. Canopied over priests in Mass vestments are very rare, and this is by far the finest.

It had six pairs of saints in the shafts and a super-canopy of five. The central arch is this is ogee, like the main arch, but all the others are straight-sided.

The figures are—in the centre, God the Father, with the soul and two angels; on his right St. Peter and St. Andrew; on his left. St. Paul and St. Thomas.

The four evangelists, with their emblems beneath them, occupy the four corner panels of the shafts. Then comes St. Gabriel, with probably the Virgin opposite; St. John the Baptist, St. Stephen, with probably St. Laurence opposite; and the Abbot St. Maur opposite St. Christopher, whose bare feet stand in the river.

The two dogs quarrelling over a bone are unique.

This is an appropriate point at which to refer to the famous brass at Balsham (Fig. 3). It measures 8 ft. 9 in. by 4 ft. 1 in., and commemorates John Blodwell in cope. Its canopy is embattled, with a single arch rising from broad shafts, which each comprise four niches containing saints, viz., St. John the Baptist, St. John the Evangelist, St. Peter, St. Andrew, St. Asaph, St. Nicholas, St. Bridget, St. Winifred.

This cope also has saints in embattled and canopied niches down the orphreys:—St. Michael, St. Gabriel, two archbishops—perhaps St. Augustine, St. Thomas (Cantua)—two bishops: St. Catherine, St. Margaret.

Another development was in place of a single arch to have double or triple arches.

The former type was used almost exclusively where two persons were commemorated; the latter was sometimes used for three, but more often was over a single figure. Often the triple canopy would support a tabernacle.

Thus in the brass of Sir Nicholas Hawberk, Cobham, Kent (Fig. 4), there is a shrine with the Holy Trinity, and further on either side are niches with St. George (slaying a very small dragon), and the Virgin and Child.

It should be noticed that God the Father is supporting the Son on the Cross, but the Holy Ghost (a dove) has been omitted. This is often the case.

This brass should be compared with the Tudor one from the same church to which reference occurs later on. Sir Nicholas's son stands beside him on a pedestal. Shields hang on either side of the shafts. The armour belonged to the Camail mail period. The date is 1407. The total length of the brasses is 7 ft. 6 in., the width 2 ft. 10 in.

The splendid tomb of the Duchess of Gloucester (1399) in Westminster Abbey is another example. There is no tabernacle, and the three canopies are more pronounced than in the Hawberk brass. She was a vowess, *i.e.*, a widow, who entered a nunnery.

But not only the finest in this group, but of all the English brasses now extant, is the monument to Thomas Nelond, Cluniac Prior of Lewes, 1433, at Cowfold, Sussex (Fig. 5).

Not only has this a tabernacle with the Virgin and Child, but the finials of the other two arches support St. Pancras and St. Thomas of Canterbury. Further, the central arch is also triple, and the shafts are supported by side shafts and connected by flying buttresses, as also is the tabernacle.

The whole is very graceful, and reminds one of the lantern at Ely. Its total length is 10 ft. 2 in. by 4 ft. 3 in.

The Prior of Lewes was an important man in his day, as he was head of all the Cluniac priories in England, he alone being responsible to Cluny.

Monastic brasses are rare, probably because most were laid down in the Monastic churches which were destroyed when the monasteries were dissolved.

Mention should also be made of the other great canopied brass at Balsham, 1401, which belongs to this group.

A SHORT HISTORY OF THE BRITISH SCHOOL AT ATHENS.*

THE short history of the British School at Athens, prepared to mark the twenty-fifth anniversary of its foundation, is a document of exceptional interest to all engaged in the study of classical antiquity.

Perhaps the most striking feature brought out by this summary of the work of the School is the wide range of study admissible under its auspices. The science of comparative archæology is represented by such able exponents as Mr. Ernest Gardner, the first student and afterwards Director, and Mr. D. G. Hogarth, another early student, while the architectural side was taken up in those days by Mr. R. W. Schultz, Mr. Sidney Barnsley, and Mr. Elsey Smith.

The following remarks from Mr. Macmillan's short history will be of interest:—

"In October, 1887, a special fund was established, under the auspices of the Hellenic Society, for carrying out excavations in the island of Cyprus. The discoveries made in this and the following session, first on the site of the temple of Aphrodite at Paphos, and afterwards at Polites Chrysochou, the supposed site of the ancient Arsinoe, and at Salamis, if they did not quite come up to the most sanguine expectations, were at any rate quite important enough to justify the enterprise and added prestige to the School. It was during the same two sessions that two other students, Mr. R. W. Schultz, Travelling Student of the Royal Academy, and Mr. Sidney Barnsley, began the work on Byzantine architecture in Greece, which afterwards bore such excellent fruit in their admirable monograph, with abundant illustrations in colour and in black and white, on the monastery of St. Luke, at Stiris, in Phocis, and of Salonica, and also of a series of full-size drawings of Greek mouldings made by Mr. Schultz, was unhappily prevented at the time by lack of funds. In the session 1890-1891 excavations were undertaken by arrangement with the Greek Government on the site of Megalopolis, and were continued for three years. The discoveries made excited great attention, and led to an animated controversy as to whether or not there had been any raised stage in the original Greek Theatre. The final results were published by the Hellenic Society, as a supplementary volume, well supplied with illustrations. When the work at Megalopolis had been completed the School next—in 1892-3—undertook excavations on the site of Aegosthena. The results, which were less important than had been anticipated, were afterwards published in the *Journal of Hellenic Studies*. In the following year the site of Abae, in Phocis, was excavated, but without much result. Mr. J. L. Myres, who had already made some preliminary researches in Crete, on finding that the time was not yet ripe for excavations in that island, transferred his energies to Cyprus, where he made excavations on several early sites near Nicosia, Salamis, and Larnaka, and also compiled a catalogue of the Nicosia Museum.

During these early years a solid foundation was laid, both by gifts and by purchase, for the Library, which forms so essential a part of the School equipment. The most important addition was due to the generosity of Sir Charles Newton. In 1890 a fund was raised for the purpose of presenting Sir Charles with a testimonial in recognition of his eminent services to classical archæology. Part of this was used for a bust to be placed in the British Museum, but the balance, amounting to upwards of 400*l.*, was, at his particular request, placed at the disposal of the School. The Committee decided to expend part of this sum on the purchase of a complete set of the Annali and Monumenti of the German Institute at Rome, to be inscribed with Sir Charles Newton's name. The rest of the money was applied as a Newton fund for purposes of research.

We now come to the year 1895, which proved to be a welcome turning point in the affairs of the School. The financial difficulties which constantly hampered its work had for some time past engaged the attention not only of the Committee, but of all who had the welfare of the School at heart. More than once the idea of an appeal for Government support had been mooted privately, but had met with no encouragement. The School, however, had an invaluable friend in Mr. (now Sir) Edwin Egerton, the British Minister at Athens, and it was largely at his instance that the Committee at last decided to make an appeal to the Treasury, which resulted in a grant of 500*l.* per annum for five years.

But this most welcome addition to its funds did not exhaust the good fortune of the School

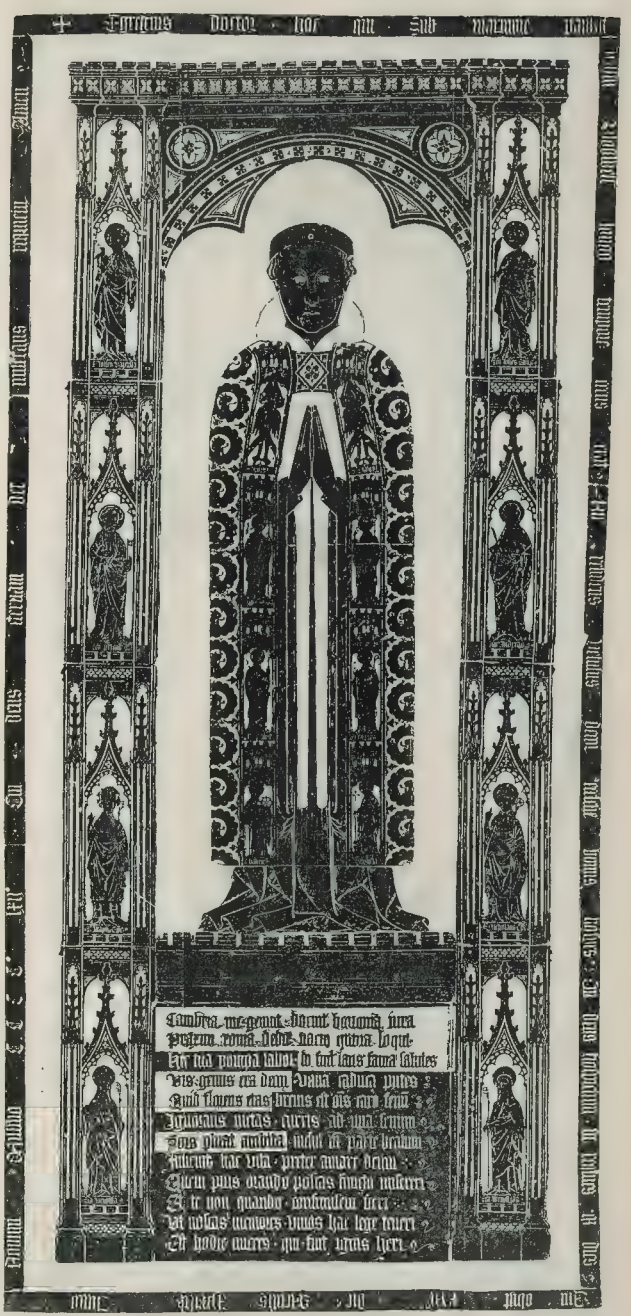


Fig. 3. John Blodwell, 1462 (Balsham, Cambs.).

* By George A. Macmillan, Hon. D.Litt. (Oxon). London: Macmillan & Co., Ltd.



Fig. 4. Sir Nicholas Hawberk, 1407 (Cobham, Kent). (*See page 70.*)

in this its *annus mirabilis*. While the result of the appeal was still very uncertain Mr. Egerton had been working for its benefit in another direction, and had succeeded in persuading H.R.H. the Prince of Wales, who had given the School its first start by a meeting at Marlborough House in 1883, to summon another meeting with the object of improving its financial position. It was at this meeting that the promised grant from the Treasury was first publicly announced, but the meeting itself yielded fresh annual subscriptions for limited periods to the amount of 300*l.* (including 25*l.* from the Prince of Wales) and donations to the amount of 800*l.* It was also during this year that the University of Cambridge first made their annual grant of 100*l.* to the funds of the School.

To inaugurate the new era the Committee were fortunate enough to secure the services as Director of Mr. (now Sir) Cecil Smith, who had received his training in the Department of Greek and Roman Antiquities under the eye of Sir Charles Newton. The Trustees of the Museum granted Mr. Smith leave of absence sufficient to enable him to hold the post for two sessions, which were memorable in the history of the School for two important developments—the building of a Students' Hostel in the precincts of the School and the foundation of the School *Annual*.

It must not, however, be supposed that Mr. Cecil Smith's energies as Director were confined to these two undertakings which specially mark the period of his rule. The ordinary work of the School was carried out with zeal and success, important additions were made to the Library, and its contents were re arranged, while fruitful excavations were undertaken in Athens, on the site of Kyno sarges, and also on the site of Phylakopi, in the island of Melos.

When Mr. Smith's brief term of office came to an end he was succeeded by one of the most distinguished of the early students of the School, Mr. D. G. Hogarth, who held office for three years. During this period the excavations at Phylakopi, which lasted from 1896 to 1899, were completed, with results of the first importance for the study of prehistoric art and civilisation in Greece. The Director was ably assisted in the work by Mr. Duncan Mackenzie and Mr. C. C. Edgar, who had previously worked on the site under Mr. Cecil Smith, and by Mr. T. D. Atkinson, who was specially appointed as architect to the expedition. The final results were published by the Hellenic Society in 1904.

In the session 1898-9, besides the completion of the work at Phylakopi, excavations were undertaken upon the site of Naucratis, by the help of a generous contribution from the Society of Dilettanti and smaller grants from the Ashmolean Museum, at Oxford, and the Fitzwilliam Museum, at Cambridge. The excavations at Naucratis did not last many weeks, as part of the site had been previously explored by Mr. Flinders Petrie and Mr. Ernest Gardner, but the site of the great Hellenion was found and identified, while a deposit of fine Vth-century terra-cottas, relics of an Aphrodite cultus, was unearthed in the enclosure, together with some very interesting early sculpture and vase fragments.

It was during this session also that plans were laid for those excavations in Crete which have since led to such marvellous discoveries mainly associated with the name of Mr. (now Sir) Arthur Evans, who had already made preliminary researches in the island, and marked out and secured the most promising sites. The change in the political situation, whereby the Greek law of excavation came into force, at last made it possible to begin operations. It was felt that the work was likely to be on a larger scale than the School could undertake single-handed. Accordingly, a "Cretan Exploration Fund" was formed under the joint management of Mr. Evans and Mr. Hogarth, as Director of the School. In order to set the Director free to devote himself to this important work an old student of the School, Mr. R. Carr Bosanquet, was appointed Assistant Director for the following session with special charge of the ordinary work in Athens.

The session of 1899-1900 was memorable for the discoveries made in Crete. Mr. Hogarth, after some preliminary and fruitful work on the site of Knossos, turned his attention to the cave at Psychro, which he identified without doubt as the far-famed Dictæan Cave. In it were found masses of bronze statuettes, implements, weapons, gems, and articles of personal adornment, while even the natural niches in the stalactite formations were in many cases stocked with votive axes, blades, needles, and the like. But even these remarkable finds were thrown into the shade by Mr. Arthur Evans's discovery, on another part of the site of Knossos, of the remains of the great prehistoric palace, presumably of King Minos, with wall-paintings and painted vases, which opened a new chapter in the history of art, and with upwards of 1,000 inscribed tablets, which may yet prove an important contribution to the science of language.

Before leaving the session of 1899-1900, and entering upon a new century, one or two other events of the year deserve mention. The first was the gift made to the School Library by Mr. W. H. Cooke, the surviving executor, of the library and antiquities collected by Mr. George Finlay during his long residence in Greece.

This year also saw the publication of the monograph on St. Luke's Monastery, at Stiris, in Phocis, which represented the first instalment of the valuable studies on Byzantine architecture in Greece, made by Mr. R. W. Schultz and Mr. Sidney Barnsley while they were students of the school from 1887 to 1891.

Lastly, an application for the renewal of the Government grant, supported by a full account of the work done by the School during the past five years, and by a list of subscribers, which showed that Government aid had in no way checked the flow of private generosity, met with a favourable response from the

Treasury, and the letter from "My Lords" announcing that the grant would be made for a further term of five years was couched in the most gracious terms. Twice since then the grant has been renewed for the same term, and so long as the School maintains its present high standard of work there can be little fear that this support will be withdrawn.

In 1900 Mr. R. Carr Bosanquet succeeded Mr. Hogarth as Director. Assisted by Mr. R. D. Wells as architectural student, and by other students, he successfully excavated the site of Praesos in Eastern Crete, where tombs were opened ranging from the geometric period to the fourth century B.C., and vases of various periods were found.

Among the achievements of this session, 1901-2, may be recorded the preliminary excavation of the site of Cyzicus by Mr. F. W. Hasluck, who received a grant of 90*l.* from the Craven Fund at Cambridge to cover the expenses. The work was continued in later sessions, and the results were finally published in book form by the Cambridge University Press.

Meanwhile, the Director, Mr. Bosanquet, made preliminary excavations on the early site of Palaiokastro in Eastern Crete, with the assistance of Mr. Heaton Comyn, architectural student. The results were sufficiently promising to justify more thorough excavations in succeeding sessions.

During the session 1903-4 the work on the new Library, which was executed by an Athenian builder after the design of Mr. Heaton Comyn, the School Architect, proceeded steadily, and the building was nearly completed before the winter of 1904.

The excavations at Palaiokastro were continued by the Director with the help of Mr. Dawkins, Mr. Comyn, and Mr. Currelly. The most important find was an inscription, which contained the text of an ancient hymn to the Cretan Zeus, and so confirmed the theory that a temple of Ζεὺς Δικταῖος had stood in classical times on the ruins of the Minoan town at Palaikastro. The language of the hymn was thought by Sir Richard Jebb to belong to the VIth or VIIth century B.C. More of the town was uncovered, and a Late Minoan Palace or Government House was found. Adjoining storehouses yielded painted pottery and terra-cotta figurines, while minor finds were made in cemeteries and on sites close at hand.

In the course of the session M. Cavvadias, the Ephor-General of Antiquities, offered the School the opportunity of exploration and excavation in Laconia, and, the offer being gladly accepted, a preliminary survey was undertaken on the site of Sparta.

The session 1904-5 was marked by the fact that in April the first meeting of the newly-established International Archæological Congress was held in Athens and drew together a remarkable gathering of scholars and archæologists from all parts of the world. The various Schools took an active part in the organisation of the Congress, and the British School came into special prominence because it was arranged that the formal opening of the new Penrose Memorial Library should form part of the programme.

After the Congress the School once more resumed its labours in the field, and the excavation at Palaiokastro was completed under the Direction of Mr. Dawkins. After the site of the temple of Zeus had been worked over, and its terra-cotta decoration had been recovered, including a frieze of chariots and metopes adorned with the head of Medusa, buildings of the Bronze Age underlying the temple proved to be especially rich in objects of the fine "Palace Style," which is known to have flourished in Crete during the Egyptian Eighteenth Dynasty. In a slightly older stratum a quantity of bones of oxen, which seemed to mark the position of an early place of sacrifice seemed to show that this lonely Hellenic temple, which stood a thousand years later on the ruins of the prehistoric town, occupied, whether by chance or by some direct religious survival, a site of immemorial antiquity. Terra-cotta models of bulls' heads and masses of painted pottery of the Late Minoan I. period were succeeded still lower by a quantity of "Early Minoan" pottery, while on a site not far distant Mr. Dawkins discovered a two-roomed house, with primitive pottery, bone needles, stone axes, etc., which, for the first time in the Ægean, gave a definite idea of a Neolithic homestead.



Fig. 5. Prior Nelond, Cluniac Prior of Lewes, 1433 (Cowfold, Sussex). (See page 70.)

Meanwhile the work of exploration in Laconia had been seriously begun. Tentative excavations on the site of Thalamai, famous in antiquity for its oracular shrine of the Goddess Ino, did not yield much, as the site had been constantly ransacked for stone in the Middle Ages, but Mr. Guy Dickins discovered and photographed some interesting sculptured marble capitals and screens.

In 1905-6 the main work of the School in the field was devoted to the site of Ancient Sparta, and the results of the first season were decidedly encouraging. The walls which enclosed the ancient Acropolis were traced in their entire circuit, and proved to be of late Roman construction after the sack of Sparta by the Goths, although its materials were drawn from the Agora and other ancient buildings. The front of the Greek theatre was incorporated in the defences, but the lower rows of seats were well preserved, and the orchestra floor was reached at a depth of 19 ft.. The Greek city wall, enclosing a far larger area, with a circuit of six miles, was also traced. It was 9 ft. thick, built of sun-dried bricks resting on a substructure of polygonal limestone blocks, and dated from the IIIrd century B.C. Various Hellenic remains were found along the bank of the river within these walls, but by far the most important discovery was the famous Sanctuary of Artemis Orthia. The first clue to the site was given by a large series of small leaden figures, but on the second day an inscription with the name Artemis Orthia made identification certain. The difficulties of working the site were enormous, including the diversion of a millstream, which flowed right through the temple. A solid wall, which extended far inland from the river bank, proved to be the substructure of a Roman theatre. The complete excavation had to be deferred to the following season, but two principal strata had already yielded a rich harvest. The older, characterised by geometric pottery and exquisite carved ivories, analogous to those found at Ephesus, extended to the VIIth century B.C. The latter, which had already yielded some 12,000 lead figurines and grotesque terra-cotta masks ranged from the VIIth to the Vth century. The lead figurines, in their endless variety of types, furnished a most valuable survey of archaic art in the Peloponnese, while the large series of masks revealed the gradual development of a vigorous naturalism.

Besides this central work at Sparta, the remains of the Byzantine and Frankish periods in Laconia occupied the attention of Mr. Sejk and Mr Traquair, by whom plans, measurements, or drawings were made of the citadel of Geraki, with its churches, and of the churches of Monemvasia, and the castles of Passavá, Maina, and Chelefz.

The session of 1906-1907 was again one of great and varied activity, in which the Director and Assistant Director were helped by nine very capable students, and also by the Secretary of the School, Mr. Baker Penoyre, who had a year's leave of absence in order to travel and make researches in Greece, the Ægean Islands, and Asia Minor.

Next year the main object was to complete the exploration of the precinct of Artemis Orthia, at Sparta. The Roman theatre (the "Circus" seen by Leake in 1830) was completely excavated, and a careful plan and restoration made by Mr. Walter George, the architectural student. The general course of the wall of the city was determined by means of the stamped tiles made for it, though few stones remained *in situ*. It included within its circuit all the villages of ancient Sparta. On April 4, when the first trial pit was sunk on the Acropolis of Sparta, the famous sanctuary of Athena Chalkioikos was identified beyond doubt.

During the session 1907-1908 the work at Sparta was again vigorously prosecuted with the help of a munificent donation of 1,000*l.* from Mr. W. W. Astor. The Artemision was the main objective, and here the primitive temple coeval with the archaic altar was found, and proved to have been a building of mud brick, resting on a foundation of undressed stones, and held together by a framework of wooden beams, while a row of wooden columns ran down the centre. It seemed probable that this was the earliest Dorian building on record.

It had been felt for some time that a determined effort was needed to throw more light on the chronology of the early civilisation of Northern Greece, and on its relationship to other cultures. During this session, therefore, Messrs. Wace, Droop, and M. S. Thompson excavated at site called Zeralia, near Almyro in Southern Thessaly. The hope of identifying the site with Itanos, by discovering the temple of Athena Itania, proved vain. But a rich prehistoric deposit was found from 6 to 8 metres thick and comprising no fewer than eight successive settlements.

During the year a Byzantine Research and Publication Fund was established in association with the School, a step which was all the more welcome to the Committee because they had long regretted their inability, on financial grounds, to publish much of the admirable work done in this field by their former distinguished students, Mr. R. W. Schultz and Mr. S. H. Barnsley. A balance of sums already contributed to the School for this purpose was made over to the new Fund, and it was arranged that students coming out under its auspices should be entitled to election as students of the School. Mr. W. Harvey, Gold Medallist and Travelling Student of the Royal Academy, accordingly visited Greece during the session, and while principally engaged on Byzantine studies also gave valuable help as draughtsman in the excavations at Sparta.

During the session 1908-9 the work at Sparta was brought to a conclusion, for, after completing the Sanctuary of Artemis Orthia, and excavating the Menelæum, trial pits on the more promising parts of the site of the ancient city seemed to show that no site of importance remained to be excavated.

During the session 1909-1910 a month's work was done at Sparta, mainly in identifying the site of the Eleusinion. In Thessaly excavations were carried out on the sites of Tsangli, between Pharsala and Velestino, and Rachmani, halfway between Larissa and Tempe. The results, compared with those of previous seasons, seemed to justify the division of the prehistoric remains of Thessaly into four periods:—I., Neolithic, marked by the occurrence of red on white painted pottery; II., Neolithic, marked by the presence of Dimini and similar wares; III., Sub-Neolithic, with the remarkable encrusted ware; and IV., Chalcolithic, with unpainted pottery, apparently contemporaneous with Late Minoan II. and III.

The narrative of the first twenty-five years of the life of the School ends with the session 1910-1911. The chief event has been the renewed excavations on the site of Phylakopi in the island of Melos, which has added materially to previous results, especially in relation to the discoveries made in Crete.

It will be seen that the last year of the period under review shows the School in full activity and doing admirable work in a variety of fields."

HISTORICAL NOTES.

The Capital of Ancient Assyria.

THE *Illustrated London News* recently contained an account with illustrations of the results of Dr. Andrae's explorations at Kalah Sherghat, on the right bank of the Tigris, the site of the ancient Asshur, which was founded not later than 2500 B.C. as the capital of the first Assyrian Empire, and though it had sunk to a subordinate position, remained fairly prosperous till after the Christian era. The exploration, which has been carried out since 1903 under the auspices of the German Oriental Society and has been chronicled from time to time in the *Proceedings* of that body, is a model of thorough and scientific methods. Its rich results are summed up in the article in question as follows:—"What Dr. Andrae has accomplished in these eight years is the clearance of most of the northern part of the site, where, round the main temple of Asshur, whose *ziggurat* is the central feature, were grouped the other principal shrines. Among these he has done his chief work in the fane of Anu and Adad, the divinities of heaven and of storm. Their temple, which he has cleared completely, is of comparatively late date—of Shalmaneser II., in the IXth century B.C.; but, by tunnelling underground with extraordinary patience, he has explored also the underlying building of the XIIth century, thus obtaining for the first time a knowledge of the development of Assyrian temple architecture. Though unable to dig out the central temple of Asshur, because the Turkish barracks occupy its site in part, he has bare many of the outlying chambers of great structure, whose foundation goes b to about 2000 B.C. Besides examining the huge fortifications which surround the and line the river bank, the Germans h explored a labyrinth of house remains of periods. The lowest stratum of the earl days of the Second Empire still keeps cobble-paved streets and courts, house wa and bathrooms in better preservation than upper, which is late Assyrian, and suffe much in the Parthian period. Among th house remains many vaulted tombs w found. The much-denuded ruins of seve palaces of various epochs, and the be preserved remains of an extra-mural building whose colonnaded garden the "Spring Sacrifi was held, should be mentioned as well. Thou Dr. Andrae did not find very much of note the houses, his reports enumerate a long of statues, of written tablets, of enamel terra-cotta wall decorations, and of vari votive objects found in the temples palaces."

Millenary Celebration, Oxford.

IT is proposed to celebrate July next year the millenary the first authentic mention Oxford with an exhibition its antiquities, lectures u the foundation of the city and Univers and pageants at each of the four corners, four gates of the city wall. We may here re the discovery some years ago in the erection the new Schools of remains of a hut villa clearly indicative of a pre-historical settlem at Oxford. In 912 King Edward gained for h self Oxnaford and Lundenbyrg, after the de of Æthelred, ealdorman of the Mercians, had held the valley of the Thames, and fr that time the true story of Oxford beg Domesday cites four churches SS. Mary, El Michael, and Peter. Before the Conquest th were 721 houses; at the time of the Survey o 243 houses within and without the wall paid g and 478 were vacant and ruined. Vol. XLV fourth series, of "Collectanea," Oxford Histor Society, contains the first detailed sur of the city in the Hundred Rolls of 12 edited by Miss Graham. It is generally belie that the most ancient college is Merton, foun by Henry III.'s Lord High Chancellor, Wa de Merton, in 1264, just twenty years bef Bishop Hugo de Balsham established, after same model, Peterhouse at Cambridge. our issue of January 3, 1891, we published late H. W. Brewer's drawing of media Oxford, in which one may trace the circumva tion of the later wall with Robert d'Oy Castle, near the West Gate, and the Cathed by the South Gate, with Merton, Univers Queen's, and New Colleges to the east; remains at Merton and New Colleges probably, of King Edward the Confessor's ti

Egypt Exploration Fund.

DURING the current sea the excavation of the Osire at Abydos, will be contin under the directions superintendence of Profe E. Naville, with the assistance of Mr. T. E. P late Craven Fellow. The work was begun 1 years ago by the Egyptian Research Accou under the conduct of Miss Petrie and Miss Murray and the general supervision Professor Petrie. Tombs of the interval fr the Ist dynasty to the Roman period h been opened in the cemeteries: in the sand been found a woman's skeleton, presum of the XIIth dynasty, with a scarab of ameth and two alabaster vases containing koh cosmetic for the eyes.

A Photographical Record of Old London.

MR. JOHN TODD, Dist Surveyor for the City London (East), has preser to the Bishopsgate Insti a valuable collection of ph graphs taken by him buildings which have recently been, or s will be, pulled down in the City, inclu the old property on the western side of Bish gate Without, lately incorporated Bishopsgate for postal purposes.

Proposed Museum, Southampton.

TUDOR HOUSE and King Jo Palace, Southampton, situ in Bugle-street and West esplanade respectively, ar be purchased by the T Council, subject to the financial assistanc the Local Government Board, and conve into a museum for antiquities.

Mediæval Concrete Roadways. In his topographical work on the lower town of Boulogne-sur-Mer the Abbé Haignère refers to the discovery of a concrete-paved roadway, which seems to be the ancestor of our modern concrete floors. This roadway, although of rudimentary character, has given proof of great resistance by remaining intact through several centuries. In addition to the roadway mentioned, there have been found in various streets the remains of ancient paving, formed by slabs of cement containing a large proportion of iron dross and consolidated by numerous copper pins.

According to the Abbé Cochet, analogous paving has been discovered in the old streets of Rouen. In his book, "Les Origines de Rouen d'après l'Histoire et l'Archéologie," this pavement is described as consisting of concrete, composed of flints broken to the size of large walnuts enveloped in slag or iron dross mixed with fragments of copper and bones. This mixture, thoroughly consolidated by traffic, forms a species of concrete harder than stone masonry and which cannot be broken by the pick. Unfortunately, this early pavement long ago excited the attention of amateur archæologists, by whom we are told every trace of it has been removed.

Ancient Scandinavian Iron Furnaces. RESEARCHES undertaken at Hedesunda and Pernebo, in Sweden, by Professor Odelstjerna in the hope of discovering the remains of ancient iron furnaces have been rewarded by success. Several furnaces have been found at both places, consisting of cavities lined with stone and provided with a hard-burned bottom of clay mixed with slag. These furnaces, which are believed to date from more than two thousand years back, show the great antiquity of the Swedish iron industry.

Inca Ruins in Peru. A REMARKABLE discovery of the remains of Inca civilisation was reported recently to the Royal Geographical Society. Professor H. Bingham, who is in charge of an expedition under the auspices of Yale University, came during last summer upon extensive ruins, which he identifies as those of the city of Pitcos, mentioned by old Spanish writers. They are situated on an all but inaccessible ridge in Peru several days' journey north-west of Cuzco, and have hitherto been known only to Indians and two or three Peruvians. They are largely overgrown with jungle, but the very cursory survey, which alone has yet been possible, has revealed work of a remarkable order, equal in interest to that at Cuzco and very superior to that of other sites visited. One building, according to Professor Bingham, contains the largest and most beautiful windows that he has seen in Peru. Some of the buildings contain blocks upwards of 10 ft. in length, while the masonry generally is very carefully wrought with accurately squared angles. It is hoped to carry out a full survey next season.

Relics of Old London. SEVERAL interesting items of news in connexion with the antiquities of London have been chronicled in recent numbers of the *City Press*. One of these relates to an addition to the architectural interests of St. Bartholomew the Great in the return after eighty years' absence of two carved bosses (one representing a mermaid), which originally formed part of the vaulting in the early XVth century cloisters. An old print is extant showing the exact position they occupied before they fell from the ruinous remains in 1833. They then passed into private hands, and have now been restored to the church by Mr. Paul White, into whose possession they had come; but the cloisters having been already restored some years ago, it is not possible now to replace them in their original place in the structure.

Our contemporary further gives an account of the objects found in the course of excavating for a new building in Tudor-street on the site of the Royal Palace of Bridewell. The most interesting of these from the structural point of view are some of the piles on which it was carried: "the trunks of young elm-trees, pointed at the base, but otherwise scarcely touched by hatchet or saw. They are still perfectly sound and strong, and . . afford a curious example of how green wood sometimes lasts longest. In order to remove them they have been sawn into sections."

A third item is the discovery, at a depth of 20 ft., in the course of digging for a foundation on a site between Pudding-lane and Fish-street-hill last autumn, of the base of the Roman city wall, 5 ft. deep and some 8 ft. wide. It rests on baulks of timber about 2 ft. square and 5 ft. long, with short upright piles between them; and consists of two courses of rough Kentish rag masonry, and, above that, of three courses of tiles embedded in mortar mixed with tile dust. The wall was originally from 20 ft. to 30 ft. high. This discovery settles the position not hitherto accurately known of the wall at this point. One of the piles has been secured for the Guildhall Museum.

Hittite Remains. MANY pressing claims on our space prevented us last month from calling attention to the interesting statement made by the authorities of the British Museum (as quoted in the *Antiquary* for November), that "the excavations conducted during the past spring and summer on the site of Carchemish, the ancient Hittite capital on the Euphrates, have brought to light considerable additions to the extant remains of Hittite civilisation, but so far the key to the Hittite writing has not been discovered. The British Museum Trustees have the concession of the site for another year, and it is hoped that important contributions may yet be made to the history of this somewhat enigmatic nation.

Among the finds during the last season are a great stairway leading from the lower to the upper city, and flanking what appears to be a building of some importance, which awaits further investigation. Lesser discoveries included the longest known inscription in Hittite pictographs and a quantity of pottery, the chronological sequence of which can, it is believed, be determined."

Excavations in the Sudan. MR. JOHN GARSTANG'S excavations at Meroe and Kabushia are making great progress, writes a correspondent to the *Times*, and the work on the Royal city is revealing a large number of buildings. The Palace near the Temple of Amon, which has now been cleared, contains over forty chambers and a large court. Important reliefs have been brought on the foundations. Three hundred natives, with a staff of trained Egyptians, are now employed, while a light railway and an aerial cableway have been constructed to facilitate the removal of the excavated material.

The Old Bridge of St. John's, Cambridge. THE old bridge lies between Trinity Bridge and the other St. John's Bridge, the Bridge of Sighs; it attracts less notice than the Bridge of Sighs because it is not a connecting thoroughfare between the old and new portions of the college. It was built at the end of the XVIIth century, being attributed to Nicholas Hawksmoor, after designs by Christopher Wren. The background of the illustration shows part of the additions made to the college buildings during the XVIIth century.



The Old Bridge of St. John's, Cambridge.
From a Drawing by Mr. S. Aveling.

THE BUILDING TRADE.

THE TIME CLAUSE IN A BUILDING CONTRACT.

NEARLY every building contract contains a clause under which the work in hand must be completed within a certain time. It is probable that this clause is a more frequent source of litigation than all the other clauses in the contract put together. With a view to preventing disputes as far as possible the architect usually has power to extend the time within reasonable limits, but notwithstanding this the builder sometimes becomes liable to penalties.

In these circumstances it may be of interest to discuss the time clause in the light of some of the recent decisions of the courts.

Difficulty occasionally arises as to the meaning of clauses as to time. If work is to be completed within so many days "from" a particular date, there is no general rule that the day is to be included or excluded; and to get ride of uncertainty it is always wise to specify the exact day on which the work is to be completed. Where the term "month" is used it means lunar months, unless the context shows or it is otherwise proved that calendar month was intended.

The true severity of the penalty clause in some contracts begins to be felt when the works are not completed within the contract time. Thus in some circumstances penalties may be exacted although the delay is caused by alterations required by the employer. In the case of Jones *v.* St. John's College, Oxford (L. R 6 Q B 115) it was agreed by a building contract that the plaintiff should, before a certain date, completely finish, according to certain specifications, a farm-house and buildings, but subject to extras, alterations, or additions which might be made as mentioned in the agreement. It was also stipulated that if the work was not done by the day named penalties might be deducted by the defendants from the amount owing from them to the plaintiff. Alterations were ordered, and the plaintiff failed to carry out the works within the time specified. The defendants having accordingly deducted penalties, the plaintiff brought an action to recover on his contract. It was decided that he had undertaken to execute not only the works specified, but also all alterations, within the time prescribed in the contract, and that it was no implied condition of the contract that the alterations should be such as could be reasonably completed within the time. Since, and as a result of, this case few contracts have been signed in which the builder has consented to complete extras within the contract time.

Where, as is generally the case, the architect has power to extend the time, but has not exercised it, and there is delay, the builder or manufacturer must not be mulcted in penalties. In the case of Westwood *v.* The Secretary of State for India (1863, 7 L. T. 736) the plaintiff contracted to build a ship. The time of completion was fixed. The contract provided that alterations might be ordered, and that the engineer was to have power to allow an extension of time for them. Failure to complete within the time fixed or extended time was to subject the plaintiff to certain penalties. The engineer ordered various alterations, but the time for completion was not extended, with the result that the shipbuilder exceeded the time specified in the contract. In an action brought by the shipbuilder for the cost of the alterations the Secretary of State for India entered a counterclaim for penalties. By way of answer to the counterclaim it was pleaded that the alterations ordered had made it impossible to complete the work within the specified time. The Court held that this afforded a good answer to the claim for penalties.

Where, however, delay is caused by the intervention of the employer, a waiver of the penalties clauses will be implied. Thus when the employer (as must often happen) during the progress of the work orders alterations to be carried out within reasonable time, and these alterations are so mixed up with the work contracted for that it is impossible to separate them, a waiver of the penalty clause may take place. In Thornhill *v.* Neats the plaintiff agreed to build six houses by a certain day, and was placed under penalty if they were not completed. Before the date fixed for completion, it was agreed that the plaintiff should perform other work in and upon the houses, this additional work to be done within reasonable time. In an action brought by the builder for work and labour done the building owner set up in answer a claim for penalties for non-completion within the time specified. It was held that there was a good legal answer to the claim for penalties for non-completion within the time specified on the ground that the defendant had in effect waived the penalty clause by agreeing that the entire work should be done within a reasonable time.

Again, in Russell *v.* Sa Da Bandeira (1862, 13 C. B. N. S. 149) a clause respecting penalties in a contract for the building of a ship imposed a penalty of 5*l.* a day on the shipbuilder for every day after a certain day if the ship should not be then delivered. The ship was not delivered until long after the day appointed, but a large portion of the delay arose from the interference of the building owner or his agent. It was decided that no sum in the nature of a penalty was recoverable by the employer. Similarly, if the time for commencing the work is delayed through no fault of the builder he will not be liable to pay penalties. Thus, in the case of Holme *v.* Guppy (1869, 3 M. & W. 387) the plaintiffs contracted to do for 1,700*l.* the carpenter's work in a brewery which was being built for the defendants. The work was to be completed within four and a half months from the date of the contract, and in default of completing within the said four and a half months the plaintiffs were to forfeit 40*l.* per week each week during which the carpenter's work was delayed beyond August 31, 1863, the expiration of the four and a half months. The defendants did not give the plaintiffs possession till four weeks after the contract was made. The plaintiffs did not complete until five weeks after August 31. The defendants claimed to set-off five penalties of 40*l.* against the last instalment of the contract price. It was decided by the Court that they could not do so; that the undertaking to complete was put to an end by the defendants' default in not giving the plaintiffs possession at the proper time; and that there was no evidence of a new contract to complete at any other time than August 31.

Again, where there was delay in setting out the ground for building and in providing the necessary plans the builder was excused.

Even when delay is caused by a strike for which he is in no sense responsible the builder may suffer from infraction of the time clause.

Thus it was decided in the case of Budgett *v.* Binnington & Co. that prevention due to causes other than the employer's intervention, such as a strike of workmen, is not an excuse for failure to complete within the proper time. This principle and the frequency with which strikes have in the past prevented the fulfilment of important engineering contracts has given rise to the insertion of a strike clause in every contract of importance. It should be observed, however, that where there is such a clause the strike may, nevertheless, be of so prolonged continuance as so to alter the conditions of the contract and the arrangements of the parties to it as to amount to a determination of the contract.

The power of granting an extension of time, which, as we have seen, is frequently conferred upon the architect, must be exercised by him in strict accordance with the terms of the contract between the parties.

Hitherto we have dealt only with penalty clauses; there is another clause often inserted in building contracts, the administration which depends very largely upon the arch tect. We refer to the "bonus" clause. contract sometimes provides that a bon shall be paid to the contractor for expeditio If there is such a clause, and the archite has power to extend the time, this powe according to a New Zealand case, is not be exercised by the architect for the purpo of enabling the contractor to earn the bon but, on the contrary, to save him fro penalties. In the case in point (Ware Lyttelton Harbour Board, 1882, 1 N Zealand L. R. 1882, S. C. 191) it was agre by contract that "The Board will gra the contractors a bonus of 100*l.* per we for every week or part of a week in whi the contract shall be finished within t specified time." The contract was to co plete certain specified works, and additio or extra works if properly ordered. T date for completion was April 7, 1882. T plaintiff completed six weeks before t appointed day, and received 600*l.* bon They claimed further bonus for time take as they alleged, by extra works. T engineer had power to extend the time. was held that the clause only applied in ca the engineer should consider that the co tractors could not complete within the tin to save the contractors from penalties, a not to give them additional bonuses.

STATE OF THE BUILDING TRADE.

WE take the following, by Mr. J. J. Jarv Managing Director of Messrs. J. Jarvis Sons, Ltd., Hackney-road, London, N.E., a Director of the Imperial Property Investm Company, Ltd., Basinghall-street, E.C., fr the *Chamber of Commerce Journal Ann Trade Review*:—

"Last year will be recalled with little sa faction by those connected with the build trade. Although spasmodic bursts of activ in different centres seemed to hold out ho of better times to come, it cannot be s with truth that the year has held ma encouraging features. In contrast with so recent "bad" years, some slight improvem has been noticeable, but, speaking genera the prevalent conditions have been by no me satisfactory, and the general outlook is caus some anxiety in many quarters.

The primary cause of depression is continued slump in the property mark There can be no doubt that the investor thoroughly frightened by recent legislation will have no dealings in real estate. T result is that house building no lon flourishes and builders of this class h practically ceased to build until better tir . . . .

Another important reason for the contin depression is the crushing burden of taxati This was referred to in last year's report a far from showing signs of amelioration, r taxes are springing up in bewildering overwhelming fashion. . . .

Nor has the continued higher level of pri for materials assisted business—it is cheaper at the moment to buy than to bu and those who have the option prefer to neither.

The fact is, despite the alleged improvem in trade, the country is living to the extent of its means. The higher cost of livi additional taxation, increased opportunities spending, are all contributing their quota larger expenditure; as the result the availa margin is reduced to the vanishing-point, on this account the building trade of neces suffers. . . .

The recent labour unrest did not affect building trade in 1911 to any very gr extent. The carmen's strike caused a days' inconvenience, and the railway troul proved annoying for a short time, but, on whole, definite disputes with any branches the trade have been few. During the v secret ballots have been taken by certain of trade unions to ascertain their members' vi as to a general demand for increased wa in 1912, and at one time there seemed sc possibility of prospective trouble. It can, h ever, be prophesied with some certainty t there will be no strike of importance dur

the new year. Whilst the increased cost of living naturally encourages the desire for higher wages, the wiser leaders of the men see that any demand of this kind can only be successfully made when the general conditions are more satisfactory than those at present obtaining.

The National Insurance Act is not by any means popular with either masters or men. The former view with some concern the trouble and expense that will devolve upon them. Neither reason would be of weight were the results likely to prove in any sense commensurate with the cost and inconvenience. The workmen, also, feel that they are being asked to pay far more than the benefits warrant. In the writer's company a sick fund has been in existence for nearly twenty years that for 2d. weekly gave 12s. to 15s. per week in sick pay, 5l. 5s. at death, and the privilege of receiving hospital letters and admission to convalescent homes owing to subscriptions from the fund to these institutions. Needless to say, it has not paid its way at 2d. per week, but at 3d. it would have shown quite a satisfactory profit. Under the new Act, funds of this kind can no longer exist, and in the particular instance mentioned the men are wondering why it is impossible to give for 9d. the benefits that have been theirs for something less than 5d. Of course, the building trade is a particularly healthy one, and whilst the men would raise no objection to paying rather more than their share if they felt it would be helping their fellow-workers engaged in some less satisfactory trades, there is a general feeling that the Act yields a very poor return for the payments made. To that more casual type of labourer who seems to need assistance most the Post Office scheme appears likely to prove a delusion and a snare, and there can be no doubt that whilst the principle of insurance is universally accepted as good, the present hurried legislation stands in considerable need of further consideration and amendment.

It is customary at the conclusion of an annual report to assume the *rôle* of a prophet. No more difficult task ever confronted a trade writer than to anticipate the trend of events in the coming year. The building trade is unique in that it depends for prosperity on an unusual variety of reasons—political, social, economic. But it is tolerably safe to predict that there can be no settled improvement until confidence is restored in the property market, some effort is made to lighten the burden of taxation, and unquestionable improvement is noticeable in the general trade of the country. To many this happy state of affairs must await the millennium, but to just a few there are signs—small, but significant—that this threefold condition may prevail before another year has ended. And the writer may be numbered amongst the optimists."

HOURS AND WAGES IN THE BUILDING TRADE.

THE Management Committee for the London district of the Amalgamated Society of Carpenters and Joiners, as has already been announced, have given notice to the Council of the London Master Builders' Association of demands for an increase of 1½d. per hour in wages, double pay for overtime, and a reduction of summer hours from fifty to forty-seven a week. Notices to expire during the course of the present year have, says the *Times*, been tendered in thirty districts of the country, including Ireland. These are Abertillery, Bacup, Barrow, Bath, Beverley, Bolton, Bradford, Cardiff, Cheltenham, Coventry, Derby, Dewsbury, Dundalk, Ebbw Vale, Grays, Hasingden, Leeds, London, Manchester, Newport (Monmouth), Portsmouth, the Potteries District, Rawtenstall, Rotherham, Selby, Spen Valley, Stockport, Sutton Coldfield, Watford, and York. Both the working hours and the rate of wages vary in different parts of the country, but the demand in each case is for an improvement in existing conditions.

The Amalgamated Society of Carpenters and Joiners has 770 branches in the United Kingdom, with a membership of between 50,000 and 60,000. There are also branches in the United States, Canada, New Zealand, Australia, and South Africa, bringing up the total number of branches to 977 and the membership to over 67,500. So far as the United Kingdom is concerned, the funds at present amount, it is understood, to something over 2*l.* a member, or roughly about 120,000*l.* These can be readily augmented by levy should necessity arise.

In the London district, a term which means a twelve-mile radius from Charing Cross, the claim for higher pay is based on the increased cost of living. This claim, it is urged, has been already recognised by the Engineers and Ship Repairers' Association of London, when they granted to the joiners working on the Thames the amount which is now being asked from the Master Builders' Association. That body, through its Council, has received the letter of notice of the executive of the men. The notice does not take effect in London till June 8. In the meantime conferences will doubtless be arranged between representatives of masters and men. So far as present indications can be ascertained, while the executive of the men are hopeful that an amicable arrangement may be arrived at, the masters are not likely to take so comfortable a view. The rise asked for is, it is felt, a very serious one, and in view of the state of trade the time is not considered opportune. In the event of a dispute the conflict would not be confined to the members of the Amalgamated Society, but would involve other sections of the building industry which are federated with the London Building Industries Federation. At the present time, it may be added, the bricklayers', plasterers', and masons' sections are taking a vote of their members on the question of seeking to improve their conditions.

GENERAL BUILDING NEWS.

NEW SCHOOL, HEOLYCYW.

This school was opened last week, and has been erected at a cost of 3,515*l.* from the designs of Mr. Pugh Jones, F.S.I., the county architect. The accommodation of the building is for 204 children, and the contract was carried out by Mr. W. A. Jones, builder, of Barry.

PROPOSED SCHOOL, WORTHING.

At a meeting of the West Sussex Education Committee it was decided to provide a new secondary school with accommodation for about 150 pupils at Worthing. Mr. Haydon P. Roberts, the Committee's architect, is to be instructed to prepare plans for this purpose.

ELEMENTARY SCHOOLS, POOLE.

The new elementary schools erected in Southroad, Poole, by the Poole Town Council, at a total cost of 9,148*l.*, have just been opened. The schools, which have been built by Mr. H. W. King, of Springbourne, from designs by the Borough Surveyor (Mr. S. J. Newman), are situated on about an acre of land forming a portion of the site of the old foundry, between South-road and Green-road. The accommodation is for 290 boys and 290 girls, a total of 580. The boys' entrance is from South-road and the girls' from Green-road, the latter children occupying the classrooms on the first floor only. The exterior is of South-Western Pottery white-faced bricks, with terra-cotta dressings by Messrs. Carter & Co. The roof is tiled. The school consists of five classrooms on the ground floor for boys, with cloakroom accommodation, lavatories, teachers' room, storeroom, etc. The first floor, which is reserved as the girls' department, is approached by a staircase of granolithic material, and contains similar classrooms, etc., to those in the boys' school. In each school three classrooms are arranged to be thrown into one by the removal of folding partitions. Throughout the school there is a glazed tile dado, and the walls above it are coloured a light green. The floors are of maple wood-block. The heating is on the low-pressure hot-water system and has been carried out by Mr. Hayden, of Trowbridge. Electric lighting has been installed by Mr. A. G. Strudwicke, of Branksome. The first floor is of fireproof construction, by Messrs. Homan & Rogers, and outside a fire-escape staircase is provided.

SECONDARY SCHOOL, BLYTH.

Messrs. Robson & Waddle, builders, of Blyth, are carrying out the erection of this school, which will provide accommodation for 280 scholars. The school includes a central hall, art-rooms and laboratories, and maple flooring is being used in all teaching-rooms and main corridors. The architect for the work is Mr. Edward Cratney, of Wallsend.

NEW SCHOOL, INCHTURE.

Mr. A. G. B. Nicolson, of Edinburgh, is the architect who has superintended the extensions to this school, the total cost of the work being 1,500*l.* The contractors were as follows:—Builder, Mr. Edward M'Kearney, Perth; joiners, Messrs. D. & J. Anderson, Perth; plumbers, Messrs. Frew & Co., Perth; slaters, Messrs. William Brand & Son, Arbroath; plasterer, Mr. J. Lyburn, Dundee; heating engineers, Messrs. A. L. Peacock & Co., Dundee; painters, Messrs. G. R. Douglas & Son, Perth.

NEW ASSEMBLY ROOMS, NORWICH.

Mr. E. J. Trench is the architect for this new building, which includes a ballroom with an area of nearly 5,600 ft., including a stage with dressing-rooms at the back; a supper-room, capable of seating 200 guests; and winter gardens, which are about 120 ft. in length. The construction was carried out under the direction of Mr. A. W. Chasteney, of Messrs. Wicks & Sons, Ltd., and the heating arrangements are by Messrs. Barnes & Pye.

TERRITORIAL HEADQUARTERS, YORKHILL.

These new buildings have been erected at an estimated cost of 26,000*l.* from the designs of Messrs. Brand & Lithgow, architects, of Glasgow. The buildings comprise quarters for the Yeomanry and Royal Army Medical Corps, also a riding school.

NEW BUILDINGS IN LONDON.

Mission church, East Ham, E. (2,000*l.*); Mr. E. D. Hoyland, 2, Walbrook, E.C. Mission church, Rotherhithe, S.E. (2,300*l.*); Messrs. Simpson & Ayrton, 3, Verulam buildings, 3, Gray's Inn-road, W.C. Schools, Senrab-street, E.; Architect, London County Council Education Committee, Victoria-embankment, E.C. Warehouse, Gray's Inn-road, W.C.; Mr. W. Matts, Birkbeck Bank-chambers, High Holborn, W.C. Extensions to school, York-road, Lambeth, S.E.; Architect, London County Council Education Committee, Victoria-embankment, E.C.

TRADE NEWS.

Under the direction of Messrs. Thomson & Bristow, architects, Victoria-street, S.W., the "Boyle" system of ventilation (natural), embracing Boyle's latest patent "air-pump" ventilators and air inlets, has been applied to the Secondary School, Whitby.

The Church of England Schools, Padiham, are being ventilated by means of Shorland's patent exhaust roof ventilators and special inlet ventilators supplied by Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester.

The Church of England school at Burwash, Sussex, has recently been fitted with D. O. Boyd's "Hygiastic" ventilating school stoves, supplied by Messrs. O'Brien, Thomas, & Co., Upper Thames-street, London, E.C., and Excelsior Works, South Bermondsey.

The Elstree Brick and Tile Company, Ltd., Boreham Wood, Herts, have recently had some of their bricks tested at Messrs. Kirkcaldy's, with the result that they show a resistance of 233 tons per square foot before cracking, and 257 tons per square foot before crushing. These bricks are made from the London clay by Staffordshire brick mills and machines, being pressed automatically in a plastic condition and burnt in the ordinary way. The tests for ordinary building bricks is very good and the porosity, 9·07 per cent., is also good for such bricks.

TRADE DINNER.

The annual dinner of the staff, to the number of over sixty, of Messrs. Thomas Parsons & Sons, varnish and colour manufacturers, took place on January 6 at the Horseshoe Hotel, Tottenham Court-road. The chair was occupied by Mr. P. Gilliard, the senior traveller present. The toast of "The King" having been honoured, Mr. Gilliard proposed the toast of "The Firm," coupled with the names of Mr. George and Mr. William Parsons. Mr. V. W. Theobalds, the Works Manager, responded in suitable terms on behalf of the firm.

PROJECTED NEW BUILDINGS IN THE PROVINCES.*

ABERDEEN.—Reconstruction of eastern wing, extensions to art school, and erection of science and engineering school; Architect, care of the Committee of Robert Gordon's Technical College. Additions to works of Mr. J. P. Kilgown, also additions to 472, Union-street, for Mr. P. E. Farquharson (1,500*l.*); Messrs. Sutherland & George, 26, Crown-street, Aberdeen.

Amesfield (Dumfriesshire).—Technical school (4,500*l.*); Messrs. James Halliday & Sons, builders, Leafield-road, Dumfries.

Annbank-by-Ayr.—School (5,000*l.*); Mr. John Eaglesham, architect, Wellington-street, Ayr.

Auchendoir. — Extensions to Glenbogies House (2,250*l.*); Mr. W. L. Duncan, architect, Hallhill House, Turiff.

Axminster.—Public hall; Messrs. Symes & Mudge, architects, Somerset House, Chard.

Ayr. — Business premises, Main-street (3,000*l.*); Mr. W. Cowie, architect, Alloway-street, Ayr.

Banff. — Administrative block, Superintendent's House (1,850*l.*); Mr. James Christie, jun., architect, Fife-street, Banff.

* See also our list of Competitions, Contracts, etc., on another page.

Batley.—Picture palace, Commercial-street, for Jenkins' Pictures, Ltd.

Bix (near Henley).—Rectory (2,000*l.*); Mr. C. W. Smith, architect, 16, Finsbury-circus, E.C.

Blyth.—School (8,000*l.*); Messrs. Fenwick & Watson, Pearl-buildings, Newcastle.

Bootle.—Proposed additions to hospital (7,220*l.*): Mr. B. J. Wolfenden, Surveyor, Bootle Town Council.

Bridgton.—Extensions to works for Messrs. Whitehouse Brothers, Ltd.

Cambridge.—School (11,325*l.*); Messrs. Kidman Brothers, builders, Cambridge.

Carlby.—Proposed workmen's houses; Mr. T. Lake, Surveyor, Bourne Rural District Council.

Castleford.—Proposed chapel, Carlton-street (5,000*l.*); Trustees, Carlton-street, Wesleyan Chapel, Castleford.

Catchgate (Durham).—School (9,000*l.*): Messrs. Marshall & Tweedy, architects, 17, Eldon square, Newcastle.

Chertsey.—Twelve houses (152*l.* each); Mr. F. W. Greig, Surveyor, Chertsey Rural District Council

Colchester.—Extensions to asylum (82,965*l.*); Messrs. H. Arnold & Son, builders, Printing Office-street, Doncaster.

Crook.—School (5,000*l.*); Mr. J. G. Murrell, Market Place-chambers, Durham.

Croydon.—Residence, Stamford-road (4,000*l.*); Mr. H. C. Pegg, Alnwick House, Thornton Heath. Hospital, London-road: Mr. F. Windsor, architect, 1, High-street, Croydon.

Dartford.—Extensions to Phœnix Works for Messrs. Burroughs, Wellcome, & Co. Houses, Priory-road, for the proprietors of the *Daily Telegraph*.

Darwen.—Summhurst Kiosk; Messrs. Lloyd & Millward, builders, Blackburn-road, Darwen, Lancs.

Dukinfield.—Extensions to workshop for Messrs. Driver, Goodier, & Co., Ltd.

Dundee.—Extensions to King's Cross House (16,000*l.*); Mr. James Thomson, engineer, 91, Commercial-street, Dundee.

Ecclesall Bierlow.—Enlargement of school, Western-road (450 extra places); Mr. G. S. Baxter, Secretary, Education Committee, Sheffield Town Council.

Elgin.—Additions to Binghead and Keams Public School (2,500*l.*); Mr. John Wittett, architect, 81, High-street, Elgin.

Exmouth.—School, Exeter-road (2,100*l.*); Mr. E. Crocker, Bank-chambers, Exeter.

Falkirk.—Extensions to electricity works; Mr. F. Ransome, electrical engineer, Electricity Works, Falkirk.

Farden Mont.—Asylum (56,000*l.*); Mr. G. A. Hutchins, County Surveyor, Welshpool.

Forth.—Slaughter-house (3,000*l.*); Messrs. Traill & Stewart, architects, 38, High-street, Lanark.

Gallatown.—Shops and houses, etc. (2,300*l.*): Mr. J. F. Smith, 210, High-street, Kirkcaldy.

Godalming.—Additions and improvements at police-station (1,500*l.*); Mr. A. Dryland, Surveyor, Surrey County Council, County Hall, Kingston-on-Thames.

Greet.—Proposed electrical sub-station, Percy-road; Mr. R. A. Chattock, Electrical Engineer, Birmingham Town Council.

Hackbridge.—Extensions to school (450 extra places): Mr. Ramsey Nares, Secretary, Education Committee, Surrey County Council, Kingston-on-Thames.

Hambledon.—Additions to school (2,800*l.*): Mr. H. Littler, architect, Ribblesdale-place, Preston.

Horwich.—Extension to premises (to accommodate one hundred extra looms) for the Lion Manufacturing Company.

Huntly (N.B.).—Shops, houses, etc. (2,000*l.*); Mr. T. G. Archibald, builder, Old road, Huntly.

Kirton (near Boston).—Town hall (1,100*l.*); Messrs. J. Langley & Son, builders, Kirton.

Leith.—Extensions, Sawnfield Roller Mills (4,000*l.*), for Messrs. J. Wilson & Co.

Lincoln.—Extensions to works, Firth road, for Messrs. Cannon & Co.

Linslade.—Proposed enlargement and improvement of St. Barnabas' Church (10,000*l.*); the Vicar.

Llanelly.—Adaptation of premises, Murray-street, into club; Secretary, Liberal Club, Llanelly.

Lower Wadsley.—School (840 places); Mr. G. S. Baxter, Secretary, Education Committee, Sheffield Town Council.

Lowestoft.—Additions to St. John's School; the Managers. Plans have been passed for fifteen houses, Dene-road, for Mr. F. Jarvis.

Nelson.—Mission hall, Goit Side; Trustees, Central Gospel Mission.

Newcastle.—Banking premises, Grey-street; Mr. W. H. Brierley, architect, Lendal, York; Mr. J. Lumsden, builder, Jarrow.

Newchapel.—Additions to parish church (1,000*l.*); the Vicar, Newchapel.

Newport (Mon.).—Theatre; Mr. W. H. Longworth, architect, 4, St. Mary's-passage, Manchester; Messrs. Jordan & Sons, builders, Harrow-road, Newport.

Nordrach-on-Dee.—Extensions to sanatorium (3,000*l.*); Mr. W. E. Gauld, 11a, Dee-street, Aberdeen.

Norwich.—St. Giles Hall (1,200*l.*); Messrs. Morgan & Buckingham, architects, 1, Upper King-street, Norwich.

Okehampton.—Police-station (2,000*l.*); Mr. S. Ingram, County Surveyor, Exeter.

Paisley.—Drill hall for Royal Engineers (2,000*l.*): Messrs. J. Craig, Barr, & Cook, architects, 13, St. James'-place, Paisley.

Parkhead.—School; Messrs. Fleeming & Son, architects, 10, Queen-square, Wolverhampton.

Portishead.—Generating-station for the Portishead and District Lighting Company.

Portree.—Additions to school (2,000*l.*); Mr. R. I. McBeth, Queen's House, Inverness.

Portslade.—School (4,000*l.*); Mr. F. J. Wood, Shire Hall, Lewes.

Preston.—Parish-room (400 places), Vicar, St. George's Church, Preston. Sunday and parish rooms (2,500*l.*); Mr. W. P. Gilbertson, 9, Winchley-street, Preston.

Rastrick Brighouse.—Free library (2,000*l.*); Mr. R. Rogerson, Henry-street, Brighouse.

Sheffield. Extensions to Ellesmere-road School: Mr. F. E. P. Edwards, Architect, Town Hall, Sheffield.

Southampton.—School, Mousehouse-lane (6,000*l.*); Mr. C. L. Crowther, Engineer, Town Hall, Southampton. Erection of handicraft and cookery centres (1,517*l.*); Mr. J. Nichol, builder, 19, Buller-road, Bitterne Park, Southampton. Additions to Ascupart School (1,360*l.*); Messrs. H. Stevens & Co., builders, 126, Above Bar, Southampton. The following plans have been passed:—Six houses, Ampthill-road, for Messrs. Watson & Burnett; three houses, Oxford-road, for Mr. D. J. Crook; additions, Mount Hermon, Church-lane, for Messrs. Udall & Co.; four houses, Four Posts-hill, and six houses, Station-road, for Mr. W. Wheeler.

Stockport.—Addition to hat works, Chestergate and King-street West, for the Chestergate Hat Manufacturing Company, Ltd.

Stretford.—Plans have been passed as follows:—Five shops, Moss-road, for Mr. G. W. Unsworth; store, First avenue, for Mr. Thomas Maiden; reconstruction of Dog and Partridge Hotel, Chester-road, for Messrs. Walker & Homfray, Ltd. Plans have been lodged for a motor garage, Humphrey-street, for Messrs. W. J. Brookes & Sons.

Swansea.—Shop, stores, etc. (2,000*l.*); Mr. A. Williams, architect, Wharton-street, Cardiff.

Teddington.—A plan has been passed for a cinematograph theatre in Kingston-road for Mr. S. J. Waters.

Troon.—Shop (2,800*l.*), for Ailsa Shipbuilding Works.

Twickenham.—A plan has been passed for the conversion of Richmond Rink into motor garage for the London General Omnibus Company.

Underbank.—Additions to school (3,000*l.*); Mr. J. H. Gilmore, School Board Offices, Lesmahagow, N.B.

Watford.—Alterations to grammar school (1,740*l.*); Messrs. George Wigg & Son, builders, 90, St. Alban's-road, Watford.

Wellingborough.—Sunday-schools (2,000*l.*); Trustees, Wesleyan Methodist Church, Wellingborough.

Weston Mill (Devonport).—Church (5,000*l.*); Mr. A. Bazeley, architect, 21, Prices-street, Plymouth; Messrs. Lapthorne & Co., builders, Citadel-road, Plymouth.

Weybridge.—Enlargement of cottage hospital; Architect, care of the Trustees.

Whitburn.—School (4,500*l.*); Mr. F. Graham, 124, George-street, Edinburgh.

Yarmouth.—School (4,355*l.*); Mr. B. G. Beech, builder, Yarmouth. Enlarging infirmary (3,000*l.*); Mr. A. S. Hewett, architect, 23, Regent street, Yarmouth. The following plans have been passed:—Houses, Windsor-avenue, for Messrs. J. & R. Chaston; five houses, Priory-gardens, for Mr. J. Eastoe; rebuilding warehouse, Beech road, Gorleston, for Mrs. Burdock.

LONDON COUNCILS.

Barnes.—Plans have been passed for Messrs. G. W. F. Bates for four houses, Lower Richmond-road, also for Mr. E. J. Partridge for six houses in Treen-avenue.

Barnet.—The Surveyor has been instructed to prepare an estimate of the cost of repaving the alleyways leading from High-street to Strafford-road. Sanction has been received from the Local Government Board to borrowing of 4,800*l.* for the erection of wo ing-class dwellings. The Board, however, pressed the opinion that smaller cottages be let at lower rentals than at present c templated were needed, and asking the Cou to inform them whether they would underta to provide same at an early date.

Bermondsey.—A plan has been passed the erection of Roman Catholic schools George-row, for the Convent of Mer Arnold's-place, Deckhead. The architect Mr. R. L. Curtis, 10 and 12, Finsbury-squa E.C. The Cubitt Concrete Construction Co pany, 260, Gray's Inn-road, W.C., are contractors for the concrete foundations.

Camberwell.—The London County Council to be requested to connect the Council's lo sewer in Ivydale-road to the County Counc new main sewer, in course of construction fr Nunhead to Brockley, at an estimated cost 185*l.*, to be paid by the Borough Council

Deptford.—The tender of Mr. E. G. Rays 27, St. Donatt's-road, has been accepted 193*l.* for repair works to the Council's Knot terrace property and 47, Tanner's-hill.

Ealing.—At the last meeting of the Cou Indurated Victoria, Croft Adamant, Aberde Adamant, and Brooks' Adamant makes stone were approved as the list to be attach to all specifications to be issued in future the making-up of private streets.

East Barnet.—At the last meeting of Joint Isolation Hospital Committee, held the District Council offices, a Committee w appointed to go into the question of erection of an observation block and oth alterations at the hospital.

East Ham.—The Works Committee have proved the amended tender of the Alph Custodis Chimney Construction Company, Lt at 1,164*l.*, for excavations, foundations, a erection of a chimney-shaft at the refu destructor works. Plans have been passed Mr. E. R. Fenwick and Mr. J. Harding the erection of six houses, Green street, a four houses, Plashett-lane, respectively. T following plans have been lodged:—Mr. Harber, four houses, Macaulay-road; Mr. Clark, sixteen houses, Kimberley-avenu Messrs. Lupson & Hirst, four houses, Dicke road; Mr. F. Hamlett, thirty-nine hous Montpelier-gardens.

Esher and Ditton.—The Council have decid to make up Imber Park-road.

Friern Barnet.—Plans have been passed Messrs. Hodges & Son for the erection eight houses in Hilton-avenue.

Lewisham.—The following plans have be passed:—Mr. A. W. Vidler, eight hous Codrington-hill and Brockley-avenue; M James Watt, eleven houses, Bellingham-roa Mr. T. A. Boughton, pavilion, Bellingha road.

Marylebone.—During the financial ye 1912-13, Old Cavendish-street and portions eleven other roads are to be repaved w wood at an estimated cost of 15,193*l.* T present pavings in portions of four other roa are to be substituted with wood at an es mated cost of 5,137*l.*, and Upper Marylebo street and portions of two other streets w asphalt at an estimated cost of 8,699*l.* Duri the same period seven streets and portions eight other streets are to be laid with t macadam at an estimated cost of 4,175*l.* T asphalt carriageway of Bird-street is to renewed at an estimated cost of 283*l.*

Richmond.—Hill-street from a point oppos the Town Hall to its junction with Petersha road, and Petersham-road to the almshou at Petersham, are to be paved with creosot deal blocks at an estimated cost of 5,600*l.*

Shoreditch.—The carriageway of Bridpo place is to be repaved with 2-in. compress asphalt on 6-in. Portland cement concrete an estimated cost of 3,000*l.*

Southgate.—Application is to be made the Local Government Board for sanction borrow 1,050*l.* for the construction of fo paths and 1,750*l.* for the drainage at t Grovelands public park.

Tottenham.—The following plans have be passed:—Messrs. Warren & Stupart, buildi at gum factory, Paxton-road; Mr. W. Riley, Superintending Architect, Lond County Council, Spring gardens, S.W., fif one houses, Tower Gardens-road, Mess Rowley Brothers, garage at Boundary Wor Crawley-road.

West Ham.—The Education Committee ha accepted the tender of Mr. W. J. Maddis 487*l.*, in lieu of that of Messrs. Barker Co., for the construction of a new handicr centre and covered playground at Russell-ro School.

Westminster.—Maintenance works are to carried out in Haunch of Venison yard at approximate cost of 100*l.*

TRIBUNAL OF APPEAL UNDER THE LONDON BUILDING ACT.

The Euston-road Building Line.

On Thursday, January 11, the Tribunal of Appeal under the London Building Act sat at the Surveyors' Institution to hear the parties interested in the decision of the Tribunal respecting the building line in Euston-road, between Osnaburgh-street and Hampstead-road, regarding the stating of a case for the High Courts on the application of the London County Council. Mr. A. A. Hudson presided. Mr. C. Daldy represented the London County Council; Mr. A. Bethune appeared for the Metropolitan Railway Company; Mr. Hyde, K.C., and Dr. Herbert Smith for Leslie's Trustees; and Mr. A. F. Wootten for the owners of the "Adam and Eve" public-house. A large number of other owners of property were represented, either by solicitors or personally, and Mr. Blair, Borough Engineer of St. Pancras, represented the Borough Council.

The Chairman said that the London County Council had given notice asking the Tribunal to state a case, and notice had also been given to Leslie's Trustees. A draft case had apparently been attempted to be settled between the Council and Leslie's Trustees, but they were unable to agree, and the Tribunal was asked to settle it, and it then appeared there was a cross appeal introduced, in which the Metropolitan Railway was concerned. The Tribunal wrote to the County Council asking if they intended to prosecute the appeal, and were told that they did; and then the County Council requested that notice of the appointment before the Tribunal should be given to all persons who were before the Tribunal when the cases were heard, and notices had accordingly been served.

Mr. C. H. Love (Clerk to the Tribunal) gave a list of the persons to whom notice had been sent.

Mr. Daldy said it did not follow that because as a matter of expediency notice had been given to a number of parties, all the persons who were concerned in the settlement of a case would be entitled to be heard in the Court above.

Mr. Wootten pointed out that if the London County Council went further with the appeal as clients, the freeholders of the "Adam and Eve" public-house, would be the most interested parties in opposing. Apparently they were not parties to the original proceedings.

Mr. Bethune said the Metropolitan Railway Company were perfectly contented with the order of the Tribunal, and did not want a case stated at all. He submitted that no point of law was involved in the decision so far as his clients were concerned. The Tribunal found on a matter of fact, against which there could be no appeal.

The Chairman said that might be so, but the County Council had asked that a case could be stated, and the only question was whether it was desirable to state one case in respect of all the appellants or whether separate cases should be settled.

Mr. Bethune submitted that even if there was a question of law in the case of the Metropolitan Railway it ought not to be considered with other questions of law which would arise in regard to other points dealt with in the Superintending Architect's decision. Each of the appeals against the certificate of the Superintending Architect was a separate and independent case. It was true that for convenience, and with the consent of all parties, the Tribunal heard the cases together; but that did not prevent them being separate proceedings.

Mr. Hyde, K.C., urged that a separate case could be stated in regard to Leslie's Trustees. The Trustees had granted a building lease, and the building tenant had erected one building, partly erected another, and wanted to go on with a third. The tenant complained that in consequence of the decision of the London County Council he would be unable to carry on anything like the buildings for which he took the land, and was claiming large compensation from the Trustees. It would be seen that it was a matter of vital importance to the building tenant, and consequently to the building owner. In form they were appealing against the decision of the Tribunal, but they knew that this decision was one which the Tribunal were bound to give in consequence of the decision of the High Court. They wished to distinguish their case from other cases, and in consequence asked that a separate case should be stated.

Mr. A. W. Bell supported the application. Mr. Wootten on behalf of the owners of No. 5, Hampstead-road, which, he pointed out, the Tribunal held were not in Euston-road, and also of the owners of 288 and 290, Euston-road.

Mr. O. L. Thomson, on behalf of the owner of 318, Euston-road, one of the original appellants, asked that he might be struck out of the case, so that his clients would incur no liability in regard to costs.

Mr. Norman also made a similar application on behalf of his clients, and Mr. C. Tyrrell Lewis, on behalf of Messrs. Boots, Ltd., supported the contention for separate cases to be stated.

Mr. Daldy argued at length that there should be one case only stated, and contended that by the House of Lords' decision in the case of Lilley *v.* Skinner it was laid down that when one proceeding was settled it settled the building line once and for all.

The Chairman pointed out that there were four separate appeals in the Lilley *v.* Skinner case.

Mr. Daldy demurred to the use of the term appeals, although he agreed that there were four defendants in the case.

The Chairman pointed out the injustice which might arise. There might be a building on 50 or 60 ft. frontage in a road, and the Superintending Architect might define a line three or four miles long. They recently had such a case of over a mile long.

After further argument, the Chairman said the view of the Tribunal was that this case lent itself to three cases. There was the middle block, the Hampstead-road end, and the Metropolitan Railway end. Three separate arguments would apply to those lines. He was sure it would be an injustice to the Metropolitan Railway Company if they had to be involved in the whole of the proceedings.

Mr. Daldy said that under those circumstances he would have to apply to the Divisional Court to decide whether they should be separate cases or one case.

The Chairman said they thought it desirable there should be three cases.

Mr. Wootten suggested that Mr. Daldy should first satisfy the Tribunal that there was a point of law on which there was a case to be stated.

The Chairman thought Mr. Daldy had better stick to the one point now. At the hearing they were taken back as far as 1750.

Mr. Daldy said they might treat that as an application to the Tribunal to state one case for the purposes of the application to the Divisional Court.

The Chairman said that Mr. Daldy was asking them to state in one document an appeal by Leslie's Trustees, with the London County Council as respondents; an appeal by the London County Council, with the Metropolitan Railway as respondents; and a third appeal by the London County Council, with the owners of the "Adam and Eve" as respondents. The only question was that the owners of the "Adam and Eve" made no appearance at the hearing.

Mr. Wootten said his clients were prepared to be made respondents in the appeal.

Mr. Daldy asked if he would be allowed to state in his application to the Divisional Court that he had asked the Tribunal to state one case on the whole proceedings and they had refused.

The Chairman said they were willing to state three cases, but having regard to the circumstances they did not consider it desirable to state one case only, because it might cause injustice to the parties. For that reason Mr. Daldy must take it that they refused to state the case in the form he had asked it.

Mr. Daldy put it that if the proceedings were attended by eight or ten different persons, and there were eight or ten different appeals, then the Tribunal would state eight or ten different cases.

The Chairman said the Tribunal did not want to be put before the Court in an unreasonable light. There were not ten appeals. They thought there should be three, but they would not have it put upon them that there were ten or fifteen appeals. They knew more about the facts than anybody, and they did not think it fair to the parties that the cases should be mixed up. If they were wrong, the Court would set them right.

The case then stood adjourned, pending the application to the Divisional Court or subject to meeting on the application of either of the parties.

Allen & Norris *v.* London County Council.

The Tribunal sat at the Surveyors' Institution on Friday to hear an appeal by Messrs. William Gilbert Allen & Henry George Norris, against the certificate of the Superintending Architect of Metropolitan Buildings dated December 2, 1911, defining the general line of buildings on the western side of Fulham Palace-road, between Bishop's Park-road and Brandenburgh-road. Mr. H. Courthope Munroe and Mr. Clarke appeared for the appellants, and Mr. Macmorran, K.C., and Mr. Daldy represented the London County Council.

Mr. Munroe said the whole point of the case was whether the Superintending Architect had taken an abnormal length of road in fixing the general line of building. The appellants were builders and had developed a large area of land in Fulham in the last twenty years or so. Twenty years ago the road was an old country road about 20 ft. wide, and then a considerable area of land east of Crabtree-lane was built on, the houses being of a small class, with gardens in front. Then his clients bought land west of Crabtree-lane, the road there being practically unbuilt upon for a considerable distance, with the exception of a school belonging to the County Council and four shops erected some years ago. They erected four shops, which were structurally finished in July, 1911, and paid the District Surveyor's fees. In August, when they were completing the internal decoration, they were told that they had been built beyond the building line, and they were asked to pull about 9 ft. down. His submission was that the points to be taken for the general line of buildings should have been between Crabtree-lane and Brandenburgh-road, or even if they went beyond Brandenburgh-road to Hammersmith he did not mind. If the Tribunal took a shorter length of road and omitted the shops built some years ago there would be no line of building at all, whilst if they took in the shops and school the buildings of the appellants were well within the building line. He contended that the mistake the London County Council had made was in trying to get something for nothing from his clients, and he put in a plan showing that the Council were prepared to agree to the buildings being retained where they were (except for a few inches), on condition that the appellants threw a strip of land into the public way.

The Chairman said that all the Tribunal had to do was to define the general line of buildings; but it looked as if the parties had got nearly to terms. The Tribunal might find there was no general line of buildings, in which case the builders could build right up to the street; but they might, on the other hand, find that the Superintending Architect was right, in which case it would be a very serious thing for the builders. In view of the two alternatives, he thought it would be well if the parties could get to terms.

The parties discussed the possibility of getting to a settlement on the basis of the buildings remaining where they were, and the appellants giving up a strip of 5 ft. of their land for the public; but it was pointed out that the difficulty was with regard to the cellars and cellar lights, as the Borough Council would not allow cellar lights in the public way, on account of their liability in case of accident.

Mr. Munro said that the appellants owned 5 ft. of land in front of the main wall of the buildings they had erected, and 2 ft. 6 in. of this was occupied by the cellar flaps and lights. They were prepared to throw the other 2 ft. 6 in. into the public way, but he was informed that if the whole 5 ft. was given up it would considerably affect the letting value of the property.

Mr. Macmorran said he could not accept this.

Mr. H. G. Norris, one of the appellants and the present Mayor of Fulham, said that in 1900 his firm developed the land from Crabtree-lane to Harbourd-street. Last year they bought the estate between Crabtree-lane to the County Council school. The decision would affect not only the shops they had put up, but also those they wanted to put up. They took the shops at Parfrey-street as defining the building line, and told the District Surveyor so at the time they deposited the plans. Witness bore out the statement of Counsel.

In cross-examination, Mr. Macmorran put some letters to witness which had passed in May between the London County Council and a Mr. Poole, then acting for the appellants, and who had since died, and witness said this had relation to some projecting bays and not to the general line of buildings.

The Chairman said that, reading the letters, it did seem that they might be taken to apply only to the bay windows, and it did seem extraordinary that the County Council should have been in communication with the District Surveyor in regard to the buildings, and yet that the builders should have been allowed to go on and complete the buildings.

Mr. Macmorran said he was informed that Mr. Poole had an interview with the officers of the London County Council in regard to the whole matter.

In re-examination, witness adhered to the

statement that the first time he heard that they had done anything wrong was on August 1, when they had spent 2,000*l.* on the buildings.

Mr. Charles Botterill, formerly Surveyor to the late Fulham Board of Works, said he considered the building line ought to be taken from Crabtree-lane to Queen-street, Hammersmith, which was near the Broadway.

Mr. J. C. Radford, A.M.Inst.C.E., who was for twenty-five years Surveyor to the Wandsworth District Board of Works, said he had known the neighbourhood for thirty-five years. He agreed with the last witness as to what portion of the road should be defined, and considered that the appellants' buildings were as near as possible on the general line of buildings.

In cross-examination, witness said he could start the line at Crabtree-lane because the road from that point was of a different character.

The further hearing of the case was adjourned provisionally till January 22

TRADE CATALOGUES.

Messrs. C. & R. Light, Ltd., of Curtain-road, E.C., forward us their current stock list of hard-woods, comprising consignments of Louisiana, Red Cypress, whitewood, plain and figured oak, and satin walnut.

A new edition of their catalogue of stable, cowhouse, and piggery fittings has reached us from the Carron Company. It would be superfluous to enlarge on the importance of proper drainage and ventilation in the stable; the "Carron" stabling is the outcome of the experience of over a century. Any of our readers who may be engaged in the designing of stable buildings would do well to consult the Carron Company in the matter of fittings. The catalogue before us is singularly complete; in fact, a veritable encyclopædia of the needs of the horse.

The Seyssel and Metallic Lava Asphalte Company, of 42, Poultry, London, E.C., enclose us a pamphlet about Seyssel asphalt, including a list of works done twenty-four years ago. The limestone contained in Seyssel asphalt is a genuine asphalt stone composed of carbonate of lime in such a state of natural purity that, it is claimed, no artificial production, under the most favourable conditions, can equal its reliability. Impure limestones, which are composed of carbonate of magnesia or similar elements, do not respond so readily to the saturating action of bitumen, and the melting process required to produce mastic asphalt, frequently reverse the very ingredients that should be firmly united. The following are a few among many important buildings where Seyssel asphalt has been employed and has triumphantly stood the test of time: The Vegetable Market, Shoreditch; the Central Fish and Poultry Market, Municipal-buildings, Sheffield; Winchester House, Old Broad street, E.C.; and the London, Tilbury, and Southend Railway Company's goods depôt.

Messrs. Arden Hill & Co., the "Acme" Gas-Stove Works, Birmingham, forward us their latest catalogue of "Acme Gas Fires." The "Olak" and "Kalo" are the firm's latest productions, and their leading features comprise the "Helium" radiant (a single column radiant), patent removable firebrick lining, and detachable burner, fitted with their "Simplex" gas and air adjuster. A gas fire of sufficient width to replace wide coal-fires in large apartments has long been a desideratum; the "Versailles" gas-fire, with a fire width of 21 in., has been designed to meet this difficulty. The most noteworthy of the gas-heaters and boilers manufactured by Messrs. Arden Hill is the "Domus" patent gas-heated steam boiler for heating garages, greenhouses, etc., and designed to be placed outside, and connected to hot-water radiators or pipes inside the building.

LEGAL COLUMN.

Workmen's Compensation.

A case of some importance to employers, Phillips *v.* Vickers, Son, & Maxim, not hitherto noticed by us, is reported in the current "Law Reports." On August 26, 1909, a workman was injured by accident, and the employers by correspondence admitted the accident and agreed to pay half his wages as compensation upon the certificate of their own medical man so long as incapacity lasted. On January 31, 1911, the workman applied to have a memorandum registered. In this memorandum, as drawn up, no mention was made of the certificate of the doctor. The County Court Judge ordered the memorandum to be registered, but the employers appealed. The Court of Appeal allowed the appeal, holding that the agreement to pay compensation was conditional on the employers' medical man certifying that the incapacity lasted, not an absolute agreement, as stated in the memorandum, to pay compensation during incapacity.

The result of the decision may be that an arbitration will have to be held to determine whether or not the man is entitled to recover compensation owing to continuing incapacity, so little has been gained by this particular form of agreement. Assuming that the doctor had withheld his certificate, that would not have concluded the matter, because it is hardly likely that the man would accept the employers' doctor's decision of the case as final.

The Master of the Rolls suggested that the best form of agreement was that adopted in the case, Jones *v.* Great Central Railway Company:—"We are paying you the full weekly allowance, and these payments will continue during disability"; but even under such an agreement there might be a question as to the degree of incapacity.

The Courts are anxious not to discourage employers and workmen from mutually agreeing in such matters, but there is considerable difficulty in coming to satisfactory agreements without the assistance of the Courts, unless the incapacity is of a kind that can hardly vary, *i.e.*, from the loss of a leg, etc.

We have repeatedly cautioned our readers in insuring under this Act to be careful to read the conditions contained in their policies. In a case heard by the Court of Appeal, December 20, Bradley *v.* The Essex and Suffolk Accident Indemnity Society, the assured only employed one person, his son. This man was injured by accident, and the assured put in a claim against the insurers in respect of the compensation paid to his son.

The policy was stated to be "subject to adjustment as hereinafter provided," and there was a clause which stated that the first premium and all renewal premiums should be regulated according to the amount of wages paid to employees, and that a wages book should be kept. No wages book was kept, and the assurers contended that they were not liable under the policy, as this was a condition precedent. The Court held that this was not a condition precedent, and in case of ambiguity the policy ought to be construed in favour of the policyholder; but Lord Justice Fletcher Moulton dissented.

LAW REPORTS.

Harries *v.* Wright.
Damage to Buildings by Poplar-Trees: Injunction Granted.

THE action of Harries *v.* Wright was heard before his Honour Judge Sir C. Selfe at the Marylebone County Court on Tuesday, January 9.

The plaintiff, Mrs. Harries, is the owner of 118, Dartmouth-road, Cricklewood, N.W., and she claimed that her premises had been damaged by the roots of certain black poplar-trees which had been planted at the bottom of the garden of No. 116, Walm-lane, adjoining her house. She claimed an injunction to restrain further damage and 100*l.* damages. Mr. A. Neilson (instructed by Messrs. T. Richards & Co.) appeared for the plaintiff, and Mr. Lightwood (instructed by Mr. J. H. Waterman) appeared for the defendant.

The evidence for the plaintiff was to the effect that a wall had subsided near the poplar-trees, and that in excavating for the purposes of underpinning and restoring the wall large quantities of poplar-tree roots were found in the trenches, and these proceeded from the poplar-trees planted by the defendant. The plaintiff's witnesses further stated that similar injury had occurred to the same house in 1908 from the same cause, but that no claim had been made then. It was also stated that black poplar-trees were well known as being dangerous to buildings near to which they were planted.

The evidence on behalf of the defendant sought to attribute the damage to the exceptionally dry summer which had been experienced in 1911, to the nature of the soil, and also to the method of construction of the walls which had been affected. It was also alleged on behalf of the defendant that the roots were not so numerous as the plaintiff's witnesses alleged, and that they could not have done any harm.

Counsel for the parties having addressed the Judge, his Honour Judge Selfe analysed the evidence and came to the conclusion that on the facts the plaintiff had established that the damage done to her building was, in fact, caused by the poplar-trees having been planted near to her boundary and by the roots pe trating and undermining the soil on which t wall was erected.

It appeared that no former case h occurred in which an injunction had be granted against damage occurring by the trusion of roots of trees, but principles h been laid down in decided cases whi warranted him in granting an injuncti against the continuance of the trespass co plained of.

He therefore gave judgment for the plaint for 100*l.* damages and an injunction, wi costs.

Accident to Workman at Bishop's Palace.

THE case of Measey *v.* The Lord Bish of Norwich came before Mr. Justice Br and a common jury in the King's Ben Division this week.

In this case the plaintiff, a hot-water fitt in the employment of the firm of Mess Samuel Owens & Co., who were engaged fit up an apparatus at the Bishop's palace Norwich, claimed damages for personal injur received as the result of an accident.

It appeared that, on the instructions of t foreman of the firm, a trench was open across a corridor on the ground floor by local builder named Smith, by who according to the terms of the contract, t work was to be done free of charge. Th trench was covered with boards, one of whi slipped while the plaintiff was passing over the result being that the plaintiff fell a fractured his leg.

The defence was a denial of liability; fir because there was no evidence of negligen against the defendant, either personal through his servants. Secondly, it was co tended, on behalf of the defendant, that t plaintiff was in the employment of Mess Samuel Owens & Co., who were independe contractors, and that if there was negligen on the part of one of their men the doctri of common employment applied. Thirdly, was contended that, as the plaintiff h received money under the Workmen's Co pensation Act, he was estopped from obta ing damages in the present action.

On behalf of the plaintiff it was submitt that the defendant, as the occupier of t palace, could not escape liability for t act of those to whom he had delegated t work. In the present case the defendant h delegated work, both to Messrs. Samuel Owe & Co. and to Mr. Smith, and it did not mat which of them negligently caused the accide the defendant was, in the circumstances, liab

Mr. Justice Bray held that in the circu stances the defendant was not liable, withdr the case from the jury, and entered judgme for the defendant with costs.

Mr. Booth and Mr. Gibbons appeared the plaintiff, and Mr. J. Sankey, K.C., a Mr. Malcolm Macnaghton for the defendant

PATENTS.

APPLICATIONS PUBLISHED.*

29,347 of 1910.—Benjamin Willetts-Adshea Hearths and kerbs of domestic fire-places.

29,348 of 1910.—Benjamin Willetts-Adshea Fire-grates for domestic or other s purposes.

29,615 of 1910.—James Thomas Mitch Johnston: Portable tar-boiling apparatus.

1,239 of 1911.—Charles Frederick Parso Machine for breaking-up roads, foundatio and the like.

1,680 of 1911.—Peter Frederick Faris Draught-excluder for doors and casements.

2,300 of 1911.—William John Gibso Domestic range boilers.

2,960 of 1911.—W. B. Haigh & Co. a John George William Gruban: Wood-mou ing, planing, and like machines.

4,892 of 1911.—Frederick Joseph Whit Barnes: Joints for connecting pipes to earth ware vessels, such as closet-pans and the li

9,453 of 1911.—William John Dunn a Henry Burns Taylor: Wallpaper hang devices.

14,097 of 1911.—Frederick Smith: Glaz devices.

17,397 of 1911. Robert Orme: Wind screens.

17,622 of 1911.—Georg Heuer: Sliding s windows.

20,742 of 1911.—Colonel Frank Gallowa Window fasteners.

25,049 of 1911.—Uberto Cagnassi: Machi for use in building walls and the like.

25,967 of 1911.—James Farley: Kitchens like chambers containing cooking-ranges.

* All these applications are in the stage which opposition to the grant of Patents u them can be made.

List of Competitions, Contracts, etc.

For some Contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) are advertised in this number:** Competitions, iv.; Contracts, iv. vi. viii. x.; Public Appointments, —; Auction Sales, xxii.

Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Competitions.

JANUARY 29. — **Montevideo.** — Government palace (premiums, 2,125*l.* and 850*l.*) and town improvement scheme (premiums, 1,060*l.*, 640*l.*, and 425*l.*). Conditions may be seen at the Board of Trade, 73, Basinghall-street, E.C.

JANUARY 31. — **Australia.** — DESIGNS FOR FEDERAL CAPITAL CITY.—The Government of the Commonwealth of Australia invite competitive designs for the laying out of this Federal capital city. See advertisement in issue of September 1 for further particulars. See also page 508, November 3.

FEBRUARY 3.—**Bolton.**—NURSES' HOME AT THE INFIRMARY.—Premiums of 30*l.*, 20*l.*, and 10*l.* Assessor, Mr. John B. Gass, F.R.I.B.A.

FEBRUARY 15. **Winnipeg.**—NEW PARLIAMENT BUILDINGS.—The Government of Manitoba invite competitive drawings for new Parliament buildings. See advertisement in issue of January 12 and Competition News, January 5, for further particulars.

FEBRUARY 17.—**London, E.C.**—NEW OFFICES.—The Port of London Authority invite preliminary sketch designs for new head offices in Trinity-square, and for laying out remainder of land as a building site. See advertisement in issue of November 24 for further particulars

FEBRUARY 17. — **York.** SCHOOL.—The York Education Committee invite competitive designs for a public elementary school. See advertisement in issue of January 12 for further particulars.

MARCH 15.— **Drammen, Norway.**—RAILWAY-STATION.—Particulars from the Norges Statsbaner, Christiania.

MARCH 15.— **Prestatyn, North Wales.** — LAYING-OUT ESTATE.—Lord Aberconway and the Trustees of the Prestatyn Estate invite designs for laying-out of the estate Three premiums are offered. Particulars from 33, Henrietta-street, W.C. See advertisement in issue of January 5 for further particulars.

MARCH 16. — **Harrow.** — PUBLIC OFFICES.—The Harrow-on-the-Hill U.D.C. invite tenders for the enlargement of and alterations to their Public Offices. See advertisement in issue of January 5 for further particulars.

MAY 1.—Society of Architects' Travelling Studentship. Design for a Town Hall. 25*l.* and medal.

JUNE 28. **Hale, Cheshire.**—TOWN PLANNING SCHEME. Premiums 50*l.* and 25*l.* Particulars from the Council Offices, Hale

JULY 1.— **Dusseldorf.**—A plan for the extension of the City of Dusseldorf. Premiums of 1,000*l.* to 375*l.* Conditions on application to the Chief Burgomaster, Dusseldorf. A translation appeared on page 365, September 29.

AUGUST 30. — SAXON SWELL PRIZE. Fifty guineas; with medal, is offered for essay on a hospital subject. Particulars from the Sanitary Institute, 90, Buckingham Palace-road, S.W.

NO DATE. **Edinburgh.**—MEMORIAL TO KING EDWARD.—Limited.

NO DATE.—**Jordanhill, Glasgow.**—PROPOSED TRAINING COLLEGE.—Limited to six firms, named in Competition News, December 1, 1911, page 635

Contracts.

BUILDING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

JANUARY 19. **Waberthwaite.**—COTTAGES.—For erection of eight workmen's cottages. Plans and specifications with the Eskmeals Granite Company, Ltd., 131, Ramsden-square, Barrow-in-Furness.

JANUARY 20.—**Bridlington.**—HOUSE. Erection of a dwelling-house at Meadowfield-road. Plans and specification with Mr. Samuel Dyer, architect, 29, Quay-road, Bridlington.

JANUARY 20 — **Invergordon.**—RESTORATION.—For restoring the damage done by fire to house and shop in King-street Plans and specifications with Messrs. A. Maitland & Sons, architects, Invergordon

JANUARY 20.—**Perth.**—WALLS, ETC.—Erection of stone walls and iron railings for widening of Jeanfield-road. Plans seen, and specification and quantities at the Burgh Surveyor's Office, 16, Tay street, Perth.

JANUARY 22.—**Nottingham.**—ADDITIONS.—For alterations and additions to the Union Inn, Trent Bridge. Plans seen, and specification, quantities, and form of tender from Mr. Frank B. Lewis, City Architect, Guildhall, on deposit of 1*l.*

JANUARY 23. **Ballylesson.** RESIDENCE, ETC. Erection of a dispensary and residence. Plans and specifications by Mr. G. Sands, C.E., architect, Courthouse, Lisburn.

JANUARY 23.—**Barking.**—COTTAGES.—Erection of a block of four cottages, to be used as a temporary administrative block of the Upney Isolation Hospital. Plans, specifications, and conditions of contract seen, and form of tender from Mr. C. J. Dawson, F.R.I.B.A., architect, 16, Cambridge-road, Barking.

JANUARY 23. **Halifax.**—EXTENSION.—For the extension of West Croft Mills, King Cross. Plans with Messrs. Jackson & Fox, 7, Rawson-street, Halifax.

JANUARY 23.—**Ilford.** SCHOOL. For erection of a public elementary school. Plans and specifications seen, and quantities from the architect, Mr. C. J. Dawson, F.R.I.B.A., 11, Cranbrook-road, Ilford. Deposit of 5*l.* 5s.

JANUARY 24. — **Dowlais.** — ADDITIONS. — For alterations and additions to the White Swan Inn. Plans and specification seen, and quantities from Messrs. Johnson & Richards.

JANUARY 24.—**Inverness.**—WATER WORKS, ETC. —For construction of water works for the Barbaraville special water supply district, and the extension of the Logie Easter water supply to Ballchragan district. Plans and specifications seen, and quantities from Messrs. Geo. Gordon & Co., civil engineers, Inverness.

JANUARY 24. —**London.**—EXTENSION.—For erection and completion of the superstructure of extension to the main electricity generating-station at Poplar. Specifications, form of tender, and quantities, on deposit of 5*l.* 5s., from Mr. Harley Heckford, A.M.Inst.C.E., Borough Surveyor, Council Offices, Poplar, or Mr. W. W. Dearle, quantity surveyor, 7, St. John-street, Adelphi, W.C.

JANUARY 25. **Heaton Norris.** DESTRUCTOR, ETC.—Erection of a small fish offal and garbage destructor. Mr Walter Banks, A.M.Inst.C.E., Surveyor to the Council, Council Offices, Heaton Moor, Lancashire.

JANUARY 26 **Croydon.** ADDITIONS. Additions and alterations to buildings at Surrey-street Waterworks. Specification, quantities, and form of tender at the Borough Engineer's Office, Town Hall, Croydon. Deposit of 1*l.* 1s.

JANUARY 26. —**Walpole St. Andrew.**—COTTAGES —For erection of a pair of semi-detached cottages. Drawings, etc., and particulars from Mr. H. T. Filson, M.S.A., architect, 16, Railway-road, King's Lynn.

JANUARY 27. **Chesterton.**—ROOMS.—Erection of a drying and ironing room at the Workhouse Plan and specifications at the Workhouse. Mr. J. P Symonds, Clerk, 9, Bene't-street, Cambridge

JANUARY 27 **Settle.**—HOUSES.—Erection of six dwelling-houses. Plans and specifications from Mr W. K Mattinson, architect, Austwick, Lancaster

★ JANUARY 27. — **Walthamstow.** — VARIOUS BUILDINGS. The Territorial Force Association for County of Essex invite tenders for erection of headquarters, Sergeant-Instructor's quarters, stores, etc., at Walthamstow. See advertisement in this issue for further particulars

★ JANUARY 27. **West Ham.**—ADDITIONS, ETC., TO "THE CEDARS." The Territorial Force Association for the County of Essex invite tenders for alterations and additions to "The Cedars," Portway, West Ham. See advertisement in this issue for further particulars.

JANUARY 29.—**Chipperfield.**—COTTAGES.—Erection of seven cottages. Drawings, specifications, and form of tender with the Council's Surveyor, Mr. Thomas H. Lighbody, M.S.A., 20, Marlowes, Hemel Hempstead, on deposit of 1*l.* 1s.

★ JANUARY 29. — **Hornsey.** — DWELLINGS AND EXTENSION OF WORKSHOPS.—The Hornsey T.C. invite tenders for workmen's dwellings (128 houses), and the extension of workshops at the sanitary depôt. See advertisement in this issue for further particulars.

★ JANUARY 29 **London** RECONSTRUCTION OF TEMPERATE HOUSE.—The Commissioners of H.M. Works and Public Buildings invite tenders for the reconstruction of the North Octagon, Temperate House, Kew Gardens. See advertisement in this issue for further particulars.

JANUARY 29. —**Purley Oaks.**—OFFICE.—For erection of Purley Oaks new sorting-office. Drawings, specification, and conditions and form of contract at Croydon Post-office. Quantities and forms of tender, on deposit of 1*l.* 1s., from the Secretary, H.M. Office of Works, etc., Storey's gate, London, S.W

JANUARY 30. **Leeds.** DWELLINGS.—Erection of two dwellings in Esmond terrace and Esmond-street, Armley. Specification and drawings seen, and forms of tender and quantities, from Mr. W. T. Lancashire, City Engineer, Municipal buildings, Leeds.

JANUARY 31.—**Chichester.** REPAIRS, ETC.—For repairs and decorations to the Chichester Institute. Particulars from the Secretary at the Institute.

★ JANUARY 31.—**Chipping Ongar.**—NEEDLE-ROOM.—The Hackney Guardians invite tenders for extension of the needle-room at the Children's Home at Chipping Ongar, Essex. See advertisement in this issue for further particulars.

JANUARY 31.—**Welsh Frankton.**—ADDITIONS.—For erection of a classroom and additions to Welsh Frankton School. Plans and specification from Mr. W. R. O. Kynaston, Hardwick, Ellesmere.

FEBRUARY 1.—**Carnarvon.** INFIRMARY.—Erection of proposed new Infirmary. Plans, specifications, etc., with the architect, Mr. Rowland Lloyd Jones, M.S.A., 14, Market-street, Carnarvon.

FEBRUARY 1.—**Sheffield.**—OFFICES, ETC.—Erection of new stabling, shed, and offices at Penistone-road Depôt. Drawings and conditions of contract seen, and quantities and forms of tender from the City Architect, Town Hall, Sheffield.

FEBRUARY 2. **London.** LABOUR EXCHANGE. — For erection of Canning Town Labour Exchange. Drawings, specification, and conditions and form of contract with Mr. R. Henry, H.M. Office of Works, &c., 12, Queen Anne's-gate, London, S.W. Quantities and forms of tender, on deposit of 1*l.* 1s., from the Secretary, H.M. Office of Works, etc., Storey's-gate, London, S.W.

FEBRUARY 5. **Pantyscallog.**—HOUSES.—Erection of thirty-five or more houses at Pantyscallog, Dowlais, for the Pantyscallog Building Club. Drawings and specification from Mr. William Dowdeswell, M.S.A., architect, Treharris

FEBRUARY 7.—**Hakin.**—SCHOOL.—For erection of a new Council school. Drawings and specifications seen, and quantities, on deposit of 1*l.* 1s., from the architect, Mr. D. Edward Thomas, 17, Victoria-place, Haverfordwest.

★ FEBRUARY 8. — **Wandsworth.**—ALTERATIONS TO INFIRMARY.—The Wandsworth Guardians invite tenders for alterations to the needleroom block at St. James's Infirmary. See advertisement in this issue for further particulars.

FEBRUARY 12.—**Wallsend.**—SCHOOL, ETC.—For erection of a new secondary school and technical institute. Deposit of 2*l.* 2s. for specification and quantities, from Mr. C. Williams, Secretary to the Education Committee, the Moothall, Newcastle-on-Tyne.

FEBRUARY 13. — **Gellifaelog.** — SCHOOL.—For erection of a new school. Drawings and specifications with the architect, Mr. J. Llewellin Smith, M.S.A., Aberdare. Specification and quantities, on deposit of 5*l.* 5s.

★ FEBRUARY 15. **Hackney.**—BRANCH LIBRARY.—The Hackney B.C. invite tenders for erection of a Branch Library. See advertisement in this issue for further particulars.

FEBRUARY 27 — **Blackburn.**—EXTENSION.—For alteration and extension of the Town Hall. Forms of tender and specifications from the joint architects, Messrs. Briggs, Wolstenholme, & Thornley, and Messrs. Stones & Stones & Atkinson, Richmond-terrace, Blackburn, on deposit of 1*l.* 1s.

FEBRUARY 27.—**Dartford.** —WORKS.—For the extension of the electricity works. Plans and specification with the Surveyor, Council Offices, Dartford.

NO DATE. **Abercynon.**—PREMISES. Erection of club premises, for the Lindsay Constitutional Club Company. Plans and specifications seen, and quantities from Messrs. Morgan & Elford, of 1, Jeffrey-street, Mountain Ash. Deposit of 1*l.* 1s.

NO DATE.—**Aberfan.**—PICTURE PALACE.—For erection of a new picture palace, for the Aberfan Picture Palace Company, Ltd. Mr. B. M. Thomas, Fronheulog, Aberfan.

NO DATE.—**Burnley.**—HOUSES.—For erection of twenty-four houses on Briercliffe-road. Specification and particulars from the Borough Engineer.

NO DATE. — **Llanbradach.** — INSTITUTE.—For erection of a workmen's institute. Deposit of 2*l.* 2s. for quantities, to Mr. E. M. Bruce-Vaughan, F.R.I.B.A., architect, Cardiff

★ NO DATE. **Rochford.**—DINING-HALL, ETC.—The Guardians of the Rochford Union invite tenders for erection of a new dining-hall, kitchen, and stores at the Workhouse, Rochford. See advertisement in this issue for further particulars.

NO DATE. **Tamworth.**—SCHOOL.—For erection and completion of a new high school for girls. Quantities, on deposit of 1*l.* 1s., from Mr. Graham Balfour, Director of Education, County Education Offices, Stafford.

BUILDING—*continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

NO DATE.—**West Pelton.**—HALL, ETC.—For miners' hall and institute for the miners of the West Pelton Collieries. Mr. J. W. Bell, architect, 16, Faversham-terrace, Chilton-lane, Ferryhill.

ENGINEERING, IRON, AND STEEL.

JANUARY 30.—**Buckfastleigh.** BRIDGE.—For the reconstruction of the Damerel's Bridge. Plans and specification, by Mr. G. G. S. Acock, County Surveyor, seen at the office of Mr. A. Warren, Surveyor to the District Council, Buckfastleigh.

JANUARY 30.—**Stourbridge.**—ENGINE.—For erecting a vertical rotative triple-expansion direct-acting three-throw plunger pumping engine, capable of raising one and one-third million gallons of water per day. Specification and form of tender from Mr. W. Fiddian, consulting engineer, Old Bank Offices, Stourbridge, on deposit of 3*l.* 3s.

JANUARY 31.—**Bath.** HOUSE.—Erection of mixing machinery house and appurtenant works at the sewage disposal site at Saltford. Plans seen, and quantities from the Engineer, Mr. W. H. Radford, C.E., Albion-chambers, Kingstreet, Nottingham, on deposit of 2*l.* 2s.

FEBRUARY 2.—**Aberporth.**—BRIDGE.—Erection of a culvert bridge and wing walls. Plans and specifications at Plas, Aberporth. Mr. D. Davies, Clerk, Cardigan.

FEBRUARY 8.—**Gilfach Goch.**—BRIDGE, ETC.—For proposed new road, bridge, and culvert across the valley. Plans and particulars seen, and quantities from Mr. W. T. Ollivant Jones, Engineer and Surveyor, Council Offices, Bryncmenyn.

FEBRUARY 10.—**Tunbridge Wells.**—SWITCHGEAR.—For erection of switchgear at the generating-station. Specifications and plans from Mr. J. W. Beauchamp, Borough Electrical Engineer, Stanley-road, Tunbridge Wells.

NO DATE.—**York.**—LOCOMOTIVE.—For supply of an electric shunting locomotive. Specification and form of tender from Mr. J. W. Hame, City Electrical Engineer, 8, Clifford-street, York.

FURNITURE, PAINTING, MATERIALS, etc.

JANUARY 20.—**Preston.**—PAINTING.—For painting, etc., at the baths, Saul-street. Specification seen, and form of tender from the Borough Surveyor, Town Hall, Preston.

JANUARY 20.—**St. Helier.**—PAINTING.—For painting and decorating the interior of the Town Hall. Particulars at the Constable's Office, Town Hall, St. Helier, Jersey.

JANUARY 24.—**Belfast.**—HEATING, ETC.—For the internal plumbing work and heating of new baths at Ligoniel. General conditions seen, and specifications and drawings from the City Surveyor, City Hall, Belfast, on deposit of 1*l.* 1s.

JANUARY 27.—**Bradford.**—RAILS, ETC.—Supply of 1,100 tons of steel girder tram rails and 200 steel poles. Drawings, specifications, and forms of tender from Mr. W. H. S. Dawson, City Engineer and Surveyor, Town Hall, Bradford.

JANUARY 29.—**Tonbridge.**—DECORATIONS, ETC.—For redecorations and repairs at the Sussex-road School. Specifications, by the Committee's Architect, Mr. Wilfrid H. Robinson, of Caxton House, Westminster, seen at the offices of Mr. Arthur H. Neve, solicitor, 103, High-street, Tonbridge, Kent.

* JANUARY 31.—**Rotherhithe and Tooting.**—CLEANING AND PAINTING.—The Metropolitan Asylums Board invite separate tenders for cleaning and painting works at Fever Hospital, Tooting-grove, and Smallpox Shelter, Rotherhithe. See advertisement in this issue for further particulars.

JANUARY 31.—**Woolwich.**—PAINTING.—The Metropolitan Asylums Board invite tenders for cleaning and painting works and repairs at the Brook Fever Hospital, Shooters' Hill, Woolwich. Specification by Mr. W. T. Hatch, M.Inst.C.E., M.I.Mech.E., Engineer-in-Chief. Specification and form of tender, on deposit of 1*l.*, at the Office of the Board, Embankment, E.C.

FEBRUARY 1.—**Bournemouth.**—PIPES, ETC.—Supply of cast-iron pipes, bolts, cradles, etc. Form of tender, specification, and conditions from Mr. F. W. Lacey, M.Inst.C.E., Borough Engineer and Surveyor, Municipal Offices, Bournemouth. Deposit of 1*l.* 1s.

FEBRUARY 5.—**Halifax.**—STORES.—For supply of stores and materials required in the Electricity Department. Forms of tender and information at the Electricity Office, Foundry-street, Halifax.

* FEBRUARY 5 **Hendon.**—VARIOUS MATERIALS.—The Hendon U.D.C. invite tenders for supply of certain materials and execution of works. See advertisement in this issue for further particulars.

* FEBRUARY 6.—**Various.** BUILDING MATERIALS AND TOOLS.—The Prison Commissioners invite tenders for supply of building materials and tools to any of H.M. Prisons, State Inebriate Reformatories, and Borstal Institutions in England or Wales. See advertisement in this issue for further particulars.

FEBRUARY 12.—**Halifax.**—STORES.—For the supply of stores and materials required in the Tramways Department. Forms of tender and particulars from the Tramways Engineer, Tramways Offices, Skircoat-road, Halifax.

ROADS, SANITARY AND WATER WORKS.

JANUARY 20 **Hailsham.** MATERIALS Supply of road materials. Mr. Edmund Catt, Clerk to the Council, Clerk's Office, 17, London-road, Hailsham.

JANUARY 22. **London.** STREETS.—For making-up private streets at Finchley. Plans, specifications, and conditions of contract seen, and forms of tender and quantities from the Council's Engineer and Surveyor, Mr. C. J. Jenkin, M.Inst.C.E., M.I.Mech.E., Council Offices, Church End Finchley, N. Deposit of 3*l.*

JANUARY 25.—**Aylesbury.**—FLINTS.—For the supply of clean hand-picked field flints. Mr. R. J. Thomas, County Surveyor, County Hall, Aylesbury.

JANUARY 25.—**Deal.**—GRANITE.—Supply of clean blue Guernsey granite. Specification and form of tender from Mr. Thos. C. Golder, Borough Engineer and Surveyor, 23, Queen-street, Deal.

JANUARY 26.—**Westmorland.**—ROADS.—For the excavating, filling, walling, and road-making required in cutting off corners near Kirkby Lonsdale. Plans, specifications, and quantities with Mr. Joseph Buntley, County Surveyor, 7 Lowther-street, Kendal.

JANUARY 27.—**Birmingham.**—MATERIALS.—For the supply of granite kerbs, setts, crossing stones, chippings, flags, paving bricks, wood paving blocks, rugstone, gravel, sand, and slag. Forms of tender, and specifications, on deposit of 1*l.*, from Mr. Henry E. Stilgoe, City Engineer and Surveyor, The Council House, Birmingham.

JANUARY 27.—**Harrow-on-Hill.**—STREETS.—For making-up private streets. Drawings seen, and specifications, quantities, and forms of tender from Mr. J. Percy Bennetts, Engineer and Surveyor to the Council, on deposit of 5*l.*

JANUARY 27.—**Rugby.** GRANITE.—Supply of granite. Mr. J. W. Pendred, Clerk to the Council, Rugby.

JANUARY 29.—**Becoles.**—MATERIALS.—For supply of materials. Mr. S. W. Rix, Clerk, Beccles.

JANUARY 29.—**Clachan.**—ROAD.—For construction of five miles of footpath from Loggie to Clachan. Plans and specifications with Mr. Charles G. Hogg, Road Surveyor, Dingwall.

JANUARY 29.—**Kettering.**—GRANITE, ETC.—For supply of granite, slag, etc. Tender forms from Mr. R. Lane, Deputy Clerk, George-street, Kettering.

JANUARY 29.—**Middlesbrough.**—MATERIALS.—For supply of materials. Specification and schedule from Mr. S. E. Burgess, M.Inst.C.E., Borough Engineer's Office, Municipal-buildings, Middlesbrough.

JANUARY 29.—**Normanton.**—STREETS.—For execution of private street works in five back streets. Plans and specifications seen, and form of tender and quantities from Mr. Arthur Hartley, Surveyor, Council Offices, Normanton.

JANUARY 29.—**Whitby.**—ROADS.—For laying-out grounds, levelling, forming roadway, and paths at the school. Plans, specifications, etc., with the clerk of works at the school. Messrs. Thomson & Bristow, A.R.I.B.A., architects, 13, Westminster-chambers, Victoria-street, London, S.W.

* JANUARY 30.—**Ealing.**—ROAD-MAKING.—The Ealing T.C. invite tenders for making-up certain roads in the borough. See advertisement in this issue for further particulars.

FEBRUARY 3.—**Buckingham.**—GRANITE.—For supply of granite and slag. Tender form and specification from Mr. R. C. Cordon, Surveyor, Buckingham.

FEBRUARY 5. **London.**—MATERIALS.—For supply of materials to the Borough of Bermondsey. Mr. Fredk. Ryall, Town Clerk, Town Hall, Spa-road, S.E.

* FEBRUARY 13.—**Putney.**—SANITARY CONVENIENCES.—The Wandsworth B.C. invite tenders for erection of sanitary conveniences at High-street, Putney. See advertisement in this issue for further particulars.

FEBRUARY 16.—**Evesham.** SEWAGE.—Construction of additional sewage disposal works. Drawings seen, and specification, quantities, and form of tender from the Corporation's Engineers, Messrs. Berrington, Son, & Watney, Prudential-chambers, Wolverhampton, and 28, Victoria-street, Westminster, London. Deposit of 5*l.* 5s.

FEBRUARY 16.—**Northwich.**—SEWAGE.—For alterations and additions to the Northwich sewage outfall works. Plans with the engineer, Mr. W. M. Beckett, A.M.Inst.C.E., 33, Brazenose-street, Manchester. Specification, quantities, and form of tender on deposit of 3*l.* 3s.

Auction Sales.

Nature and Place of Sale.	By whom Offered.	Date of Sale.
*BUILDING MATERIAL, BRIXTON-ROAD, S.W. —On the Premises	Hulbert & Haysman ...	Jan. 23
*DEALS, BATTENS, BOARDS, TIMBER, ETC.—Great Hall, Winchester House, E.C. ...	Churchill & Sim ...	Jan. 24
*PLANT AND MATERIALS—On the Greensward, near Sandy Hook	E. S. Beard & Daniel ...	Jan. 26
*NURSERY STOCK—On the Premises, South Woodford	Protheroe & Morris ...	Jan. 30
*LEASEHOLD PREMISES, CHELSEA—At the Mart	Furbers ...	Feb. 7

METROPOLITAN ASYLUMS BOARD.

AT the fortnightly sitting of the Metropolitan Asylums Board on Saturday the following matters amongst others were dealt with:—

Leavesden Asylum.—A letter was received from the Local Government Board asking for further information with regard to the proposal to provide six two-tier bridges at this asylum at an estimated cost of 7,000*l.*

Darenth Asylum.—For the fencing-in of buildings at this asylum the tenders of Messrs. Bayliss, Jones, & Bayliss, Ltd., of 452*l.* 12s. 6d., and of Messrs. Steavenson & Co., of 125*l.*, were accepted. The Asylums Committee submitted a report with reference to the further inquiries made by the Local Government Board as to the proposals for roofing in the upper yard, and suggesting as an alternative the construction of a wide verandah round three sides of the yard. The Committee suggested a modification in the original scheme, which would reduce the cost from 700*l.* to 595*l.*

Reflooring Work.—It was decided to relay in oak the floors of certain wards in the South Western Hospital, and in terrazzo the floors of the lavatories, bathrooms, etc., of the hospital, at a cost of 620*l.*, and also to overlay two more floors at the Eastern Hospital with "Durato," at a cost of 240*l.*

FOREIGN AND COLONIAL.

Works in Austria-Hungary (Bosnia-Herzegovina).

With reference to the notice on pp. 630-1 of the *Board of Trade Journal* of December 28 relative to a Bill submitted to the Bosnian Landtag providing for the construction of railways from Tuzla to Brcka, Bjelina, and Raca, from Banjaluka to Jajce, and from Bihác to Novi, at a total cost of some 3,400,000*l.*, H.M. Consul at Sarajevo (Mr F. G. Freeman) reports that the Bill also provides for the expenditure of a further 1,479,000*l.* on railway improvements; 808,000*l.* on roads and bridges; 132,000*l.* on hospitals, etc.; and 419,000*l.* on schools.

Building Materials, etc., in Congo State.

The *Moniteur Belge* of December 31 states that the extraordinary expenditure to be included in the Congo Budget for 1912 amounts to 18,618,660 francs, of which 4,100,000 francs are for the building of houses and other buildings, and also barracks, etc.

SOME RECENT SALES OF PROPERTY:

ESTATE EXCHANGE REPORT.

January 10.—By ERNEST S. BEARD & DANIELL.

Brightlingsea, Essex.—2, Wellington-rd., f., p.	£170
1, High-st. (s.) and 8 a. 1 r. 8 p., f., y.r. 32*l.*	700
3 to 9 (odd), High-st., f., y.r. 23*l.* 10s. and p.	415

January 11.—By MONTAGU HOLMES & SONS.

Croydon.—Grenaby-rd., f.g. rents 49*l.* 10s., reversion in 97 yrs	1,114
Fleet, Hants.—Fleet hoscope, f.	650

Contractions used in these lists.—F.g.r. for freehold ground-rent; l.g.r. for leasehold ground-rent; i.g.r. for improved ground-rent; g.r. for ground-rent; r. for rent. f. for freehold; c. for copyhold; l. for leasehold; p. for possession; e.r. for estimated rental; w.r. for weekly rental; q.r. for quarterly rental; y.r. for yearly rental; u.t. for unexpired term; p.a. for per annum; yrs. for years; la. for lane; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; cres. for crescent; av. for avenue; gdns. for gardens; yd. for yard; gr. for grove; h.h. for beerhouse; p.h. for public-house; o. for offices; s. for shops; ct. for court.

TERMS OF SUBSCRIPTION.

"THE BUILDER" (Published Weekly) is supplied DIRECT from the Office to residents in any part of the United Kingdom at the prepaid rate of 18s. per annum, with delivery *by Friday Morning's Post* in London and its suburbs.

To Canada, post-free, 21s. 8d. per annum; and to all part of Europe, America, Australia, New Zealand, India, China, Ceylon, etc., 26s. per annum.

Remittances (payable to J. MORGAN) should be addressed to The Publisher of "THE BUILDER," 4, Catherine-street, W.C.

PRICES CURRENT OF MATERIALS.

* Our aim in this list is to give, as far as possible, the average prices of materials, not necessarily the lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

BRICKS, &c.

Per 1000 Alongside, in River.

	£ s. d.
Best Stocks	1 14 0
Picked Stocks for Facings	2 7 0

Per 1000, Delivered at Railway Depôt.

	£ s. d.		£ s. d.
Cottons	1 12 0	Best Blue Pressed	
Best Fareham Red	3 12 0	Staffordshire	3 15 0
Best Red Pressed Ruabon Facing	5 0 0	Do. Bullnose	4 0 0
		Best Stourbridge Fire Bricks	4 0 0

GLAZED BRICKS—

Best White, Ivory, and Salt Glaz'd Str'tch'rs	11 7 6	Double Headers	13 17 6
Headers	10 17 6	One Side and two Ends	17 17 6
Coins, Bullnose, and 4½ in. Flats	14 17 6	Two Sides and one End	18 17 6
Bible Stretchers	16 17 6	Splays & Squints	16 7 6

Second Quality £1 10s. per 1000 less than best.

	s. d.	
Flames and Pit Sand	6	9 per yard, delivered.
Flames Ballast	5	6 " "
Best Portland Cement	31	0 per ton, "
Best Ground Blue Lias Lime	19	0 " "

NOTE—The cement or lime is exclusive of the ordinary charge for sacks.

Grey Stone Lime	13s. 0d. per yard delivered.
Dourbridge Fireclay in sacks 27s. 0d. per ton at rly dpt.	

STONE.

Per Ft. Cube.

	s. d.
BATH STONE—delivered on road waggons, Paddington Depôt	1 6½
Ditto, do. delivered on road waggons, Nine Elms Depôt	1 8½

PORTLAND STONE (20 ft. average)—

Best Brown Whitbed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or at Pimlico Wharf	2 3
Best White Basebed, delivered on road waggons Paddington Depôt, Nine Elms Depôt, or at Pimlico Wharf	2 4½

Per Ft. Cube, delivered at Railway Depôt.

	s. d.		s. d.
Basebed blocks	1 10	Closeburn Red	
Other in blocks	1 6	Freestone	2 0
Whitbed in blocks	1 10	Red Mansfield Freestone	2 4
Portland Dale in blocks	2 4	Talacre & Gwespyr Stone	2 8
Corsehill in blocks	2 3		

YORK STONE—*Robin Hood Quality.*

Per Ft. Cube, Delivered at Railway Depôt. s. d.

Dappled random blocks	2 10

Per Ft. Super., Delivered at Railway Depôt.

Cut, sawn two sides landings to sizes (under 40 ft. super.)	2 3
Cut, rubbed two sides ditto, ditto	2 6
Cut, sawn two sides slabs (random sizes)	0 11½
Cut, to 2½ in. sawn one side slabs (random sizes)	0 7
Cut, to 2 in. ditto, ditto	0 6

YORK—

Per Ft. Cube, Delivered at Railway Depôt.

Dappled random blocks	3 0

Per Ft. Super., Delivered at Railway Depôt.

Cut, sawn two sides landing to sizes (under 40 ft. super.)	2 8
Cut, rubbed two sides ditto	3 0
Cut, sawn two sides slabs (random sizes)	1 2
Cut, self-faced random flags	0 5

SLATES.

Per 1000 of 1200 at Railway Depôt.

	£ s. d.		£ s. d.
Best Blue	13 2 6	20×10 best Eur'ka unfading green	15 17 6
Extra ditto	13 17 6	20×12 ditto	18 7 6
Best 1st quality		18×10 ditto	13 5 0
Extra ditto	13 0 0	16×8 ditto	10 5 0
Duchess ditto	13 15 0	20×10 permanent green	11 12 6
Countess ditto	7 5 0		
Best Blue		18×10 ditto	9 12 6
Portmadoc	12 12 6	16×8 ditto	6 12 6
Imperial ditto	6 12 6		

TILES.

At Railway Depôt.

	s. d.		s. d.
Best plain red roofing (per 1000)	42 0	Best "Hartshill" brand, plain sand-faced (per 1000)	50 0
Hip and Valley (per doz.)	3 7	Do. pressed (per 1000)	47 6
Broseley (per 100)	50 0	Do. Ornamental (per 1000)	50 0
Ornamental (per 100)	52 6	Hip (per doz.)	4 0
Hip and Valley (per doz.)	4 0	Valley (per doz.)	3 6
Ruabon red, brown, or brindled (per 1000)	57 6	Staffords. (Hanley) Reds or Brindled (per 1000)	42 6
Ornamental (per 100)	60 0	Hand-made sand-faced (per 1000)	45 0
Hip (per doz.)	4 0	Hip (per doz.)	4 0
Valley (per doz.)	3 0	Valley (per doz.)	3 6

WOOD.

BUILDING WOOD.	At per standard.				
	£	s.	d.	£	s. d.
Battens: best 3 in. by 11 in. and 4 in. by 9 in. and 11 in.	14	0	0 ...	15 10	0
Battens: best 3 by 9	13	10	0 ...	14 10	0

WOOD (*Continued*).

JOINERS' WOOD.	At per standard.				
	£	s.	d.	£	s. d.
Battens: best 2½ in. by 7 in. and 8 in., and 3 in. by 7 in. and 8 in.	11	10	0 ...	12 10	0
Battens: best 2½ by 6 and 3 by 6	0	10	0	less than 7 in. and 8 in.	
Deals: seconds	1	0	0	less than best.	
Battens: seconds	0	10	0 "	"	
2 in. by in. and 2 in. by 6 in.	9	10	0 ...	10 10	0
2 in. by 4½ in. and 2 in. by 5 in.	9	0	0 ...	10 0	0
Foreign Sawn Boards—					
1 in. and 1¼ in. by 7 in.	0	10	0	more than battens.	
¼ in.	1	0	0	"	
Fir timber: best middling Danzig or Memel (average specification)	At per load of 50 ft.				
	5	0	0 ...	5 10	0
Seconds	4	10	0 ...	5 0	0
Small timber (8 in. to 10 in.)	3	17	6 ...	4 0	0
Small timber (6 in. to 8 in.)	3	5	0 ...	3 10	0
Swedish balks	2	12	6 ...	3 0	0
Pitch-pine timber (30 ft. average)	5	5	0 ...	6 0	0
White Sea: first yellow deals, 3 in. by 11 in.	At per standard.				
	24	10	0 ...	25 10	0
3 in. by 9 in.	22	10	0 ...	23 10	0
Battens, 2½ in. and 3 in. by 7 in.	17	0	0 ...	18 0	0
Second yellow deals, 3in. by 11in.	19	0	0 ...	20 0	0
" " 3 in. by 9 in.	18	0	0 ...	19 10	0
Battens, 2½ in. and 3in. by 7 in.	14	0	0 ...	15 0	0
Third yellow deals, 3 in. by 11 in. and 9 in.	14	0	0 ...	15 0	0
Battens, 2½ in. and 3 in. by 7 in.	11	10	0 ...	12 10	0
Petersburg: first yellow deals, 3 in. by 11 in.	21	10	0 ...	22 10	0
Do. 3 in. by 9 in.	18	10	0 ...	19 10	0
Battens	14	0	0 ...	15 0	0
Second yellow deals, 3 in. by 11 in.	16	10	0 ...	17 10	0
Do. 3 in. by 9 in.	15	0	0 ...	16 0	0
Battens	11	10	0 ...	12 10	0
Third yellow deals, 3in. by 11 in.	13	10	0 ...	14 10	0
Do. 3 in. by 9 in.	13	0	0 ...	14 0	0
Battens	10	10	0 ...	11 0	0
White Sea and Petersburg—					
First white deals, 3 in. by 11 in.	15	0	0 ...	16 0	0
" " 3 in. by 9 in.	14	0	0 ...	14 10	0
Battens	11	10	0 ...	12 10	0
Second white deals, 3in. by 11in.	14	0	0 ...	15 0	0
" " 3 in. by 9 in.	13	0	0 ...	14 0	0
Battens	10	10	0 ...	11 0	0
Pitch-pine: deals	19	0	0 ...	21 0	0
Under 2 in. thick extra	0	10	0 ...	1 0	0
Yellow Pine—First, regular sizes	44	0	0	upwards.	
Oddments	32	0	0	"	
Seconds, regular sizes	33	0	0	"	
Oddments	28	0	0	"	
Kurai Pine—Planks per ft. cube	0	0	6 ...	0 5	0
Danzig and Stettin Oak Logs—					
Large, per ft. cube	0	3	0 ...	0 3	9
Small " "	0	2	6 ...	0 2	6
Wainscot Oak Logs, per ft. cube	0	5	6 ...	0 6	0
Dry Wainscot Oak, per ft. sup. as inch	0	0	9 ...	0 0	11
½ in. do. do.	0	0	8 ...	—	
Dry Mahogany—Honduras, Tabasco, per ft. super. as inch	0	0	10 ...	0 1	1
Selected, Figury, per ft. super. as inch	0	1	6 ...	0 2	6
Dry Walnut, American, per ft. super. as inch	0	0	10 ...	0 1	0
Teak, per load	18	0	0 ...	22 0	0
American Whitewood planks, per ft. cube	0	4	0 ...	0 5	0
Prepared Flooring, etc.—	Per square.				
1 in. by 7 in. yellow, planed and shot	0	13	6 ...	0 17	0
1 in. by 7 in. yellow, planed and matched	0	14	0 ...	0 18	0
1¼ in. by 7 in. yellow, planed and matched	0	16	0 ...	1 0	0
1 in. by 7 in. white, planed and shot	0	12	0 ...	0 14	6
1 in. by 7 in. white, planed and matched	0	12	6 ...	0 15	0
1¼ in. by 7 in. white, planed and matched	0	15	0 ...	0 16	6
¾ in. by 7 in. yellow, matched and beaded or V-jointed brds.	0	11	0 ...	0 13	6
1 in. by 7 in. " "	0	14	0 ...	0 18	6
¾ in. by 7 in. white " "	0	10	0 ...	0 11	0
1 in. by 7 in. " "	0	12	9 ...	0 15	0
6 in. at 6d. to 9d. per square less than 7 in.					

JOISTS, GIRDERS, &c.

	In London, or delivered Railway Vans, per ton.				
	£	s.	d.	£	s. d.
Rolled Steel Joists, ordinary sections	7	10	0 ...	8	0 0
Compound Girders, ordinary sections	9	10	0 ...	10	0 0
Steel Compound Stanchions	11	0	0 ...	12	0 0
Angles, Tees, and Channels, ordinary sections	9	10	0 ...	10	0 0
Flitch Plates	9	10	0 ...	9	10 0
Cast Iron Columns & Stanchions, including ordinary patterns	7	10	0 ...	8	10 0

METALS.

IRON—	Per ton, in London.				
	£	s.	d.	£	s. d.
Common Bars	9	0	0 ...	9	10 0
Staffordshire Crown Bars, good merchant quality	9	5	0 ...	9	15 0
Staffordshire "Marked Bars"	11	0	0 ...	—	
Mild Steel Bars	9	5	0 ...	9	15 0
Hoop Iron, basis price	10	0	0 ...	—	
" " Galvanised	17	10	0 ...	—	
(*And upwards, according to size and gauge.)					
Sheet Iron Black—					
Ordinary sizes to 20 g.	10	5	0 ...	—	
" " 24 g.	11	5	0 ...	—	
" " 26 g.	12	15	0 ...	—	
Sheet Iron, Galvanised, flat, ordinary quality—					
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15	10	0 ...	—	
Ordinary sizes to 22 g. and 24 g.	16	0	0 ...	—	
" " 26 g.	17	0	0 ...	—	
Sheet Iron, Galvanised, flat, best quality—					
Ordinary sizes to 20 g.	18	10	0 ...	—	
" " " 22 g. and 24 g.	19	0	0 ...	—	
" " " 26 g.	20	10	0 ...	—	

METALS (*Continued*).

IRON (*Continued*)—	Per ton, in London.				
	£	s.	d.	£	s. d.
Galvanised Corrugated Sheets— Ordinary sizes, 6ft. to 9ft. 20 g.	15	0	0 ...	—	
" " 22 g. and 24 g.	15	5	0 ...	—	
" " 26 g.	16	15	0 ...	—	
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	12	10	0 ...	—	
Best Soft Steel Sheets, 2 g. & 24 g.	13	10	0 ...	—	
" " " 26 g.	15	10	0 ...	—	
Cut Nails, 3 in. to 6 in.	11	0	0 ...	11	10 0
(Under 3 in., usual trade extras.)					

LEAD, &c.

	£	s.	d.		
LEAD—Sheet, English, 4lb. and up	19	7	6 ...	—	
Pipe in coils	19	17	6 ...	—	
Soil pipe	22	17	6 ...	—	
Compo pipe	22	17	6 ...	—	
ZINC—Sheet— In casks of 10 cwt.					
Vielle Montagne	33	10	0 ...	—	
Silesian	33	5	0 ...	—	
Zinc, in bundles, 1s. per cwt. extra.					
COPPER—					
Strong Sheet per lb.	0	1	0 ...	—	
Thin "	0	1	1 ...	—	
Copper nails "	0	0	10 ...	—	
Copper wire "	0	0	10 ...	—	
BRASS—					
Strong Sheet "	0	0	11 ...	—	
Thin "	0	1	0 ...	—	
TIN—English Ingots "	0	2	0 ...	—	
SOLDER—Plumbers' "	0	0	8½ ...	—	
Tinmen's "	0	0	11 ...	—	
Blowpipe "	0	1	2 ..	—	

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

15 oz. thirds	2½d.	26 oz. fourths	3½d.
" fourths	1½d.	32 oz. thirds	3d.
21 oz. thirds	3d.	" fourths	4½d.
" fourths	2½d.	Fluted Sheet, 15 oz.	3½d.
26 oz. thirds	4d.	" 21 oz.	4½d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

⅛ Hartley's	2d.	Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white	3½d.
⅛ "	2½d.		
¼ "	2½d.	Ditto, tinted	5d.

* Not less than three crates.

OILS, &c.

		£	s.	d.
Raw Linseed Oil in pipes	per gallon	0	3	6
" " in barrels	"	0	3	7
" " in drums	"	0	3	9
Boiled " in barrels	"	0	3	9
" " in drums	"	0	4	0
Turpentine in barrels	"	0	3	0
" in drums	"	0	3	2
Genuine Ground English White Lead, per ton		26	10	0
Red Lead, Dry	"	23	5	0
Best Linseed Oil Putty	per cwt.	0	10	0
Stockholm Tar	per barrel	1	12	0

VARNISHES, &c.

	Per gallon. £ s. d.
Fine Pale Oak Varnish	0 8 0
Pale Copal Oak	0 10 6
Superfine Pale Elastic Oak	0 12 6
Fine Extra Hard Church Oak	0 10 0
Superfine Hard-drying Oak, for seats of Churches	0 14 6
Fine Elastic Carriage	0 12 0
Superfine Pale Elastic Carriage	0 16 0
Fine Pale Maple	0 10 0
Finest Pale Durable Copal	0 18 0
Extra Pale French Oil	1 1 0
Eggshell Flating Varnish	0 18 0
White Pale Enamel	1 4 0
Extra Pale Paper	0 12 0
Best Japan Gold Size	0 10 6
Best Black Japan	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Knotting	0 10 9
French and Brush Polish	0 10 6

TO CORRESPONDENTS.

NOTE.—All communications with respect to literary and artistic matters should be addressed to "THE EDITOR" (and not to any person by name); those relating to advertisements and other exclusively business matters should be addressed to "THE PUBLISHER," and not to the Editor.

All communications must be authenticated by the name and address of the sender, whether for publication or not. No notice can be taken of anonymous communications.

The responsibility of signed articles, letters, and papers read at meetings rests, of course, with the authors.

We cannot undertake to return rejected communications; and the Editor cannot be responsible for drawings, photographs, manuscripts, or other documents, or for models or samples sent to or left at this office, unless he has specially asked for them.

All drawings sent to or left at this office for consideration should bear the owner's name and address on either the face or back of the drawing. Delay and inconvenience may result from inattention to this.

Any commission to a contributor to write an article, or to execute or lend a drawing for publication, is given subject to the approval of the article or drawing, when received, by the Editor, who retains the right to reject it if unsatisfactory. The receipt by the author of a proof of an article in type does not necessarily imply its acceptance.

N.B.—Illustrations of the First Premiated Design in any important architectural competition will always be accepted for publication by the Editor, whether they have been formally asked for or not.

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than* 10 *a.m. on Thursday.* [N.B.—We cannot publish Tenders unless authenticated either by the architect or the building owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is stated, nor any list in which the lowest Tender is under 100*l.* unless in some exceptional cases and for special reasons.]

*Denotes *accepted.* †Denotes *provisionally accepted.*

BACTON-ON-SEA (Norfolk).—For the erection of a private residence for the Rev. J. W. W. Moeran, M.A. Mr. A. Waring Venner, architect, 7, Station-approach, Redhill, Surrey:

M. Gotts, Bacton-on-Sea* ..	£946

BIRKDALE.—For erection of a caretaker's lodge, cricket pavilion, and bowls house, for the Birkdale Urban District Council. Quantities by Mr. W. H. Nixon:—

Fairbridge Bros., 3a, Upper Aughton-road, Birkdale*	£999

CATERHAM.—For erection of a Roman Catholic school. Mr. W. Bevan, F.R.I.B.A., architect, Croydon. Quantities by architect:—

E. I. Fox	£1,542	19	9
McCormick & Sons	1,430	0	0
W. Potter	1,325	0	0
E. Wallis . .	1,285	0	0
Dowsett & Jenkins	1,277	0	0
H. Bacon & Son.....	1,275	0	0
W. Smith & Sons	1,274	0	0
Gathercole Bros. .	1,270	0	0
J. Quittenton	1,270	0	0
Pasterfield & English	1,249	0	0
J. J. Pink ..	1,248	0	0
D. W. Barker & Sons	1,245	0	0
W. J. Williams & Co.....	£1,243	18	9
J. Smith & Sons, Ltd .	1,235	0	0
Cropley Bros., Ltd.	1,212	0	0
North Downs Building Co.	1,196	10	0
G. E Everitt & Sons, Ltd. .	1,194	0	0
F J. Bradford	1,193	17	0
Battley, Sons, & Holness ...	1,177	0	0
F. W. Honour	1,163	0	0
I. E. Whiter & Co	1,142	0	0
F C. Gorham	1,107	19	0
W. J. Norris	1,099	0	0
F. & G. Foster	1,098	0	0
E Clark* ...	1,060	0	0

CHATHAM. For Luton-road International Stores. Messrs. Geo. Baines & Son, architects, 5, Clement's-inn, Strand, London, W.C.:—

Bainbridge & Son	£573	0	
H. J. Carter	499	0	
G. Browning.....	456	0	0

[All for six weeks.]

‡ Accepted with modification.

Hutchinson & Co.	£455	15	
J. W. Jerram	450	0	
C. E. Skinner‡	427	0	

HENFRYN (Wales). For erection of new farm-house and buildings forming a new homestead and additions to the existing buildings. Mr. R. W. Davies, M.S.A., Dolafon, Carno, Mont.

Manuel & Sons	£1,417	6	5
J. J. Meredith...	1,390	0	0
J. Brass & Sons	1,290	0	0
M. Jones & Son	£1,091	0	0
J. Evans & Son, Caersws*	1,081	10	0

HORSHAM.—For alterations and additions to the grammar school, for the West Sussex Education Committee. Mr. Haydn P. Roberts, A.R.I.B.A., County Architect, Worthing. Quantities by Mr. H. A. Grover, 32, New Bridge-street, E.C.:—

H. Lindfield & Son	£2,780 0 0
Hillman & Murrell	2,687 13 0
W. J. Fryer & Co.....	2,686 14 9
J. Longley & Co.	2,678 0 0
A. Peskett & Co.	2,658 0 0
E. Ellis	2,435 0 0
Norman & Burt	2,600 0 0
Rowland Bros	2,599 0 0
G. Potter .	2,500 0 0
F. Saudell & Sons, Worthing* .. .	2,478 0 0

HUDDERSFIELD For erection of a Liberal Club at Almondbury, for the Trustees Messrs. Stocks & Sykes, architects, Huddersfield. Quantities by architects:—

Mason: J. W. Roothroyd, Almondbury	£567 0 0
Joiners J. Stansfield & Son, Almondbury	345 0 0
Plumber: S Hall, Huddersfield	121 0 0
Slater: W. E. Jowitt, Huddersfield.....	52 10 0
Ironfounders Oldfield Bros., Netherton, near Huddersfld	72 13 0
Painters. A. Jackson & Sons, Huddersfield .	24 18 6
Concrete. J. E. Dyson, Lindley, Huddersfield	71 11 6
Heating, etc. Brook, Hardcastle, & Watson, Huddersfield	57 0 0
Electricians: J. H. Taylor & Co., Huddersfield	43 19 0

KENDAL.—For removal of earthwork and building of retaining walls in connexion with the widening of Queen's-road, for Kendal Corporation. Mr. F. W. Oxberry, Borough Surveyor. Quantities by Surveyor:—

R. Dixon	£278	R. Woodburn	£220
W. Carradice	250	E. T. Pennington, White Horse-yard, Kendal*	210
J. Hine	247		
S. Downham ..	238		

[Borough Surveyor's estimate, £212.]

MERTHYR TYDFIL.—For erection of a manual instruction-room at Abermorlais School:—

N. Moss, Mill-street, Merthyr*	£199

NEWBRIDGE.—For erection of a chapel, school-room and classrooms Mr. E L. Roberts, M.S.A., architect, Abercarn. Quantities by architect:—

T. James	£3,016	15	0
W. Williams	2,912	0	0
D. Davies & Sons ...	2,747	0	0
Kirly & Westacott	2,700	0	0
Poulton & Wighten	2,600	0	0
A. S. Morgan	2,540	0	0
R. Jones . . .	£2,531	19	3
G. T. Leabeter	2,500	0	0
J. Pritchard ..	2,480	0	0
D. Richards	2,440	0	0
A. J. Colbourne ..	2,426	0	0
Herbert & Co.	2,400	0	0
C. F. Morgan, Newbridge*	2,448	0	0

NORTH STAFFORDSHIRE.—For additions to the children's ward at the Infirmary. Messrs. R. Scrivener & Son, architects, Hanley:—

Tompkinson & Bettelley	£2,816	S. Wilton, jun.	£2,690
Grants	2,725	T. Godwin, Hanley, Staffs.*	2,650
G. Ellis ...	2,700	A. E. Chatfield .	2,600

PORTSMOUTH.—For erection of a house as a residence for the engineer in charge on the east side of the Eastney pumping-station:—

E. & A. Sprigings...	£623	0	
H. C. Sweetland ..	618	0	
J. Crockerell	598	10	
W. W. Evans .	593	0	
J. Durrant.....	588	0	
H. Jones & Son.. ..	569	0	
J. Tanner	£565	16	
F. J. Privett . .	547	0	
Woods & Co., St. Vincent-street, Southsea*	545	0	

STORRINGTON.—For alterations and additions to the Council school, for the West Sussex Education Committee. Mr. Haydn P. Roberts, A.R.I.B.A., County Architect, Worthing:—

A. Peskett & Co.	£605	0	0
F. Sandell & Sons	590	0	0
G. Gillam.....	540	0	0
H. Baker & Son...	530	0	0
Elkington & Co....	510	0	0
H. Richardson...	£486	7	6
H. Tier	485	0	0
W. Wicker, Storrington*...	485	0	0
E. Hill.....	479	10	0

WITHYCOMBE.—For alterations and additions to the old recreation-room, for Mr. P. F. Rowsell, J.P., Nutbrook House, Withycombe, Exmouth. Mr. H. J. Lacey, architect and surveyor, Exmouth:—

R. C. Cooper	£335 0
F. W. Lacey . . .	288 10
H. Greenaway, Park-road, Exmouth*	250 0

[Architect's estimate, £306.]

Ham Hill Stone.
Doulting Stone.
Portland Stone.
The Ham Hill and Doulting Stone Co., Limited
(incorporating the Ham Hill Stone Co. and C. Trask & Son, The Doulting Stone Co.).
Norton, Stoke-under-Ham, Somerset.
London Agent:—Mr. E. A. Williams, 16, Craven-street, Strand.

Asphalte.—The Seyssel and Metallic Lat
Asphalte Co. (Mr. H. Glenn), Office, 42, Poultr
E.C.—The best and cheapest materials for dan
courses, railway arches, warehouse floors, fl
roofs, stables, cow-sheds and milk-rooms, gra
aries, tun-rooms, and terraces. Asphalte Co
tractors to Forth Bridge Co. T.N. 2644 Central.

SPRAGUE & CO., Ltd.,
LITHOGRAPHERS,
Employ a large and efficient Staff especially f
Bills of Quantities, &c.
4 & 5, East Harding-st., Fetter-lane, E.C.

OGILVIE & CO., Telephone: DALSTON 18
Many years connected wi
the late firm of W.
LASCELLES & CO., Ltd
of Bunhill Row.
Amhurst Works, DALSTON LANE, N.E
EXPERTS IN HIGH-CLASS JOINERY.
ALTERATIONS AND DECORATIONS. ESTIMATES FREE.

J. J. ETRIDGE, Jr. LTD.
SLATE MERCHANTS.
EXPERTS IN
SLATING, TILING.
BEST WORK ONLY.
Telephone 2685 Wall, or write—
BETHNAL GREEN SLATE WORKS,
BETHNAL GREEN, LONDON, E.

ASPHALTE
For Horizontal & Vertical Damp Courses.
For Flat Roofs, Basements, & other Floors
The best materials and workmanship are supplied b
THE
French Asphalte Co
Whose name and address should be inserted in specifications.
For estimates, quotations, and all information apply at the Offices of the Company,
5, LAURENCE POUNTNEY HILL,
CANNON STREET, E.C.

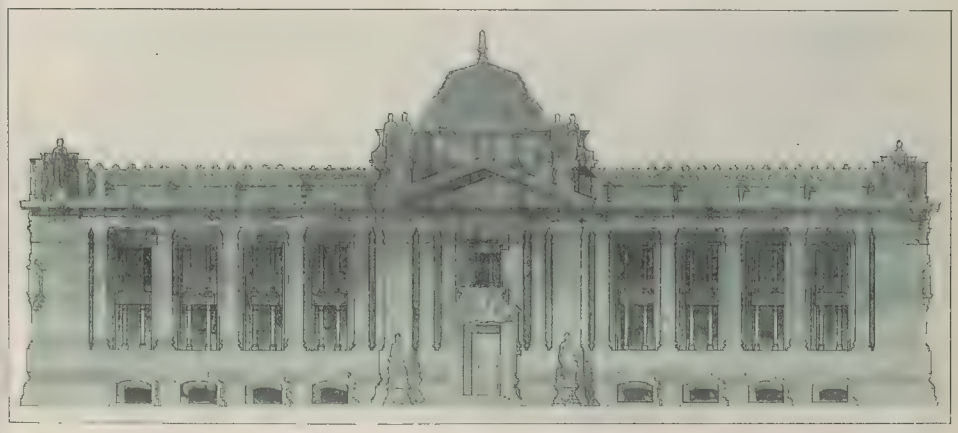
EWART'S
"EMPEROR"
Established 1834.
Telephone: 2570 North.
Cures in 19 cases out of 20.
Write to-day for Illustrated Catalogue Free to
EWART & SON Ltd.,
346-350, Euston Road, London, N.W.
SMOKE-CURE

THE BUILDER

VOL. CII.—No. 3599. JANUARY 26, 1912.

CONTENTS.

	PAGE
Prize Designs at the R.I.B.A.	85
Notes	88
Alfred Stevens (with Illustrations)	88
The Royal Institute of British Architects	88
Basing House (with Illustration)	90
General News	91
Competition News	92
Books	92
Correspondence	92
Intercommunication Column	93
Editorial Summary	94
Meetings	94
Architectural Societies	94
Notes to Illustrations	95
Fifty Years Ago	96
Monthly Review of Engineering:—	
Reinforced Concrete in Great Britain—I. (with Diagrams)	97
Monthly Review of Engineering (*contd.*):—	
Regent-street Polytechnic—III.	98
Reinforced Concrete Applied to Buildings	99
Notes	100
The Building Trade:	
The Institute of Builders (Annual Dinner)	101
The London Building Trade	102
Government Contracts	102
Mahogany and Hardwood	102
General Building News	102
Applications under London Building Acts, 1894 to 1909	103
Projected New Buildings in the Provinces	104
Foreign and Colonial	104
The Surveyors' Institution	105
The London County Council	106
Alterations to "Underhills," Bletchingley, (with Illustrations)	106
Tribunal of Appeal under the London Building Act	106
Law Reports	107
London Councils	108
Obituary	108
Patents	108
List of Competitions, Contracts, etc., Open	109
Some Recent Sales	110
Prices Current	111
Tenders	112
Illustrations.	
Voor Linden, near The Hague. Mr. Robert F. Johnston, Architect.	
Marylebone Municipal Buildings Competition:—	
Detail of Design by Messrs. Tait, Whitelaw, & Sutton.	
Detail of Design by Mr. S. Woods Hill, A.R.I.B.A.	



Design for the Marylebone Municipal Buildings. (*See page* 95.)

By Mr. S. Woods Hill, A.R.I.B.A.

PRIZE DESIGNS AT THE R.I.B.A.

THE withholding of the Soane Medallion must always be a great disappointment to those immediately concerned and a matter of some regret to everyone interested in the future of architecture, as it is generally regarded as an indication that the work of the year is not up to the usual standard.

Although the Exhibition, taken as a whole, includes some very creditable work, yet no design submitted for the Soane appears to be of such outstanding merit as to suffer any grave injustice by the reservation of the prize.

We imagine, however, that the Council in taking this course were prompted not so much by a deliberate intention to express disappointment at the general level of the designs as by some little difficulty in choosing between the rival claims of the two designers, Mr. William Friskin and Mr. Piet de Joug, to each of whom has been awarded a certificate of Honourable Mention and a sum of 50*l.* This difficulty seems to be largely of the Council's own making. The subject set was a guildhall situated in a public park. Although it may perhaps be maintained that there is no reason why a guildhall, or any other building, should not be placed in a public park, yet it might be contended with equal, or even greater, force that there is no reason why it should. A guildhall is not one of those buildings that demand a site in a park. This is not just the most characteristic position imaginable. A guildhall suggests the civic centre, which is not usually a park.

But however this may be, the fact remains that the position of a building influences its lay-out and general treatment. The provision of a site not usually associated with the type of building desired is apt to confuse the student and to cause him to hesitate as to the treatment to be adopted, and to wonder how far it is permissible to vary the characteristic arrangements of any building in order to take full advantage of an uncharacteristic site. Competitors may well have thought that it was not quite clear whether the intention was simply to provide an unrestricted island site on which the building could develop its natural and characteristic form, and be given proper setting and approaches, or whether the park site was of the essence of the conditions—given with the deliberate intention of provoking those modifications of convenience and of accepted arrangements which would be necessarily entailed if full justice was to be done to the opportunity.

Be this as it may, the result is that most of the competitors show but little appreciation of the opportunity, and produce designs which might equally well have been placed in any open island site in the heart of a city. The principal

exception to this general rule is the design by Mr. William Friskin, which, taking the park site seriously, and making some definite attempt to show the influence of such a site and surroundings, and to solve the peculiar problem involved, creates, in so doing, a problem for the judges, which they, for their part, have attempted to solve in the same spirit of compromise as is displayed in Mr. Friskin's design.

The scheme by Mr. Piet de Joug is more compact, better arranged for the circulation of the public at receptions, more "practical," worked out better, perhaps, and, if there is anything to choose between them on this score, it may possibly show more technical accomplishment; but in its general lay-out, massing and grouping, and scale of feature it makes no special affort to take advantage of the character of its site or to express the influence of its environment. It is not altogether a solution of the exact problem involved. On the other hand, the design by Mr. Friskin does make a definite attempt to show the modifications of arrangements and of general lay-out suggested by the important fact that the building stands in a park. The idea may not be so well worked out in some respects—the junction of the circular hall with the main building, for instance, is not altogether happy—but it seems to be a more correct idea, and this is the first and most important factor in a competition of this description, and one which the judges are bound to take into consideration.

The fact that Mr. Friskin's design is less convenient and less compact is balanced by the fact that it is well spread out—a virtue on a park site, compactness being more appropriate to a compact or confined site. If this quality is essential to a guildhall the suggestion naturally presents itself that a park site is not. Indeed, we seem driven to the conclusion that what is a virtue in a park building is a vice in a guildhall, and that the problem is one which, if it is capable of satisfactory solution at all, is certainly most subtle and difficult, a refinement of expression needing a master hand; hardly suitable, therefore, as a subject for the Soane Medallion.

If the Council in stating the conditions of the programme attached any definite meaning to the site in a park and intended it to be a special problem, then we think Mr. Friskin's design would have won as being the best design which makes any serious attempt to solve it.

The fact that the Council have compromised between Mr. Friskin and Mr. Piet de Joug suggests that they attached no special meaning to the word and did not realise the significance or the possibilities of their own programme till they saw the different ways in which it could be interpreted by the students, when they found themselves in the position of not being able to award the prize to either one of the two best designs without injustice to the other.

The whole incident is unsatisfactory, and suggests that the programmes for these competitions are perhaps drawn up in too casual a manner.

Although there seems little doubt that the money prize has been divided between the two most meritorious designs, the reasons that prompted the selection of the other Honourable Mentions are not quite so obvious. Mr. Bertram Lisle has a good practical scheme, more pleasing perhaps than that by Mr. C. A. Harding, but both of them seem to be somewhat lacking in character. This perhaps is due to the fact that they have not made a special feature of the hall.

Where, as in this case, the programme consists of one principal hall round which the lesser ones are grouped the most characteristic effects can be obtained by frankly and clearly expressing this arrangement on the elevations. The hall itself provides the dominant feature. Where, however, as, say, in the Palais de Justice at Brussels, the scheme consists of several halls or courts of more or less equal importance, they can be grouped together in accordance with their relative functions, and the expression of the whole can be gathered up by one central dominant feature. This method of expression, being more characteristic of large and elaborate schemes, hardly seems suitable to such a simple subject as this. From this point of view most of the other designs are superior. "Fraternity," "Sign of the Black Fish," "Dragon," "ΟΥ ΤΟΠΟΣ," "Guild," and "Vitæ" are all designs which, whatever their defects, show a simpler and more straightforward solution of the problem. "Experientia Docet" is a design in which much individual character and feeling appears to be wasted on an impossible idea. If this design, more than any other submitted, suggests that ability without right principles only runs to waste, the thought is immediately followed by the reflection that the responsibility for wasted energies lies on those who are in a position to direct and control our system of education.

The value of a sound training is aptly illustrated by the design of Mr. Louis de Soissons, which carries off the Tite Prize. We consider that this design for the covered courtyard of an exchange attains to a higher standard of technical excellence than any other in the Exhibition. It may or may not show the greatest natural gift, but, taking it all round, whether as design or as draughtsmanship, we are inclined to think it the finest achievement.

An Honourable Mention goes to Mr. T. H. Chalkley for a well-worked-out circular plan. "Gregalah" has some interesting coloured drawings. "Dum Spiro Spero's" design is delicately rendered, and "Black Cat" submits a creditable scheme; but none of them have a chance against such a mature and accomplished design as that by Mr. De Soissons.

It must have been no easy task to select the winner of the Pugin Studentship. The prize goes to Mr. James Macgregor for good and careful drawings and sketches. Honourable Mentions are awarded to Mr. C. P. Anderson, Mr. J. R. Leatheart, Mr. R. Norman Mackellar, and Mr. W. J. P. Jones, all of whom submit excellent work. It is interesting to note how the brush is superseding the pen as a medium for rendering Gothic work. Such drawings as the studies of Durham Cathedral by Mr. Mackellar show that the special style and character of Gothic need not suffer in the process.

The Silver Medal and ten guineas are awarded to an excellent set of coloured drawings of Compton Wynyates by Mr. A. E. Maxwell. These are most carefully and successfully carried out, and, with the accompanying notes, amount to a complete monograph of the building.

An Honourable Mention goes to Mr. W. M. Keesey for a straightforward set of drawings of San Spirito, Florence, finished in ink and slightly tinted; and another to Mr. A. B. Allen for a complete and interesting study of the octagonal lantern of Ely Cathedral. "Sphinx" submits tinted drawings of the entrance front of the Male Prison at Cork.

The Owen Jones Prize is won by Mr. N. H. Leaver with a set of drawings which show considerable power for the realistic representation of examples of coloured decoration. We cannot help wondering, however, whether the careful, exact, and forcible rendering of each minute tissue of a fragment of antique mosaic is exactly the best form of study to improve our colour sense or to teach one the principles of colour decoration. Mr. Mason, the other competitor, has some extremely good studies of heads from tempera wall decorations by Raphael.

The Grissell Prize for construction is awarded to Mr. T. Braddock for a well-worked-out scheme on somewhat usual lines, while "Blanc Mange" submits a more novel and up-to-date suggestion into which the æsthetic element is introduced in an interesting and suggestive manner.

The Cates Prize, being given for a miscellaneous collection of "testimonies of study," must also be rather a difficult one to award. Mr. J. B. F. Cowper wins it with some excellent drawings.

The general impression that we carry away from this Exhibition is that the supply of energy, enthusiasm, and ability in those who will carry on the traditions of architecture in the future is unfailing, but that these qualities do not get a fair chance owing to the lack of a thorough and systematic training in the first principles of architecture. Progress in this direction is, however, apparent, and, though slow, may perhaps on that account be all the more sure.

NOTES.

New Zealand Parliament Buildings.

We are glad to see that the recent competition for new Parliament Buildings in New Zealand has excited much local interest in architecture, and that our contemporary, *Progress: The Scientific New Zealander*, has thought the occasion of sufficient importance to warrant the publication of a selection of the designs. In an appreciative leading article it points out the necessity of obtaining the highest skill available, but does not appear to realise that the New Zealand Government, by limiting the competition to local architects, hardly went the best way to work to secure this result. Referring to some dissatisfaction with the interpretation of the conditions and with the method of assessing, our contemporary asks whether it would not have been much better to have sent the whole of the plans away to England to be judged by a member nominated by the R.I.B.A., and adds,

"There could have been no question then of any but fair treatment." Considering the nature and importance of the scheme, we think the New Zealanders would have been better advised to have done as the Manitoba Government proposes to do and throw the competition open to the whole of the Empire, in which case the arrangements for judging the designs would no doubt have been placed on a similar footing.

Colour as Applied to Decoration.

LAST Monday's papers at the Institute provided material for useful discussion. It is good for the arts of architecture and painting to find their representatives on the same platform adumbrating principles which are of equal importance to either art. The opinions of Sir Alfred East and Mr. Edgar Wood were scarcely ever at issue. Both architect and painter recognised the disadvantages which the dominating influence of the easel type of picture has on the outlook of a painter when he has to face a subject suitable for a mural painting. Sir Alfred East expressed himself entirely in sympathy with the architectural view that decoration should assist, rather than diminish or conceal, the structural qualities of a building. And he evolved interesting theories with regard to the influence of special forms in the appeal of colour, which were not wholly without a significance made prominent by the Post-Impressionists. His references to the decorative qualities of Japanese painting and the means by which they are attained—the relation of colour weight to colour area, and so on—were particularly illuminating, and worth the consideration of all decorative artists, whether painters or architects. His allusion also to the difficulties with which the painter may have to contend when the subject for a decorative painting, not susceptible of decorative treatment, is chosen not by the architect, but by some outside authority, is certainly worth attention. Mr. Edgar Wood admirably presented the architects' point of view, and, while expressing a difficulty in finding words to make explicit impressions which in their essence "defy language," as he said, he nevertheless managed to convey his views in phrases which justified the medium of language in subtle matters of interpretation. His appreciation, for instance, of the colour qualities of St. Mark's at Venice was one of the happiest justifications of the use of colour for its own sake that we have ever heard.

The Royal Academy Lectures on Sculpture.

THE first Royal Academy lecture on Sculpture this year was delivered on Monday by Professor W. R. Colton, A.R.A., the subject of the course being "Ideas and Ethics of Sculpture." The first lecture covered much of the ground of Professor Colton's recent Carpenters' Hall lecture, the first part being directed to a condemnation of the tendency to let ornament run riot in our public buildings, especially where, as in the "Keystone treatment," construction is sacrificed to ornament. The lecturer made some pertinent criticisms also on the Post-Impressionist sculpture fashionable in some places, but the best part of the lecture was in reference to our public monuments. Generally speaking, he said, England was a country of great intentions which were rarely carried out. Our bridges were left without ornamentation, and the art of sculpture was neglected by the public authorities. Foreign capitals were greatly superior to our own from the artistic point of view, and in this connexion the lecturer instanced the fine decorative approach to the Pont Alexandre III. in Paris. It was to be hoped that when the new St. Paul's Bridge came to be constructed the authorities would rise to the occasion. Our fault was that as a nation we were too utilitarian. We should be quite capable of putting kitchens inside our statues; anything to make them pay. The English grudged money for objects that appealed to the decorative sense alone. They failed to realise that miserable surroundings made miserable human beings. The few decorative objects we had in our thoroughfares were neglected and allowed to become coated with soot and sulphuric acid. As a nation we had become drab-grey, and all through the continual outcry in favour of utility.

Wood Engraving.

THE City and Guilds of London Institute Report for Session 1910-1911 on the City and Guilds South London Technical Art School, in commenting on the fact that at one time the Institute's School included in its work a successful class in wood engraving, "when that art provided the only means of illustrating books and periodicals in the text," tells how the art of wood engraving was gradually superseded by the discovery and perfection of mechanical processes by which artists' drawings could be reproduced in the form of blocks, and used in much the same way as wood engravings for illustrations capable of being printed along with ordinary type. As the Report says:—

> "The wood engraver, whose art consisted in interpreting artist's drawings and paintings on wood so that they might be printed in large numbers, was superseded by mechanical processes in which photography played the more important part."

The truth of this is, unfortunately, only too well known, and all artists and art workers must regret it, even while they are compelled to admit the inevitableness, once the mechanical process was started, of a loss which has rendered a fine craft more or less obsolete. We are glad to note from the Report that a very successful and useful work is being carried on in the School.

Hampton Court Palace.

MUCH satisfaction will be felt at the action of the Office of Works in carrying out a thorough scheme for the proper protection of Hampton Court Palace against fire. Probably no building of the magnitude and character of the Palace, used as this building is, can ever be altogether safe against fire; but so much can be done in these days of high-pressure water supply, electric fire alarms, telephonic communication, and efficient fire brigades, to render our national treasure-houses more or less proof against fire, that everything should be done on the most approved lines and regardless of cost. We welcome the action of the Office of Works and hope that other public buildings will not be forgotten.

The Carpenters' Hall Lectures.

WE should like to call attention to another course of free lectures on "The Arts Connected with Building," which has been arranged by the Worshipful Company of Carpenters in their Hall in London-wall, the first of which was delivered on Wednesday. The course has nothing to do with the more popular, though none the less useful, Thursday series, beginning this year on February 15, but it is arranged with the idea of interesting and instructing craftsmen and art workers, though the range is not limited, as will be seen by a perusal of the subjects and a glance at the list of able lecturers. Such a course deserves to be supported, and we hope the efforts of the Company, who are doing such excellent work both in London-wall and in Great Titchfield-street, will be appreciated by good attendances.

The R.I.B.A. "At Home."

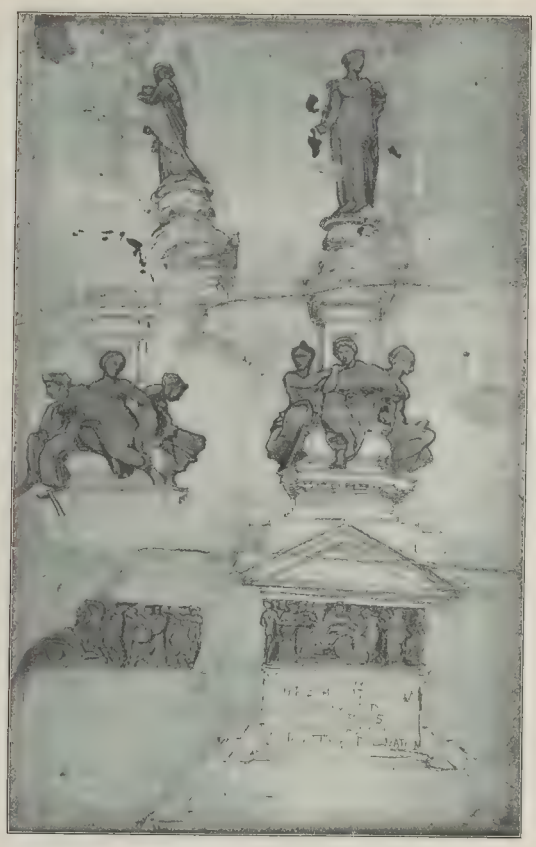
THE "At Home" given by the President and Council of the Royal Institute of British Architects at the Institute Galleries on Wednesday was a well-attended and successful function. Beyond the opportunity afforded for social intercourse, the object of interest on this occasion was the collection of drawings submitted in competition for the Royal Institute Prizes and Studentships, which were seen to advantage in the galleries of the Institute. The collection as a whole loses some of its interest from the fact that the Council have not been able to award the Soane Medallion this year, but the drawings are sufficiently attractive to interest the guests for the whole of a very pleasant evening.

LARGS MEMORIAL.

The designs of Mr. J. S. Kay, of Glasgow, architect, have been accepted for the erection of a memorial, in the form of a round tower after the Scottish mode, upon the foreshore at Largs.

CHURCH BUILDING SOCIETY.

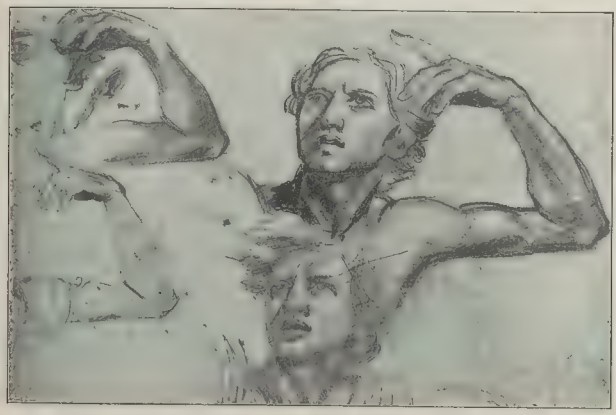
The Incorporated Church Building Society held its usual monthly meeting on the 18th inst. at the Society's House, 7, Dean's-yard, Westminster Abbey, S.W. Grants of money were made in aid of the following objects, viz.:—Building new churches at Barnfield, St. Paul, Accrington, 100*l.*; Beckenham, St. Barnabas, Kent, 50*l.*; Colne, Holy Trinity, Lancs., 120*l.*; Goodmayes, All Saints, Barking, Essex, 100*l.*; Hollinwood, Emmanuel, Chadderton, 80*l.*; Hurst Green, St. John, Oxted, Surrey, 70*l.*; Kentish Town, St. Silas, Middlesex, 150*l.*; Watford, St. Michael and All Angels, Herts, 120*l.*; Bristol, St. Ambrose, 125*l.*; Forest Town, Mansfield Woodhouse, Notts, 100*l.*; Langley Mill, St. Andrew, Heanor, Derby, 150*l.*; and Mitcham, St. Barnabas (City of London School Mission), Surrey, 175*l.*; rebuilding the Church of St. Stephen, Sneinton, Notts, 100*l.*; and towards enlarging the Churches at Pleasley Hill, St. Barnabas, Notts, 25*l.*; and Plumstead, Church of the Ascension, Kent, 100*l.* The following grants were also paid for works completed: South Tiverton, Church of the Ascension, near Bath, 250*l.*; Walton, St. Mary, Suffolk, 15*l.*; Layer Marney, St. Mary Kelvedon, Essex, 60*l.*; Canford Cliffs, Church of the Transfiguration, near Bournemouth, 25*l.*; and Grimsby, St. Hugh, 40*l.* In addition to this the sum of 170*l.* was paid towards the repairs of fifteen churches from Trust Funds held by the Society.



Sketch for a Monument to the 1851 Exhibition. By Alfred Stevens.

ALFRED STEVENS.

THE name of this artist is to the fore at the present time with the instructive exhibition at the Tate Gallery, which was to have closed on January 14, but which will remain open until the latter part of March, and with the revived controversy regarding the expediency of completing the Wellington Monument in St. Paul's. The sketches in the Victoria and Albert Museum (Department of Engraving, Illustration, and Design) are of much interest, among them being the three which we reproduce this week. To these sketches and to the models in the Museum Mr. Edward F. Strange alluded in his paper read recently before the Architectural Association and reported in our issue of last week. The bronze equestrian statue completing the Wellington Monument in St. Paul's Cathedral has been placed in position. It was modelled by Mr. Tweed from the unfinished sketch by Alfred Stevens.



A Sketch by Alfred Stevens.

COLOUR AS APPLIED TO ARCHITECTURE.

THE usual fortnightly meeting of th Royal Institute of British Architects wa held at No. 9, Conduit-street, W., on Monday Mr. Leonard Stokes presiding.

Mr. H. T. Hare announced the decease o Mr. Bloomfield Bare, of Liverpool, electe Fellow, 1888.

Two papers on "Colour as Applied t Architecture" were then read, the first b Sir Alfred East, A.R.A., who, in the cours of his remarks, said :—

"The architect is, or should be, respon sible for the absolute completion of an public building, and it is unfair to criticis him if some local authority assumes th responsibility of its decoration. We know the difficulties which surround this question It may be that the painter does not interes himself sufficiently, and has not been able t identify himself thoroughly with the aims o the architect, or that the architect approache the question of decoration with preconceived ideas engendered by examples of the past which may be in themselves very beautiful but totally unfitted for the purpose he has before him. I would not claim that the architect should be necessarily instructed in the technical qualities of the various methods of painting, nor can it be expected that the painter should make himself acquainted with the constructive side of architecture, but a knowledge of each of their aims should be mutually understood.

It is a source of the greatest satisfaction to see that during the last generation the architect has taken the sculptor more thoroughly into his confidence, and I would like to see the same confidence extended to the painter. For I am under the impression that the place of the mural painting should have been considered by the architect in the creation of his plan as much as that of the sculptor. Neither are required for the actual structural qualities of the building, but both are a necessity for its perfect completeness. I do not think anyone would dispute the assertion that the noblest work of man is the combination of all the arts in perfect fitness, the combination of these arts into a building that would be devoted to, and best adapted for, the expression of the other arts of music or literature. Such a building would not be altogether dominated by the architect, to the exclusion of the sculpture and painting, but would be one that in its completeness was perfectly adapted to the purpose of its creation. Unfortunately, the opportunity of so expressing the unity of the arts is rare. But one such building in any country would mark it as exhibiting the highest understanding of the real purpose of art.

I believe that in all public buildings the architect should be held responsible for their entire completion, but what shall I say to the architect who designs a private house in which he leaves no place either for sculpture or painting? I think one of the causes of the decline in the purchase of easel pictures arises from the fact that neither the architect nor the commercial decorator ever considers that it is possible for the cultured man to be interested in the arts of painting and sculpture.

The fitness of colour for decorative purpose is a question that has never been adjusted by any rule except that rule which is applied equally to the architect and sculptor. The first and most important is the sense of scale. A responsibility rests

sometimes with the architect, who may not have considered the space suitable for the work of the painter or sculptor in his design. The great problem of the application of colour to decoration has been solved in some instances with success, and in every case that success has been achieved by the perfect sympathy of those concerned in its production.

Colour is entirely altered in its decorative quality by the shapes and sizes of its display. A certain arrangement of colour of certain sizes in conjunction may completely destroy the object of the architect, and yet the same series with a different arrangement may be perfectly satisfactory. Colour expressed in angular forms must convey a different decorative sense from the same colour displayed by rounded forms.

All form is expressed by the figures of the straight line and the curve. We have associated the conjunction of straight lines, the simplest figure possible having the triangle as a symbol, not only because it is the simplest figure possible in the use of lines, but because it is suggestive of something which lies outside, and points to the outside and beyond. The curve, on the contrary, completes its figure alone. The circle it describes is associated with completed things, and is materialistic; the incomplete always suggests possibilities. The complete is final.

I have pointed out the difficulties of the mural painter, and where the building has no history to record on its walls, but reserves its history for its literature, he might be asked if it were not possible better to satisfy the claims of the architect if he substituted decorative landscape in place of the illustration of an incident. It would give the painter a wider scope for a more personal expression, and he would be free from the conditions that so often make decoration a failure, for his materials are more at his discretion, both in form and colour, and, if he succeed, he will not fall into the difficulty of attracting unduly the attention of the spectator from the beauty of the architecture. I have known decorations which would, by their dominancy, suggest that the whole effort of the architect was to furnish him with a setting for his picture, whereas it should be considered from an entirely opposite point of view. And, in conclusion, I would appeal to those who have the responsibility of designing a great public building to bear in mind the conditions which must govern the mural painter, and, on the other hand, to the mural painter to consider that the architect has a right to expect that he should be supported in his architectural ideal."

Mr. Edgar Wood, F.R.I.B.A., contributed the second paper. He said that "a comparison between the Greek or Gothic use of colour as compared with that of the East resolves itself into a conflict between two opposing and antagonistic expressions, the expression of form and the appeal of colour, antagonistic because they represent two irreconcilable intentions. Colour is emotional, appealing to us by its emotional and sensuous faculties. It comes to us before form, representing nothing in itself, dependent upon the emotional feeling it produces and its rightful appeal to sensuous sensibility, whilst form is intellectual and its appeal is the outcome of reason.

Greek work as known to us is restrained on the emotional side, nor has it any touch of mysticism. This was always secondary to form, just as music was subordinate to poetry in songs, this tendency fitted in naturally with the general character of Greek art. In the East this is entirely the reverse; the emotional instinct proved too strong, and all is sacrificed and surrendered in order that colour may become the all-powerful appeal, for the very essence of the East consists in two dominant distinctions. Colour is there used for colour alone. It is not only richer, more powerful, more intense, but is convincing and satisfying by the quality of colour alone. In their hands it leaves no void of unfulfilment in its directness and intensity of appeal. It is vital colour, leaving the impression of colour as distinct from things coloured. Thus, again, it is not used merely to define the shape and object of things, and this great revision was accomplished by the assistance and employment of light and shade by which form was so lost, so controlled that it not only relinquished its ascendancy, but immediately became sufficiently pliable as to be dependent upon the power of this triumphant colour supremacy.

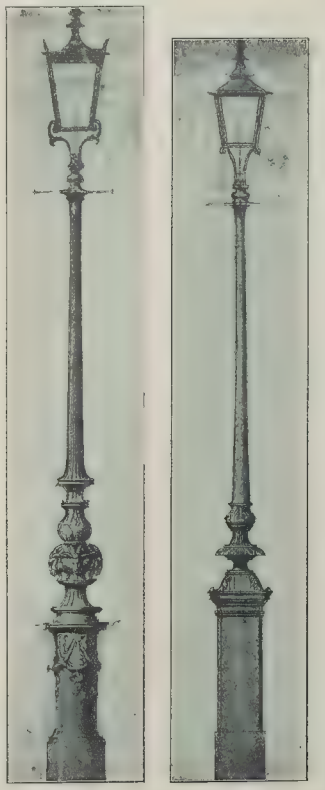
It was thus that the great colourists employed their great emotional appeal, and of which Venice is rich in its illustration. We recognise it amongst its painters, where the colour and glow of a Titian and a Tintoretto are precisely the same in purpose as the interior of the great basilica of St. Mark's.

Turning to domestic work, one problem that all architects have to consider is the right or the best treatment of the walls that will assist the easel picture, or, as some would say, to minimise the defects of the same.

It is the instinctive desire of all dealing with structure to give their work a lasting and permanent effect, to avoid any sense of detachment, unfixedness, or looseness, that the line shall be drawn sharply and logically between structure and portability, and that the dominant note shall always be that of structure, reducing as far as possible the degree and extent of the movable.

Many, I know, urge that the easel picture properly considered and placed in its right relationship to its surroundings by judicious treatment and hanging may be the acme of decoration, that its relation to a scheme of decoration may be like that of a jewel in a dress; but in this comparison a convincing one? The jewel in such positions is logical with the dress and wearer, because all are portable.

That thoughtful consideration in hanging, framing, and fixing can minimise much of the objection is admitted, as is shown in some of the rooms of the Ducal Palace at Venice, and also in those of the Vatican; but, however well marked, there still remains sufficient of the difference of aim and habit of mind of the two intentions, of the fixed aim of the architect or constructor, and the divorced and isolated thought of the painter.



Designs for Lamp-posts. By Alfred Stevens.

"The portability," Mr. Walter Crane writes, "of the easel picture has much to do with its unrelatable character. Destined for nowhere in particular, as a rule it goes out on tour—a member of a performing and often very diverse company"; and Mr. Furst says:—"The painters often resemble tailors making clothes which are not ordered and do not fit but accidentally."

I can think of no stronger guidance to decorative effect than the influence upon the painter of the walls themselves, provided he will allow their unconscious appeal its full scope by executing the work upon the site.

The Japanese method of showing one picture at a time is only a mitigation of the objection, and assists the problem but little, as the Japanese surroundings themselves are not so antagonistic to portability, being often themselves composed of movables having but little structural quality.

My own preference is towards the judicious employment of drapery as frequently offering a satisfactory compromise, the principle based upon the acceptance contained in the dress and jewel suggestion.

In thoughts upon the use of colour there is always to be remembered, though all-important the form and shape that an architect has given to his work, the surface alone derived from it always represents a large area, and all surface means colour, either of material or applied, and, therefore, the treatment of it remembered as quantity alone has an importance that should justify the architect in his legitimate desire to control the decoration.

I have the impression that colour of an enduring type, decoration even of an intending permanency, is still the unfortunate exception, not only in domestic work which can be partially excused by existing social conditions, but in our public and devotional buildings, where no such conditions exist. I do not only recall the absence of great mural decorations from which these buildings so lose the occasion of a great appeal and the opportunity of a great impression, but the same absence of colour and pleasure in colour is also missing in the minor surroundings.

Have the painters deserted us because they have other and better things to do, that decorative art has become the poor relation, that they have forgotten that 'the best sculpture yet produced has been the decoration of a temple front, the best painting the decoration of a room," that portable art expressed by the easel picture, "independent of all place—to-day over the sideboard, to-morrow between the windows," can never supplant in importance the work of a fixed position. The more they are portable the more they become unsuitable; their offence often increases with their merit of realism.

In conclusion, architects should encourage opportunities to bring back the painter to their assistance, that the neglected art of great decoration shall be, so far as we are able, a neglected craft no more, but shall continue to embellish our efforts of the future as it has formerly jewelled and crowned others of the past."

Mr. Gerald Moira,

in moving a vote of thanks to the authors of the papers, said that one thing he enjoyed in Sir Alfred East's paper was that the author spoke up for his own job. He certainly thought that landscape painting, when done in the way that Chavannes did it, was the most beautiful decoration possible. He felt that at the present day more mural work was being used in buildings than at any previous period of their own time, and painters owed a great deal to architects. The great difficulty, however, was the length of the client's purse, and if they could only club together and do things a little more economically then, he thought, work might be done in the George V. era which would be of interest to future generations.

Mr. J. D. Crace,

in seconding the motion, said he would like to dwell a little on the architectural side of the question. Both authors had said how painters and architects desired to sympathise with each other, and that undoubtedly was necessary, but there were two or three kinds of sympathy. There was a very platonic sympathy and a real genuine and helpful sympathy. What was wanted in decoration

was not so much subtlety of mural painting, but that the architecture should be expressed. The great difficulty was that the modern English painter was not sufficiently versed in architecture to understand what the architect was longing for. The architect naturally was very unwilling to have his architectural effort destroyed by the location of colour in the wrong places. Sir Alfred East spoke of the architect providing spaces for the decorative painter, but the decorative painter had the building for his spaces, and the great thing was that he should select for his colour such distribution as would express the constructive form, and accept the spaces which the architect would naturally distribute in such a way as also to express structural form. In the execution of the mural painting itself there was much to be borne in mind with respect to the architectural aspect of the building. If they took the period between 1300 and 1600 they would see that the painters never left their paintings alone on the wall, but they always supported them with such accessories as would fit them to the building itself; and that was a point which appeared to be entirely overlooked by the modern painter. The scheme of the decoration of a building must not limit itself to paintings in certain positions, whatever their good qualities might be, but it should be to distribute colour in the building in such a way as to make the picture part of the architectural structure as well as a work of art. To illustrate what he had in his mind Mr. Crace exhibited a series of reproductions of the work of Giotto in the chapel of Padua, the frescoes of Domenico Ghirlandaio in Santa Trinita, at Florence, the interior of the Piccolomini Library at Siena, and of San Domenico at Siena. He pointed out that in all these cases the paintings had been welded into the buildings, and not left as isolated pictures on the walls. Architecture was made use of in the paintings themselves to convey the idea of stability.

Mr. H. H. Statham

said he thought the basis of the consideration of colour in architecture should have been a consideration of the colour which might be got for the architectural materials themselves, which was much neglected at the present day. They were content to build buildings in monochrome when they might have a great deal of colour by the use of various coloured materials. That was a much less intellectual side of the subject to that to which they had listened, but, still, from the architect's point of view, it was very important. Then he thought there was an unjust criticism of what was called the easel painting. At present there was a very confused use of the word "decoration." They used to think that decoration was painting treated in a somewhat conventional manner in order that the painting should not take away the idea that the surface was a wall. Now they had people telling them that this was nonsense, and that all painting was decorative painting. In a way it was, for every figure must be designed to have a harmony of line, and landscape was distinctly decorative in that sense. But he mentioned that there was a distinction between the decorative painting properly so called and the painting which depended upon itself. The latter was often one of the greatest efforts of art, and was a thing they looked upon as a poem in colour quite separate from its surroundings. Titian's picture of "Bacchus and Ariadne" in the National Gallery was not a decorative picture, but it was a splendid piece of colour, and it would assert itself independently of any surroundings they put to it. He said it was untrue of the great art of painting to say that it only came to its highest when it was conventionalised by its surroundings. Ford Madox Brown had been mentioned, but his best work was the picture of "The Last Sight of England," at present in the Tate Gallery. What he wished to see admitted was that painting had a claim for itself, apart from the merely decorative, and it ought not to be sneered at simply because it could be carried about and looked at.

Mr. H. G. Ibberson

said that Sir Alfred East's subject divided itself into two parts. He could understand what he said about architects bearing the picture in mind from the very first, but he did not grasp the mystical part when he said that colour suggested certain forms—that circular forms suggested materialism and straight lines spirituality. He would have liked a few more definite instances as to that. He thought if they had the opportunity of getting the assistance of such a great painter as he who decorated the Sistine Chapel he would not bother about the architectural features. He knew himself that if he could get Sir Alfred East to come into one of his houses he would not bother him about the architraves and cornices, but would let him loose on the plain surfaces. Then, with regard to colour, he would have liked to have had a definite instance of the form which scarlet suggested. Scarlet suggested no form to him except perhaps a form of political activity, with which he had not much sympathy. He noticed that the room they were in had a curved ceiling, whilst the room behind had a straight ceiling, and, therefore, according to Sir Alfred East's view, and, letting their President typify spirituality, ought they not to have held the meeting in the back room and brought the cakes and ale into this one?

The motion having been passed,

Sir Alfred East

said that if painting was taken out of their lives their lives would be very poor indeed. The fact that painting did not decorate a house was the fault of the architect, who did not make a place to fit it properly, and the sooner architects recognised the fact that they should have pictures in the house the better. There were many things which they hung on the wall which could be removed, and were they to be turned out of a house for that reason? Movability was the expression of life. It was the dead things which remained permanent, and that was why so much architecture was dead.

Mr. Edgar Wood

remarked that he never intended to say there was no use for the easel picture, but he did feel that the highest ideal of decoration and the finest result had never been brought about by the easel picture. Let them go to the finest picture galleries in the world and compare the impressions they got with those they received after seeing the work at the Sistine Chapel at the Vatican or at Florence, and anyone would feel that decoration intended for a place would always convey the greater impression than the greatest of easel pictures. The question of what was decoration was difficult to define—one could feel things which one could not define. He agreed that there was a place for what might be called the easel movable picture, such, for instance, as the altar.

Prizes and Studentships.

The Secretary then read the Deed of Award for the Prizes and Studentships—

The Essay Medal and 25 *guineas.*—Subject, "The Principles to be observed in Designing and Laying-out Towns, Treated from the Architectural Standpoint." Twelve essays were received. The Council have awarded the Medal and 25 guineas to Mr. T. Harold Hughes ("Redundancy").

The Measured Drawings Medal and 10 *guineas.*—Subject, "Measured Drawings of Ancient Buildings in the United Kingdom and Abroad." Five sets of drawings were received. The Council have awarded the Medal and 10 guineas to Mr. Arthur E. Maxwell ("Zeta"). Certificates of Hon. Mention have been awarded to Mr. A. Bayliss Allen ("Shopeinshoudes"), and to Mr. W. M. Keesey ("Arno").

The Soane Medallion and 100*l.*—Subject, "Designs for a Guildhall." Thirteen sets of designs were submitted. The Council have been unable to give the prize to any competitor, but the following awards have been made:—Certificates of Hon. Mention and 50*l.* each to Mr. W. Friskin ("Circle City") and Mr. P. de Joug ("Antæ"). Certificates of Hon. Mention to Mr. C. A. Harding ("Sailing Ship") and Mr. B. Lisle ("Vista").

The Owen Jones Studentship Certificate and 100*l.*—Two applications were received, viz., from Mr. Noël H. Leaver (to whom the Studentship was awarded), and from Mr. G. W. Mason.

The Pugin Studentship Silver Medal and 40*l.*—Nine sets of drawings were received. The Council have awarded the Studentship to Mr. James Macgregor. Certificates of Hon. Mention have been awarded to Mr. C. Peake Anderson, Mr. W. J. P. Jones, Mr. J. R. Leathart, and Mr. R. Norman Mackellar, who were bracketed as equal.

The Tite Prize, Certificate, and 30*l.*—Eleven sets of designs were received for "The Central Courtyard of a Royal Exchange covered with a Roof." The Council have awarded the prize to Mr. L. de Soissons ("Red Lion"), and a Certificate of Hon. Mention to Mr. T. H. Chalkley.

The Godwin Bursary Medal and 65*l.*—Drawings were received from Mr Geoffry Lucas (to whom the Bursary was awarded), and from Mr. A. F. Wickenden.

The Arthur Cates Prize, 40 *guineas.*—Drawings were received from Mr. J. B. F. Cowper (to whom the prize was awarded), from Mr. Claude Y. Hodges, and from Mr. Maurice Lyon.

The Grissell Gold Medal and 10 *guineas.*—Four sets of designs were received for "An Isolated Exhibition Building." The Council have awarded the prize to Mr. T. Braddock.

The Ashpitel Prize.—The Council have awarded the prize to Mr. P. D. Hepworth.

Travelling Students' Works.—The drawings by Mr. J. B. F. Cowper, Pugin Student, 1911, have been approved by the Council.

A speaker asked if the *bona fides* of the designs would be inquired into.

The President: Have you anything to tell us?

The Speaker: Some of the designs were made in Architectural Schools. Is this fair?

The President: Will you communicate with me?

The Speaker: I communicated with the Prizes Committee, and received no reply.

The President: I think you had better communicate with me. If you will, come and see me in my office to-morrow.

It was announced that the next meeting of the Institute would be held on February 5, when the President's address will be delivered, and a criticism of the designs and drawings will be given by Mr. Gerald Horsley. The presentation of the prizes would be made at the meeting.

BASING HOUSE.

It is probable that few castles or mansions have played so important a part in the history of our land as Basing House; its siege alone constituting an interesting chapter in history.

Standing about 2 miles out of Basingstoke, with the weed-grown channel of the Basingstoke canal running by the old wall and octagonal dovecote, and past the "loftie gate-house with foure turrets looking northwards," the ancient pile is near one of the great trunk roads to London, and formerly, by reason of its strength and commanding position, practically held the key to the West of England. Originally it comprised two parts, a castle and a mansion, of which the oldest portion—the former—dated from 1261. The residential section of the structure was erected in 1509, and combined they formed the largest residence in England, regarding which old Thomas Fuller wrote in the XVIIth century:—"The greatest of any subjects' House in England, yea larger than most of the King's Palaces. The motto *Love Loyaltie*, well practised in it when, for resistance on that account, it was lately levelled to the ground."

The commencement of the Civil War found Basing House in the possession of John Pawlet, Marquis of Winchester, a devout Catholic and cavalier, who with a garrison of 800 men, vowed that he would hold the castle for the King, even though every other piece of land in England be wrested from him. The Parliamentarians quickly recognised the advantages attaching to the possession of the fortress, and for four years the gallant Pawlet withstood the Puritan siege, when, in 1643, Sir William Waller began two formal assaults, both of which, however, proved futile. Two years longer the stout old pile held out, and then Cromwell, his patience exhausted, determined to bring the "rebels" of Basing House to book. In October, 1645, he commenced operations with a train of siege guns, which took three days effectively to mount. The besieged scornfully refused to



[*Photo. by H. A. Aylward.*

The Dove Cote, Basing House.

surrender, and for two days the guns kept up an incessant fire. Eventually two wide breaches were made in the walls, and the Ironsides commenced to loot and plunder the citadel. Over 100 of the besieged were slain, and among those taken prisoners were Pawlet himself, Sir Robert Peak, and Inigo Jones, then a very old man. The castle was thoroughly ransacked, and jewels, gold, plate, and tapestry to the value of 200,000*l.* carried off and sold. In the midst of this wild scene of devastation and pillage flames were seen to burst forth, though what originated the conflagration has never been determined, and in a few hours the once lordly mansion lay a heap of smouldering ruins. In this condition it continued to remain for over two centuries, its battered defences covered with hawthorn, its earthworks hidden under a growth of ivy and herbage, until Lord Bolton, the present owner of Basing, decided to clear away the rubbish and restore what yet remained of the once famous "Loyaltie House."

During the excavations many interesting finds were brought to light, comprising shot, shells, bones, pottery, pipes, tiles, skulls, etc.

Perhaps the first thing that strikes the visitor now that the ruins have been laid bare is their great extent. According to Lady Winchester's diary of the siege, the castle "was in forme circular, encompassed with a brick rampart lyned with earth, and a very deep trench but dry," while the fortifications around it must have been very strong and formidable. In the centre of the fortress was a courtyard with two large wells, one of which was said to be the deepest in all England. The guard-room, kitchens, cellars, and larders are still in an excellent state of preservation, and on the walls of the cells drawings and letterings, evidently the work of prisoners, are still quite legible. In another portion of the ruins, the dining hall, chapel, and State apartments of the old structure can easily be traced.

Thanks to Lord Bolton, not a stone or brick of the ruins has been removed, and one may now walk over the same flint cobbles and quaint old pavement of kidney stones that existed before the direful conflagration reduced to ruins one of the finest piles of old-time England.

GENERAL NEWS.

Professional Announcement.

Mr. H. Bedford Tylor, Lic.R.I.B.A., for sixteen years architect and surveyor on the Bournville Estate, is now in practice on his own account at 20, Linden-road, Bournville, and care of Messrs. Mayhew & Darling, solicitors, 38, Waterloo-street, Birmingham.

The New Capital of India.

The *Times* Calcutta correspondent cables:—"It is officially stated that until the best European architect and sanitary engineer obtainable, both to be selected by Lord Crewe, have visited Delhi before and during the rains, the Government will select no site for the new capital, but will merely acquire land. A committee will subsequently sit to supervise the plans that have been agreed upon."

Paisley Abbey.

Towards the restoration of Paisley Abbey 8,000*l.* is being given by Mr. Robert Allison, merchant, of Paisley, for the erection of the great central tower, and 2,000*l.* by Mr. A. F. Craig, of Paisley, and his wife for the building of the cloisters. Recently, Mr. J. Stewart-Clark, of Dundas Castle, and his sisters gave 30,000*l.* for the restoration of the ruined choir, and only a small sum, it is stated, now remains to be subscribed to complete the scheme.

The Old Cottages at Guildford.

As a result of the expression of opinion at the recent meeting of the Surrey County Council, it is expected that the Highways and Bridges Committee will recommend the county authority to release the Town Council of Guildford from their undertaking to widen Farnham-road, and so obviate the necessity of demolishing the picturesque old cottages, the fate of which has been the subject of recent correspondence in the *Times*.

South American Project for Kingsway Site.

A scheme is on foot, it is stated, which will result in a combination of South American Republics for the purpose of erecting a large edifice on one of the Kingsway sites in which all their interests can be housed. The idea is to make the ground floor a great hall for the exhibition of products of the Republics, while on other floors will be reception-rooms, lecture-rooms, and offices.

Proposed Canadian Offices in London.

In the Canadian House of Commons Mr. Bradbury urged the erection of suitable offices in London for the High Commissioner and the immigration staff. In reply, Mr. Borden, the Premier, said he was in favour of the construction of a building worthy of Canada and the Empire, and he had noticed the satisfactory effort made by Australia in this respect. But it would be necessary, he considered, to have further data before entering upon the project.

Statue of William III., Petersfield.

The Urban Council, Petersfield, have appointed a Committee, of which Mr. H. Inigo Triggs, of Liphook, Hants, is the Hon. Secretary, for a restoration of the fine leaden equestrian statue of King William III. The memorial was erected in the market-place a long while ago at the charges of William Jolliffe, M.P. for the borough, and ancestor of the Lords Hylton. An appeal is made for contributions to a sum of 350*l.*, the estimated cost of the work.

Reredos, Christchurch Cathedral, St. Louis, U.S.A.

A reredos and high altar, one of the most important works of the kind erected in the U.S.A., was dedicated on Christmas Day at Christchurch Cathedral, St. Louis. The reredos and high altar, which were made in the studios of Messrs. Harry Hems & Sons, of Exeter, were conveyed from Exeter without injury, and were fixed by the firm's own men. The material is of Caen stone, and the height of the work is 35 ft. to the top of the cresting. The architects were Messrs. Tully & Clark, of St. Louis.

Antiquarian Discovery at Hatfield.

During the work of reconstruction of Goodrich House, Hatfield, which is now being carried out for Mr. F. W. Speaight, there has just been discovered the remains of a XVth century timber building, which has been hidden by brickwork for over two hundred years. A large number of silver and copper coins, dating from the time of Charles II. to George II., have also been found. The property was originally a portion of the Manor of Hatfield, and was sold in 1792 by the first Marquis of Salisbury to the Hart family, from the executors of which family it was purchased last year by Mr. Speaight, whose residence practically adjoins it on the south, Hatfield Park forming its northern boundary.

Dearer Coal—Cheaper Gas.

Coincident with a rise in the price of coal, the price of gas has been reduced 1d. per 1,000 cubic ft. by the Gas Light and Coke Company. This reduction—following upon a similar lowering of price each January for four successive years—brings the charge down to 2s. 6d. a 1,000 cubic ft. As the lower price for the consumer will mean higher dividends for the shareholders and bigger bonuses for the employees (under the company's scheme of co-partnership), the announcement will be the subject of very general congratulation.

The Royal Sanitary Institute.

The President of the Local Government Board, the Right Hon. John Burns, the Medical Officer, Dr. Newsholme, and Mr. Willis, Assistant Secretary, visited the Royal Sanitary Institute, 90, Buckingham Palace-road, London, S.W., on the 23rd inst., where, in addition to the permanent exhibits in the Parkes Museum relating to hygiene and public health, a special exhibition has been arranged of plans and models of shelters for tuberculose patients.

COMPETITION NEWS.

Winnipeg Legislative Building Competition.

The Secretary of the Royal Institute of British Architects has received from the Minister of Public Works, Manitoba, the following cablegram with reference to this competition :—"Date for acceptance of plans extended to March 31." We understand that Mr. Leonard Stokes, President of the R.I.B.A., has been appointed assessor in this competition.

Rochdale Infirmary Extensions.

Eleven sets of plans and designs were sent in by nine firms of Rochdale architects in the recent limited competition for the above extensions. They were adjudicated upon by Mr. Alexander Graham, F.S.A., F.R.I.B.A., of London, who made the following awards :—

First premium (50 guineas), Mr. Hugh Healey, A.R.I.B.A., of Rochdale and Manchester.

Second premium (30 guineas), Messrs. Sykes & Evans, of Rochdale and Manchester.

Third premium (20 guineas), Messrs. Butterworth & Duncan, of Rochdale.

Arrangements are to be made shortly for the exhibition of the drawings to the public.

New Church, Carrington.

Mr. Edward S. Prior, F.S.A., F.R.I.B.A., is the assessor in the competition for the new Parish Church of St. John the Evangelist, Carrington, Nottingham, the estimated cost of which is 9,000*l.* Designs by the twelve architects selected to compete were sent in on the 22nd inst.

Halifax Town Planning Competition.

Professor Adshead has recently given his award in the Halifax Town Planning Competition, the premiums in which were offered by Mr. J. Whitley, M.P. for the Borough, and the result, which was announced at a meeting in the Mayor's parlour, is as follows :—

First premium (100 guineas), Messrs. Longbottom & Culpan.

Second premium (30 guineas), Messrs. Medley Hall & Son.

Third premium (20 guineas), Messrs. C. F. L. Horsfall & Son.

Eight schemes were submitted in the competition, which was limited to Halifax architects.

Mr. Whitley stated that it would not be convenient for the drawings to be publicly exhibited forthwith, but he presumed that he might take it that the competitors would not mind leaving the plans in his hands for a few weeks until an exhibition could be arranged.

BOOKS.

Cathedrals of Spain. By JOHN ALLYNE GADE. Fully Illustrated. (London : Constable & Co., Ltd. 15s. net.)

THE cathedrals considered in this volume are Salamanca, Burgos, Avila, Leon, Toledo, Segovia, Seville, and Granada—some of the finest in Spain—and the author makes an interesting study of them in a happy blending of a not too technical and picturesque description. His intention is best described in the Preface, in which he says that certain buildings, and especially cathedrals, cannot be properly studied quite apart from what surrounds them, or from their past history. "To look comprehendingly up at cathedral vaults and spires, one must also look beyond them, at the city and the people and times that created them," and some such setting is here attempted, "in the hope it will not prove too technical for the ordinary traveller, nor too superficial for the student of architecture." If we are able to answer for the two classes of readers, we think we can claim for the author that he has achieved his object, for his work contains many pages of sound and interesting description which will be appreciated by the architectural reader, while the educated "ordinary traveller" with a love for ecclesiastical architecture will find his interest stimulated by a perusal of Mr. Gade's book. The richness of the country in great ecclesiastical buildings is well understood, and, though Spain is not as well known to the traveller as France or Italy, it is the ambition of most students of art to travel and see the architectural masterpieces of the country, and with this book in his hands the traveller will be helped to a proper appreciation of some of the great cathedrals there. The spirit in which the author writes will be realised from the following sentences referring to the monuments of Spain's greatness :—"If nowhere else in the world can one find such glorious works of art surrounded by such squalor, let us draw from the past the promise of a revival in Spain of all that constitutes the true greatness of a nation. . . . When the Spanish people have once more made education as general as it was under the accomplished Arabs . . their cathedrals will then stand in an environment befitting their grandeur, a society which will help them to transmit to coming generations the noblest, imperishable hopes of humanity."

Penmanship of the XVIth, XVIIth, and XVIIIth Centuries. A series of typical examples from English and foreign writing books. Selected by LEWIS F. DAY. Critical notes by PERCY J. SMITH. (Batsford. 18s.)

THE late Mr. Lewis F. Day, interested in everything which concerned the craftsman, made a special study of lettering, his books on the subject testifying to his judicial outlook. Mr. Day contemplated a book on penmanship, and put aside many illustrations which, since his death, have been studied by Mr. Percy J. Smith and supplemented for the purpose of the present book. Consisting mainly of reproductions, the book is not a difficult one to assimilate, and it gives food for thought in two directions. Firstly, we are astonished at the flexibility which was attained by the best writers of past centuries; secondly, we wonder to what extent the printing press influenced the art of penmanship. In many of the writings that exist there is a regularity and machine-like precision which must have been the cause of infinite labour to the scribe, without adding much to his reputation. Such painstaking work is marked by little individuality in design, and once the scheme of lettering was fixed upon the only faculties needed to produce page after page of MS. were a steady hand, a correct eye, and an abundance of patience. The type-like character of such work suggests that the scribes were endeavouring to emulate the mechanical qualities of machines. Yet we would dispense willingly with such methodical penmanship, and we turn to the less-perfect results achieved with the press and early movable types, through which design in the best sense was achieved.

Some scribes, however, understood exactly the advantages of deviation from mechanical penmanship, and, when the writing was placed on the page with due regard to area and construction, a beautiful result was attained. The good penman had no use for meaningless flourishes, but in the employment of graceful curves and rhythmical scrolls he found means to decorate his page, weaving around his words the most suitable embellishments.

While it is difficult to enter into the spirit of the work of less-hurried days, we can see the advantages of legibility and grace of outline. In modern printing there is ample room for the application of design, both as regards founts and display; and in the revival of good lettering, in which Mr. Lewis Day played so conspicuous a part, there is hope that inferior work will ultimately disappear. To attain this end the printer himself must be the true successor to the artistic scribe and learn the possibilities of the allied crafts. One of the most satisfactory results of the foundation of art schools is that in many cases opportunities are taken to learn the rudiments of design and the application of it to printing. The periodical exhibitions at the L.C.C. Central School, for instance, show the vitality of this branch of study.

To architects and their assistants this book on penmanship should prove suggestive. Beautiful writing gives distinction to architectural design, and drawings which are attractive throughout lose nothing in force.

CORRECTION.

In our issue of January 12 (p. 43) we referred to the baths erected at Winnington, Cheshire, for Messrs. Brunner, Mond, & Co. The name of the architect is given as Mr. L. W. Ensor, A.R.I.B.A.; it should have been Mr. A. E. Powles, F.R.I.B.A. We regret the mistake. Mr. Powles informs us that the special zig-zag bath cubicles and internal fittings were designed and carried out by the Leeds Fireclay Company.

BOOKS RECEIVED.

TECHNICAL ARITHMETIC AND GEOME By C. T. Millis, M.I.Mech.E. (Lond Methuen & Co. 3s. 6d. net.)

CHIMNEYPIECES AND INGLE NOOKS. Guy Cadogan Rothery. (London : T. We Laurie. 6s. net.)

THE ART OF THE ROMANS. By H. Walters. (London : Methuen & Co. net.)

CORRESPONDENCE.

The Policy of the R.I.B.A.

SIR,—As a good many letters have la been published about the Policy of R.I.B.A., may I draw attention to a p which, I think, needs a little considerati

There are many young men who, betw the ages of twenty and twenty-five, i Registration Bill was passed might themselves stranded through no fault of t own, unless special provision was made them. For instance, many of these h entered architects' offices as pupils at se teen. On completion of their articles, du which they may have passed the R.I.B Preliminary Examination, not being abl take special courses of instruction owing lack of funds, and in some cases because t must earn something to help pay their liv expenses, they go on as assistants until g opportunities come to set up on their account.

Now, if a Bill were passed these wo have to take the Intermediate and Fi Examinations, at least so it seems at prese and to pass these means either attend special classes, which needs cash, or using every minute that can be spared a office hours in working up the subjects aided, which is no light task, especially no opportunities were given at school learn mechanics, etc.; and if they do use all that spare time their health is sure suffer from lack of exercise.

At the universities and in the Services believe, candidates are allowed to take s examinations in two and sometimes th parts. Could not the Council of the R.I.B make some arrangement on similar lin It would also help those who, from reas of health, cannot live in London or the towns, and so cannot benefit from the m excellent classes held to prepare for th examinations. Correspondence courses m be suggested for these, but, with all respect to the gentlemen who run these, hour of good teaching in a class goes mu farther than a week's hard working un the correspondence system, because in former mistakes are corrected at once, wh in the latter a week must elapse, by wh time the student has partly forgotten wh it was about.

If such a plan as I have ventured to s gest could be arranged, it would be bet in every way; for an intending candid could do his office work without trying hurry over it, and in his spare time we up three or four subjects far more thoroug in six months than he could the whole sev and also find time for that one hour's healt exercise, which would keep him fit. Co he not be allowed to take each examinat in two parts, provided he took Part within six months of passing Part 1?

I only make this suggestion because th are many young fellows who are anxious pass these examinations if they could, h who cannot owing to causes which I ha pointed out, and also because the prese time seems to be a good one for the purpo

A READER

SIR, I am afraid that a reader of yo article published on January 12 might thi that the reason the members of the R.I.B. refused to sanction the scheme for amalgan tion with the Society of Architects w because they did not improve the draft Reg tration Bill.

A verbatim report in the *Journal* w shortly be sent to every member, and th it will be seen that there were several oth reasons which influenced the rejection of t scheme by an enormous majority. This w also be made clear by the conversation the end of the meeting; the proposer a

seconder of the amendment were asked if they limited the reference to the one point of the draft Bill, and the answer was that it must be referred back on every point.

I feel sure you would not like a false impression to be created in the minds of your readers, and consequently I ask you to kindly publish this letter.

SYDNEY PERKS, F.R.I.B.A., F.S.A.

The Clerk of Works and H.M. Office of Works.

SIR,—All H.M. Office of Works Clerks of Works of a certain number of years standing should be placed on the establishment without any reduction in salary, and given a pension at retirement.

A clerk of works is an officer holding an important trust; his services surely are at least twice as valuable as the most skilled mechanic on a building, and therefore his salary should never be less than twice the mechanic's wage, or, in other words, 4*l*. 10s.

Too frequently it is 3*l*. 3s. to 3*l*. 10s.; it sometimes reaches 5*l*. 5s. to 7*l*. 7s., but not often.

The duties of an Office of Works Clerk of Works are far more arduous and need more skill than one who is employed by an independent architect.

He has numerous sub-contractors (I had fourteen on one job) to supervise, and has to value the work weekly, the contractor being paid on his certificate. Every variation requires an estimate as to saving or extra, and every account has to be signed by him.

If he is honest his banking account increases but slowly, and when he is of no further use to his employer he has only Heaven or the workhouse to go to.

Seeing that a clerk of works is a poor man usually drawn from the ranks of mechanics, has to possess a deal of highly-skilled knowledge, has to keep up an appearance, remain honest in face of temptation, is liable to periods of unemployment, the least the Office of Works can do is to give a pension and a permanent office to those who have given satisfaction in the past.

Until quite recently His Majesty's Office of Works did not even pay the cost of removal when sent from one job to another, perhaps 150 miles apart. ONE OF THEM.

Architectural Assistants and the Office of Works.

SIR,—Does "Fiat Justitia" in your January 12 issue desire your readers to infer that this Labour Member, so generously advocating the cause of the "Architectural Assistant" class, has been misled by one of its members, because if even one statement made were proved to be "exaggerated" or "unfounded" all others would remain under suspicion? But I find a marked unanimity of opinion existing in the numerous letters that have appeared for a considerable period, not only in your valuable medium, but also in the *Civilian* and other journals to which I would refer your correspondent; and I do not consider the statements I have read can be so described; and, seeing that the class is numerically small, it cannot be the expression of the "small minority," as he avers. But perhaps my own opinions as an onlooker for more than fifteen years, and in more than one branch, may have some weight. I have known the class termed "Junior Assistant Architects" long before any of the present generation existed, even as "Draughtsmen," and I have certainly not observed the "harmony" "Fiat Justitia" speaks of. I have observed, however, the absence of spirit displayed by the unestablished men, even the seniors, when ordered to do certain work which the chief has given to the established juniors to do themselves, who appear to imagine that establishment, amongst other things, gives them the power to act thus; although I must say I know of nothing in the regulations to this effect, and I have more than once expected to see it resented. But, for this purpose, they have been suitably impressed with the word "temporary." Also I have observed their "prescriptive right" to occupy, for the greater portion of the official day, a certain pattern of the chief's carpet, if he is there, with the object of the exclusion of the other class, who, until a few years back, took their instructions direct from him.

I believe the Architectural Assistant class feel strongly that justice would not have been withheld from them until now, in establishment and better pay, if this other class had not been willing so to act, and thus obtain by one leap a position over the heads of these seniors. This knowledge cannot readily be effaced even by the present overtures of their "sympathy."

The fact that the Junior Draughtsmen (afterwards Junior Assistant Architects) have been in most cases taught by the Senior Draughtsmen (now "Architectural Assistants") has been known and stated all these years, and this is the first time I have known it denied. I don't know who else there would be, unless it be the chief of the branch!

But I am glad to agree with "Fiat Justitia" as to the justice of the claims of the "Architectural Assistants" class, and it is to be deplored if anything is being done to jeopardise his individual efforts on behalf of the cause, which, we are assured, he is "trying to advance." TECHNICAL CLERK.

SIR,—When reviewing the answer given by Mr. Dudley Ward, representing the First Commissioner, in the House of Commons on November 24 last, who promised "to consider establishments for a professional class, numbering forty, termed 'Architectural Assistants,' employed for years past in his department," he spoke of "the consequent sacrifice of income demanded by the regulations" when passing from the unestablished to the established ranks, to pay for pensions, etc.; it should be understood that the "Assistant Architects'" Civil Service examination (the present unsatisfactory method of recruiting the established professional class) was altered from an open to a nominated one restricted to "Draughtsmen" in the department, in 1902, by reason of the inferior artistic material previously obtained, but by which, of course, all the present heads of the Architects' Division have entered, and that this was to be regarded as an opportunity expressly intended in future as some recognition of the efficient services of the "Senior Draughtsmen" class (termed "Architectural Assistants" since 1907) who were in receipt of 165*l*. and upwards per annum, and the salary was fixed for the successful candidates at 150*l*. per annum (subsequently 200*l*.), and so the Treasury rule referred to would have been met to the extent of 15*l*. or more. But, seeing that these senior men whilst engaged upon their daily duties had already been most thoroughly examined for years past by their Board, they naturally expected establishment without further test, and did not respond to the invitation to be nominated; and so for the past ten years the Treasury rule has been ignored by the department, for "Junior Draughtsmen" have been nominated mostly with short service (some only just attained the minimum age of twenty-three and some with only six months' service), and the successful ones have thus had their salaries increased, not diminished, and to the extent of some 70*l*. to 120*l*. per annum plus their pensions, etc.

Thus we observe the anomalous feature of a junior leaving one week-end at the rate of 30s. and returning the following week at 4*l*. plus "extras" to do the same work for the same employer. Is this consistent with true business method or common sense? *Ipso facto*, he was either underpaid before or overpaid after.

But the "Architectural Assistant" class look to their First Commissioner for justice when placing them upon the established list (and for precedent one of this class was established last year without "sacrifice") by a sympathetic consideration of the past injustice meted out to them, in the manner now recorded, and their long professional service with inadequate pay, to merit at the least equivalent rank with the "Assistant Architects'" class, constituting an increase to the majority and not a sacrifice of their incomes. JUSTICE.

[*** This correspondence must now cease.—ED.]

Skeleton-Frame Buildings.

SIR,—We shall be glad if you will kindly allow us the use of your columns in order to make an announcement that will, we feel sure, be of considerable interest to architects and others concerned in steel-frame buildings.

It is enacted in sect. 22 of the London Building Act (Amendment) Act of 1909 (9 Edward VII., cap. cxxx.) that, when it is proposed to erect a skeleton-frame building, copies of all the plans, sections, and calculations in detail shall be deposited with the district surveyor.

As it will manifestly be convenient alike to the architect, engineer, and district surveyor that these drawings and calculations shall be submitted upon a uniform basis, thus greatly reducing the labour of making and checking the calculations, the District Surveyors' Association (Incorporated) have, with the co-operation of the Science Standing Committee of the Royal Institute of British Architects and others, drawn up a scheme to be adopted by persons depositing plans, sections, and calculations with the district surveyor.

This scheme is now completed, and copies may be obtained of the Association's publishers, Messrs. Merritt & Hatcher, Ltd., 2, Grocers' Hall-court, E.C., price 2s. 6d. net.

The scheme provides for a uniform system of nomenclature, the adoption of uniform symbols, and uniform calculation sheets for pillars, beams, and foundations. It also contains the formulæ necessary for making the calculations, a schedule of weights of materials, and a number of tables of value. Samples of the various forms are attached.

(Signed) WILFRED J. HARDCASTLE, President,
BERNARD DICKSEE, Hon. Secretary,
District Surveyors' Association (Incorporated).

Dorton House, Bucks.

SIR,—I noticed in the Appendix No. I. of Mr. A. T. Bolton's list of dates on Jacobean Architecture in your issue of December 22 that the date of Dorton House, Bucks, is not ascertainable. I find on looking up the history of Dorton House that it was erected in 1627 upon foundations of an earlier structure.

The church which stands in the grounds is of the Decorated period. HUGH ROWDON.

INTERCOMMUNICATION COLUMN.

Workmen's Compensation and the Insurance Act.

SIR,—I should be glad if you can give me any information on one or two questions.

First of all, I am a bricklayer, and when I have not a job as foreman I sometimes take sub-let work. Now, I have an offer of a job—a good large one in London—and I am desirous of knowing if I should be responsible under the Workmen's Compensation Act (as sub-contractor for labour only), or if the contractor would be responsible for insurance against accident; if I should, could you give me the name and address of a good office.

Secondly, should I, as sub-contractor, be responsible for the employers' contributions, sickness and unemployment, to the national scheme? I take it that I should.

DAVID J. EAST.

[*** It is impossible to answer your question with any exactitude without knowing the exact terms of the contract under which you will be engaged. If you not only supply the labour, but the men are under your control, and are paid by you, you would appear to be an employer within the meaning of the Workmen's Compensation Act, and liable to pay compensation to an injured workman, or, if he claims compensation in the first instance from your principal, you may be liable to indemnify him under sect. 4. Therefore, if you exercise any independent control over the men you should insure. We cannot advise you by naming any particular office. Nearly all the old-established insurance companies undertake this branch of insurance on moderate terms. With regard to your second question, the Insurance Act does not come into force until July 15 next, and may be postponed to a later date by Order in Council. As regards health insurance, in determining who is an employer liable to pay contributions, the same considerations appear to arise as under the Workmen's Compensation Act, the power of control, power to select and appoint, power to dismiss and payment of wages; but in the case of employment insurance, regulations may be made by the Board of Trade under sect. 91, sub-sect. (f), which may affect this liability.—ED.]

EDITORIAL SUMMARY.

A critical review of the R.I.B.A. prize designs is given in our leading article.

In Notes Column (p. 86) will be found observations on : "Colour as Applied to Decoration" ; "The R.I.B.A. 'At Home'" ; "Wood Engraving" ; "Hampton Court Palace" ; "The Royal Academy Lectures on Sculpture" ; "The Carpenters' Hall Lectures" ; "New Zealand Parliament Buildings."

Three sketches by Alfred Stevens appear in this issue (pp. 88 and 89). They are given in connexion with Mr. E. F. Strange's lecture before the Architectural Association last week and printed in our last issue.

At the meeting of the Royal Institute of British Architects on Monday two papers were read on "Colour as Applied to Architecture," by Sir Alfred East, A.R.A., and Mr. Edgar Wood. At the same meeting the announcement was made of the names of the successful students in the annual competition for prizes and studentships (p. 88).

Book notices (p. 92) include : "Cathedrals of Spain" ; "Penmanship of the XVIth, XVIIth, and XVIIIth Centuries."

In Correspondence columns (p. 92) are letters on : "The Policy of the R.I.B.A." ; "Skeleton-Frame Buildings" ; "Architectural Assistants and the Office of Works" ; "The Clerk of Works and H.M. Office of Works" ; "Dorton House, Bucks."

Notices of meetings of architectural societies (p. 94) include : "Nottingham Architectural Society" ; "Manchester Society of Architects" ; "Leicester Society of Architects."

Our Monthly Illustrated Review of Engineering (p. 97) includes : "Reinforced Concrete in Great Britain"—I., by Mr. W. Noble Twelvetrees ; "Regent-street Polytechnic—III." ; "Reinforced Concrete Applied to Buildings" ; and Notes.

The Building Trade Section (p. 101) includes : "The Institute of Builders' Dinner" ; "Government Contracts" ; "The London Building Trade" ; "Projected New Buildings in the Provinces" ; "Applications under the Building Act, 1894-1909" ; "Mahogany and Hardwood," etc.

A meeting of the Surveyors' Institution was held on Monday, when a paper was read, entitled "An Evening in the Institution Library" (p. 105).

The Tribunal of Appeal under the London Building Act sat on Monday to consider further the appeal by Messrs. W. G. Allen and H. G. Norris against the certificate of the Superintending Architect of Metropolitan Buildings defining the general line of buildings on the western side of Fulham Palace-road. A report appears on p. 106.

Our Law Reports (p. 107) include : "Ramsden & Carr *v.* J. Chessum & Sons"—building dispute ; "Hallett & Langdale *v.* Cowdell"—building ownership dispute.

MEETINGS.

FRIDAY, JANUARY 26.

Royal Institution.—Professor B. Hopkinson, M.A., F.R.S., M.Inst.C.E., on "The Pressure of a Blow." 9 p.m.

Battersea Polytechnic (Lectures on Illuminating Engineering). Mr. J. S. Dow, B.Sc., on "Shades and Reflectors." 7.30 p.m.

Leicester and Leicestershire Society of Architects.—Mr. H. F. Traylen on "The Architecture of Stamford." Lantern illustrations. 8 p.m.

SATURDAY, JANUARY 27.

Architectural Association.—Visit to the New Polytechnic, Regent-street. 2 p.m.

The Builders' Foremen's Association.—Eighteenth annual dinner, Holborn Resturant, King's Hall, W.C. 6.30 p.m.

MONDAY, JANUARY 29.

Architectural Association (Combined Meeting with the Camera, Sketch, and Debate Club).—Paper by Mr. A. G. R. Mackenzie, entitled "That Modern House Planning Tends to be Over-Elaborate." 7.30 p.m.

Royal Academy of Arts.—Professor W. R. Colton, R.A., on "Ideals and Ethics of Sculpture"—III. Lantern slides of ancient and modern works. 4 p.m.

Royal Society of Arts (Cantor Lectures).—Mr. Vaughan Cornish, D.Sc., on "Ocean Waves, Sea-Beaches, and Sandbanks"—II. 8 p.m.

Royal Sanitary Institute.—Mr. Charles Porter, M.D., B.Sc., on "Sanitary Law (a) : Introductory Remarks," etc. 7 p.m.

Manchester Society of Architects. Mr. Raymond Unwin on "The Town Extension Plan." 8 p.m.

University of London (Victoria and Albert Museum).—Mr. Banister Fletcher on "Spanish Renaissance Architecture." 5 p.m.

TUESDAY, JANUARY 30.

Royal Society of Arts (Colonial Section).—Mr. W. A. Legg on "Irrigation in South Africa." 4.30 p.m.

Northern Polytechnic Institute (Lectures on Illuminating Engineering).—Mr. F. M. Denton on "The Production of Electric Light and its Distribution."

Nottingham Architectural Society.—Mr. Arthur Marshall on "Pencil Sketching." 8 p.m.

University of London (British Museum).—Mr. Banister Fletcher on "The Roman Thermæ." Lantern illustrations. 4.30 p.m.

The Institution of Civil Engineers.—Paper, "The Central Heating and Power-Plant of McGill University, Montreal," by Mr. R. J. Durley, B.Sc., Ma.E., M.Inst.C.E. 8 p.m.

WEDNESDAY, JANUARY 31.

The Carpenters' Company (Lectures on Arts Connected with Building).—Professor Beresford Pite on "London : an Architectural Syllabus." 7.45 p.m.

Royal Sanitary Institute.—Mr. Charles Porter, M.D., B.Sc., on "Sanitary Law (b) : Public Health (London) Act," etc. 7 p.m.

Incorporated Institute of British Decorators (Painters' Hall).—The drawings submitted in competition for the Travelling Studentship will be exhibited. The awards will be announced and the meeting addressed by Sir William Richmond, K.C.B., R.A. 8.30 p.m.

THURSDAY, FEBRUARY 1.

Royal Academy of Arts.—Professor W. R. Colton, A.R.A., on "Ideals and Ethics of Sculpture"—IV. Lantern slides of ancient and modern works. 4 p.m.

Society of Antiquaries.—8.30 p.m.

FRIDAY, FEBRUARY 2.

Royal Sanitary Institute.—Mr. Charles Porter, M.D., B.Sc., on "Sanitary Law (c) : Factory and Workshop Acts," etc. 7 p.m.

Glasgow Technical College (Architectural Craftsmen's Society). Mr. J. A. Lanchlan on "A Cistercian Monastery." 8 p.m.

Battersea Polytechnic (Lectures on Illuminating Engineering). Mr. J. S. Dow, B.Sc., on "Daylight and Artificial Lighting Compared." 7.30 p.m.

The Institution of Civil Engineers.—Lecture on "Steam-Turbines : Some Practical Applications of Theory," by Capt. R. Riall Sankey, R.E., M.Inst.C.E. 8 p.m.

SATURDAY, FEBRUARY 3.

Aberdeen Architectural Association.—Paper by Mr. A. J. Wood, entitled "Under Italian Skies." Illustrated. 7.30 p.m.

ARCHITECTURAL SOCIETIES.

Manchester Society of Architects : Construction and Design.

On Wednesday, the 17th inst., Sir Charles A. Nicholson, Bart., read a paper on "Construction and Design." The President, Mr. Edgar Wood, occupied the chair.

Good construction and good design, Sir Charles Nicholson said, are equally necessary elements of our art, and therefore it is worth while to turn our attention to well-known buildings where the union of the two elements can be easily followed. He would confine his remarks that night to Gothic work. One point became obvious, that, as cathedrals were built in a leisurely way, each section, and even each bay, had to be structurally independent and self-supporting. Norman buildings lent themselves to this gradual method, but in Gothic structures strong temporary abutments had to be provided. The weakness of Norman buildings was due to the bad material rather than to thrusts ; the collapses of Winchester, Chichester, and Ely towers were due to this cause. The weakness of Gothic structures was that they were maintained in a precarious state of equilibrium which approached instability.

Sir Charles then proceeded to very minutely analyse the development of Gothic construction, first as regards the relation of buttresses to the vaults they supported, then as to the development of the vaults themselves, and finally the evolution of the apse plan, paying special attention to the parallel process of evolution in England and France. Many points of interest in the construction of Wells Cathedral were instanced, and a section of the tower which was thrown on the screen was specially interesting, showing how the upper stages had been built as light as possible, and how the piers below had been strengthened by the well-known Strainer arches and the solid rood-screen, and how the tower was latterly stiffened by the filling up of the long lancet windows of the lantern. The ingenious way of augmenting the thrust of the eastern flying buttresses was illustrated ; the lower portion of the buttresses, which are received by the slender marble shafts in the Lady Chap are built with courses oversailing towar the west. After a survey of the period fan vaulting, the lecturer came to t application of the principles which could discern in the old work to mode construction. How modern materials shou be treated was a question still awaitin solution. Slides of ferro-concrete buil ings, where the concrete was honestly show and the monolithic nature of the structu expressed, were shown and much appreciate by the audience, most of whom recognise Sir Charles's own work in Jamaica. In co cluding, the lecturer said that the prese generation of architects was capable evolving artistic solutions of each fresh co structive problem that arose, but they shou make use of the large supply of knowled to be gained from the stupendous works the old masters of our art.

Leicester Society of Architects.

The 1912 session of this Society w opened at the Society's Rooms in S Martin's East on the 19th inst. The Pres dent, Mr. W. M. Cowdell, F.R.I.B.A., w in the chair, and gave an interesting a dress. He alluded with regret to the rece illness of the late President, Mr. Keites, ar expressed thanks to Mr. Keay for the attra tive programme which had been arrange for the session, and also thanked the Ho Secretary, Mr. Clement Stretton, for th earnest and thorough work he had done f the Society. He alluded to the fact that member of the Society, Sir J. Tudor Walter had received the honour of Knighthood. H congratulated Messrs. J. B. Healing, Wilfre Oxley, F. H. Morley, and C. J. M. Cowde on their success in the R.I.B.A. Final Exam nation, qualifying for Associateship of th Institute, and hoped that all their name would shortly be enrolled. Proceeding, M Cowdell drew attention to what had bee termed "the new responsibilities of arch tects" in view of recent decisions as to th relative legal liabilities of architects an builders in regard to defects in building and, after briefly dealing with certain the points that had been raised, hoped tha later in the session the members might hav a discussion upon the subject. In conclusion Mr. Cowdell drew attention to two interes ing drawings which were exhibited in th room. These were two of the contract draw ings made by the late Mr. F. W. Ordis when he extended the Corn Exchange an built the flight of steps in front of i They had, he said, been in his possessio over twenty years, and he only discovere them accidentally the other day. The ad dress was followed by a musical evenin arranged by Mr. A. H. Hind, A.R.I.B.A and Mr. W. H. Riley, A.R.I.B.A.

Nottingham Architectural Society : Visit to New Bank Premises.

Messrs. A. N. Bromley, F.R.I.B.A., an H. G. Watkins, A.R.I.B.A., architects, o January 16 invited the members of th Architectural Society to inspect the new premises for the National Provincial Bank Ltd., now nearing completion, at the corne of High-street. Twenty-three members an friends accepted the invitation. M Bromley first of all explained the plans, an pointed out the principal difficulties in con nexion with the scheme and the manner i which they had been overcome.

The peculiar shape of the site necessitate special arrangement of planning, and th ancient lights of the adjoining propertie had also to be considered. The foundation were honeycombed with the rock cellars o the former building, the main walls in place having to be taken down about 20 ft. t reach a solid foundation. The architect decided to carry out the whole of the fron as one continuous design, and when th weather has toned the newness down a littl the columns and carvings will, of course show to better advantage even than a present.

The principal entrance had necessarily t be at the corner of High-street and Smithy row, which, unfortunately, faces north, bu the draught is cut off by means of a porch Swing doors were considered too draughty and, therefore, the doors are arranged so a to throw the incoming air towards th radiators. Another difficulty was that th sewer in High-street was not deep enough t

drain the lavatories, etc., in the basement without these being kept higher than originally intended, and a special arrangement is put in to prevent flooding the basement in time of storms.

The ground floor is occupied by the bank, and the manager's room is placed on this floor, enclosed with glass panels and a glass ceiling to keep out noise. There being very little light obtainable from the side and back owing to the proximity of the adjoining buildings, a glass dome has been erected, and forms a very pleasing feature. To prevent down draughts the dome is double.

The interior of the bank is very striking and is most tastefully designed. The walls are lined with grey and green marbles, and the floor with marble slabs. The beams of the ceiling are covered with fibrous ornamental plasterwork, and the woodwork is polished mahogany. All the fittings are of bronze, specially designed. In the basement are the strong-rooms, clerks' mess-rooms, lavatories, heating apparatus, etc. There are various offices over the bank premises, and a caretaker's suite of rooms above these.

The front has been built in Portland stone. The floors are fireproof concrete, and the window-frames on the ground floor are teak.

The contractors are Messrs. Dennett & Ingle, and the fibrous plaster enrichments to the ceiling and the wood and stone carvings have been done by Mr. G. Seale, of London. The bronze fittings were supplied by Messrs. Spittal & Clarke, of Birmingham, and the electric lighting by Mr. H. T. Hazledine, of Nottingham.

Mr. A. E. Heazell, on behalf of those present, thanked Messrs. Bromley & Watkins for giving them the opportunity to see the plans and the building, and especially thanked Mr. Bromley for personally explaining the various features and conducting them round. Mr. H. Gill seconded.

Mr. Bromley then took the party to Messrs. Griffin & Spalding's on Long-row, where very extensive alterations and additions have been recently carried out from the designs of Messrs. Bromley & Watkins by Messrs. Fish & Son, contractors. The difficulty here was to bring the varying floor levels (due to the steep incline of Market-street) into the general scheme and to obtain light. This has been successfully accomplished, and the long lantern lights form a very pleasing feature.

A very interesting afternoon concluded by Mr. Bromley inviting the visitors to join him at tea in the new tea-room.

Glasgow Technical College Architectural Craftsmen's Society.

At a meeting of the Technical College Architectural Craftsmen's Society, Glasgow, Mr. James S. Boyd in the chair, a lecture was given by Mr. James McKissack on "Rothenburg on the Tauber and other Bavarian Towns." The lecturer gave a general description of Bavaria, the situation and method of reaching the various towns. A great number of excellent slides were shown, proving its claim to be called a "City of dreams and fairy hills," rich in architectural and historic associations. The lecturer also gave a short description of other interesting towns, including Hamburg, Dinkleshull, etc.

ILLUSTRATIONS.

Voor Linden, The Hague.

THIS house is situated about four miles from the Hague in a charming setting of characteristic Dutch landscape. The estate is enclosed on the east and west by a belt of trees. The north is broken by a variety of fine old trees giving an irregular effect. To the south is a large meadow intersected by dykes, and a winding stream of ornamental water. The view is relieved by the distant woods. The house built in the Georgian period; the walls are of thin, hand-made Dutch bricks in two colours, the quoins being light red and the remainder dark red, laid with a light mortar joint. The arches over windows and doors are of hand-made tiles 1 in. thick. The roofs are covered with rough, hand-made tiles supplied by Messrs. Collier, Reading. The main entrance is treated with stone dressings of a fine-grained, mellow cream colour oolitic free stone from France.

The accompanying plan shows the ground-floor accommodation and part of formal garden. The staircase and all the decorative work of the great hall is of fumed oak, and is lighted by a dome.

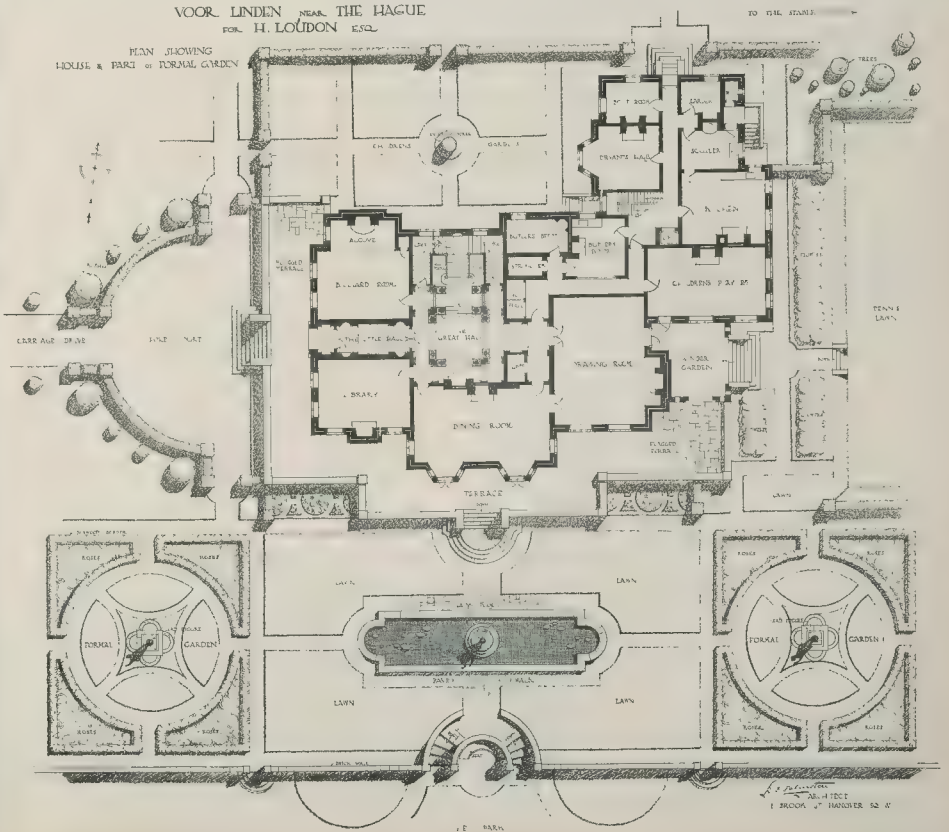
There are four suites of bedrooms with their bath and dressing rooms on the first floor, also nurseries, linen pantries, store cupboards, and the usual offices. On the second floor there is good bedroom accommodation, the laundry also being on this floor; an electric lift communicates with all floors. A central heating installation is provided for in the basement.

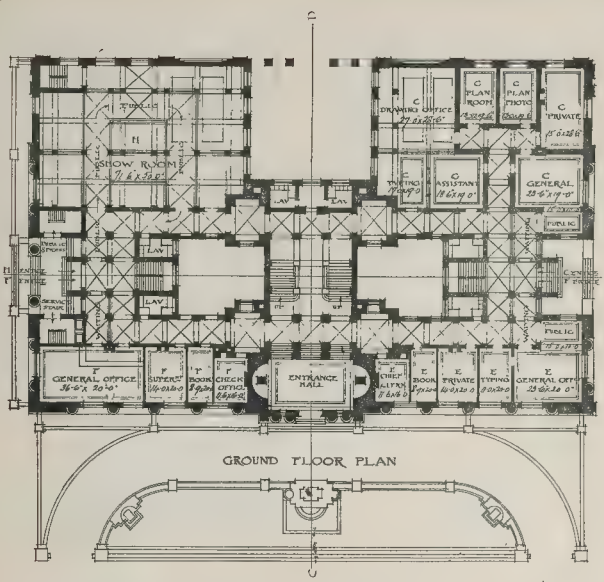
The stables, cottages, and garage buildings on the estate have been designed so as to be in keeping with the house.

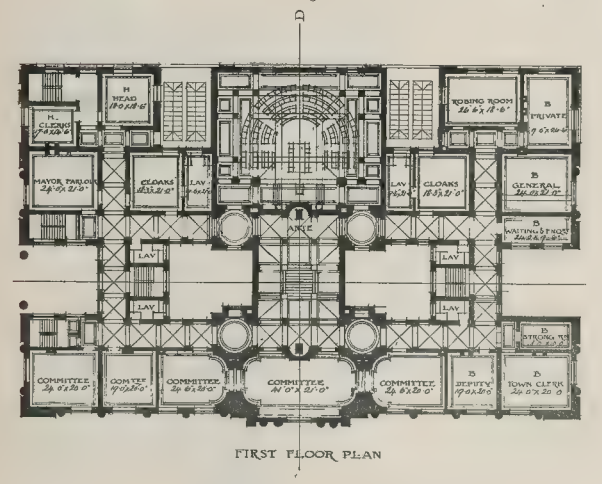
The builder is Mr. H. F. Boersma, The Hague; clerk of works, Mr. John Davies. The bills of quantities have been prepared by Mr. S. L. Gowland, London. The architect is Mr. R. F. Johnston, Brook-street, Hanover-square, W

Designs for the Municipal Buildings, Marylebone.

FULL reference was made in our issue of December 8 to the competition for this building. We illustrate a design submitted by Messrs.







Design for Marylebone Municipal Buildings.

By Mr. S. Woods Hill, A.R.I.B.A.

Thos. S. Tait, James S. Whitelaw, and Cecil A. Sutton. A.R.I.B.A., who write as follows :—

"In designing the elevations of this building the authors endeavoured to make them genuinely expressive of the plan. The equal distribution of the piers throughout the plan is truthfully announced in all the elevations, thereby obtaining unity in the external treatment. The two important floors are emphasised externally by the larger order, whilst the suites of the main rooms are farther accentuated by raising the roof throughout the entire length of the main façade to Marylebone-road. A large pedimented central projection agreeably declares the position of the chief reception-room and the main entrance underneath; this portico is considerably wider than the pedimented ends, thereby forming a dominant note in the whole composition. The ½-in. scale detail is of one of the pedimented ends of the main building, and contains the entrance for the rates department. The relation of this detail drawing to the complete elevation to Gloucester-place is shown by the accompanying small-scale drawing.

It was found to be quite impossible to make the council chamber a feature visible from the main frontage, as the ancient lights prevented the council chamber from appearing above the top of the main roof. It was also felt that a tower was undesirable on so small a building, as such a feature would be entirely dwarfed by the very high adjoining buildings.

Internally the same height of column used in the reception-rooms is used in the council chamber, but here the order stands on a high podium at the level of the spectators' gallery. This increased height gives added dignity, and is in harmony with the greater depth in the curved ceiling of council chamber.

The lavatory accommodation is grouped in the large wells on either side of the main staircase.

The service stairs are placed near the four corners of the building, thereby obtaining rapid and easy communication to the various departments."

We illustrate also the design sent in by Mr. S. Woods Hill, A.R.I.B.A., who writes :—

"The author felt that adequate access for carts to the back of the buildings should be a predominating factor in the scheme. The plan was, therefore, disposed so that all stores, coal, coke, electrical fittings and apparatus, borough surveyors' samples, contaminated food, etc., could be dealt with at a point as nearly central as possible within the building.

Little more need be said, but that the entrances to the various departments were grouped together round a recessed portion at either end of the building.

The rest of the scheme follows the obvious arrangement of a good central staircase with the committee-rooms and council chamber at front and back of same respectively."

FIFTY YEARS AGO.

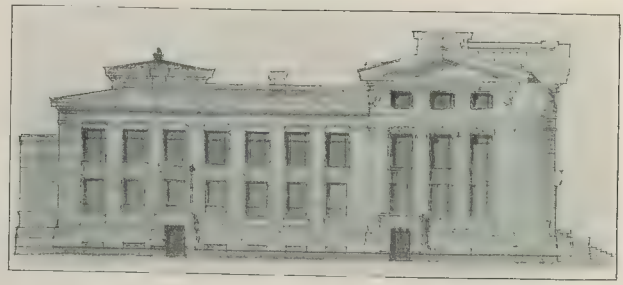
From the *Builder* of January 25, 1862.

London on the Thames.

"THAMES, the most loved of all the Ocean's sons," has got into a sad mess; dirty is his bed, and squalid are his banks. We have made a few sketches to show what is the actual aspect, on the river, of—

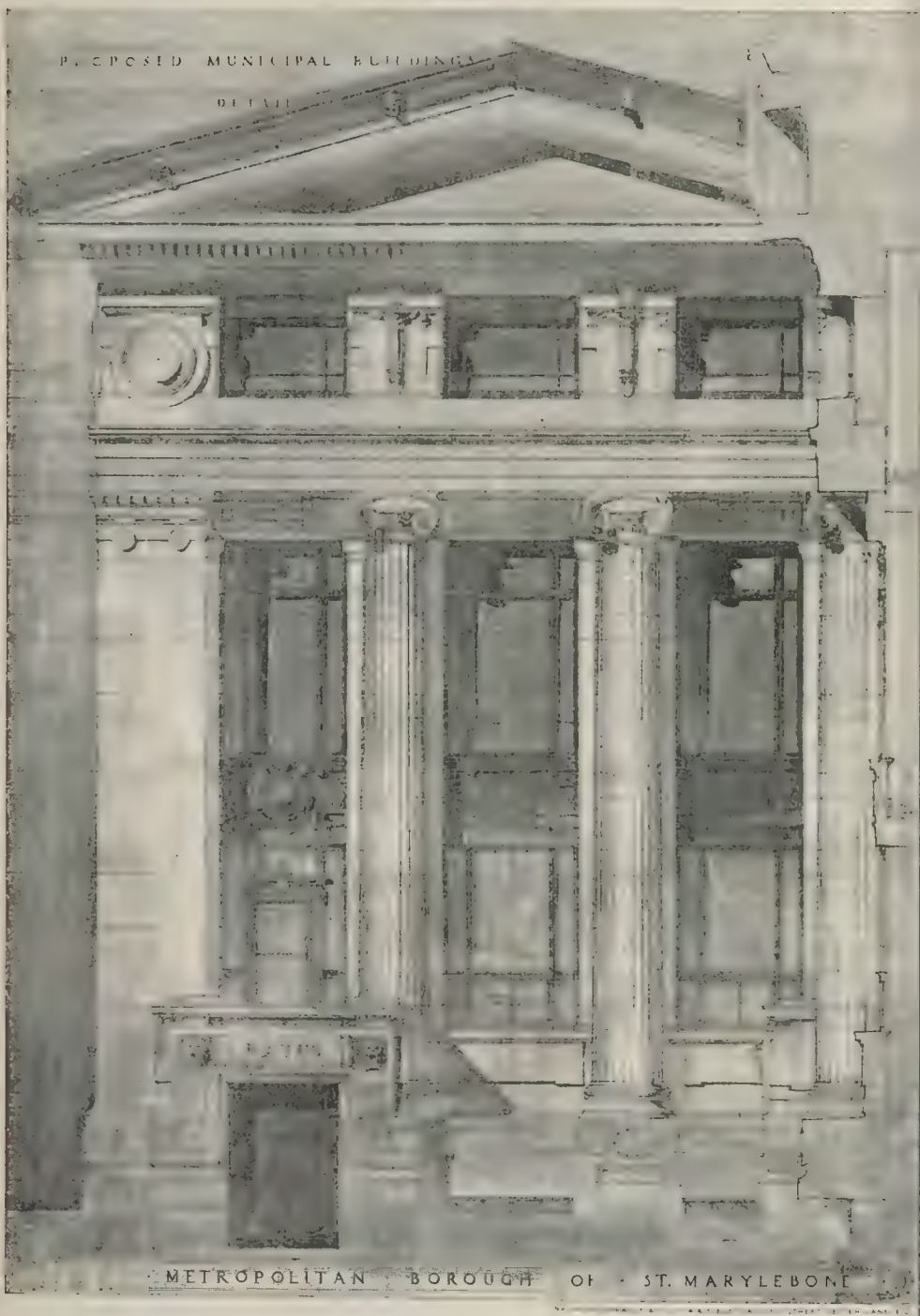
"The glorious city,
Which holds the fair, the rich, the gay, the witty."

Before long now Parliament will be asked to settle something as to the embankment; and doubtless before the next summer has passed the work will be commenced, we hope, on both sides of the river, and that in the course of a short time we shall have a clearly defined and substantial margin to our great river, and a roadway extending on the north from Westminster to the Tower and on the south throughout such a distance as will afford the required convenience and prevent the damage which is caused by floods. In arranging this matter there should be no half-measures. To stop short on the north side, as is proposed by some, at Blackfriars Bridge, would be a mistake, for independently of other considerations a better roadway along the part of Thames side, which leads from Blackfriars to Tower-hill, is most necessary for the accommodation of the present large and constantly increasing traffic. From morning till night these narrow streets are choked. In the vicinity of the Custom House and Billingsgate the confusion is generally so great that it is not easy for even foot passengers to make their way.



Design for the Marylebone Municipal Buildings: Side Elevation.

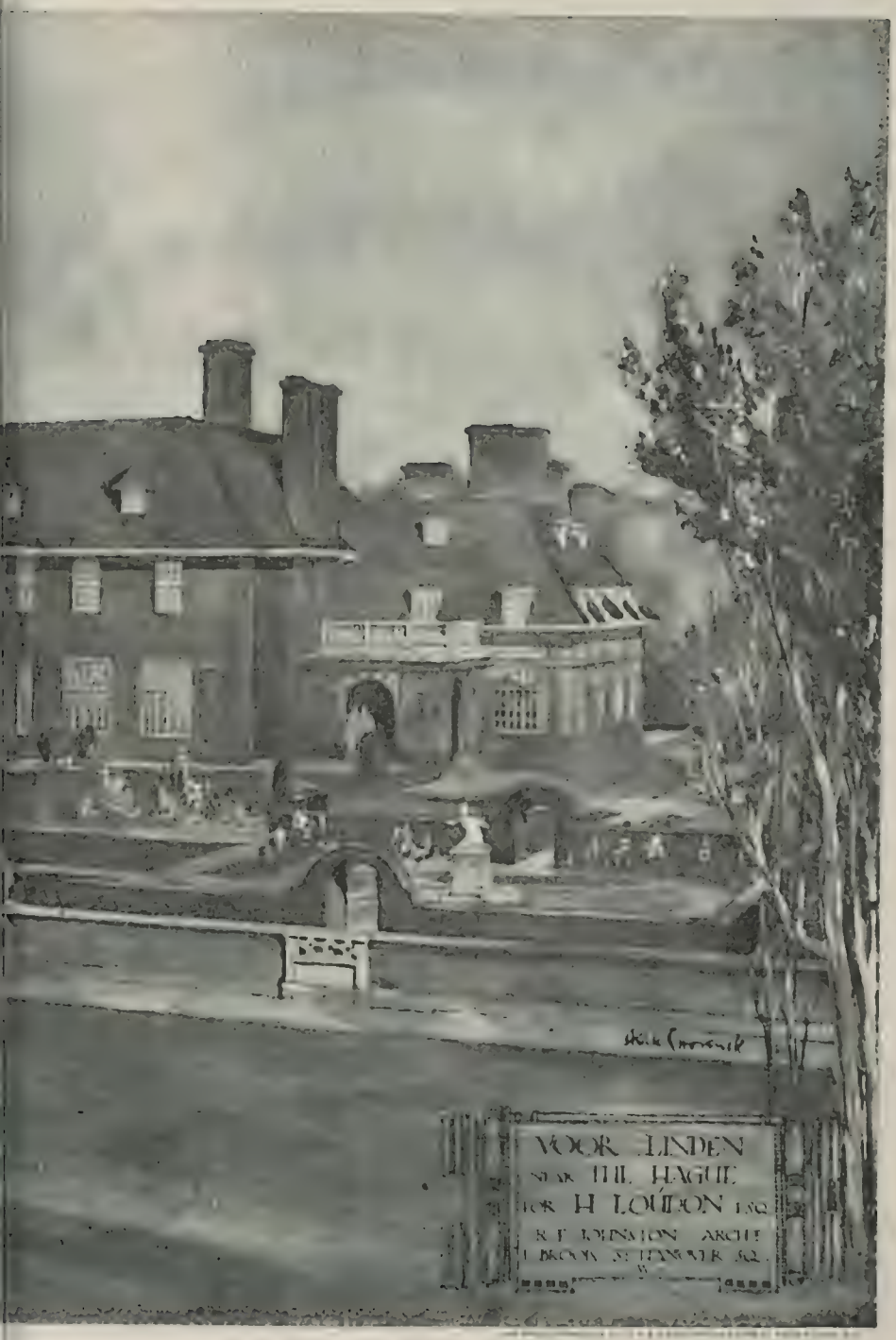
By Messrs. Tait, Whitelaw, & Sutton.



MARYLEBONE MUNICIPAL BUILDINGS COMPETITION.—Detail of Design by Messrs. Tait, Whitelaw & Sutton.



VOOR LINDEN NEAR THE

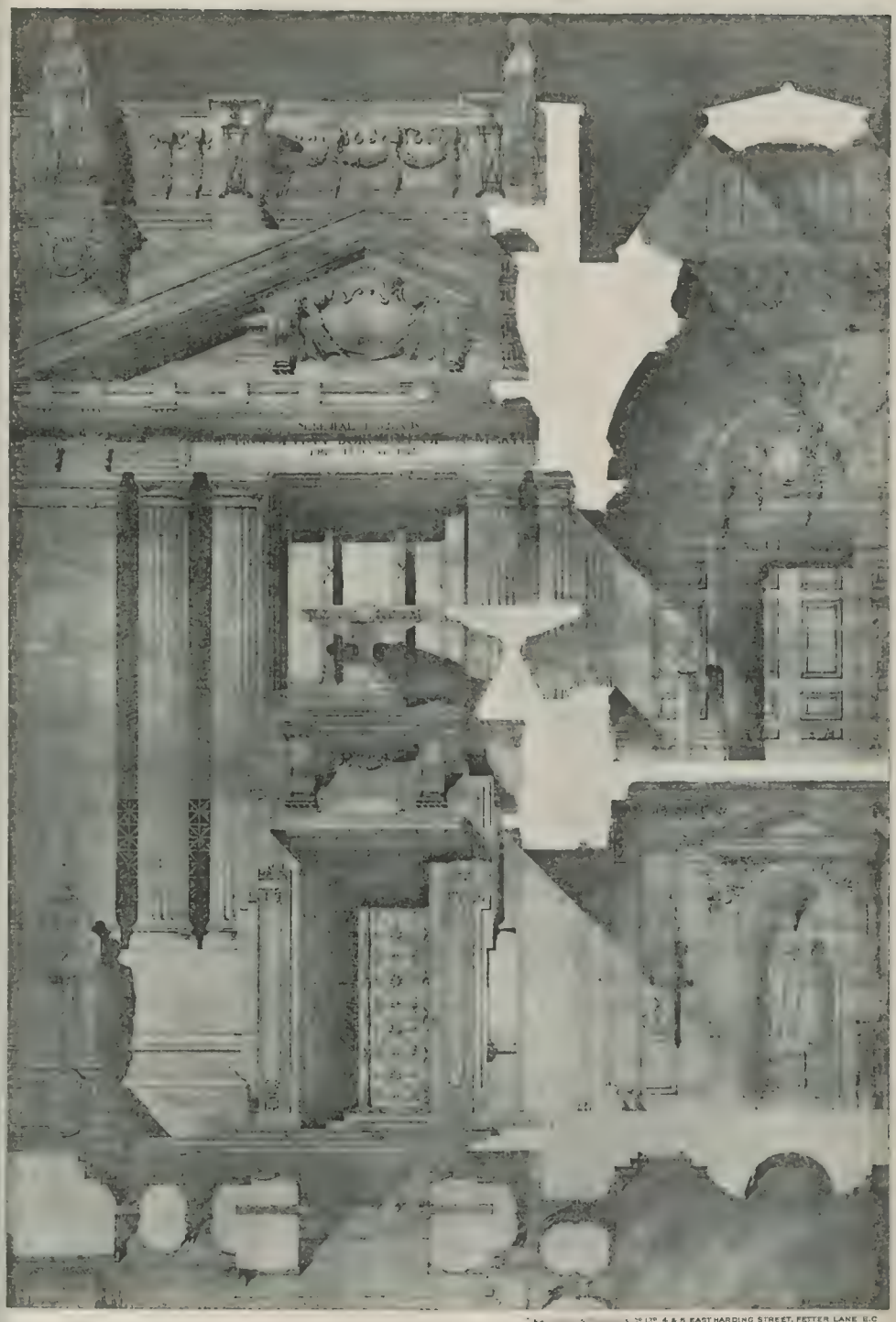


Robert F Johnston, Architect.





VOOR LINDEN, NEAR THE HAGUE.—Mr. Robert F. Johnston, Architect.



MARYLEBONE MUNICIPAL BUILDINGS COMPETITION.—Detail of Design by Mr. S. Woods Hill, A.R.I.B.A

MONTHLY REVIEW · *of* · ENGINEERING.

REINFORCED CONCRETE IN GREAT BRITAIN.—I.

By W. Noble Twelvetrees.

Introduction.

As far back as the early years of the XIXth century the idea of strengthening cast-iron and wrought-iron structures by the addition of concrete, or of strengthening concrete structures by the addition of iron, was suggested and applied in practice by certain British architects and engineers.

The general principle thus originated seems to have been neglected in this country at the period of which we write, although the hint was taken by Continental and American constructors, with the result that buildings and other structures began to be erected in a crude form of reinforced concrete.

About the middle of last century several clearly-defined systems made their appearance abroad, some probably having been developed from the first British suggestions, and others due to the initiative of the inventors concerned.

The history of reinforced concrete as a structural material and reinforced concrete construction as a system of building construction has been so frequently told that readers need not be wearied by its reiteration in the present series of articles. Attention may be directed, however, to some pioneer patents in the United Kingdom which show that reinforced concrete, properly so termed, is by no means a new thing in this country.

In his patent of 1854 Wilkinson, of Newcastle-on-Tyne, describes the use of iron rods or ropes embedded in concrete for withstanding tension. The drawings accompanying the specification show the manner in which the inventor anchored the ends of the reinforcement to obviate the risk of slipping as the result of longitudinal shear when the reinforced concrete was under flexure. Thus it will be seen that Wilkinson clearly grasped the principles underlying genuine reinforced concrete construction. In his 1855 patent François Coignet describes a form of concrete, termed "béton Coignet," and a method of reinforcing floors with iron rods arranged to constitute a network which was carried by iron beams in floors of great span and large area. Matthew Allen, a London builder, obtained a patent in 1862 for flooring reinforced by flat and round bars placed near the lower surface of the concrete so as to form a tension network. This type of floor was used in the Columbia Market, Shoreditch, and elsewhere.

The patent of Brannon, dating from 1871, proposed the employment of reinforcement in the form of a metal skeleton upon which to stretch open wirework. Although the system never came into general use it constituted an anticipation of later patents, based upon the same general idea, which, however, cannot properly be regarded as conveying with the principles embodied in reinforced concrete proper.

Joseph Monier, to whom a British patent was granted in 1883, was a noteworthy pioneer on the Continent, but is known merely by name in this country, where his system never took root.

François Hennebique, whose first British patent dates from 1892, deserves credit for the extensive development of reinforced concrete in numerous countries, his efforts having been ably seconded by the late Mr. L. G. Mouchel, by whom the Hennebique system was introduced into the United Kingdom in 1897.

When the practicability of reinforced concrete had been firmly established several systems, previously employed on the Continent and in America, were introduced here, and subsequently some systems of British origin have evolved, the position at present being that architects and engineers have available for selection numerous methods of applying concrete and steel in the combination now generally termed "reinforced concrete."

Some of the methods involve the acceptance of systems, properly so called, where ordinary commercial forms of steel are utilised and which represent special arrangements of the reinforcement. Others, again, depend upon the use of steel rolled or otherwise manufactured in distinctive forms, for which certain advantages are claimed.

The selection of the most appropriate system for any given class of structure is not an easy task unless the architect is well grounded in the theory and practice of reinforced concrete, and the difficulty of choosing wisely is rendered somewhat more difficult than it would otherwise be by the handbooks which are issued by most of the firms concerned. As a rule, these books are very ably written, and the only conclusion to be drawn from careful study of them is that each system must be better than all the others. So confusing are studies of this kind to the inexperienced that we have known cases where two or more systems have been combined, and in one instance an architect acting on his own initiative designed the main and secondary beams for the floors of a building with reinforcement consisting of rolled steel joists and two patented types of reinforcing bars. The hope that a triple factor of safety would be secured by this multiple use of advantageous reinforcing elements was not realised, for the flooring proved unable to carry its own dead weight.

As a preliminary to the consideration of reinforced concrete systems and patented auxiliaries, it may be convenient to state briefly the more important facts to be borne in mind by the architect concerning the nature of reinforced concrete itself.

Reinforced concrete may be defined as the combination of concrete and steel in such manner that the most valuable properties of each constituent are utilised to the greatest possible advantage.

Well-made concrete offers great resistance to the transmission of heat and sound, is impenetrable by water and moisture, is one of the best fire-resisting materials known, and instead of deteriorating under atmospheric influences actually improves with continued exposure. Therefore it is an ideal building material, well adapted for the protection of steel, which, as our readers are aware, is very deficient in respect of all but one of the above-stated properties.

The use of concrete for the protection of steelwork is quite justifiable, but it must be clearly understood that a concrete-sheathed steel structure does not represent reinforced concrete, and would be more appropriately designated reinforced steel.

Concrete is relatively strong in compression and weak in tension, while steel is of approximately equal strength both in compression and in tension.

Volume for volume, concrete costs about one-fiftieth the cost of steel.

Area for area, steel will withstand about thirty times the compression and about three hundred times the tension that can be resisted by concrete.

The foregoing data are only applied in designing after certain necessary modifications, but will suffice to show that for equal resistance to compression the cost of concrete is only three-fifths that of steel, and that for equal resistance to tension the cost of steel is only one-sixth that of concrete.

Beams.

The great economy of concrete in compression and of steel in tension account for the economy of beams where concrete takes all compressive stress and steel takes all tensile stress, the most advantageous beam form being one of T-shape, where the concrete in the compression area is relatively of large cross section, and the concrete in the tension area is only of such cross section as will provide for enclosing the steel and insuring the requisite lateral rigidity of the rib.

In the selection and arrangement of steel for reinforcement an important matter is to bear in mind the desirability of concentrating the metal as closely as possible along the axis of tension and to arrange the steel so that the axis of tension shall be at the greatest possible distance from the neutral axis of the beam.

These points are illustrated diagrammatically by Figs. 1, 2, and 3, where it will be seen that the axis of tension for a rolled steel joist, used as reinforcement in the manner adopted in certain types of composite flooring, is considerably nearer the neutral axis of the beam than the corresponding axis for small round bars in two rows and a single row, the axis for the last arrangement being the lowest of the three.

If we take the depth of the beam from the top to the axis of tension the length of the lever arm for the internal forces would be approximately as follows—

Fig. 1	R.S.J.	14½ in.
Fig. 2	4 bars	16¾ in.
Fig. 3	2 bars	18 in.

As shortening of the lever arm involves proportionate diminution of resistance moment the practical disadvantage of any reinforcement type or any arrangement of reinforcing bars having the effect mentioned is quite apparent.

Further, it must be remembered that the permissible working stress for steel in tension would be greatly exceeded below the axis of tension if the steel at that axis in Fig. 1 were allowed to be stressed up to the permissible limit, while at the same time the steel above the axis of tension would work at much below the same limit. Therefore, assuming 17,000 lb. per square inch to be the permissible working stress at the bottom flange of the rolled steel joist, the working stress at the axis of tension would be only about 12,000 lb. per square inch.

Similarly, for the two rows of bars in Fig. 2, the actual stress of about 15,500 lb. per square inch at the axis of tension would correspond with 17,000 lb. per square inch for the bottom bars, while in Fig. 3, the whole of the metal may be taken as working at the mean stress of 17,000 lb. per square inch, the excess in the bottom fibres being permitted by the recommendations of the R.I.B.A. Report and generally sanctioned by other authorities.

We need not weary our readers by calculations which they can easily perform for themselves, but will simply point out that the beam in Fig. 2 is 50 per cent. stronger than that in Fig. 1, and the beam in Fig. 3 is 75 per cent. stronger than that in Fig. 1, neglecting in each case the comparatively small element of strength due to the independent moment of resistance of the rolled steel joist.

Another matter of considerable importance is the quality of the steel involved in the different systems of reinforced concrete construction.

As the tenacity of concrete is overcome by the elongation of the embedded reinforcement at comparatively low stress nothing is allowed for the tensile resistance of the

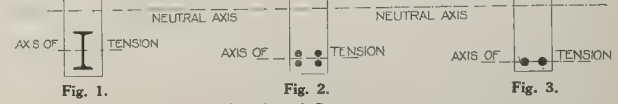


Fig. 1. Fig. 2. Fig. 3.

Reinforced Concrete.

material in reinforced concrete beams. After the point has been passed beyond which the concrete cannot be stretched exceedingly minute hair cracks are developed, but so small as to be invisible until the tensile strain of the steel is very considerable. The dimensions of the hair cracks depend upon the modular ratio of the two materials, and if the steel is to be subjected to stresses greater than 17,000 lb. or 18,000 lb. per square inch it is very desirable that the elastic modulus should be greater than the customarily accepted value of 30,000,000 lb. per square inch, otherwise the hair cracks will be correspondingly extended.

For this reason many engineers insist upon the employment of mild steel in preference to high tension steel. Although the width of the inevitable hair cracks is a matter for serious inquiry in the case of engineering structures, especially those in or near water, these invisible cracks are of less importance in building construction, where it may be permissible to use steel that can be safely stressed up to 20,000 lb. per square inch on the basis of 30,000,000 lb. per square inch as the value of the elastic modulus. If steel could be produced with a higher modulus the range of permissible working stress could be extended proportionately.

As to the form of the bars employed, the architect must decide for himself whether to adopt the plain round section obtainable in the open market or one of the various types of deformed bar.

European experts have used plain bars for many years with perfectly satisfactory results, relying upon the adhesion bond existing between the steel and the concrete, and, in some cases, upon the cranking of the bars as requisite in continuous beams and beams with fixed ends. As an additional precaution the ends of such bars are usually split and fish-tailed, or are bent over to J form.

As Professor Turneaure remarks, "America is the home of the patent bar," the object of which is to furnish a mechanical bond, supplementary to the natural adhesion of the materials.

The architect may adopt the general class of bar he prefers without affecting the question of design in any way. But he should at the same time take into account the character and properties of the steel and the nature of the projections intended to provide the mechanical bond.

If the projections occur at intervals in the length of a bar so as to destroy continuity of the metal in the line of the projections the area of steel must be measured on the core of the bar and the projections treated as waste metal so far as concerns resistance to tension.

A bar with gradual swellings and depressions on opposite sides would be a desirable form but for the tendency of the swellings to cause fracture of the concrete by wedge action.

Twisted round bars are effective, and at the same time obviate wasted sectional area because the fibres are continuous throughout. Twisted square bars are not desirable owing to the sharp corners they present.

The question of web reinforcement in beams raises further points for consideration, and has resulted in a fertile crop of patents, most of them relating to special types of reinforcement.

Web reinforcement is primarily intended for resisting tension on diagonal planes in the concrete, and if the stirrups or equivalent members are of uniform sectional area they ought, in the case of uniformly distributed loading, to be disposed at progressively increasing intervals from the supports to the middle of the beam, as dictated by a diagram of shearing force, which serves as a convenient measure of diagonal tension. If the web members are spaced equally their sectional area ought to be varied in accordance with the shear diagram. These points have a direct bearing on the design or selection of web reinforcement, as the case may be.

In systems where the web members are of round rods or flat strips bent to the form of stirrups or links and looped round or clipped to the tension bars the design of web reinforcement is perfectly simple. There are several types of patented reinforcement where the web members are fixed permanently to the tension bars, and in choosing from these the designer should see that facilities are provided for variation of the spacing as necessary.

Columns and Struts.

Reinforced concrete necessarily shows to less advantage in compression members than in beams, for the reasons already stated, and its economy is further reduced by the customary stipulation that the working stress in the steel shall not exceed m times the working stress in the concrete. As the value m -15 is now generally adopted the result is that for a column with longitudinal reinforcement and moderately efficient lateral reinforcement the working stress in the steel, even for concrete with the safe resistance of 900 lb. per square inch, is only 13,500 lb. per square inch, or 9,000 lb. if the working stress for the concrete is 600 lb. per square inch.

Special forms of bars for the longitudinal reinforcement are unnecessary, and are not always advocated even by makers of patent bars for beams.

The choice of lateral reinforcement offers greater scope for the judgment of the designer. The proprietors of different systems provide several methods for consideration—hoops, ties, links, and spiral coils of various kinds are recommended, and the designer should consider the merits of these with care, bearing in mind particularly the facilities afforded for moulding and tamping the concrete in successive layers from the bottom upwards, a mode of procedure more conducive to sound work than the practice of pouring the concrete in at the top of a closed mould.

As we have mentioned in previous articles the R.I.B.A. Report and the L.C.C. Draft Regulations put a premium on helical reinforcement, and prefer circular hoops to rectilinear ties. Even if these recommendations are followed the designer still has to judge of the efficiency with which they are carried out in the systems of construction submitted for consideration.

(To be continued.)

REGENT-STREET POLYTECHNIC.—III.

[*Continued from page 677, vol. CI.*]

Fire-Escape Stairways.

THE problem of obviating material loss of light where fire-escape stairs are erected outside the windows of buildings was solved in a satisfactory manner at the new premises of the Regent-street Polytechnic.

In that building there are two stairways of the kind both constructed by the St. Pancras Ironwork Company, Ltd., one in the north and the other in the south light area. Both of them are approximately 12 ft. square in plan, with a square or rectangular well varying somewhat in form and dimensions at different floor levels.

As the architect, Mr. George A. Mitchell, considered it very desirable that the obstruction to light should be minimised as much as possible, the patent reinforced concrete treads which had originally been specified for all the stairs were replaced by perforated iron treads and risers, made in compliance with the requirements of the London County Council, except in one place, where obstruction to light was not an important consideration, and in a few situations where a non-slippery tread was particularly desirable.

Further, most of the landings were constructed on the principle of pavement lights, designed so as to throw as much light as possible on the windows below.

The arrangement is one necessarily involving additional cost, which many owners, who are obliged to provide means of escape in case of fire, may think it well to avoid, but the resulting economy of light secured at the Polytechnic is clearly a consideration which justifies the outlay involved by the application of glazed landings in the case of buildings where abundant light is essential for work.

Sanitary Fittings.

The new sanitary tower, the position of which is shown by the drawings reproduced in a previous article, provides ample accommodation for students and others on the various floors. The whole of the fittings were supplie by Messrs. A. Emanuel & Sons, Ltd., and th plumbing was executed by Messrs. Holloway Bros. (London), Ltd., the general buildin contractors. The fittings are of white glaze fireclay, and, although generally similar t those employed so largely in the present da they present some features of which brie mention may be made.

The sink fittings were specially manufacture to suit the space available in the building The lavatory basins are of the twin type and are fitted with special press-dow valves, most suitable for colleges wher considerable waste of water occurs if ordinar screw-down valves are employed. Anothe feature of the basins is to be found in th fitting of the grids into the overflow of th other basins, thus permitting free access fo clearing the waste outlet. The urinals are o the firm's standard pattern, solidly made i fireclay. The closets are in heavy fireclay fitted with teak seats bolted on. The bath room, not intended for the general use o students' is of the independent fireclay pattern and the shower fittings are provided wit Emanuel's "Careless" valve, constructed s that the user must keep his hand on the leve as long as water is required.

Throughout the work no unnecessary wast of water can take place, as all the fittings hav been designed in view of this contingency. S far as we were able to judge in the course o our recent inspection, the whole of the sanitary work has been executed so as to ensure workin efficiency, and the plumbing details b Messrs. Holloway Bros. deserve equal com mendation for their neatness and workmanlik finish.

Heating and Ventilation.

This part of the engineering equipment o the Polytechnic building was carried out under great difficulties owing to the fact that the alterations to the old part and the con struction of the new portion were completed in sections, so as to provide for the unin terrupted continuance of the work conducte by the institution. In consequence of thi programme, the heating engineers, Messrs Strode & Co., were obliged to install the heating and ventilation systems in the various sections as completed, a mode of procedure which is somewhat inconvenient, as wil readily be appreciated by all who have had practical experience of heating and pipe erection work generally.

The medium employed for heating is low pressure hot water, supplied from three large boilers of the sectional type, but two of these are adequate for the requirement of the building, the third being arranged as a stand by. For the swimming-bath any one of the three boilers can be utilised.

To ensure rapid and efficient circulation of the water from and back to the boilers the circuits are fitted with Strode's electrically driven hot-water circulation accelerators, two of these appliances being installed so that one may always be in reserve for use in case of emergency.

Separate circulation mains are run to the different sections of the building, thus permitting any individual section to be shut off independently of the others, this being a very important facility in a building such as that of the Polytechnic, where several sections are only required for use at certain times. The swimming-bath is also served by an independent circuit of flow and return mains.

Heat is distributed in the halls, rooms, and corridors by means of radiators, each fitted with a control valve permitting the regulation of temperature to suit requirements.

The ventilation scheme, also carried out by Messrs. Strode & Co., provides for the supply of fresh air from a central fan of the closed blower type. The air is drawn in through a special filter, and after being purified is blown by way of ducts formed in the brickwork into the various rooms to be ventilated. For the extraction of vitiated air, separate fans of the exhaust type have been provided, the effect of the two systems being to ensure a thoroughly efficient circulation of pure air throughout the entire building. Separate means of regulating the movement of air are included, so that in the event of a large congregation of people in any of the rooms the supply of fresh air can be increased suitably, and, if occasion should arise the volume of air moved by the fans can be reduced.

Hot-water supplies for domestic purposes are furnished by an independent boiler and cylinder from which circulation mains proceed to all sections of the building where hot-water is required.

Electrical Installations.

The whole of the electrical work was carried out by Messrs. H. J. Cash & Co., Ltd., of Westminster, in accordance with the designs and specification of Mr. R. Borlase Matthews, M.I.E.E., of Kingsway. The work comprises five distinct installations, viz. :—

General Lighting, Public Hall Lighting, Power Circuit, Laboratory and Photographic Circuits, Cooking Circuit.

Current for all the circuits is drawn from the mains of the Marylebone Borough Council, whence leads are taken into the building at a point in Cavendish-place, and connected with a general distribution-board on the three-wire system.

For the information of any of our readers who may be familiar only with the two-wire system, we may explain that the three-wire system can be considered as the combination of two two-wire systems placed side by side with the two inner wires merged into one. The lamps are supplied with current alternately from the positive and negative mains and all the return wires are connected with the inner main. Assuming the positive main to carry current at +200 volts and the negative main to carry current at −200 volts, the potential difference is 400 volts. Then assuming the inner wire to be charged with electricity at earth potential, the difference of voltage between each of the outer mains and the inner main is 200 volts, this being the maximum pressure in the lamp wires. Currents passing along the inner main neutralise each other, and if the load were equally balanced there would be no current in this conductor. The great advantage of the system is to be found in the fact that owing to the relatively high potential between the two outer mains and the small amount of current in the inner conductor, the quantity of copper required is very much smaller than for the conductors in a two-wire system, the theoretical saving of copper being fully 70 per cent. From the main distribution board at the Polytechnic cables are run to seven control boards :—Two for the general lighting, at 240 volts; two for the public hall lighting, at 240 volts; one for the power feeders, at 480 volts; one for the laboratory circuits, at 480 volts; and a three-wire board for the laboratory, photographic, and cooking circuits.

The seven control-boards supply the following feeder cables :—

Two 150-ampere feeders for general lighting, carried to a point in the basement, whence rising mains are taken to distribution-boards on each floor.

Three 25-ampere feeders for the public hall lighting terminating on three distribution switch and fuse boards, two of these boards controlling the lighting of the hall, the corridor, and exits, and the third board controlling the lighting of the platform.

Two 20-ampere feeders for the swimming-bath and gymnasium lighting.

Two 100-ampere power circuits at 480 volts for the electricity laboratory, terminating on a distribution-board, whence sub-circuits are carried to supply machinery and apparatus installed in this laboratory.

One 50-ampere power circuit at 480 volts for the electricity laboratory, terminating on the distribution-board mentioned in the preceding paragraph.

One 50-ampere power circuit at 480 volts for the engineering workshops, terminating on a distribution-board, whence sub-circuits are run to supply electric motors operating lathes and other machine tools.

One 15-ampere power circuit at 240 volts also for the engineering laboratory with distribution-board and sub-circuits as above.

Two 100-ampere heat circuits, supplying the kitchen with current for cooking purposes.

Two 50-ampere arc light circuits, supplying current for the lanterns used by lecturers in the chemistry, physics, architecture, engineering, and art departments.

Two 50-ampere circuits, supplying current to the daylight studio.

Two 100-ampere circuits at 200 volts for the photography department.

One 50-ampere circuit at 480 volts for the photography department.

The following electric motors are included in the power installation :—

Two 12-brake-horse-power motors for the lifts.

Two 8-brake-horse-power motors for ventilating fans.

One 5-brake-horse-power motor for ventilating fans.

Two 3-brake-horse-power motors for the Strode accelerators included in the heating installation.

The looped-in system of wiring was adopted throughout the building, a method which obviates the jointing of wires and consequent risk of faults. The greater proportion of the wiring is protected by heavy gauge solid drawn enamelled-steel conduit, erected complete before the floors and walls were finished, the wires having been drawn into the conduits after the floors had been surfaced and the walls plastered.

In lavatories and places where condensation was anticipated the wires were drawn into "Kalkos" tinned-brass tube, with "Kalkos" fittings at all switch and ceiling rose points. The lamps throughout are fitted with Holophone reflectors specially designed to give the best results in the positions where they were placed.

In the Masonic Hall the ceiling enrichment is worked out in masonic designs, outlined with red and blue electric lamps. The conduit work here was very intricate, and had to be executed most accurately to fit the lines of the design.

We are indebted to Mr. Borlase Matthews for permission to publish the foregoing account of this interesting and comprehensive installation.

REINFORCED CONCRETE APPLIED TO BUILDINGS.

At a general meeting of the Leeds and Yorkshire Architectural Society on the 11th inst., held at the Leeds Institute, the President, Mr. S. D. Kitson, F.R.I.B.A., in the chair, an interesting paper was read by Mr. G. C. Workman on "Reinforced Concrete Applied to Buildings." The lecture was illustrated by slides, showing many important buildings already erected and some in course of construction. In the course of the lecture Mr. Workman said :—

"I would explain that as I have been during the past ten years exclusively identified with the 'Coignet System' of reinforced concrete, all the works which I intend to describe to you have been executed in this method, and the reinforcement of the various members has been carried out in accordance with the typical arrangement of the bars, which forms the characteristic of this particular system.

In all the buildings I am about to show you round bars of mild steel have been used in every case for the preparation of the various steel frames or units for the reinforcement of beams and pillars, and the same kind of bars have been used for the reinforcement of the floor slabs, and in certain cases for the walls.

I would mention that the principal reason for using round bars is because they have the advantage of being easily procurable in the open market, and also on account of the fact that this section produces the minimum amount of contact between the various bars forming the steel framework.

It is obvious that flat surfaces of contact between the bars should, as much as possible, be avoided on account of the fact that rust is liable to develop between the surfaces of contact, and this may ultimately become a source of danger to the structure.

Round bars have also the advantage over any other section that they offer a better surface of adhesion for the concrete, which is a matter of great importance in order to ensure the proper working of both the steel and the concrete to resist the external efforts.

In beams the lower or tension bar, which usually varies in diameter between $\frac{1}{2}$ in. and $1\frac{1}{8}$ in., is connected to an upper bar $\frac{1}{2}$ in. in diameter by means of vertical stirrups $\frac{5}{16}$ in. or $\frac{1}{4}$ in. in diameter, passing underneath the lower bar and having their ends hooked over the top longitudinal bar, thus forming a perfect mechanical anchorage between the tensional and compressional areas of the beam. These stirrups are gradually spaced in proportion to the shearing effort, which is greater at the points of support. These stirrups are bound to the main bars by means of strong annealed wire in such a manner that when the unit is suspended into the box-moulding forming the beams the position of these stirrups cannot be altered during the concreting operation, nor is it possible for the lower bars to become pressed downwards in such a manner as to be apparent on the soffit of the beam.

These top longitudinal members have also the advantage that the bars forming the reinforcement of the slabs must pass over them, which makes it necessary to place them in their proper position, namely, in the upper portion of the concrete of the slab above the beams, where they are required to counteract the negative bending moment or contraflexure of the slab.

It is obvious that if the reinforcement of the slab above the beam is not properly kept in position it is liable to be laid flat over the beams so that the upper concrete is not reinforced to resist the bending efforts, and, although this defect may not actually endanger the stability of the slab, longitudinal cracks over the beams are likely to appear in course of time.

The negative bending moment in the beams over the pillars is counteracted by means of joint bars bound by annealed wire to the top members of the unit reinforcement.

The rules of the R.I.B.A. concerning reinforced concrete, which have recently been amended, have added a special recommendation to the effect that precautions should in every case be taken by splitting or bending the rod ends or otherwise to provide additional security against the sliding of the bars in the concrete.

One of the first large buildings with which I had to deal was the second Tobacco Warehouse for the Bristol Docks. This work was carried out under the docks engineer, and the contractors were Messrs. W. Cowlin & Son, of Bristol.

Besides the advantages of fire-resistance and economy which this building offers over the first one, the internal accommodation is larger, on account of the walls being only about 14 in. in thickness throughout the height of the building, instead of the considerable thickness of brick walls required in the first building. These thin brick walls or panels were supported at each floor by lintels, and the building has been divided in two by a partition in reinforced concrete 6 in. thick.

The various floors were arranged in such a manner as to minimise the risk of fire by cutting off any particular floor from the others. The level of the floors is slightly raised at all lift openings and doors, so that it would be possible to flood any particular floor with a couple of inches of water if required. This warehouse has been erected on reinforced concrete piles varying in length between 40 ft. and 50 ft., which were driven into the ground by means of a steam monkey weighing 2 tons.

In the case of several buildings erected at Rainham, Essex, for Messrs. J. C. & J. Field, Ltd. (the architects being Messrs. Scott & Fraser, and the contractors Messrs. William King & Son, of London), the site is situated on the riverside and is extremely marshy, so that the buildings had to be constructed on spread foundations or rafts in reinforced concrete. Although this building contains very heavy machinery and tanks for the manufacture of soap, it has been possible to spread these loads on to the ground evenly, at a rate of only about a quarter of a ton to half a ton per square foot. Reinforced concrete buildings, being monolithic and lighter than brick or masonry work, are very well adapted to cases where unequal settlement is likely to occur, especially when such buildings are erected upon a reinforced concrete raft.

I would mention that there seems to be a considerable difference of opinion between the various methods of stopping the concreting in floor slabs, in beams and in pillars. Personally, I am of opinion that the best method of stopping the concrete of the floor slabs is to stop the work over the beams, because at this particular point the bars of the slab have been brought upwards to take the negative bending moments over the beam, so that the concrete in compression

is underneath, and if a sufficient number of bars have been provided to resist the contraflexure of the slab no cracks should appear, or if such cracks did appear they would not endanger the entire structure, whereas if the break in the concreting operation is in the middle of the slab it is necessary that the face should be left perpendicular, and if by any chance this has not been done there is a risk of the old face and the new sliding over each other, which would have the effect of endangering the strength of the floor. It is also difficult, on account of the meshwork in the lower part of a slab, to carry a perpendicular face right through. The remaining alternative of stopping the concreting in slabs is to do so at about 1 ft. to 2 ft. before reaching the beam at the point where the bending moments change, but here again we are met with the difficulty of making a perpendicular face right through the thickness, on account of the meshwork of the slab.

Concerning the beams, I am of opinion that the best way to stop the concreting operation is at the points of support, for the same reason as I have given in the case of the slabs.

Concerning the pillars, the footings should be made first and the body of the pillar carried up to the level of the soffit of the beams, the remaining portion being concreted at the same time as the beams. The usual practice is to carry out the concreting of the beams up to their point of junction with the slab, and to concrete the slab, which is usually situated above the neutral axis of the beam, after the meshwork has been placed in position on the flat centring.

One of the most interesting buildings with which I have been associated is the new Western District Post Office, which was erected about two years ago under the supervision of the Office of Works, the contractors being Messrs. William King & Son, of London.

This building, which is situated between Cavendish-square and Wimpole-street, comprises a block of 200 ft. frontage and 160 ft. in depth, with basement, ground floor, first and second floors, and flat roof.

Owing to the fact that only four large pillars were allowed in the centre of this floor space, the spans between these pillars and the outer walls varied between 45 ft. and 39 ft., so that the pillars support loads of over 200 tons each.

One of the chief features of the building is that the ends of the principal beams carrying respectively the first floor, second floor, and roof are suspended bodily by means of strong steel stirrups to upper beams 6 ft. high, forming the internal walls surrounding the inner court above the various floor levels. By this means it was possible to obtain a maximum height for the windows, which was a condition stipulated by the Office of Works. This condition, however, brought about a question as to whether this method of suspension could be used without danger, the two beams having a span of 39 ft., and supporting the first floor with a superload of 1 cwt. per square foot, the upper supporting beam having a span of 45 ft. There was no evidence that this particular arrangement had ever been adopted before, at least for spans of such large dimension. I am glad to say that the problem was solved in a satisfactory manner, with the result that the two suspended beams, 39 ft. long each, and the beams across the inner court supporting the skylight appear to have been made in one single span of about 118 ft.

Another noticeable feature is found in the extensive beams, over 12 ft. in height, which carry the other end of the suspended beams. These 12-ft. beams have a span of 45 ft., and it was necessary to provide in them a series of large windows situated below the neutral axis of the beam, which occurs approximately at the level of the first floor.

In this building large areas of flooring were tested, the specification being one and a half times the superload, and the deflection not to be greater than $\frac{1}{720}$ of the span. The deflection recorded in the beams did not, however, exceed $\frac{1}{1500}$ to $\frac{1}{2000}$ of the span, and no permanent deflection was noticed.

I would take this opportunity to state that, in my opinion, it is essential to place underneath the beams which are to be tested a few strong emergency props not touching the soffit of the beam by about $\frac{1}{2}$ in. This has the effect of reassuring the men who are carrying on the loading operation, and it also has the effect of preventing any sudden collapse which might be due to unforeseen circumstances.

A very large amount of reinforced concrete work has been carried out during the last two years in Jamaica, including the new Government buildings erected at Kingston, Jamaica, for the Government. The architects were Messrs. Nicholson & Corlette, of London, and the contractors, Messrs. William Cowlin & Son, of Bristol. This large building, which is entirely in reinforced concrete, contains the General Post Office and the Treasury.

In preparing the design the architects had to consider the question of earthquakes, and consequently the foundations of these buildings have been constructed in such a manner as to offer the least possible obstruction to shocks or movements of the ground. The foundation is practically in the form of an immense raft composed of strong slabs and beams, the latter uniting the various footings of the pillars. The superstructure is of the type usually adopted in hot climates with spacious verandahs and colonnades. All the roofs are flat and covered with several inches of gravel.

The making of the steel frameworks, and in fact all the labour, was carried out by natives working under a few experienced supervisors. I am informed that most of the concreting was done by native women carrying the concrete in baskets. The new King's House at Kingston was carried out simultaneously with the building previously described under the same architects and by the same contractors. It contains a large swimming-bath and several remarkably fine dancing and reception halls.

Another large building is at present in course of erection at Kingston for the new Law Courts, under Messrs. Nicholson & Corlette. In this case the contract was secured by Messrs. Mais & Sant, of Kingston, Jamaica. This last-mentioned building will be very similar in appearance to the other public buildings. Needless to say, they have been constructed not only to resist earthquake shocks, but also to resist fire, and you will no doubt remember that a very severe conflagration followed the earthquake which happened in Jamaica many years ago. It is for this reason that practically all the buildings of any importance in Jamaica are at present being constructed in reinforced concrete.

I would like to mention that it has been my experience that architects, and in many cases engineers also, are inclined to specify superloads which are obviously far more considerable than what is really necessary for the requirements of the particular building which they have designed. This is probably due to the fact that in many cases reinforced concrete is a novelty to them, so that by specifying a comparatively high superload they hope to guard themselves against failure of the work. It is well established, however, that any failures which have occurred have been due either to the premature removal of props and centering, or, in a few isolated cases, to faulty design, so that in reality nothing is gained in security by specifying a higher superload than is required.

In giving a few examples of applications of reinforced concrete to schools I may point out that, although it has been stated frequently that reinforced concrete was too expensive a material to be used for buildings of this nature, as a matter of fact it has been and is frequently used for this purpose.

It is noticeable also that reinforced concrete is gradually superseding all other kinds of flooring for hospitals, on account of its fire resistance, and also of its cleanness and economy. The same system of flooring is at present being used for the Maternity Hospital, Leeds, and the new Royal Infirmary at Bristol; it has been used also for the Livingstone Hospital at Dartford and for the National Hospital for Paralysis in London.

Amongst large buildings where this kind of flooring is used at present I may mention the Headingley Training College.

I would conclude by saying that I trust that these few examples of reinforced work have been of interest to you, particularly in showing you how various difficulties in construction have been solved, and if the works I have described to you have had the effect of further strengthening your confidence in reinforced concrete, the object of my lecture will have been fully attained."

ENGINEERING NOTES.

The Municipal Engineering Profession.

At a Western District meeting of the Institution of Municipal Engineers, held at Birmingham on January 18, Mr Henry Hulse, Borough Surveyor and Engineer, Droitwich, read a paper on "The Institution of Municipal Engineers and its Relation to the Municipal Engineering Profession." The Institution was inaugurated in 1908. In the course of his remarks Mr. Hulse said: "The membership now numbers 712 fully accredited members, eighty associate members, and ninety-five students. Ten districts have already been set up in the British Isles. Examinations have been commenced upon lines which, while being a distinct innovation upon what has been the usual practice, are considered, by those well qualified to express an opinion, to be best suited to present-day requirements, and will undoubtedly be followed by other bodies in the future. These examinations, while making no special call for the crammer, do call for individual initiative, while sound knowledge gained in the ordinary curriculum of the schools, with thorough practical training such as may be gained under an experienced official, will be found to be of more service than the mental gymnastics that have hitherto been necessary in so many examination halls. Let not the slack student think that he will benefit under such a scheme, as it is just the co-relating of theory with practical work in its varied problems in the questions set that will leave him plucked, and discover the student who has made up his mind to understand and grasp the work of the profession in all its many details. . . . Our Institution is at one with other institutions in consolidating the municipal engineering profession, and giving its members reason to think and work along national as well as local lines for the benefit of the entire service."

Blackfriars Bridge.

The City Corporation has just published a historical and statistical report in connexion with the recent widening of Blackfriars Bridge, which is the second bridge at that spot. The first was begun in 1760, opened for foot passengers in 1766, and finally completed in 1769. The present bridge was begun in 1865 and opened by Queen Victoria in 1869. For the widening of the bridge the tender of Sir William Arrol & Co. Ltd.—203,006*l.*—was accepted. This included 3,228*l.*, being the estimated cost of the Embankment subway. The actual cost of the widening and the subway proved to be 197,039*l.*, to which was added 3,560*l.*, being the agreed premium for early completion (178 days, at 20*l.* per day), making a total of 200,599*l.* In addition to the cost of widening there were other expenses to the amount of over 31,000*l.*, including the tramways, or in all, 232,362*l.* Before the widening the total width of the bridge between the parapets was 75 ft.; the present width is 105 ft. The other bridges are of the following widths—London, 65 ft.; Southwark, 42 ft.; Tower, from 48 ft. to 60 ft.; Westminster, 84 ft.; Vauxhall, 80 ft.; Kew, 55 ft.; Chelsea, 45 ft.; Putney, 44 ft.; Waterloo, 42 ft.; Albert, 41 ft.; Battersea, 40 ft.; Lambeth, 31 ft.; Hammersmith, 38 ft.; and Wandsworth, 30 ft.

Strength of Concrete.

In the paper on "Reinforced Concrete Columns," read by Mr. W. C. Popplewell, M.Sc., A.M.Inst.C.E., to the Institution of Civil Engineers, some figures are given which deserve notice by concrete users. The concrete tested by Mr. Popplewell was mixed in the following proportions:—Portland cement, 6½ cwt.; Leighton Buzzard sand, unscreened, 13⅔ cubic ft.; broken granite, ⅜-in. to ¾-in. gauge, 27 cubic ft. This is roughly equivalent to a 1 : 5 mixture by volume, and might reasonably be expected, in view of previously ascertained data, to give the ultimate compressive resistance of from 3,500 lb. to 4,000 lb. per square inch at the age of three months. Nevertheless the average results obtained by Mr. Popplewell were less than 2,200 lb. per square inch, at the same age, thus showing that the strength of concrete cannot be judged merely by the proportions and quality of the materials used, and emphasising the important influence of workmanship and manipulation in the preparation of this material.

THE BUILDING TRADE.

THE NSTITUTE OF BUILDERS:

ANNUAL DINNER.

IE dinner of the Institute of Builders held in the Whitehall Rooms, Hotel opole, Charing Cross, W.C., on Wednes- when Mr. James S. Holliday, President, ied the chair, supported by Mr. W. olson, J.P., Lord Mayor of Leeds; Mr. ld C. Horsley, F.R.I.B.A., President itectural Association; Mr. W. Edgar ie, M.P., F.S.I., President Surveyors' itution; Mr. C. W. Ball, President itity Surveyors' Association; Mr. J. ott-Bartrum, Master Tylers and Brick- s' Company; and Messrs.

.. Bartlett	F. May
. Babbs	W. B Medlicott
. Brown	C. H. Mabey
rthur Bartlett	W. W. R. May
. Bailey	Leo. Martin
Carmichael	F. G. Minter
. Chessum	F. Messum
. Howard Colls	Ellis Marsland
ntzroy Doll	E. M. May
. Dollar	F. M. May
. Dove	W. F. Northcroft
Dixon	G. Perry Nash
unch	C. M. Poland
ngland	J. Randall
. Elgood	H. Gray Robbins
rankins	L. C. Randall
. Falkner	L. S. Sullivan
Greenwood	L. Sunderland
Gould	— Sopwith
eech Grant	H. Percy Shepherd
. Greenwood	E. J. Strange
. Greenwood	Edgar Stones
Gattie	Frank Sherrin
. Gregory	H. H. Turner
orner	A. W. Turnbull
. Hill	C. F. A. Voysey
. Hill	J. B. Whinney
olland	H. D. Searles-Wood
Holliday	Wm. Willett
. Holliday	J. A. Wallis
. Holloway	Maurice E. Webb
. Holloway	F. A. Wallis
all	F. E. Wallis
Hall	Hugh Watkins
. Hughes	W. T. Walker
. Knight	F. Wilkins
. Latter	Sydney M. Young
awrence	Kenneth Nicholson
ane	and
oody	T. G. Costigan, Secre-
. Maton	tary.

ie loyal toasts having been suitably pro- l and honoured,

H. H. Bartlett,

President of the Institute of Builders, osed the toast of "The Architects and evors," coupled with the names of Mr. ld C. Horsley, President of the Architec- Association, and Mr. W. Edgar Horne, President of the Surveyors' Institution.

Bartlett said one had heard a good deal y in regard to the responsibilities of archi-, and more might be heard with advan- on that interesting and important matter. aps a discussion of the subject would le architects to realise the responsibilities h had been placed upon the builders— onsibilities which were not perhaps eciated quite as fully as they might have . The architect who knew what he ed and would say it would find many builders able and willing to interpret his wishes and thoughts, and save him much trouble and labour by doing what was, after all, builder's work—such details as finding out prices, etc. The architect was responsible for the artistic part of a building, and by troubling about so much detail he took upon himself more responsibility than there was any need for. The builder was placed in rather an invidious position, because so many people were invited to do so many different works on the building that almost all the builder had to do was to pay the accounts and take the general responsibility. He knew the temptation put in the way of the architect, but he thought a little more confidence might be shown in the builder. He thought that modern architecture had vastly improved, and much of it would bear comparison with the best work of the past. In London architecture there was great variety, much perfection, and much better materials than used to be specified or used. New materials were constantly being introduced, and ferro-concrete was one of them. It might be a difficult material to treat architecturally, but it had come to stay, and he believed that architects would produce with that material buildings which we should not be ashamed of, but, on the contrary, look on with pride. As to surveyors, they were the friendly medium between the architect and the builder. It was true there were quantities and quantities, and there were some which it was impossible to price, but the best surveyors of the day carried out their work specially well. The quantity surveyor was a man who held the balance strictly fairly between architect and builder. He hoped architects would not take upon themselves the responsibilities of surveyors, and that surveyors would not take upon themselves the responsibilities of architects.

Mr. Gerald C. Horsley,

in responding for the architects, said he was sure in the number of business associations and transactions which are every day entered into by busy men of affairs in this country there were none which were more fully based upon honourable dealing and mutual respect than those between the architect and the builder. There were always reasons for every case of friendship or alliance, and in this case the mutual undertsanding to which he referred as existing between architect and builder was founded upon one common desire, viz., that good work shall be done. In that way only could the obligation to the client, who pays for the work, be fulfilled. The hope that they might be able to do good work themselves, and that they might get good work out of others, and that this work might advance the highest interests and well-being of their art, should be the mainspring and motive force of their daily efforts in their respective occupations. It was this desire which impelled them all to do what they could to improve the standard of knowledge and execution in their own craft. He need not remind them that architects had always been actively engaged in trying to ensure a sound education for the workers in their profession. The Association of which he was President had for the whole of its life of sixty-five years maintained a flourishing school for young architects, designed to supplement the instruction they obtained through the apprenticeship system. To be entirely successful their efforts must be unceasing, and he claimed that they were that. Broadly speaking, the Association had two objects in view:—(1) That an architect shall be an accomplished designer, a first-rate artist; (2) that the arts and crafts connected with architecture shall be so flourishing as to ensure the production of fine and noble building. In the attainment of the second of these objects builders did, and could, materially assist. In the workshops of builders, and in their yards, architects were accustomed to find the best work. When they visited them they invariably found the best technical execution. He was certain that all architects were frequently amazed at the perfection of execution which was to be found in builders' workshops. But although this was the case in so many instances, although the excellence of the British workman was well known (there was none better in his opinion), he believed that every man needed help and encouragement in this world, not only to attain and possess "a living wage," but also to produce the best work he is capable of. Assure him that if he fits himself to do this more than the "living wage" will probably be his. Their Institute was, he had no doubt, engaged upon many affairs of importance which were to the advantage and benefit of the craft and to the art of building in this country. Architects viewed that work with the utmost sympathy and interest.

Mr. W. Edgar Horne, M.P.,

after some humorous remarks in reference to architects, said that surveyors and builders were intimately acquainted and brought into close touch with each other, and their relations were of a most friendly character.

Mr. H. D. Searles-Wood

then proposed the toast of the evening, "The Institute of Builders and Its President." In the course of his remarks he said that builders had a grave responsibility in teaching their workmen. The President had done much in this direction, not only in his own workshops, but also at the Brixton School of Building, of which he was the Chairman of Committee. We talk about the newer responsibilities of architects and builders, and the difficulties they had to face, but he doubted whether those responsibilities were greater now than they were in the distant past. In the Laws of Babylon, some 4,000 years ago, the laws affecting builders were very drastic. Mr. Searles-Wood then read some of the onerous conditions imposed on builders, but the underlying principle was the same, *i.e.*, to build well and truly. He congratulated them on having Mr. Holliday as their President, and the Institute in having as their President a gentleman of such wide experience.

The President,

in the course of his reply, said, as regards the Institute, he could not say it had been a brilliant year, although very useful foundation work had been laid in one important matter, viz., in the suggested form of contract between builders and sub-contractors. Efforts had also been made to resuscitate the apprenticeship system, and those efforts had taken tangible shape in the suggested draft of indentures which had been prepared and submitted by his Council to the Educational Department of the London County Council for their co-operation. The evolution or revolution which has taken place in the building trade during the past thirty years had been very great, and one marked change had been the introduction of specialists into building operations of all kinds. And it had therefore been felt that a fair contract for sub-contractors was necessary, based on the form of main contract agreed upon by the R.I.B.A. and Institute of Builders. He trusted the basis of the sub-contract suggested by his Council, and which had practically been approved by the Master Builders' Association and National Federation, might prove to be considered fair by all interested, especially as the idea had been only to ask the specialist to take the same responsibilities, as far as he was concerned, as the builder had in the main contract. He should like to take the opportunity of thanking the members of the Council, and especially the members of the Contract Committee, for the great assistance they had given him in the consideration of these two important matters. As regards the building trade generally, while admitting that trade generally was better, the clouds of depression were still over us, and the competition so unhealthily keen that it was difficult to obtain prices that were remunerative. Many reasons had been put forward as the cause of this depression. Among others, the disturbing legislation especially affecting the

trade, and he daresay we could all go as far as saying that the legislation of the past three years had certainly not been conducive to the best interests of the building trade. But as the Government had large questions to engage its attention for some time, he hoped the building trade would have a rest from legislation for a time, so that it could rest on a firmer basis that at present, when, he hoped, there would be a natural return to a period of its former prosperity.

Mr. Benjamin I. Greenwood
proposed the last toast, *i.e.*, "The Guests," in happy terms, and in remarking on a previous observation—that perhaps the Pyramids had been built by a prophet—he said that, if so, he was afraid that no builder had had anything to do with it.

Mr. Fitzroy Doll
responded, and said that architects deplored the introduction of so many specialists in the building trade. Having referred to the many qualifications necessary nowadays for the architect to possess, he spoke of the effect of recent legislation on the building industry. The prosperity of the country was the prosperity of the building trade, because unless the country was prosperous building could not go on.

THE LONDON BUILDING TRADE.

THE notice given by the London district of the Amalgamated Society of Carpenters and Joiners of demands for increased wages and shorter summer hours has been considered at a meeting of the masters, but no decision, we understand, has been reached. It is expected that the two sides will meet in a conference, but as the men's notices do not take effect till June 8 the negotiations will probably go on for some time before a definite answer is given.

The demands, as has been already stated, are for an increase of wages from 10½d. to 1s. an hour, double pay for overtime, and a reduction of summer hours from fifty to forty-seven a week. The masters consider that the brighter prospects which the building trade is beginning to enjoy after a period of stagnation lasting for five or six years would be checked by such a considerable increase in working expenses. The prosperity of the trade is dependent to a great extent on the enterprise work on speculative lines in the suburbs, which is largely undertaken on borrowed capital. The proportion of failures in the trade in the last few years has been high, and it is pointed out that any substantial rise of wages as would threaten the stability of speculative builders would tend to discourage the flow of capital to the industry. The employers complain, says the *Times*, of being hardly hit by recent legislation, in particular by the Insurance Act and the Workmen's Compensation Act. In addition to the contributions for invalidity insurance, they anticipate a heavy burden in connexion with the unemployment provisions, the building trade being one of the three groups of trades to which this part of the Act applies. Complaint is also made of the uncertainty as well as the weight of the liabilities imposed on builders by recent Finance Acts.

GOVERNMENT CONTRACTS.

THE following tenders have been accepted during the past month by the Government Departments named:—*Admiralty, Works Department:* Works services, landing steps and footway at Oil Fuel Depôt, Turnchapel—Messrs. Steer & Pearce, 8, Carfrae-terrace, Plymouth; new surgery, North-yard, Devonport — Mr. James Crockerell, Richmond-walk, Devonport, officers' cabins, submarine depôt, Haslar—Mr. John Hunt, South Wharf, Cleveland-road, Gosport; workmen's cottages, Torpedo Range, Loch Long—Mr. William Clarke, 43, Sandgate-street, Ayr. *Commissioners of Woods:* Buildings for wood distillation works at Speech House in the Forest of Dean, Gloucester—Mr. Alfred James Dolman, 95, Ryecroft-street, Gloucester; alterations and improvements, Barossa Farm—Mr. J. Corbett, Bagshot. *War Office:* Work services, alterations and additions to Hilsea Hospital—Messrs. G. Munday & Sons, 9, Botolph-lane, Eastcheap, E.C.; alterations and improvements to married quarters, Cahir—Mr. J. Roche, Gladstone-street, Clonmel; annexes to Netley Hospital—Mr. J. Hunt, Gosport; conversion of headquarters, Cardiff—Messrs. Davies & Griffiths King William-street, Pembroke Dock; erection of civilians' quarters at Tidworth—Messrs. W. E. Chivers & Sons, 29, Sheep-street, Devizes; installation of heating apparatus, Herbert Hospital, Woolwich—Messrs. Ashwell & Nesbit, Ltd., 12, St. James-street, Bedford-row, W.C.; installation of heating apparatus, Military Hospital, York—Messrs. J. F. Phillips & Sons, Ltd., Queen Anne's-chambers, S.W.; internal wiring, Louisberg Barracks, Bordon, and married quarters, Bordon—Messrs. G. E. Taylor & Co., 8, Bush-lane, Cannon-street, E.C.; periodical works services at Tidworth—Mr. F. Holdsworth, Shipley, Yorks; reconstruction of No. 3 store, Gunwharf, Portsmouth—Messrs. E. & A. Sprigings, Winstanley-road, Portsmouth; supply and erection of steel stop butts at Rainham—Messrs. J. Westwood & Co., Ltd., Napier-yard, Millwall, E.; surface drainage, Bulford—Messrs. W. E. Chivers & Sons, 29, Sheep-street, Devizes. *India Office; Store Department:* Lavatories—Messrs. Doulton & Co., Lambeth, S.E.; water supply plant—Messrs. J. Simpson & Co., 155, Queen Victoria-street, E.C. *Crown Agents for the Colonies:* Cement—Messrs. Peters Brothers, 72, Victoria-street, S.W. *Office of Works:* Builders' work, extensions, and alterations, Birmingham parcel office—Mr. J. A. Turton, 1, Wheely's-road, Birmingham; children's conveniences at Kensington-gardens—Messrs. F. Webster & Son, Grove Vale Works, East Dulwich, S.E.; land registry extension—Messrs. F. & T. Thorne, Isle of Dogs, E.; Manchester maintenance work—Messrs. Brown & Backhouse, Chatham Works, Chatham street, Liverpool; erection of new post office, Rochester—Messrs. T. H. Kingerlee & Son, 35, Queen-street, Oxford; erection of administration block, Royal Scottish Museum—Messrs. J. Lownie & Son, 57, Harrison-road, Edinburgh; extension to Waltham Cross Post-office—Messrs. J. Bentley & Sons, Sun-street, Waltham Abbey; water mains, pipelaying, repairs, alterations, etc., Windsor Castle—Messrs. J. Mowlem & Co., Ltd., Grosvenor Wharf, S.W.; alterations, drainage, Windsor Castle—Messrs. Dent & Hellyer, 35, Red Lion-square, W.C.; marble work, British Museum extension—Messrs. Fenning & Co., Ltd., Palace Wharf, Rainville-road, Hammersmith, W.; National Gallery of Scotland Messrs. Galbraith & Winton, 185, St. Vincent-street, Glasgow; reinforced concrete work to tank on Duck Island, St. James's Park—Messrs. Holloway Brothers (London), Ltd., Victoria Wharf, Belvedere road, Westminster-bridge, S.W.; framework and floors, Royal Scottish Museum—Messrs. Loudon & Inglis, Coatbridge. *Commissioners of Public Works, Ireland:* Alterations, Kilkenny Post-office—Mr. T. A. Walsh, Kilmallock.

MAHOGANY AND HARDWOOD.

WE learn from Messrs. Foy, Morgan, & Co.'s London mahogany and hardwood report, 1911, that the total importations of mahogany into London during the last twelve months amounted to about 15 per cent. in excess of the figures for 1910. Although the quantities from several sources of supply show some variation from the shipment of the previous year, the excess is practically owing to the increased importations from the West Coast of Africa. The year closed with a very strong market. The prospect for shippers is encouraging, as there are no indications that the present high prices will fall away in the near future. The importations during the past year of Honduras were almost identical in quantity with those of 1910—to be exact they were one per cent. less. The total importations of African mahogany into London showed an increase of over 60 per cent. as compared with the previous year's total, and the trade during the year reached more important dimensions than for several years past. Unfortunately, however, the increased quantity chiefly came from a district which supplies a very poor quality. In addition to this, the condition of many of the logs generally has been faulty, so that the market has not received sufficient really good logs. Prices have been maintained at an excellent level throughout the year, and all the good logs imported have met with a ready sale at exceptionally good figures. "The teak trade of 1911 presents some peculiar features. The total importations exceed those of 1910 by about 40 per cent. and the increased quantity has consisted largely of logs. While all the sources of supply have contributed to some extent to the increase, by far the most important additional supplies have come from Bangkok. The moderate increase in the plank importations is owing chiefly to the larger import from Rangoon. The deliveries during the year have been disappointing, having declined about 13 per cent. as compared with the total of 1910. . . . So far as logs are concerned, the standard of quality on the whole has not been high. The bulk of the importations has consisted of second-grade parcels, and even some of those which have been brought in as "first class" have left a good deal to be desired in point of condition. . . . The outlook for the near future is difficult to gauge. The present conditions of trade and stocks on this side do not appear to warrant the hope of any advance in values. . . . The bulk of the importations of Kauri pine to the United Kingdom arrived in sailing vessels early in the year, and stocks were more than ample for the slow consumption during the first nine months. A greatly improved demand has existed throughout the last quarter of the year, reducing stocks to a moderate quantity, and enabling holders to advance prices to a slight extent, although not sufficient to bring them to a parity with the increased cost of future supplies. The extraordinary development of the demand in the Colonies during 1910 was more than maintained during the present year, so that very little of the production was available for shipment to the United Kingdom, whilst values have risen considerably at the shipping ports. It appears, therefore, that better prices must be forthcoming in the United Kingdom market in order to attract further supplies of this highly esteemed material. The demand for white pine (Kahikatea) in suitable sizes and conditions is now firmly established, and the consumption has been active during the entire year."

GENERAL BUILDING NEWS.

NEW CHAPEL, NOTTINGHAM.

Messrs. E. R. Sutton and F. W. C. Gregory, of Nottingham, are the architects for the new Baptist chapel and schoolrooms to be erected at the junction of Gregory-boulevard and Sherwood-rise. The chapel will accommodate 500 persons and the schools 400. The estimated cost of the work is about 8,000*l.*

RIDLEY HALL, CAMBRIDGE.

A new block of buildings, to accommodate ten additional students and a tutor, has been built at Ridley Hall, Cambridge. There are now rooms for thirty-nine students. The architect of the new building was Mr. A. W. Wallace (London), and the builder Mr. W. Saint (Cambridge).

NEW SCHOOL, PORT TALBOT.

This new higher elementary school has been erected at a cost of 10,000*l.*, and provides accommodation for 204 children. The building includes a science wing containing a chemical and physical laboratory and lecture-room, and a corresponding wing contains cookery, laundry, and dinner rooms; there is also a large central hall and a manual instruction-room. The architect for the work was Mr. W. James Nash, A.R.I.B.A., the County Architect, and the contract was carried out by Mr. Watkin Williams, builder, of Cardiff.

NEW SCHOOL BUILDINGS, NORWICH.

A large extension of the Norwich High School for Boys has just been carried out from the plans prepared by Mr. E. J. Trench, architect, of Norwich. The new buildings include a large hall, three classrooms, each accommodating one hundred boys, and a chemical and physical laboratory. The heating throughout is by hot water, and the whole school will accommodate about 250 scholars. The contractor for the work was Mr. H. C. Greengrass.

MUNICIPAL TECHNICAL INSTITUTE, CORK.

This new institute was opened last week and has been erected from the designs of Mr. A. Hill, F.R.I.B.A., architect, of Cork, and the contract was carried out by Mr. Samuel Hill, builder, of Cork.

NEW BUILDINGS IN LONDON.

Catholic Church, Eltham; Mr. F. J. Bradford, builder, King Richard-road, Leicester. Rebuilding Nos. 9, 10, and 11, Eagle street, Holborn, S.W.; Messrs. L. W. Ridge & W. Charles Waymouth, architects, 104, High Holborn, W.C. Nurses' quarters at Constance-road Workhouse, Camberwell, S.E. (2,450*l.*); Messrs. W. J. Mitchell & Son, builders, Dulwich Village, S.E.

NEW INFIRMARY, PERTH.

Great progress is being made in the erection of this infirmary, which is to cost about 36,000*l.* About half of the work has already been completed, including the lodges, admission block, operating theatre, half the corridors, and half the surgical block. The architect for the work is Mr. James Miller, A.R.S.A., of Glasgow.

...e contractors are:—Brickwork, Messrs. ... & P. M'Lachlan, Larbert; joiner work, ... Robert Hill, Perth; plumber work, ...s. Munro & Sons, Glasgow; slater work, ...s. James Buchan & Son, Perth; plaster ... Mr. D. M'Nair, Falkirk; iron work. ...V. Hume, Kirkside, Perth; glazier work, ...cook Glazing Company, Glasgow; heat... ...ork, Messrs. G. N. Haden & Sons, Trow... ...s; tyler work, Messrs. Allan & Son, ...urgh.

TRADE NEWS.

...ler the direction of Mr. W. C. Hawke, ...Inst.C.E., Borough Engineer, Dover, the ...le" system of ventilation (natural), em... ...ng Boyle's latest patent "air-pump" ...ators and air inlets, has been applied to ...ier Infants' Council School, Dover.

...able-way, down-draught hospital ward ...s are being supplied by the Royal Doulton ...ries to the Hayley Green Hospital, under ...irection of Mr. H. E. Folkes, architect, ...bridge. Double-way, down-draught ...tal ward stoves are also being supplied ...e Royal Doulton Potteries to the new ...tal extension, Wolverhamtpon, under the ...tion of Mr. Arthur W. Worrall, archi... Wolverhampton.

...e Dutton Isolation Hospital, near War... ...on, is being supplied with Shorland's ...le-fronted patent Manchester stoves and ...hester grates by Messrs. E. H. Shorland ...other, Ltd., of Failsworth, Manchester.

...e Church of England School, Caunton, ...ark, has recently been fitted with D. O. ...'s "Hygiastic" ventilating school grates, ...lied by Messrs. O'Brien, Thomas, & Co., ...er Thames-street, London, E.C., and ...lsior Works, South Bermondsey.

...connexion with extensions and additions ...being carried out to Messrs. Peck, Frean, ...o.'s premises, at Bermondsey, Messrs. ...h, Major, & Stevens, Ltd., of London and ...hampton, have received instructions for ...nstallation of one of their full automatic ...button electric passenger lifts and one ...electrically-operated goods lift. Other ...acts at present in the hands of the firm ...for the Admiralty, for Messrs. Boots' ...ises at Bath and Derby, for the Swansea ...ral Hospital, and for Messrs. Anderson, ... & Hedley's new premises, Newcastle-on-... The firm are also exporting twelve ...ines to Australia, two machines to Well... ...n, New Zealand, and six machines to ...h America.

PLICATIONS UNDER LONDON UILDING ACTS, 1894 to 1909.

Tuesday's meeting of the London County ...cil the following applications under the ...lon Building Acts were dealt with. (The ...es of the applicants are given in paren... ...s).—

Lines of Frontage and Projections.

...w and Bromley.—Projecting porch and ...ony in front of Tredegar House, Bow-road, ... (Mr. Rowland Plumbe for the Chairman ... Governors of the London Hospital).—...sent.

...apham.—Erection of porches and two-... bay windows in front of three houses ...the southern side of Voltaire-road, Clap... (Messrs. H. F. Buchan & Co.).—Consent.

...ulham.—Erection of twenty-three houses on ...northern side of Clancarty-road, and six ...ses on the eastern side of Peterborough-..., Fulham, with two-story bay windows. ...e boards and porches (Mr. A. Dawkins ...Mr. R. B. Mason).—Consent.

...ampstead.—Iron and glass shelter at No. ...West End-lane, Hampstead (Messrs. H. B. ...ey & Sons).—Consent.

...ampstead.—Greenhouse at the rear of Park ...se, St. John's Wood-park, Hampstead, ... to Avenue-road (Messrs. C. R. Lowe & ... for Mr. E. Gardner).—Consent.

...ensington, South.—Addition in front of ... 23, Pembroke-road, Kensington (Messrs. ...y & Co. for Mr. H. Sharpe).—Consent.

...wisham.—Iron and glass hoods and one-... wooden bay windows to houses on both ...s of Arthurdon-street and the northern ... of Chudleigh-road, Lewisham (Messrs. ...J. Heath & Sons).—Consent.

...arylebone, East.—Erection of a building ...the north-eastern side of Townshend-road, ...he rear of No. 21, Avenue-road, Regent's... (Mr. J. M. Ross for Mr. H. B. Birn...m).—Consent.

...arylebone, West.—Iron and glass hood at ... 47, Boundary-road, St. John's Wood (Mrs. ...S. Lupton).—Consent.

...ddington, South.—Addition in the base... ...t area in front of No. 26, Norfolk-crescent, ...dington (Messrs. Cleveland & Drysdale).—...sent.

Paddington, South.—Iron and glass covered way in front of No. 51, Porchester-terrace, Paddington (Dr. H. Huxley).—Consent.

St. George, Hanover-square.—Illuminated sign in front of No. 13, Wilton-road, Westminster (Messrs. J. G. Pollett & Co.).—Consent.

St. George, Hanover-square.—Two show cases at No. 13, Wilton-road, Westminster (Messrs. J. G. Pollett & Co.).—Consent.

St. Pancras, North.—Addition at the "Gem Picture Palace," Malden-road and Wellesley-place, St Pancras (Mr. J. Codrington for Mr. A. Letté).—Consent.

St. Pancras, South.—Projecting illuminated sign in front of No. 125, Tottenham Court-road (Messrs. F. Sage & Co., Ltd.).—Consent.

St. Pancras, South.—Projecting clock in front of Nos. 297-299, Euston-road, St. Pancras (Greenwich Time, Ltd.).—Consent.

Strand.—Projecting sign in front of No. 183, Oxford-street (Mr. R. H. Kerr for Messrs. Powneeby & Co.).—Consent.

Strand.—Projecting clock in front of Nos. 14-16, Cockspur-street, Pall Mall (Greenwich Time, Ltd., for the Hamburg-Amerika Linie).—Consent.

Walworth.—Addition to the South London Central Mission on the southern side of New Kent-road, Walworth (Mr. H. Macintosh).—Consent.

Wandsworth.—Erection of buildings on the south-eastern side of Mitcham-lane, Streatham (Mr. J. Harding).—Consent.

Wandsworth.†—Erection of buildings on the northern side of Garratt lane, Wandsworth (Mr. E. King).—Consent.

Wandsworth.—Wooden bay windows and porches in front of proposed houses on the northern and southern sides of Woodbourne-avenue, Streatham (Messrs. Holliday & Stanger).—Consent.

Woolwich.—Bay windows in front of four houses on the northern side of Glenlyon-road, Eltham-park (Mr. J. J. Bassett for Lord Rowallan).—Consent.

Woolwich.—Porch at a house on the western side of Eaglesfield-road, Woolwich, immediately northward of Foxcroft-road (Messrs. J. E. Edwards & Co. for Mr. T. Brandon).—Consent.

Woolwich.†—Erection of a building upon a site abutting upon the southern side of Greenlane, and the western side of Henley-road, Woolwich (Mr. Bruce Dawson for the Western Electric Company, Ltd.).—Consent.

Width of Way.

St. Pancras, South.—Addition at the rear of No. 37, Howland-street, St. Pancras, to abut upon Howland mews West (Messrs. H. Holmes & Co. for Messrs. Cleaver Brothers).—Consent.

Width of Way and Lines of Frontage.

Bow and Bromley.—Re-erection of No. 416, Old Ford road, Bow (Mr. H. Brown for Messrs. R. Smith & Co.).—Consent.

Hampstead.—Addition consisting of a water-closet and petrol store at No. 3, Belsize-place, Hampstead (Mr. W. Willett).—Consent.

Kensington, South.—Additions in front of No. 50, Holland Park-mews, Kensington (Mr. H. E. Church for Mr. A. Moor-Radford).—Consent.

St. George, Hanover-square.—Re-erection of a urinal in Hay's-mews, Charles-street, Berkeley square, at the rear of the "Running Footman" public-house (Mr. M. T. Saunders for Messrs. Watney, Combe, Reid, & Co., Ltd.).—Consent.

St. Pancras, North.—Projecting buttresses in front of the church of St. Silas on the southern side of Preston-street, Kentish Town (Mr. E. C. Shearman for the Rev. Gordon Smythe).—Consent.

Strand.† —Erection of an oriel window and hood at No. 8, York buildings, Adelphi (Mr. H. D. Searles Wood for Dr. Wynter Blyth).—Consent.

Lines of Frontage and Construction.

Fulham.—Building of a temporary character at No. 86, Stanley-road, Fulham (Messrs. Wheeler Brothers for Mrs. Roberts).—Consent.

Hampstead.—Motor-car shed at the rear of No. 156, Haverstock-hill, Hampstead (Dr. H. Sanders).—Consent.

Holborn.—Iron and glass shelter over the High Holborn entrance to the Holborn tube railway-station (Mr. W. E. Mandelick for the London Electric Railway Company).—Consent.

Kensington, South.—Temporary wood and iron structure erected on the forecourt of No. 48, Victoria-road, Kensington (Mr. A. de Beaufort).—Consent.

Lambeth, North.—Temporary wooden coffee-stall on the north-western side of York-road, Lambeth (Mr. W. H. Hopton).—Consent.

Lewisham.—Temporary wood, iron, and glass building at No. 132, Arngask-road, Catford, next to Torridon-road (Messrs. Norfolk & Prior for Mr. H. Brown).—Consent.

Marylebone, East.—Temporary wood and iron tool-shed at the entrance to Sussex Lodge, Park-road, St. Marylebone (Mr. W. Chisman).—Consent.

Strand.—Iron and glass shelter at the Tottenham Court-road tube railway-station, Oxford-street (Mr. E. P. Grove for the Central London Railway Company).—Consent.

Wandsworth.—Temporary shed at the rear of No. 87, Mayford-road, Balham, abutting upon the northern side of Fernside-road (Mr. J. R. Coward for Mr. W. E. Bradford).—Consent.

Width of Way and Construction.

Lewisham.—Temporary iron motor and cycle shed at Preston Lodge, on the western side of Trewsbury-road, Lewisham, and re-erection of two sheds at the rear of such house (Messrs. F. & H. F. Higgs).—Consent.

St. Pancras, West.—Three wood and iron buildings of a temporary character on the roof of Nos. 386 and 388, Euston road, St. Pancras (Messrs. Dunk & Bousfield for Messrs. G. Wailes & Sons).—Consent.

Width of Way, Frontage, and Construction.

Hampstead.—Temporary wooden tool-shed in a garden at the rear of houses on the north-eastern side of Belsize-crescent, Hampstead (Mr. W. Willett).—Consent.

Hampstead.—Wooden building of a temporary character at the rear of No. 33, Belsize-park, Hampstead, next to Belsize-lane (Mr. S. C. Lathbridge for Mr. A. Friedberg). Consent.

Space at Rear.

Hampstead.—Buildings on the western side of Finchley-road, Hampstead, abutting also upon the northern side of Weech-road (Mr. H. A. Welch).—Consent.

Strand.—Addition to No. 2, Coventry-street, Piccadilly (Messrs. Emden, Egan, & Co., for Mr. Appenrodt).—Consent.

Width of Way and Space at Rear.

Norwood.—Five buildings with bay windows on the eastern side of Lyham-road, Brixton (Mr. H. Macintosh).—Consent.

Width of Way, Space at Rear, and Alteration of Building.

Southwark, West.—Alterations at No. 2, Sumner-street, Southwark (Messrs. P. & G. Geen for Messrs. Moore & Sons).—Consent.

Space at Rear and Projections.

Norwood.—Three houses on the northern side of Dane-avenue, Denmark-hill, eastward of Finsen-road (Mr. E. B. Ellis for Mr. H. A. Sargeant).—Consent.

Space at Rear and Alteration of Building.

Norwood.—Alterations at Nos. 2 and 2a, Upper Tulse-hill, Brixton (Mr. R. Milnes). Consent.

Working-class Dwellings.

Deptford.—Erection of blocks of dwelling-houses, intended to be inhabited by persons of the working classes, upon a site on the eastern side of Brookmill-road, Deptford (Mr. E. Cannell).—Consent.

Deviation from Certified Plans.

Hammersmith.—Erection of Nos. 7 and 9, The Broadway, Hammersmith (Messrs. Hall-Jones & Cummings).—Consent.

St. George, Hanover-square.—Re-erection of No. 25a, Belgrave square (Mr. F. W. Foster).—Consent.

Separation and Alteration of Buildings.

St. George, Hanover-square.—Alterations at No. 3, Arlington-street, St. James (Messrs. Daniel Smith, Son, & Oakley for Messrs. Crawley, Arnold, & Co.).—Consent.

Formation of Streets.

Norwood.—Roadway of a proposed street for carriage traffic, to lead from Cornwall-road to St. Saviour's-road, Brixton (Messrs. E. Evans & Sons).—Consent.

Buildings for the Supply of Electricity.

Bermondsey.—Steel platform adjacent to the boiler-house at the Neckinger electricity generating-station, Spa-road, Bermondsey (Mr. R. J. Angel for the Bermondsey Metropolitan Borough Council).—Consent.

Finsbury, East.—Steel gantry for a travelling crane at the electricity generating-station, Graham-street, City-road (Messrs. Babcock & Wilcox, Ltd., for the County of London Electric Supply Company).—Consent.

Cubical Extent.

Bow and Bromley.—Additional cubical extent at the premises of Messrs. Bryant & May, Ltd., Fairfield-road, Bow (Messrs. Holman & Goodrham for Messrs. Bryant & May, Ltd.).—Consent.

Chelsea.—Additional cubical extent in respect of additions and alterations to blocks 1, 2, A and B, of Harrod's Stores, Ltd., Basil-street and Hans-crescent (Mr. C. W. Stephens for Harrod's Stores, Ltd.).—Consent.

City of London.—Formation of an opening between Nos. 17 and 19, Carter-lane, City, at the third-floor level (Mr. E. Stones for Mr. G. Buchner).—Consent.

Kensington, South.—Additional cubical extent in respect of additions and alterations at the block of Harrod's Stores, Ltd., at the corner of Basil-street and Hans-road, Kensington (Mr. C. W. Stephens for Harrod's Stores, Ltd.).—Consent.

The recommendations marked † are contrary to the views of the Metropolitan Borough Councils concerned.

PROJECTED NEW BUILDINGS IN THE PROVINCES.*

ABERDARE.—Premises, Gadlys-road, for the Aberdare Co-operative Society.

Aberdeen.—Extensions to Ashley-street School (7,000*l.*); Mr. J. A. O. Allan, architect, 5, Union-terrace, Aberdeen. Church halls, Albion-street Congregational Church (2,200*l.*); Mr. G. Wilson, architect, 181A, Union-street, Aberdeen.

Amesbury.—Police-station; Messrs. Parsons Brothers, builders, Westbury.

Bingley. — Proposed swimming bath and laundry (3,000*l.*); Mr. H. Bottomley, Surveyor, Bingley Urban District Council.

Blyth.—School; Messrs. Robson & Waddle, builders, Blyth.

Bradford.—Tuberculosis dispensary (1,180*l.*): Mr. R. G. Kirkby, Architect, Town Hall, Bradford.

Bristol.—Relief-station, Netham-road; Mr. J. J. Simpson, Clerk, Bristol Board of Guardians, Osborne House, Cotham Park, Bristol.

Brovanmill.—Extensions to Anchor Chemical Works for Messrs. Hope, Ltd. (2,150*l.*); Mr. A. W. McDonald, 219, Hope-street, Glasgow.

Cardiff.—Central fire-station, Newgate street (15,000*l.*); Mr. William Harpur, Surveyor, City Hall, Cardiff. Cold storage warehouse at Docks (40,000*l.*) for the Cardiff Railway Company.

Chelmsford.—Council offices, Waterloo-lane (2,200*l.*); Mr. J. Dewhirst, Surveyor, Chelmsford Rural District Council.

Chertsey.—Twelve houses (150*l.* each); Mr. H. Beeney, Surveyor, Chertsey Rural District Council.

Chorley.—Branch premises, Mayfield-road, for the Co-operative Society

Christchurch.—Additions, infirmary (2,200*l.*); Mr. C. W. Ball, architect, Whittington-chambers, King's-road, Southsea.

Cockburns Path (Berwick).—School (3,000*l.*); Messrs. Gray & Boyd, Scotts-place, Berwick-on-Tweed.

Darwen.—Kiosk and villa, Darwen Park (2,100*l.*); Mr. F. E. Seville, Council Offices, Darwen.

Devizes.—Police-station; Messrs. Parsons Brothers, builders, Westbury.

Doncaster.—Lecture hall, etc.; Mr. C. Stevenson, 6, St. Vincent-avenue, Doncaster.

Dunfermline.—Proposed showroom, workshops, etc., Canmore-street (700*l.*); Mr. A. Waddell, Gas Manager. Town Hall, Dunfermline.

Exmouth.—Church institute (3,000*l.*); Mr. G. H. Fellowes-Prynne, architect, 6, Queen Anne's-gate, S.W.

Fence Houses (Co. Durham).—School (9,000*l.*); Mr. W. Rushworth, Architect, Shire Hall, Durham.

Ferryhill.—School (6,500*l.*); Mr. J. A. O. Allan, architect, 5, Union-terrace, Aberdeen

Garstang.—Isolation hospital (1,457*l.*); Mr. J. Cook, Surveyor, Garstang Rural District Council.

Glasgow.—Extensions to Saracen Tool Works for Messrs. A. Mathieson & Sons (6,000*l.*); Mr. A. T. Millar, 12, Renfield-street, Glasgow. Proposed extensions to City-chambers; Mr. A. B. M'Donald, City Engineer, Town Hall, Glasgow.

Greenock.—Baths and washhouses (5,000*l.*): Mr. J. Low, Master of Works, Burgh Buildings, Greenock.

Grimsby.—Paper mill for Messrs. Dixon & Son, Sheffield.

Halstead. — Proposed public baths; Mr. W. A. Nicholson, Surveyor, Halstead Urban District Council.

Haslingden.—Catholic school (3,000*l.*); Mr. H. Fielding, architect, 2, Beaconsfield-street, Haslingden.

Heywood.—Cooper house, Green-lane, for the Phœnix Brewery Company, Ltd.

Holbeck (Leeds).—St. Francis' Catholic School (3,000*l.*); Messrs. Simpson & Son, 12, Cunliffe-terrace, Manningham, Bradford.

Holsworthy.—Masonic hall; Mr. A. Ross, Heard Bridge, Cornwall.

Honiton.—St. Michael's Church; Mr. C. E. Ponting, architect, Marlborough. Additions, workhouse; Mr. W. Redfern, Honiton, Devon.

Huddersfield.—Yeomanry headquarters, Fitzwilliam-street (7,000*l.*); Mr. W. Cooper, architect, 4, Kirkgate-buildings, Kirkgate, Huddersfield.

Huntwick-with-Foulby.—School (2,600*l.*); Mr. W. V. Dixon, Secretary, Education Committee, West Riding of Yorks County Council, Wakefield.

Inverness.—Science and art school for the Royal Academy (8,000*l.*); Mr. R. I. McBeth, Queen's House, Inverness.

Leagrave. — School; Messrs. Gotch & Saunders, architects, Bank-chambers, High-street, Kettering.

Limerick.—Additions, workhouse infirmary (2,500*l.*); Mr. W. Rosengrave, architect, 33, Catherine-street, Limerick.

Macclesfield.—Structural improvements at Infirmary; Architect, care of the Governors.

Margam.—Twenty-six houses; Mr. J. Cox, Surveyor, Town Hall, Margam.

Montrose. — Flax warehouse (600*l.*), for Messrs. J. & G. Paton, Ltd.

Moorthorpe.—Sunday-school; Vicar, South Elmsall Paris Church.

Mossley.—School (360 places); Mr. R. H. Buckley, Surveyor, Mossley Town Council.

Netherton (Dudley). — School (5,280*l.*); Messrs. Willetts & Sons, builders, Bowling Green, Old Hall, S.O., Staffs. Alterations to school (560*l.*); Mr. W. Deeley, builder, New-road, Cinder Bank, Netherton.

Newcastle.—Additions to Gorforth Church; Messrs. Hicks & Charlewood, architects, 67, Westgate-road, Newcastle.

Newsham (Northumberland).—Picture hall; Mr. J. N. Fatkin, 1, St. Nicholas-buildings, Newcastle.

Normanton.—Baths and washhouses (4,000*l.*); Mr. A. Hartley, Council Surveyor, Normanton.

Nuneaton.—Cooking and handicraft centres, Coton-road (3,390*l.*); Mr. T. Smith, builder, Wheat-street, Nuneaton.

Port Sunlight.—Schools: Mr. H. Beswick. County Architect, Chester.

Radcliffe.—Warehouse and office, Hope Mill, for Messrs. J. C. Hamer, Ltd.

Reading.—Hospital; Messrs. Webb & Sutton, architects, Market-place, Reading.

Renfrew.—Extensions and alterations to Municipal-buildings (3,000*l.*); Mr. John Arthur, architect, 131, West Regent-street, Glasgow.

Saddleworth. — Housing scheme (60,000*l.*); Mr. J. H. Reynolds, Surveyor, Saddleworth Urban District Council.

St. Asaph.—Casual wards; Mr. James Hughes, architect, Denbigh.

Skegness.—Cottage hospital (3,000*l.*); Mr. F. J. Parkinson, architect, 9, Richmond-terrace, Blackburn.

Southsea.—Improvements at St. Jude's Church (2,500*l.*); the Vicar.

Stalybridge.—Additions to Ray Mill for the Victor Mill, Ltd.

Stockport. — Extensions to police-station buildings (10,000*l.*); Mr. C. T. Taylor, 10, Clegg-street, Oldham, and Mr. G. Brady, St. Peter's-gate, Stockport, joint architects.

Swansea.—Extensions to electricity works (4,500*l.*); Mr. C. A. L. Prusmann, Electrical Engineer, Town Hall, Swansea. The following plans have been passed:—Alterations, Dot Café, Rutland-street, for Messrs. R. E. Jones, Ltd.; additions, Printing Works, Fisher-street, for Messrs. E. Davies & Co.; three houses, Gorse-road, for Mr. David Williams; five houses, Pinewood-road, for Messrs. J. B. Jenkins & Sons; alterations, Jersey Arms, Bonymaen, for Messrs. Hancock & Co.; re-building Castle Stores, Castle-street, and twelve houses off Middle-road, for Mr. C. Gustavus; four houses and shops, Penfilla-road, for Mr. D. Ludwig. A plan has been lodged for four houses, Uplands, by Mr. E. Evans.

Trowbridge.—School (5,000*l.*); Mr. G. Powell, County Hall, Trowbridge.

Waltham Cross (Herts).—School (4,940*l.*); Messrs. Willmott & Sons, builders, 80, Walsworth-road, Hitchin.

Warsop.—Seventy-five houses for the New Hucknall Colliery Company.

Wellingborough.—Schools (6,672*l.*); Messrs. Henson & Son, builders, 149, Midland-road, Wellingborough.

Wombwell.—Baths, Hough-lane (6,000*l.*); Mr. W. Quest, Surveyor, Town Hall, Wombwell; architect to be appointed.

Worth.—Additions to Prince's Golf C House, Sandwich Bay; Mr. E. W. May, ar tect, Sandwich.

Wortley (Leeds).—Clothing factory laundry; Mr. J. P. Kay, The Lodge, To street, Bramley, Yorks.

Wrexham.—Church; Messrs. Protheroe Co., architects, 13, The Promenade, Chelt ham; Messrs. Collins & Godfrey, builders, Cross, Tewkesbury.

Yarmouth.—Additions to infirmary; Mr. Burton, Clerk, Board of Guardians, Yarmou

* See also our list of Competitions, Contracts, etc., on another page.

FOREIGN AND COLONIAL.

Labour in the Colonies.

From the Emigrants' Information Office, Broadway, Westminster, S.W., we learn th all emigrants to Canada must fulfil the quirements of the Canadian Government as possession of sufficient travelling mon guarantee of employment, etc. There is present a surplus of unskilled labourers many parts.—In Sydney and suburbs, N South Wales, the building, iron, and furnitu workers have been well employed; and sto masons, bricklayers, brickmakers, carpente sawyers, and able-bodied labourers are in gre demand. It is reported that immigrants ha difficulty in finding housing accommodation Sydney. The strike of ironworkers at Lithg continues. In country districts employment generally plentiful.—In Victoria employme continues to be very good; and assist passages are now being granted to mechan in addition to other persons. There is a lar demand for generally useful men, bricklaye carpenters, plasterers, boilermakers, bla smiths, moulders, engine fitters, plumbe turners, and furniture makers.—In Sou Australia work of nearly all kinds is plen ful, and there is a good demand for bric layers, plasterers, carpenters, first-cla painters, plumbers, tinsmiths, boilermake ironworkers, and coppersmiths.—In Queen land there is a good demand for labo generally, both in towns and country, especial in the building and kindred industries.— New Zealand the demand for mechanics is n so general, but skilled men, such as plumbe bricklayers, painters, plasterers, and buildi trade labourers are wanted in many place skilled labourers in Otago are fully employe but there is much industrial unrest.—In t Union of South Africa employment in t building and other trades in Johannesbu continues fairly active; but the supply of m is quite sufficient, and in the case of ca penters and boilermakers is excessive. In t Cape there is a marked increase in the amou of employment at Cape Town available f artisans and labourers, and there is a dema for a few masons in the stone-dressing i dustry, a few cabinet-makers, a few joine and a few sheet-metal workers. Otherwi there is no general demand for more labour the Union.—The employment by the Isthmi Canal Commission of skilled labourers, clerk and other high-grade employees is no restricted to American citizens, except in cas in which American labour of the charact required is not available. There is a surpl of skilled and unskilled labour on the Isthmu and as the Canal Works are now with measurable time of being completed it wi soon be necessary to reduce the number men employed.

Council Offices, etc., Austria-Hungary.

The following notices are taken from th *Zentral-Anzeiger für das öffentliche Lieferungswesen* (Vienna) of January 11:—The municip authorities of Vienna have approved the pla for the erection of new council offices in th 13th District at a cost of 950,000 kronen (near 40,000*l.*).

The municipal authorities of Pécs (Hungar have (1) ear-marked a sum of 1,500,0 kronen (62,500*l.*) for the carrying out of cit drainage works; (2) authorised a call f tenders for the erection of a central electr generating-station; and (3) arranged for th fitting of water-pipes to 1,500 dwellings.

Works in Servia.

The *Zentral-Anzeiger für das öffentlich Lieferungswesen* (Vienna) of January 11 stat that, in connexion with the construction of new harbour at Prahavo, proposals have bee made for the construction and provision of th following:—Quay walls, thirty-eight concret bridges, water works, streets, fire-station electric-light installations, life-saving ap paratus, dock railways, landing-stage, re taurant, station, workmen's dwellings, hote post and telegraph office, and locomotives.

THE SURVEYORS' INSTITUTION: "AN EVENING IN THE INSTITUTION LIBRARY."

At the ordinary general meeting of the Surveyors' Institution, held on Monday, January 22, Mr. Julian C. Rogers (honorary member and late Secretary) read an interesting paper, entitled "An Evening in the Institution Library." In the course of a long but highly entertaining paper—a witty and amusing paper indeed—he said:—

"There is a class of book undeserving of the smallest mercy in a library like ours. I refer to the obsolete or even obsolescent text book. Theoretically a library like ours should, I suppose, be strictly limited to professional text-books. I am profoundly thankful that this narrow view has not been suffered to prevail. I have known libraries of the kind. They are the most dismal spots on earth.

The staple of our library is British topography, and our collection of these noble works would be hard to match elsewhere. Shall I be thought lacking in appreciation of them when I avow my ability to understand why topography should be regarded as of such surpassing and peculiar interest to surveyors, for, I say it without hesitation after an experience of thirty-six years, there is no class of book in the library less frequently consulted by the members. Whatever might be the appropriateness of topography, there could be no manner of doubt as to the claims of agriculture, historical and technical, ancient and modern, to a place on our shelves, and it figures there to a satisfying extent. Professional text-books also, as a matter of course. There is no lack of them.

As I have said, British topography forms the staple of our collection—in value, not number. The earliest county history is Lambarde's "Kent," of which we possess an excellent reprint, dated 1656—that is two years after its first publication. We have also a copy of Kilburne's "Kent," published in 1657, three years after Lambarde's work, to which it is inferior in every way. Sir William Dugdale's masterpiece, "The History of Warwickshire," was published about two years after Lambarde's "Kent," but there is no comparison between the two authors. Lambarde was an ignorant amateur, Dugdale a professional antiquary and a literary craftsman of the first order of excellence. His work is the model on which all subsequent county histories have been fashioned. We possess a copy of the original edition of this famous book. It is enriched with many plates by the celebrated engraver Hollar, who also contributed many illustrations to the same author's *magnum opus*, the "Monasticon," of which we possess a fine, though not an original, copy.

Let me commend to your notice J. T. Smith's "Antiquities of Westminster," a most delightful book. It abounds especially in admirable illustrations—among them contrasted views of the so-called Painted Chamber of Westminster Palace. The first of them represents the very earliest attempt in the art of lithography, the second the improvements of the art in a later stage of its development. It also shows, on No. 6 of the supplemental plates, an admirable ground plan of Old Whitehall Palace before the fire.

Another book which should by no means be overlooked is Parton's "History of the Parish of St. Giles." Apart from its literary merit, it is of interest from a plan showing, in detail, all the houses and the names of their occupants or owners in the year A.D. 1300. I believe this to be the earliest plan of the kind in existence.

One of the strangest topographical works ever produced is the "Polyolbion" of Michael Drayton, described on the title-page as "A chorographical description of the tracts, rivers, mountains, forests, and other parts of Great Britain." It was published in 1613. Drayton is the "Tusser" of topography, except that his verses are of a higher order of poetical merit, in which the personification of inanimate objects bears a conspicuous part, after the fashion of the period. There is nothing like it in the language. A lyrical Bradshaw or Euclid in hexameters would seem very little more strange to modern eyes. The book is annotated by John Selden.

Those who care for early chronicles should look at our copy of the magnificent volume of Reports of the Record Commission, published under the title "Monumenta Historica Britannica." Here you will find the oft-quoted "Chronicle of Bede" (*circa* 673-735), "venerable," if anyone ever deserved the title, and the "Anglo-Saxon Chronicle," printed in English and Anglo-Saxon in parallel columns—most interesting for those who care to achieve some knowledge of the rudiments of our native tongue, and very useful for students of the much-neglected poet Gower in his last, or English, period. The volume also contains a most instructive map of Roman Britain.

Let me call attention to Fitzherbert's "The Boke of Husbandry," a copy of which, in black letter, dated 1534, is in the library. Thirty years after Fitzherbert came Thomas Tusser's rhymed jingle called "Five Hundred Points of Good Husbandry."

I believe that we own a complete set of Young's writings. They can still be read with profit, though he belonged to that curious class of men competent to advise others in a business in which they are themselves dismal failures.

Of the writings of William Cobbett, Young's successor as an annalist, we possess nothing but his immortal "Rural Rides," which is almost a classic in the language. There is an indefinable charm about the book. It seems to exhale the very air of the breezy downs and sequestered lanes he loved so well.

The principal charm of our library consists in a number of miscellaneous books which cannot be grouped under any general heading.

I am happy to say that we possess a copy of the original edition of Samuel Johnson's dictionary. We are also the possessors of a good copy of Bayle's great historical and critical dictionary—a miracle of learning and research.

We have but two recognisable books from Beckford's celebrated library at Fonthill. One of them, the "History of Framlingham," the other a small guide to the city of Hereford. We are not very rich in books on architecture, perhaps rightly so, but I should like to direct your attention to two of them—Wren's "Parentalia" and Pugin's "Contrasts."

The "Parentalia" is a history of the family of Sir Christopher Wren, written by his son, the second Sir Christopher. Wren was not only a great architect (perhaps the greatest since Bramante), but a great scientist, for he was Savilian Professor of Astronomy in the University of Oxford and a President of the Royal Society. On page 274 is a most interesting account of a survey of St. Paul's Cathedral, made by Wren a few months before the Great Fire in 1666. This should be read in connexion with a report by him after the fire, which will be found on page 247 in Elmes' admirable biography of Wren, also in the library.

A. Welby Pugin's "Contrasts" strikes one at first as an ill-natured pictorial skit on contemporary architecture. It is not really so, being only an appeal to the eye against the degradation of his beloved art. His plan is to place side by side modern and ancient examples of buildings for similar purposes, very much to the disadvantage of the former. I have heard it said by those who knew him that this great artist never used a T-square, and rarely supplied the builder with a working drawing, the poor man having to content himself with rough sketches in charcoal, on the nearest plane surface available.

Let me call your attention to a little "History of Newcastle upon-Tyne" for the sake of its frontispiece, an undeniable product of the burin of Thomas Bewick, recognisable at once, by the instructed eye, by the masses of uncut wood left to form the deeper shadows.

We have a copy of the third edition of the admirable itinerary (1534 1542) of the learned John Leland—that prince of antiquaries. The book was written to form a New Year's gift to King Henry VIII.

It will be observed that Leland's travels covered the exact period of the suppression of the greater monastic houses, and it is a thousand pities that his commission to explore their records did not extend to their acquisition, so preserving them from destruction by accident or design in those nefarious times.

Of road books we have some excellent examples. The Roman roads appear in detail in Reynold's "Iter Britanniarum." It contains an excellent map of the Roman roads in Britain.

We have also another road book (engraved text and illustrations on 100 copper plates, a most costly production), entitled Ogilby's "Britannia," which was the direct predecessor of Patterson's well known book.

Patterson's "Roads of England and Wales," published in 1771, enjoyed an extraordinary popularity and passed through many editions. It was in immense demand in the pre-railway times. We have a copy, dated 1784, of the sixth edition, and another copy greatly enlarged by Mogg, which came out just before the disappearance of the mail coaches. The advent of the automobile has given the book a new lease of life, and it is again in great request.

There is a queer book in the library, published in 1653, entitled "Mattheus de Auctionibus," which, being interpreted, is "Matthew on Auctions."

In order that the fact may be on record I may here state that this very house in which we are assembled has a literary history of its own. Here it was, at No. 13, Great George-street, incorporated in our building, that John Wilkes, patriot, buffoon, and libertine, wrote the famous No. 45 of the "North Briton," and from which he was dragged to imprisonment in the Tower. What is now known as the "Members' " Room on the ground floor was his dining-room, and I have no doubt that its beautiful chimneypiece dates from his time.

We have a complete set of the excellent photo-lithographic reproductions of "Domesday Book" (or "Inquest," as it is more properly called), published by the Ordnance Survey authorities. Its interest is greatly enhanced by a previous perusal of an excellent treatise on it by Mr. Adolphus Ballard, which is also in the library.

Francis Grose's "Antiquities of England and Wales" in eight folio volumes is formidable reading, and more useful for reference than perusal.

No reasonable person can expect our library to be used, say, like the library of the Athenæum Club for very few of our members can be numbered (or, for that matter, would care to be numbered) among the leisured classes. Practically there are but two periods in the life of an ordinary man when methodical reading is possible—the period of youth and the period of late middle life.

Needless to say, what is read in youth is of incalculably greater benefit than what is read in maturer years, if read properly and on a systematic plan; otherwise it is time absolutely wasted, for there is an art in reading as there is in writing or speaking.

The Institution is still young, as institutions go. The composition of the membership has undergone great changes in the last forty years without losing its basal form in relation to the great landed interests. It has attracted to its ranks in large numbers the important class of building and quantity surveyors, valuers, as distinguished from the stewards of country estates, sanitary surveyors interested in ventilation, drainage and sewage disposal, municipal surveyors concerned with paving, sewerage, road making, and water supply. The literary needs of all these classes of practitioners have had to be catered for, with the result that the library is what it is—a storehouse of information in which every reasonable practical want is fairly, if not fully, provided for.

But there is, beyond this, a larger question which, as it is treading on delicate ground, a former Vice-President shall voice for me.

How many are there still living who remember, as I do most vividly, a paper read before this Institution forty-one years ago, by the late Mr. Jeremiah Mathews, entitled "A Plea for Culture in the Profession of a Surveyor"? He pointed out (what is true) that at the beginning of his career (say, about 1820) "the modern surveyor was unknown . . . occupying a simply subordinate position." He adds: "It is well to be reminded of this . . . . in order that we may be impressed with the necessity for



Alterations to "Underhills," Bletchingley, Surrey: The Staircase Hall.
Mr. R. P. Oglesby, Architect.

an expansion of our education and culture." Again he says: "I consider the best preparation for our profession to be a high general education . . . such as is generally thought necessary in the older-established professions . . . and I know of no place comparable to the universities for this purpose."

This is the road which the Institution is now treading, but, as it is open only to a few, might it not be well to place further self-educational facilities within the reach of our students by the inclusion of a considerable number of works of general literature in the lending library, and by encouraging the younger men to attend the classes in History and English Literature, held at King's College, and in many of the provincial universities?

This we can place to our credit—that we were the very first of the modern professions to adopt the examination system, previously confined to the older so-called liberal professions. Our example has since been followed by the architects, the engineers, the accountants, and many other bodies, showing how correctly we interpreted the spirit of the age."

PROTECTION AGAINST FIRE, HAMPTON COURT.

A scheme of fire protection is now being carried out at Hampton Court Palace. The work of laying new water mains which are to furnish a high-pressure supply has been begun by the Metropolitan Water Board, who are carrying a 15-in. main from the Flower Pot Gate in the Hampton Court-road right along the main walk in front of the Palace. From this large main there will radiate several 9-in. mains, while 4-in. distributing pipes will convey the water to all parts of the buildings. A system of electric fire alarms will enable communication to be made with the Palace Fire Brigade.

THE LONDON COUNTY COUNCIL.

THE first weekly meeting of the London County Council after the recess was held on Tuesday in the County Hall, Spring-gardens, S.W., Mr E. White, Chairman, presiding.

LOANS.—The Bermondsey Borough Council is to receive a loan of 2,782*l.* for electricity undertaking. A loan of 2,650*l.* is to be made to the St. Marylebone Borough Council for electricity undertaking, and 2,500*l.* to the Wandsworth Borough Council for the purchase of land for use as a slop shoot.

HOTEL CECIL.—Mr. E. Keynes Purchase has submitted drawings showing a proposal to provide a winter garden in the courtyard at the Hotel Cecil, Strand.

THEATRES, ETC.—The following drawings have been approved by the Theatres and Music Halls Committee:—Broadway Theatre, Deptford—provision of cinematograph chamber; Caledonian-road Baths—provision of cinematograph chamber; Grand Casino (Terry's Theatre), Strand—provision of two water-closets; High-street, Notting Hill (Electric Palace)—provision of a rewinding room; His Majesty's Theatre—adaptation of certain rooms in the basement as property rooms; New Prince's Theatre, Shaftesbury-avenue—arrangement of stage switchboard, arrangement of the seating at the area level, and the provision of balconies at the back of the circle and gallery; Palace Theatre of Varieties, Shaftsbury-avenue—amended arrangement of cinematograph enclosure; Shaftesbury Theatre, Shaftesbury-avenue—construction of a manager's office in a disused painting gallery; Shepherd's Bush Empire—alterations to the gallery.

COUNTERS CREEK SEWER.—The apron at the river outlet of the Counters-Creek sewer is to be repaired, and the estimated cost of the work is 1,500*l.*

ALTERATIONS TO "UNDERHILLS," BLETCHINGLEY.

TO OBTAIN the staircase hall, which is the subject of our illustrations, the central portion of the house was practically gutted. The principal and also secondary stairs had to be so designed as to pick up mezzanine floors.

The whole of the flooring, staircase, and panelling was executed in wainscot oak, the walls above being white with stuc masonry quoins.

The insertion of an old eight-day clock, its brass dial flush with the panelling, is thought to be a novel feature.

The alterations also comprise new library, boudoir, kitchen offices, and maids' rooms. The architect was Mr. Robert P. Oglesby, of George-street, Hanover-square, W.

TRIBUNAL OF APPEAL UNDER THE LONDON BUILDING ACT.

THE Tribunal sat at the Surveyors' Institution on Monday to consider further the appeal by Messrs. William Gilbert Allen & Henry George Norris against the certificate of the Superintending Architect of Metropolitan Buildings defining the general line of buildings on the western side of Fulham Palace-road between Bishop's Park-road and Brandenburgh-road. Mr. H. Courthope Munroe and Mr. Clarke appeared for the appellants, and Mr. Macmorran, K.C., and Mr. Daldy represented the London County Council. A report of the first hearing, which covered the case of the appellants, appeared in last week's *Builder*.

Mr. Macmorran opened the case for the respondents, and contended that the general line of buildings as fixed by the Superintending Architect was the correct line in the circum-

ces of the case. If they were dealing with case outside the metropolis there could be e doubt but that the buildings to the London of Crabtree-lane would govern the line of dings on the other side. In this case, how-, the Tribunal had to decide how far that should extend. They had to deal with t he would call a vacant piece of land ween buildings on the north and buildings he south. In this case the Superintending hitect had taken Brandenburgh-road as one he points, and there were reasons for doing . In the first place, the road was not a ight one, and the general building line had e fixed with regard to the alignment of the et, and at Brandenburgh-road there was a plete break. The first house from the k, where there was a cross road, was set , and the Superintending Architect had n that as one point and the houses set t on the other side of Crabtree-lane as the r point, and this, he submitted, was a right reasonable thing to do. There was no on whatever why the point to start the line uld be taken at Crabtree-lane. The only ting buildings between Crabtree-road and southern point at which the line was fixed e a school and four shops. The shops were ted by consent, and the school building was ted under the statutory authority of the School Board, and therefore these build- could not be taken into account.

he Chairman said the Tribunal had been king the matter over, and thought it an reme pity that the parties did not agree pose they had to find that the line went ugh the appellants' building, it would be a ous matter for them, and, on the other d, if they found there was no general build- line, then the appellants could build up to pavement, which would be a great dis- antage to the whole neighbourhood.

r. Macmorran said the difficulty which had en was with regard to what the appellants uld throw into the road. If they could e to the building line which the County ncil had suggested there would be no culty.

r. Munroe said that at the last sitting he le an offer, which the County Council would accept. There was 5 ft. 6 in. of land ween the front wall of the shops and the ement, and if he was allowed half of this his pavement lights he would give the other to the public. As a matter of fact, if he d be reserved the rights as to the pavement ts and a sale board during business hours the 2 ft. 6 in., he would surrender all other ts to the public, but in regard to that there eared to be a legal difficulty.

he Chairman repeated the feeling of the unal, that it was a matter on which there uld be an agreement, and

r. Macmorran said that if the Tribunal ld hear his evidence he would undertake suggestion as to coming to terms should aid before the Building Act Committee of County Council.

he Chairman said they thought both parties uld be reasonable. There must be a give take on both sides, for otherwise it must be ous to one side or the other.

r. Herbert Alfred Legge, District Surveyor Fulham, said the first he had to do with the ter was when Mr. Allen called on him with is on May 4, 1911, for buildings in the road. ness called attention to the line of frontage, told Mr. Allen that he would have to go to County Council to see what line he could d to. Mr. Allen argued that the line they posed to build to was within their rights, said that the reason why the houses to the h of Crabtree lane had been placed back t. was because this was a residential estate. it was by agreement with the ground land- s. He wrote on May 5 to the London nty Council, stating that the appellants e taking the existing fence as their front- line, but that most of their buildings would ehind that line. Subsequently he saw Mr. n on the building, and asked him if he heard anything from the County Council as he frontage line, and was told he had not. received a copy of the Council's resolution June 21, stating that they disapproved of projecting bays, and Mr. Allen told him on e 23 or 25 that he had received a copy. hat date the building was three-parts up. rwards Mr. Poole, who was acting for the ellants, called on him with reference to bay windows, and Mr. Poole told him in y to a question that he had no instructions tever with regard to the line of frontage.

r. Munroe said he submitted that, looking he resolution passed by the County Council, the bay windows were referred to.

plying to the Chairman, witness said it his duty to call the attention of the County ncil to anything done not in conformity of Building Act. He did not know that the ellants were building beyond the general of buildings because he did not know what general line of buildings was.

Mr. Frank S. Caton, Assistant Architect in the Building Act Section of the Superintending Architect's Department of the London County Council, said that Mr. Poole applied to the Council for consent to the buildings on May 9, 1911. The plans were placed before the Building Act Committee about a fortnight afterwards, and the Council passed a resolution on May 29. Owing to holidays and delays which occurred in presenting, the resolution was not sent out till June 20. The question of the general building line was discussed by the Committee. On June 21 Mr. Poole called on him with regard to the resolution passed, and witness suggested that Mr. Poole should advise Messrs. Allen & Norris to give up certain land and compromise. Of course, he had no authority to make that suggestion. On June 26 he had a visit from Messrs. Allen & Norris, and the question of the building line was discussed.

Mr. A. Millwood, of the Superintending Architect's Department, gave particulars as to the road, and as to the circumstances under which certain houses were erected by consent.

Mr. Walmsley, Solicitor for the Fulham Borough Council, supported the appeal, and said there was no doubt that the absence of forecourts would prejudicially affect the rateable value of the property.

Mr. F. Wood, Borough Surveyor for Fulham, disagreed with the line laid down by the Superintending Architect.

Mr. Walter Atkinson, builder, who had erected a large number of houses in the neighbourhood, said that he had built in Parfrey-road, and had left a plot of 80 ft. on which to build four houses to front Fulham Palace-road. The action of the Superintending Architect would take 15 ft. off this 80 ft.

Mr. Munroe, in replying for the appellants, said that nothing in the evidence had shaken his contention that the Superintending Architect had not defined the general line of buildings, and this was shown by the County Council having offered to agree to a different line, subject to the appellants giving up certain land. He submitted that to raise the question of the building line was only a method of putting on the screw to get land for the public. All the correspondence pointed to the fact that the parties were only dealing with the bay windows, and it was only shortly before August that the have of the general building line was started, and his clients got notice that they had gone beyond the line after their buildings were up.

The case was further adjourned to enable the matter to be laid before the County Council.

LAW REPORTS.

KING'S BENCH DIVISION.

(Before Mr. Justice HAMILTON.)

Building Dispute :

Ramsden & Carr *v.* J. Chessum & Sons.

IN this case the plaintiffs were Messrs. Ramsden & Carr, of St. Dunstan's Studio, Seymour-place, South Kensington, and the defendants Messrs. J. Chessum & Sons, builders, of South-place, Finsbury.

During the year 1910 a cinematograph company employed Messrs. Chessum & Sons to erect "Cinema House," at 225, Oxford-street, and the plaintiffs now claimed in respect of certain goods supplied, including a quantity of artistic door handles and hammered silver and brass door plates. They alleged that the amount due to them was 142*l.* 13*s.*, which they alternatively claimed as money had and received by the defendants for the use of the plaintiffs or as money held in trust for them. Some time after the place had been opened the cinematograph company went into liquidation, and plaintiffs alleged that Messrs. Chessum & Sons had received certain payments which should be allocated to the goods supplied by the plaintiffs. This was disputed by Messrs. Chessum & Sons, who entered a general denial of liability and contended that the orders for the goods were given by the architect, but not confirmed by them.

His Lordship, in the course of a lengthy judgment, expressed the view that Messrs. Ramsden & Carr had failed to show that any money had been received to their use by the defendants. The plaintiffs succeeded on the issue as to goods sold and delivered, and obtained judgment with costs on that issue. Defendants were given the costs on the issues on which the plaintiffs failed.



Alterations to "Underhills," Bletchingley, Surrey : The Staircase Hall.
Mr. R. P. Oglesby, Architect.

OFFICIAL REFEREE'S COURT.
(Before Mr. HENRY WILLIAM VEREY.)

Battle Building Ownership Dispute: Hallett & Langdale *v.* Cowdell.

JUDGMENT was given last week in an action in which Mr. Arthur Carthew Langdale and Mr. John Hallett, trading as Langdale, Hallett, & Co., builders and decorators, of 11, West Halkin-street, Mayfair, sued Mr. Henry Seward Cowdell to recover 75*l.* 19s., balance of an account for work done at North Lodge on the Lewis-road, Battle.

The plaintiffs' case was that in October, 1910, Mr. Cowdell purchased the house in question, for which he required the alterations and additions. He approached the plaintiffs, whom he requested to prepare plans and estimates. The plaintiffs said that Mr. Cowdell had emphasised upon them the necessity for haste, desiring to have the place ready for occupation by March 25, 1911, and repeatedly he had urged that there should be no delay. Mr. Langdale had an interview with the defendant on October 25 at Southsea, taking with him the plans. This interview was regarded as important by both the parties, inasmuch as there was a direct conflict of evidence as to what took place at it. The plans were discussed, and the whole matter investigated. Mr. Langdale claimed that at that interview he was instructed to proceed with the whole of the work—the interior as well as the roof and gutters—and that it had been arranged that he was to render weekly sheets of labour with the usual 5 per cent. establishment charges and 10 per cent. profit.

The defendant, on the other hand, pleaded that plaintiffs at that interview on October 25 were instructed only to do work on the roof and gutters, and that on the day in question a verbal agreement was entered into to do the work for 40*l.* That the plaintiffs denied. —In the course of the hearing Mr. Drucquer (the defendant's counsel) said that it was a question as to whether—aye or nay—Mr. Cowdell gave the order for the whole of the work, and added that his client absolutely denied orders for the interior work. His client, too, disputed the prices for the work in respect to the roof and gutters.

In giving judgment, after hearing exhaustive evidence on both sides,

The Official Referee said he came to the conclusion that the whole conversation between Mr. Langdale and Mr. Cowdell on October 25, 1910, resulted in Mr. Langdale receiving instructions for this work to go on generally, and that consequently the plaintiffs were justified in incurring the expenditure. Mr. Langdale had stated in the witness-box that they would not have engaged a foreman at 3*l.* a week for a 40*l.* job only. This was not a case in which one or either of the parties questioned each other's veracity; there were no mutual accusations of trying to deceive. It was a matter of memory, and he (the Referee) decided that the memory of the plaintiffs was to be relied upon, Mr. Langdale having also made notes of what transpired. His Honour added he could not find anything to discredit the plaintiffs concerning their time sheets. The weather was very bad during the time the work was carried out; they had been told that there were rain, wind, snow, thunder, and lightning, that the place was exposed, and hence it was not plane-sailing work. Nor could he find that there had been any overcharges by the plaintiffs. There would, therefore, be judgment for the plaintiffs for the balance claimed—75*l.* 19s., of which 25*l.* paid into court by defendant formed a part. Plaintiffs would have High Court costs.

LONDON COUNCILS.

Barking.—The Surveyor has been directed to prepare plans and estimates for the carrying through of Bifrons-street into St. Ann's-road. The Surveyor is to prepare plans and estimates for the erection of additional cottages on the remainder of the land adjacent to King Edwards-road. The tender of Mr. S. E. Moss, Southend-on-Sea, has been accepted, at 17,344*l.*, for the erection of the Ripple Schools. A plan has been passed for Messrs. Anton Deppe Söhne for additions to factory, Hart's-lane.

Battersea.—The Borough Surveyor has been instructed to prepare estimates with a view to making-up and paving Bowood-road, Wakehurst-road, part of Alfriston-road, and part of Canford-road. The carriageway of Albert Bridge-road is to be repaired with granite macadam at an estimated cost of 434*l.* No objection is to be raised to the proposals of Messrs. Edwin Evans & Sons and Mr. W. E. Tapley to erect seven houses, Muncaster-road, and additions to Messrs. Spiers & Pond's premises, Warriner-gardens and Alexandra-avenue respectively.

Berkhamsted.—Plans submitted by the Berkhamsted Tenants, Ltd., have been approved for the erection of twelve houses.

Bushey.—Directions have been given the Surveyor to prepare plans, specifications, and provisional apportionments for making-up Nightingale-road and part of Grange-road. The tender of Messrs. Bracey & Clark, at 349*l.*, has been accepted for making-up Springfields.

Chelsea.—No objection is to be raised to a proposal by Mr. C. W. Stephens to erect a warehouse upon an island site abutting upon Pavilion-road, Charlotte-street, and Cross-street; also to the proposal of Mr. C. R. Ashbee for a building scheme at Cheyne-walk.

Croydon (County).—The tender of Messrs. W. Smith & Sons, Croydon, at 2,449*l.*, has been accepted for carrying out the work of erecting a disinfecting station in Factory-lane. The following plans have been passed:—Mr. W. Capon, Streatham, S.W., ten houses, Kilmartin avenue; The Alliance Estates and Development Company, Ltd., 39, New Broad-street, E.C., fifty-nine houses, Beechwood-avenue, and eighteen houses, Nutfield-road; Mr. J. Hicks, Brighton-road, four houses, Mayday-road; Messrs. Thompson & Fyfe, offices, etc., Tamworth-road Model Steam Laundry; Messrs. Chown & Sheffield, Norbury, S.W., four houses, Pollard's Hill North, and two houses, Pollard's Hill West; Messrs. Paish, Tyler, & Co., 5, Station-road, West Croydon, six houses, Lower Addiscombe-road.

Croydon (Rural).—Plans and estimates have been submitted by the Surveyor for making up the following streets at Beddington, at the costs mentioned: -The Avenue, 1,086*l.*; The Grove, 710*l.*; Woodcote-grove, Approach-road, 315*l.*; Osmond-gardens, 1,083*l.*

Hackney.—An old brick sewer in a portion of Forest-road is to be reconstructed for a length of 300 ft. with 9-inch glazed stoneware pipes, at an estimated cost of 98*l.* Plans have been passed for Messrs. Douglass Mathews & Son, on behalf of Messrs. H. E. Davenport, Ltd., for a two-story addition to premises on the western side of Brunswick-place, Farleigh road, West Hackney. Plans have been lodged with the London County Council by Messrs. Rowlandson & Co. for the erection of a factory in Chatham-place.

Hornsey.—The following plans have been passed:—Mr. W. J. Collins, pavilion, Ethelldene avenue, Crouch End; Mr. J. C. Hill, four houses, Hornsey-lane-gardens, Highgate; Messrs. Cutts, Southampton-street, W.C., alterations and additions to All Saints' Church, Durham-road, Muswell Hill.

Islington.—A further portion of the wood paving of the carriageway of Hornsey-road is to be renewed at an estimated cost of 600*l.*, as is also the asphalt carriageway of a portion of Thornhill-road at an estimated cost of 1,200*l.* In connexion with the renewal of the wood paving in Highbury-grove and, as stated above, in Hornsey-road, the tender of Thos. Gabriel & Sons has been accepted at 563*l.* 10s. 4d. to supply 86,000 creosoted yellow deal blocks.

Lambeth.—An apportionment order is to be made for paving the carriageway and footways of Denny-street. The Borough Engineer estimates the cost at 1,024*l.* No objection is to be raised to the proposal of Mr. E. B. Ellis, on behalf of Mr. H. A. Sergeant, to erect three houses at the junction of Dane-avenue with Finsen-road. The L.C.C. is to be advised to refuse the application of Mr. H. Macintosh for consent to the erection of five houses in Lyham-road.

Poplar.—Plans have been passed for Mr. Wm. Stewart, for additions to the Manor Arms beer-house, East India Dock-road; also for the London Asphalte Company, Ltd., for a factory at Leven Wharf, Leven-road.

Stepney.—The sewer in Little Hermitage-street is to be substituted with a nine-inch glazed-ware pipe sewer, at an estimated cost of 90*l.* Electricity mains are to be extended to Grafton-street, Mile End Old Town.

Wandsworth.—Tenders are to be invited for paving Daylesford-avenue, Putney, part of Roehampton-lane, Putney, and part of Southerland-grove, Southfield, as new streets. The tenders of Messrs. E. Parry & Co. have been accepted at 425*l.* (and schedule of prices for extras and omissions), and at 250*l.* (and schedule of prices for extras or omissions), for repairing Beaumont-road and part of Augustus-road, Southfield, respectively. The tender of Messrs. J. Mowlem & Co., Ltd., at 113*l.* (and schedule of prices for extras or omissions), has also been accepted for repairing Southmead-road, Southfield. Plans submitted by Mr. J. C. Radford, on behalf of Lord Westbury, for proposed sewers in two intended new streets out of the western side of Putney-hill, are to be forwarded to the London County Council for approval. Th following plans have been passed:—Messr W. Adkins & Son, alterations and additions t Templeton, Priory-lane, Putney; alterations t Grove House, Roehampton-lane, Putney, an memorial hall, Alton-road, Putney; Messr Swain & Selly, twenty-two houses, Elmwoo House Estate; Mr. F. Eaton, motor garag rear of No. 25, Gwendolen-avenue, Putney Mr. A. Harvey, additions to the Convent o the Holy Family, Nos. 85, 87, and 89, Tootin High-street; Messrs. G. F. Bates & Son alterations and additions to Audley Lodge Putney Park-avenue, Putney; Mr. J. W Coates, additions to Madeira Hall, Madeira road, Streatham; Messrs. L. & W. White head & Co., Ltd., three shops, High-street Clapham; Messrs. Allen, Fairhead, & Son church, Narbonne avenue, South Clapham Messrs. Dent & Hellyer, Ltd., school for Con vent of Sacred Heart, Roehampton-lane Putney; Messrs. Holloway Brothers, twelv houses, Loxley-road, Springfield.

Watford. Sanction has been received by th Urban District Council from the Local Govern ment Board to the borrowing of 5,536*l.* fo footpath paving.

Woolwich.—The following plans have been passed:—Mr. J. J. Bassett, 121, Earlshall-road Eltham, eight houses, Glenlyon-road, and Dun breck-road, Eltham; Mr. W. Pollock, Wes Park, Eltham, additions to east Entrance Lodge, Avery Hill, Eltham.

OBITUARY.

Mr. H. Bloomfield Bare.

We regret to record the death of Mr H. Bloomfield Bare, which has just occurred a Liverpool. The deceased was a Fellow of the Royal Institute of British Architects, having been elected in 1888. He was a Liverpool man, and received his training in the sur veyor's office of the London and North Western Railway at Liverpool. For some time he was a partner with Mr. H. L. Beckwith architect, of Liverpool, and then, leaving England, established a practice in Philadelphia. On his return to this country about eight years ago he resumed his practice a an architect, and did considerable work in connexion with the Art Workers' Guild. Mr Bare was a member of the Liverpool Archi tectural Society.

PATENTS.

APPLICATIONS PUBLISHED.*

27,446 of 1910. Elizabeth Ann Beaumont: Appliances for dusting walls, floors, pictures and the like.

30,075 of 1910.—Steel, Peech, and Tozer Ltd., and Henry Edward Bowen: Magnetic lifting appliances used with cranes.

30,507 of 1910.—Wladyslaw Maciejewski: Conduits.

1 of 1911. -Walter Wille Gilbert: Grab excavating, and the like apparatus.

4,116 of 1911.—Charles William Pinchbeck: Portable hoist.

5,319 of 1911.—Ernest Griffiths and Dargue Griffiths & Co., Ltd.: Water-heating fireplaces or stoves.

8,276 of 1911.—Frank Howard Pochin and Horace Stanley Pochin: Sandpapering and like machines.

8,429 of 1911.—Bernard Musgrave: Boiler flue baffles.

9,766 of 1911.—Christopher Whittaker: Chimney-pots and the like.

9,838 of 1911.—Alfred Zempliner: Self closing devices for doors.

9,880 of 1911.—George Albert Ure: Slow combustion stoves.

11,115 of 1911.—George Castle and Horatio Leonard Barraclough: Bricks, blocks, or slabs employed in building construction.

11,645 of 1911.—Paul Wilhelm Sieurin: Shovelling and hoisting material.

12,826 of 1911.—Charles Thomas Pearcy and Hubert James Vick: Windows.

14,348 of 1911.—Felix Ueberall and Albert Bussenius: Covers for the seats of water closets.

14,706 of 1911.—Allison Riley Akin and Jacob Joseph Veid: Heating-stove.

17,580 of 1911.—Peter Storme: Tile-cutting and drilling machines.

19,221 of 1911.—Herbert James Beresford and Frank William Beresford: Water-closets.

26,593 of 1911.—Joseph Francis Ebner and Edgar Ebner: Process of manufacturing blocks for wood-block flooring.

* All these applications are in the stage in which opposition to the grant of Patents upon them can be made.

List of Competitions, Contracts, etc.

For some Contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) are advertised in this number:** Competitions, iv.; Contracts, iv. vi. viii. x.; Public Appointment, xvii.; Auction Sales, xxii.

Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Competitions.

ANUARY 29. — **Montevideo.** — Government ace (premiums, 2,125*l.* and 850*l.*) and town im- ovement scheme (premiums, 1,060*l.*, 640*l.*, and 4.). Conditions may be seen at the Board of ade, 73, Basinghall-street, E.C.

ANUARY 31. — **Australia.** — DESIGNS FOR DERAL CAPITAL CITY.—The Government of the mmonwealth of Australia invite competitive signs for the laying out of this Federal capital y. See advertisement in issue of September 1 further particulars. See also page 508, ovember 3.

EBRUARY 3.—**Bolton.**—NURSES' HOME AT E INFIRMARY.—Premiums of 30*l.*, 20*l.*, and 10*l.* essor, Mr. John S. Gass, F.R.I.B.A.

EBRUARY 17.—**London, E.C.**—NEW OFFICES.— e Port of London Authority invite pre- minary sketch designs for new head offices Trinity-square, and for laying out remainder land as a building site. See advertisement in ue of November 24 for further particulars.

EBRUARY 17. — **York.** — SCHOOL. — The York ducation Committee invite competitive designs r a public elementary school. See advertise- ent in issue of January 12 for further rticulars.

ARCH 15. — **Drammen, Norway.**—RAILWAY- ATION.—Particulars from the Norges Stats- aner, Christiania.

ARCH 15. — **Prestatyn, North Wales.** — AYING-OUT ESTATE.—Lord Aberconway and the rustees of the Prestatyn Estate invite designs r laying-out of the estate Three premiums e offered. Particulars from 33, Henrietta- reet, W.C. See advertisement in issue of anuary 5 for further particulars.

ARCH 16. — **Harrow.** — PUBLIC OFFICES.—The arrow-on-the-Hill U.D.C. invite tenders for the nlargement of and alterations to their Public ffices. See advertisement in issue of January 5 r further particulars.

ARCH 31. — **Winnipeg.** — NEW PARLIAMENT UILDINGS.—The Government of Manitoba invite competitive drawings for new Parliament build- ngs. See advertisement in issue of January 12 nd Competition News, January 5, for further articulars. Also p 92.

AY 1.—Society of Architects' Travelling udentship. Design for a Town Hall. 25*l.* nd medal.

UNE 28. — **Hale, Cheshire.**—TOWN PLANNING CHEME.—Premiums 50*l.* and 25*l.* Particulars rom the Council Offices, Hale.

ULY 1. — **Dusseldorf.** — A plan for the xtension of the City of Dusseldorf. Premiums f 1,000*l.* to 375*l.* Conditions on application to he Chief Burgomaster, Dusseldorf. A transla- ion appeared on page 366, September 29.

UGUST 30. — SAXON SHELL PRIZE. — Fifty uineas; with medal, is offered for essay on a ospital subject. Particulars from the Sanitary nstitute, 90, Buckingham Palace-road, S.W.

O DATE.—**Edinburgh.**—MEMORIAL TO KING DWARD.—Limited.

O DATE.—**Jordanhill, Glasgow.**—PROPOSED RAINING COLLEGE.—Limited to six firms, named n Competition News, December 1, 1911, page 635

Contracts.

BUILDING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

JANUARY 26. — **Mytholmroyd.** — PAVILION. — Erection of bowling green pavilion. Plans and specifications with Messrs. Longbottom & Culpan, architects, 11, George-street, Halifax.

JANUARY 27. — **London.** — ADDITIONS, ETC.— Alterations and additions to The Cedars, Port- way, West Ham. Deposit of 2*l.* 2s. to Colonel F. F. Johnson, C.B., Secretary, Territorial Force Association, County of Essex, Market-road, Chelmsford.

JANUARY 27.—**London.**—QUARTERS.—Erection of headquarters, Sergeant-Instructor's quarters, stores, etc., for the 7th Battalion, the Essex Regiment, and 3rd E.A. Field Ambulance, R.A.M.C., at Walthamstow. Deposit of 2*l.* 2s. to Colonel F. F. Johnson, C.B., Secretary, Territorial Force Association, County of Essex, Market-road, Chelmsford.

JANUARY 29.—**Farnborough.**—REPAIRS, ETC.— For painting and repairs, etc., to the Workhouse Chapel and Children's Home, Farnborough. Measurements and form of tender from the Board's Architect, Mr. Fras. J. Smith, F.R.I.B.A., Parliament-mansions, Victoria-street, S.W.

JANUARY 29. — **Lancaster.** — BUILDINGS.—For the erection of farm colony buildings. Plans seen, and quantities from the architects, Messrs. Woolfall & Eccles, FF.R.I.B.A., 60, Castle-street, Liverpool. Deposit of 1*l.* 1s.

JANUARY 29. — **London.** — HOUSES, ETC. —Erection of workmen's dwellings near to North-hill, Highgate; extension of workshops at sanitary depôt, High-street, Hornsey. Plans and specifications seen, and quantities and forms of tender from Mr. E. J. Lovegrove, Borough Engineer and Surveyor, Municipal Offices, Highgate, N.

JANUARY 29. **London.**—RECONSTRUCTION.—For reconstruction of the north octagon, Temperate House, Kew Gardens. Drawings, specification, and conditions and form of contract with Mr. G. J. T. Reavell, Office of Works, etc., Storey's-gate, London, S.W.

JANUARY 29. — **Poole.** —ADDITIONS.—Erection of classroom and other additions to the Heather-lands Infants' School. Plans, specification, and general conditions with Mr. Samuel J. Newman, F.R.I.B.A., Borough Surveyor, Municipal Offices, Market-street, Poole.

JANUARY 29. — **Royston.** —HOUSE.— Erection of a house and shop, Midland-street. Plans seen, and quantities from Mr. Reginald C. Woodhead, architect and surveyor, 20, Church-street, Barnsley.

JANUARY 29. **Thornbury.** —SCHOOL.—Erection of the new infants' school. Drawings and conditions of contract seen, and quantities and forms of tender from the City Architect, Town Hall, Bradford.

JANUARY 31.—**Chipping Ongar.**—EXTENSION.— For the extension of the needle-room at the Children's Homes, at Chipping Ongar, Essex. Specification, conditions of contract, and forms of tender from Mr. Frank R. Coles, Clerk to the Guardians, Clerk's Office, Hackney Union, Homerton, N.E.

JANUARY 31. — **Christchurch, Mon.**—HOUSES, ETC. —Erection of seven houses, piggeries, and alterations to existing house and farm buildings, near the Hartridge Farm, Christchurch, near Newport, Mon. Plans and quantities, with forms of tender, from the Borough Architect, Mr. C. F. Ward, A.R.I.B.A., Town Hall. Deposit of 1*l.* 1s.

JANUARY 31. — **Merthyr.** — WAREHOUSE.—Erection of warehouse and saw-mill at the Great Western Railway yard. Plans and specification with Mr. T. E. Rees, architect, Bank-chambers, High-street, Merthyr.

FEBRUARY 1. — **Darlington.**—EXTENSIONS.—Extensions to the engine-house of the electric power station, Haughton-road. Plans and specification seen, and quantities from Mr. G. Winter, Borough Surveyor, Town Hall. Deposit 2*l.* 2s.

FEBRUARY 2.—**Rothes.**—WAREHOUSE.—Erection of a warehouse at Glenspey Distillery, for Messrs. W. & A. Gilbey, Ltd. Plans and specifications seen, and quantities from Mr. C. C. Doig, architect, Elgin.

FEBRUARY 2. — **Southwold.** — MORTUARY.—For erection of a mortuary Plans and specification with the Borough Surveyor, Town Hall.

FEBRUARY 3.—**Bandon.**—COTTAGES.—Erection of twenty-two labourers' cottages. Plans, specifications, and tender forms from Mr. A. Haynes, Clerk to the Council.

FEBRUARY 5. — **Argoed.**—HOUSES.—Erection of eighteen houses at Argoed, for the Penylan Argoed Building Club. Plans and specifications with Mr. A. F. Webb, M.S.A., architect and surveyor, Tredegar-chambers, Blackwood.

FEBRUARY 5. **Liverpool.** COLONY.—Erection of epileptic colony at Maghull. Plans and specifications with Messrs. Briggs, Wolstenholme, & Thornley, FF.R.I.B.A., architects, Royal Liver Building, Pierhead, Liverpool. Quantities on deposit of 2*l.* 2s.

FEBRUARY 5. **Tipton.** - CONVENIENCES, ETC. Erection of new sanitary conveniences, etc. Drawings, specifications, and quantities by Mr. W. H. Jukes, Surveyor, Public Offices, Tipton. Deposit of 10s.

FEBRUARY 6. — **Blackpool.** —SCHOOL. —Erection of new Sunday-school at Victoria-street Congregational Church, Blackpool. Plans and specifications with the architect, Mr. H. Wade, 27, Birley-street, Blackpool. Quantities on deposit 1*l.* 1s.

FEBRUARY 6. — **Hull.** — BRIDGE.—The North-Eastern Railway invite tenders for the construction of the abutments, wing walls, and superstructure of a new bridge at Southcoates-lane. Plans seen, and specification, quantities, and form of tender from Mr. C. F. Bengough, the company's engineer at York

* FEBRUARY 7.—**London, S.W.**—EXTENSION OF POST-OFFICE.—The Commissioners of H.M. Works, etc., invite tenders for the extension of the South-Western District Post-office. See advertisement in this issue for further particulars.

* FEBRUARY 7. — **Southend-on-Sea.** — TIMBER COVERING.—The Corporation of Southend-on-Sea invite tenders for a timber covering over South Station of the Pier Tramways. See advertisement in this issue for further particulars.

FEBRUARY 8. — **London.** — ALTERATIONS.—For alterations to the needle-room block at the St. James' Infirmary. Drawings and specification and form of tender and quantities, on deposit of 1*l.*, from Mr. F. W. Piper, Clerk to the Guardians, Union Offices, St. John's-hill, Wandsworth, S.W.

FEBRUARY 9. — **Settle.** — SCHOOL.—For erection of a new secondary school. Plans seen, and specifications, with quantities, from Education Architect, County Hall, Wakefield. Deposit of 1*l.*

FEBRUARY 10. — **Newry.** —HOUSE.— For erection of a dwelling-house in Kilmorey-street. Plans, specifications, from Mr. P. J. Neary, architect, Newry.

FEBRUARY 12. — **Hastings.** — SEAT.—For construction and erection of a shelter seat on the esplanade opposite Warrior-square, St. Leonards. Drawings and specifications seen, and form of tender at the office of the Borough Engineer, Mr. P. H. Palmer, M.Inst.C.E., Town Hall, Hastings.

* FEBRUARY 13.—**Brockley.** —GREENHOUSE, ETC. —The Metropolitan Board of Deptford invite tenders for erection of a greenhouse and forcing-houses at the cemetery at Brockley-road. See advertisement in this issue for further particulars.

FEBRUARY 13. — **London.**—CONVENIENCE.—Erection of a sanitary convenience at High-street, Putney. Specification, drawings, form of contract, and particulars seen, and form of tender and quantities from the Borough Engineer and Surveyor, No. 215, Balham High-road, S.W., on deposit of 1*l.* 1s.

* FEBRUARY 13. — **Nuneaton.**—ENLARGEMENT OF POST-OFFICE.—The Commissioners of H.M. Works, etc., invite tenders for enlargement of Nuneaton Post office. See advertisement in this issue for further particulars.

FEBRUARY 15.—**Birkenhead.**—TANK, ETC.—Construction of a brick gasholder tank and steel internal framing, and other works, at the new gasholder station, Laird-street. Also for the construction and erection of "A" a boundary wall, weigh-house, entrance gates, etc., at the gasholder station. Further, for the construction and erection of two cottages, a governor house, and a boiler house. Specification, general conditions of contract, and quantities at the office of the Gas Engineer, Mr. T. O. Paterson, M.Inst.C.E., Gasworks, Thomas-street, Birkenhead. A deposit of 5*l.* 5s. and 1*l.* 1s. and 2*l.* 2s.

* FEBRUARY 15.—**Hackney.**—BRANCH LIBRARY.— The Hackney B.C. invite tenders for erection of a Branch Library. See advertisement in this issue for further particulars.

FEBRUARY 15. — **London.** — LIBRARY.—Erection of a branch library building in Forest-road and Wordland-street, Dalston, Hackney. Plans and specifications seen, and quantities, form of tender, and contract from the architect, Mr. Edwin Cooper, F.R.I.B.A., 12, Gray's-inn-square, W.C. Deposit of 2*l.* 2s.

FEBRUARY 16. —**Upholland.**—SCHOOL.—Erection of an elementary school at Crawford Village, Upholland. Plans seen, and quantities at the office of the County Architect, Mr. Henry Littler, 16, Ribbledale-place, Preston. Deposit of 2*l.*

FEBRUARY 16. —**Stratford.**—RESIDENCE AND DINNER-ROOM, ETC. — The West Ham Education Committee invite tenders for erection of new residence for caretaker and alterations at Denmark-street School; also conversion of covered playground into dinner-room, at Stock-street School. See advertisement in this issue for further particulars.

FEBRUARY 21. - **Berriew.**—SCHOOL.—Erection of a new Council school at Brooks, Berriew, and for a water supply. Plans, specifications, and conditions seen at the County Education Offices. Deposit of 1*l.* 1s. to Mr. Llewelyn Phillips, Clerk to the Education Authority, County Education Offices, Newtown.

FEBRUARY 23. — **Newbury.** — COTTAGES.—Erection of twelve cottages, Speenhamland. Plans and specifications with Mr. S J. L. Vincent, Borough Surveyor, Newbury.

FEBRUARY 27 — **Blackburn.**—EXTENSION.—For alteration and extension of the Town Hall. Forms of tender and specifications from the joint Architects, Messrs. Briggs, Wolstenholme, & Thornley, and Messrs. Stones & Stones & Atkinson, Richmond-terrace, Blackburn, on deposit of 1*l.* 1s.

No DATE. — **Halifax.**—EXTENSION.—For extension of weaving shed at Pellon. Plans with Messrs. Jackson & Fox, 7, Rawson-street, Halifax

No DATE.- **Heighington.**—HALL.—For erection of Heighington Church Parochial Hall Quantities from Mr. G. Walesby Davis, M.S.A.,

BUILDING—*continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

Lic.R.I.B.A., architect, High-row-chambers, Darlington.

NO DATE.—**Hull.** —PICTURE HALL.—For erection of the East Hull Picture Drome, corner of Brazil-street. Quantities on deposit of 1*l.* 1s. to Mr. John Abbott, architect and surveyor, 18, Newland-avenue, Hull.

NO DATE. — **Lahardane.** —CHURCH.—For erection of a new church at Lahardane, Co. Mayo. Plans and specification from Messrs. William H. Byrne & Son, architects, 20, Suffolk-street, Dublin. Quantities from Messrs. D. Morris & Co., 68, Harcourt-street, Dublin.

NO DATE.—**Rochford.**—NEW HALL, ETC.—For the erection of a new dining hall, kitchen, and stores at the Workhouse, Rochford. Names to the architect, Mr. Walter J. Wood, 26, Alexandra-street, Southend-on-Sea, with a deposit of 1*l.* 1s.

NO DATE. — **Torquay.** — ALTERATIONS. — For alterations to Chelston Wesleyan Church. Mr. F. G. Moore, A.M.Inst M.E., 9, Fleet-street, Torquay, architect.

NO DATE.—**Torquay.** — GARAGE. Erection of garage, for the Torquay Chelston Steam Car Company, Ltd. Mr. F. G. Moore, A.M.Inst.M.E., 9, Fleet-street, Torquay, architect

ENGINEERING, IRON, AND STEEL.

FEBRUARY 10. **Tunbridge Wells.** SWITCHGEAR. For erection of switchgear at the generating-station. Specifications and plans from Mr. J. W. Beauchamp, Borough Electrical Engineer, Stanley-road, Tunbridge Wells.

FURNITURE, PAINTING, MATERIALS, etc.

JANUARY 26. — **Brighton.** — PAINTING.—For painting the interiors of the West-street and Madeira-drive shelter halls. Specification and form of tender at the office of the Borough Surveyor, Town Hall, Brighton.

JANUARY 29.—**Birmingham.** PAINTING.—For cleaning, painting, and colouring at the Northwood-street Public Baths. Forms of tender and specification from Mr. J. Cox, Superintendent Engineer, Kent-street, Birmingham. Deposit of 1*l.* 1s.

JANUARY 29. **Glasgow.**—FIREBRICKS, ETC.—For supply of firebricks, fireclay, and fireclay retorts at Gasworks. Specifications and forms of tender from Mr. Alexander Wilson, Gas Engineer, 45, John-street.

JANUARY 30. — **Bradford.**—PAINTING. —For external painting at City Hospital, Leeds-road, City Hospital, Bierley Hall; Faxfleet-street dwellings, and Semon Convalescents' Home, Ilkley. Specifications and form of tender from the City Architect, Town Hall, Bradford.

JANUARY 31. — **Burnley.** —RAILING.—For fixing of iron railing and gates at Ship-alley. Plans seen, and form of tender from Mr. G. H. Pickles, M.Inst.C.E., Borough Surveyor, Town Hall.

JANUARY 31.—**Glasgow.**—STORES.—The Glasgow and South-Western Railway Company invite tenders for supply of building stone, iron castings, larch fencing, lime and Portland cement. Specifications from Mr. R. F. Harrison, Stores Superintendent, Kilmarnock. Also wire fencing, and erecting same. Particulars with the company's engineer, St. Enoch Station.

JANUARY 31. — **London.** — PAINTING, ETC. —The Metropolitan Asylums Board invite tenders for cleaning and painting works at the Grove Fever Hospital, Tooting-grove, Tooting-graveney, S.W. Specification by Mr W. T. Hatch, M.Inst.C.E., M.I Mech.E., Engineer-in-Chief. Specification and form of tender at the office of the Board, Embankment, E.C., on deposit of 1*l.*

✱ FEBRUARY 1.—**Lambeth.** —REPAIRING, CLEANSING, AND REDECORATING. —The Lambeth B.C. invite tenders for repairing, cleansing, and redecorating the Mortuary and Coroner's Court, Lambeth, and the Disinfecting Station and Mortuary, Loughborough Junction. See advertisement in this issue for further particulars

FEBRUARY 1. **London.** PAINTING, ETC.—For repairing, cleansing, and redecorating the Mortuary and Coroner's Court, High-street, Lambeth, and the Disinfecting Station and Mortuary, Wanless-road, Loughborough Junction. Specifications and forms of tender from Mr. Henry Edwards, C.E., Borough Engineer, Lambeth Town Hall, Brixton-hill, S.W.

FEBRUARY 3.— **Canterbury.** MATERIALS. For supply and delivery of materials. Forms of tender and specifications from Mr. Arthur C. Turley, A.M.Inst C.E., City Surveyor. City Surveyor's Office, Municipal Buildings, Canterbury.

FEBRUARY 3. — **Finchley.** —DECORATIONS.—For internal decoration at the workmen's dwellings. Specification and form of tender from the Engineer and Surveyor, Mr. C. J. Jenkin, M.Inst.C.E., Council Offices, Church End, Finchley. Deposit of 1*l.*

FEBRUARY 5 **Glasgow.** — PAINTING. — For painting Glasgow Central Station. Specifications and schedules with the company's engineer, Buchanan-street Station, Glasgow. Deposit of 2*l.* 2s.

✱ FEBRUARY 5.—**Hendon.**—VARIOUS MATERIALS. The Hendon U.D.C. invite tenders for supply of certain materials and execution of works. See advertisement in this issue for further particulars.

✱ FEBRUARY 10. **Stepney.** — WORKS AND MATERIALS. —The Stepney B C. invite tenders for supply of materials and execution of works. See advertisement in this issue for further particulars.

FEBRUARY 12. — **Halifax.** — STORES.—For the supply of stores and materials required in the Tramways Department. Forms of tender and particulars from the Tramways Engineer, Tramways Offices, Skircoat-road, Halifax.

FEBRUARY 13.— **Bournemouth.** STORES. For supply of tramway stores. Specification and forms of tender from Mr. I. Bulfin, General Manager, Tramways Offices, Lansdowne, Bournemouth. Deposit of 5s.

FEBRUARY 14. — **Grays.** — DECK. The Metropolitan Asylums Board invite tenders for relaying in teak the upper deck of the training ship *Exmouth*, moored off Grays, Essex. Specification by Mr. W. T. Hatch, M.Inst.C.E., M I.Mech.E., Engineer-in-Chief. Specification and form of tender at the office of the Board, Embankment, E.C. Deposit of 1*l.*

✱ FEBRUARY 14. — **Greenwich.** — DEMOLITION OF BOILER-HOUSE, ETC. — The Metropolitan Asylums Board invite tenders for the demolition of the boiler-house, chimney shaft, and other buildings at the North.-Eastern Fever Hospital, Tottenham. See advertisement in this issue for further particulars.

ROADS, SANITARY AND WATER WORKS.

JANUARY 29. — **Steeton.**—PIPES, ETC.—For supplying earthenware pipes, with manholes, lamp-holes, etc. Specifications and quantities from Mr. T. Burton, Surveyor, 80, Cark-road, Keighley.

✱ JANUARY 30. — **Ealing.**—ROAD-MAKING.—The Ealing T.C. invite tenders for making-up certain roads in the borough. See advertisement in this issue for further particulars.

FEBRUARY 1.—**Anstey.**—ROADS.—For construction of new macadam roads, with pipe sewers, etc Plans seen, and quantities from the surveyors, Messrs. W. T. Topett & Son, 15, Hotel-street, Leicester. Deposit of 1*l.* 1s.

FEBRUARY 2.— **Barnstaple.** — SEWER.—For relaying sewer at No. 3, Lower Maudlin-street. Specification with Mr. E. Y. Saunders, P.A.S.I., Borough Surveyor, The Strand, Barnstaple.

FEBRUARY 5.— **Dowlais.** ROADS. For construction of roads, with drainage Drawings and specification with Mr. W. Dowdeswell, M.S.A., architect, Treharris.

FEBRUARY 6. — **Northampton.**—GRANITE, ETC.— For supply of granite, slag, and gravel. Forms of tender and conditions from Mr Wm. Fawkes, Clerk, 4, Derngate, Northampton.

FEBRUARY 6. — **Wealdstone.** — ROAD. — For making-up of a section of Ferndale-terrace-road. Plans and specification seen, and quantities and forms of tender from Mr. H. Walker, C.E., Surveyor, Council Offices, Peel-road, Wealdstone.

FEBRUARY 7.—**Clacton.**—PIPES.—For supply of British cast-iron pipes and connexions. Specification and form of tender from the Council's consulting engineer, Mr. S. Francis, A.M.Inst.C.E., Town Hall, Clacton-on-Sea.

FEBRUARY 7. —**Scawby.** —SEWER.—For laying a sewer from Mill-place to Victoria-cottages. Plans and specifications seen, and forms of tender from Mr. Frank C. Hett, Clerk of the Council, 11, Bigby-street, Brigg.

FEBRUARY 7. —**Woolwich.**—STORES.—For supply of road material, forage, stores, etc. Forms of tender, with schedules, from Mr. J. Rush Dixon, M.Inst.C.E., Borough Engineer, Town Hall, Woolwich.

FEBRUARY 8. — **Thetford.** — DRAINAGE. — For various alterations to drainage, new outfall works, etc., at the Workhouse. Drawings and specification at the Workhouse. Specification and form of tender from Mr. S. J. Wearing, A.R.I.B.A., 15, Upper King-street, Norwich. Deposit of 10s. 6d.

FEBRUARY 12.—**London.**—MATERIALS. —The B.C. of Bethnal Green invite tenders for execution of works and supply of materials. Specifications and forms of tender from Mr. A. E. Darby, A.M.Inst.C.E., Borough Engineer and Surveyor, at the Town Hall, Cambridge-road, Bethnal Green, E.

FEBRUARY 16. — **Northwich.** — SEWAGE.—For alterations and additions to the Northwich sewage outfall works. Plans with the engineer, Mr. W. M. Beckett, A.M.Inst C.E., 33, Brazenose-street, Manchester. Specification, quantities, and form of tender on deposit of 3*l.* 3s

Public Appointment.

Nature of Appointment.	By whom Advertised.	Salary.	Application to be in
*JUNIOR DRAUGHTSMAN	Derbyshire Education Com.	100*l.* per annum	Feb. 3

Auction Sales.

Nature and Place of Sale.	By whom Offered.	Date of Sale.
*BUILDER'S STOCK AND PLANT, GT. ORMOND-ST., W.C. —Ormond-yard, W.C. ..	H. W. Smith	Feb. 1
*LEASEHOLD PREMISES, CHELSEA—At the Mart	Furbers.....	Feb. 7

SOME RECENT SALES OF PROPERTY:

ESTATE EXCHANGE REPORT.

January 5.—By CRANSWICK & CRANSWICK.

Beumpton, Yorks.—White Horse Inn, f.	£1,000
Arable and pasture land, 34 acres, f.	1,690
January 15.—By MORGAN, BAINES, & CLARK.	
Sutton.—Grange-rd., St. Margarets, f., y.r. 90*l.*	1,100
Wallington.—Grosvenor-av., Melita House, f., y.r. 45*l.*	675
The Hut, f., y.r. 32*l.* 10s.	445
By J. TYDEMAN.	
Cheshunt, Herts.—Bull's Head p.h. and 2 acres, f., y.r. 100*l.*	2,050
Two cottages and meadow land, f., w.r. 27*l.* 8s.	365
156, Crossbrook-st., f., p.....	255
January 16.—By J. J. HILL & WEAVER.	
Barbican.—Beech-st., George and Dragon p.h., lease for 36 yrs. at 120*l.* with possession ...	100
January 18.—By ARBEE, RUTTER, WAGHORN, & BROWN.	
Regent-st.—11 and 12, Argyll-pl., area 1,400 ft., f., g.r. 525*l.*	9,000
By C. C. & T. MOORE.	
Aldgate, 28, High-st. (s.), f., y.r. 230*l.* 5s.	£3,500
32 and 34, Scarborough-st., f., y.r. 72*l.*	860
Mile End.—199, Jubilee st. (s.), u.t. 17½ yrs., s.r. 6*l.* 10s., w.r. 52*l.*	105
Southwark. 117, Southwark Bridge-rd., f., p.	300
Hammersmith.—99 and 101, Queen-st., f., p.	225
Clerkenwell.—34, Clerkenwell-green, f., p.	500
By C. ERNEST MANEY.	
Clapham. 71, Deauville-rd., u.t. 80½ yrs., g.r. 9*l.*, s.r. 45*l.*	350
New Wandsworth.—96, Manchuria-rd., u.t. 90 yrs., g.r. 7*l.* 10s., y.r. 32*l.*	325
Brixton.—16 and 18, Branksome-rd., u.t. 55 yrs., g.r. 10*l.*, w.r. 83*l.* 4s.	275
By LINNETT, LANE, & BETTRIDGE.	
Harlesden.—79, Tubbs-rd., u.t. 70 yrs., g.r. 5*l.* 10s., w.r. 41*l.* 13s.	230
33, Buckingham-rd., u.t. 69 yrs., g.r. 5*l.*, w.r. 31*l.* 4s.	195
45 and 47, Westbury-rd., u.t. 84 yrs., g.r. 10*l.*, w.r. 32*l.*	165
Wandsworth.—96 and 102, Standen-rd., f., w.r. 54*l.* 12s	440
Camberwell.—32, Foreign-st, u.t. 53 yrs., g.r. 4*l.* 10s., w.r. 41*l.* 12s.....	£210
By H. HOOKEY & CO.	
Balham.—58, Balham High-rd. (picture palace, beneficial lease for 34 yrs. at 130*l.*, with possession	100
By Geo. BILLINGS, WRIGHT, & Co.	
Hackney.—25, London-rd, u.t. 42 yrs., g.r. 5*l.*, s.r. 28*l.*	155
Poplar. 32, Cotton-st. (s.), f., w.r. 36*l.* 8s.	210
15, Bow-la., f., w.r. 28*l.* 12s.	180

Contractions used in these lists.—F.g.r. for freehold ground-rent; l.g.r. for leasehold ground-rent; i.g.r. for improved ground-rent; g.r. for ground-rent; r. for rent, f. for freehold; c. for copyhold; l. for leasehold; p. for possession; o.r. for estimated rental; w.r. for weekly rental; q.r. for quarterly rental; y.r. for yearly rental; u.t. for unexpired term, p.a. for per annum; yrs. for years; la. for lane; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; cres. for crescent; av for avenue; gdns for gardens; yd. for yard; gr. for grove; b.h. for beerhouse; p.h. for public-house; o. for offices; s. for shops; ct. for court.

CES CURRENT OF MATERIALS.

ur aim in this list is to give, as far as possible, the
ge prices of materials, not necessarily the lowest.
ty and quantity obviously affect prices—a fact
a should be remembered by those who make use of
nformation.

BRICKS, &c.

Per 1000 Alongside, in River. £ s. d.
Stocks 1 14 0
d Stocks for Facings 2 7 0

Per 1000, Delivered at Railway Depôt.

	£ s. d.		£ s. d.
ons	1 12 0	Best Blue Pressed	
Fareham		Staffordshire...	3 15 0
d	3 12 0	Do. Bullnose....	4 0 0
Red Pressed		Best Stourbridge	
abon Facing	5 0 0	Fire Bricks ...	4 0 0

ED BRICKS—

t White,		Double Headers	13 17 6
ry, and Salt		One Side and two	
d. Str'tch'rs	11 7 6	Ends	17 17 6
ers	10 17 6	Two Sides and	
ns, Bullnose,		one End	18 17 6
1½ in. Flats	14 17 6	Splays & Squints	16 7 6
s Stretchers	16 17 6		

Second Quality £1 10s. per 1000 less than best.

	s. d.	
nes and Pit Sand	6	9 per yard, delivered.
nes Ballast	5	6 " "
Portland Cement	31	0 per ton, "
Ground Blue Lias Lime	19	0 " "

TE—The cement or lime is exclusive of the ordinary charge for sacks.

Stone Lime ..... 13s. 0d. per yard delivered.
bridge Fireclay in sacks 27s. 0d. per ton at rly dpt.

STONE.

Per Ft. Cube.

	s. d.
STONE—delivered on road waggons,	
ddington Depôt	1 6½
do. delivered on road waggons, Nine Elms	
pôt	1 8½

LAND STONE (20 ft. average)—

own Whitbed, delivered on road waggons,	
Paddington Depôt, Nine Elms Depôt, or	
Pimlico Wharf	2 3
hite Basebed, delivered on road waggons	
Paddington Depôt, Nine Elms Depôt, or	
Pimlico Wharf	2 4½

Per Ft. Cube, delivered at Railway Depôt.

	s. d.		s. d.
aster in blocks..	1 10	Closeburn Red	
in blocks	1 6	Freestone	2 0
nshill in blocks	1 10	Red Mansfield	
ey Dale in		Freestone	2 4
cks	2 4	Talacre & Gwespyr	
Corsehill in		Stone	2 8
cks	2 3		

K STONE—*Robin Hood Quality.*

	s. d.
Per Ft. Cube, Delivered at Railway Depôt.	
pled random blocks	2 10
Per Ft. Super., Delivered at Railway Depôt.	
sawn two sides landings to sizes (under	
ft. super.)	2 3
rubbed two sides ditto, ditto	2 6
sawn two sides slabs (random sizes)	0 11½
to 2½ in. sawn one side slabs (random sizes)	0 7
to 2 in. ditto, ditto	0 6

D YORK—

Per Ft. Cube, Delivered at Railway Depôt.	
pled random blocks	3 0
Per Ft. Super., Delivered at Railway Depôt.	
sawn two sides landing to sizes (under 40 ft.	
per.)	2 8
rubbed two sides ditto	3 0
sawn two sides slabs (random sizes)	1 2
self-faced random flags	0 5

SLATES.

Per 1000 of 1200 at Railway Depôt.

	£ s. d.		£ s. d.
in.		In. In.	
0 best blue		20×10 best Eur'ka	
ango	13 2 6	unfading green	15 17 6
2 ditto	13 17 6	20×12 ditto	18 7 6
0 1st quality	–	18×10 ditto	13 5 0
cto.....	13 0 0	16×8 ditto.....	10 5 0
2 ditto	13 15 0	20×10 permanent	
8 ditto	7 5 0	green	11 12 6
0 best blue		18×10 ditto	9 12 6
rtmadoc.....	12 12 6	16×8 ditto.....	6 12 6
8 ditto.....	6 12 6		

TILES.

At Railway Depôt.

	s. d.		s. d.
plain red roof-		Best "Hartshill"	
g (per 1000)	42 0	brand, plain sand-	
Hip and Valley		faced (per 1000) ...	50 0
(per doz.)	3 7	Do. pressed (per	
Broseley (per		1000)	47 6
00)	50 0	Do. Ornamental (per	
Ornamental (per		1000)	50 0
00)	52 6	Hip (per doz.)...	4 0
Hip and Valley		Valley (per doz.)	3 6
(per doz.)	4 0	Staffords. (Hanley)	
Ruabon red,		Reds or Brindled	
own, or brindled		(per 1000)	42 6
dw'ds) (per 1000)	57 6	Hand-made sand-	
Ornamental (per		faced (per 1000)	45 0
00)	60 0	Hip (per doz.)...	4 0
Hip (per doz.) ..	4 0	Valley (per doz.)	3 6
Valley (per doz.)	3 0		

WOOD.

BUILDING WOOD. At per standard.

	£ s. d.	£ s. d.
s: best 3 in. by 11 in. and 4 in.		
by 9 in. and 11 in.....	14 0 0 ...	15 10 0
s: best 3 by 9	13 10 0 ...	14 10 0

WOOD (*Continued*).

JOINERS' WOOD. At per standard.

	£ s. d.	£ s. d.
Battens: best 2½ in. by 7 in. and 8in., and 3 in. by 7 in. and 8 in.	11 10 0 ...	12 10 0
Battens: best 2½ by 6 and 3 by 6...	0 10 0	less than 7 in. and 8 in.
Deals: seconds	1 0 0	less than best.
Battens: seconds	0 10 0	"
2 in. by in. and 2 in. by 6 in. ...	9 10 0 ...	10 10 0
2 in. by 4½ in. and 2 in. by 5 in.	9 0 0 ...	10 0 0
Foreign Sawn Boards—		
1 in. and 1½ in. by 7 in.	0 10 0	more than battens.
¼ in.	1 0 0	"
Fir timber: best middling Danzig or Memel (average specification)	At per load of 50 ft. 5 0 0 ...	5 10 0
Seconds	4 10 0 ...	5 0 0
Small timber (8 in. to 10 in.) ...	3 17 6 ...	4 0 0
Small timber (6 in. to 8 in.).....	3 5 0 ...	3 10 0
Swedish balks	2 12 6 ...	3 0 0
Pitch-pine timber (30 ft. average)	5 5 0 ...	6 0 0
White Sea: first yellow deals,	At per standard.	
3 in. by 11 in.....	24 10 0 ...	25 10 0
3 in. by 9 in.....	22 10 0 ...	23 10 0
Battens, 2½ in. and 3 in. by 7 in.	17 0 0 ...	18 0 0
Second yellow deals, 3in. by 11in.	19 0 0 ...	20 0 0
" " 3 in. by 9 in.	18 0 0 ...	19 10 0
Battens, 2½ in. and 3 in. by 7 in.	14 0 0 ...	15 0 0
Third yellow deals, 3 in. by 11 in. and 9 in.....	14 0 0 ...	15 0 0
Battens, 2½ in. and 3 in. by 7 in.	11 10 0 ...	12 10 0
Petersburg: first yellow deals,		
3 in. by 11 in.	21 10 0 ...	22 10 0
Do. 3 in. by 9 in.....	18 10 0 ...	19 10 0
Battens	14 0 0 ...	15 0 0
Second yellow deals, 3 in. by 11 in	16 10 0 ...	17 10 0
" " 3 in. by 9 in.	15 0 0 ...	16 0 0
Battens	11 10 0 ...	12 10 0
Second white deals, 3in. by 11in.	14 0 0 ...	15 0 0
" " 3 in. by 9 in.	13 0 0 ...	14 0 0
Battens	10 10 0 ...	11 0 0
Third yellow deals, 3in. by 11 in.	13 10 0 ...	14 10 0
Do. 3 in. by 9 in.	13 0 0 ...	14 0 0
Battens	10 10 0 ...	11 0 0
White Sea and Petersburg—		
First white deals, 3 in. by 11 in.	15 0 0 ...	16 0 0
" " 3 in. by 9 in.	14 0 0 ...	14 10 0
Battens	11 10 0 ...	12 10 0
Second white deals, 3in. by 11in.	14 0 0 ...	15 0 0
" " 3 in. by 9 in.	13 0 0 ...	14 0 0
Battens	10 10 0 ...	11 0 0
Pitch-pine: deals	19 0 0 ...	21 0 0
Under 2 in. thick extra.....	0 10 0 ...	1 0 0
Yellow Pine—First, regular sizes	44 0 0	upwards.
Oddments	32 0 0	"
Seconds, regular sizes	33 0 0	"
Oddments	28 0 0	"
Kauri Pine—Planks per ft. cube.	0 3 6 ...	0 5 0
Danzig and Stettin Oak Logs—		
Large, per ft. cube.....	0 3 0 ...	0 3 9
Small " "	0 2 6 ...	0 2 6
Wainscot Oak Logs, per ft. cube	0 5 6 ...	0 6 0
Dry Wainscot Oak, per ft. sup. as inch	0 0 9 ...	0 0 11
¾ in. do. do.	0 0 8 ...	—
Dry Mahogany—Houndras, Tabasco, per ft. super. as inch..	0 0 10 ...	0 1 1
Selected, Figury, per ft. super. as inch	0 1 6 ...	0 2 6
Dry Walnut, American, per ft. super. as inch	0 0 10 ...	0 1 0
Teak, per load	18 0 0 ...	22 0 0
American Whitewood planks, per ft. cube	0 4 0 ...	0 5 0
Prepared Flooring, etc.—	Per square.	
1 in. by 7 in. yellow, planed and shot	0 13 6 ...	0 17 0
1 in. by 7 in. yellow, planed and matched	0 14 0 ...	0 18 0
1¼ in. by 7 in. yellow, planed and matched	0 16 0 ...	1 0 0
1 in. by 7 in. white, planed and shot	0 12 0 ...	0 14 6
1 in. by 7 in. white, planed and matched.....	0 12 6 ...	0 15 0
1¼ in. by 7 in. white, planed and matched.....	0 15 0 ...	0 16 6
¾ in. by 7 in. yellow, matched and beaded or V-jointed brds.	0 11 0 ...	0 13 6
1 in. by 7 in. " "	0 14 0 ...	0 18 6
¾ in. by 7 in. white " "	0 10 0 ...	0 11 0
1 in. by 7 in. " "	0 12 9 ...	0 15 0
6 in. at 6d. to 9d. per square less than 7 in.		

JOISTS, GIRDERS, &c.

	In London, or delivered Railway Vans, per ton. £ s. d.	£ s. d.
Rolled Steel Joists, ordinary sections	7 10 0 ...	8 0 0
Compound Girders, ordinary sections	9 10 0 ...	10 0 0
Steel Compound Stanchions	11 0 0 ...	12 0 0
Angles, Tees, and Channels, ordinary sections	9 10 0 ...	10 0 0
Flitch Plates	9 10 0 ...	9 10 0
Cast Iron Columns & Stanchions, including ordinary patterns ...	7 10 0 ...	8 10 0

METALS.

	Per ton, in London. £ s. d.	£ s. d.
IRON—		
Common Bars	9 0 0 ...	9 10 0
Staffordshire Crown Bars, good merchant quality	9 5 0 ...	9 15 0
Staffordshire "Marked Bars"	11 0 0 ...	—
Mild Steel Bars	9 5 0 ...	9 15 0
Hoop Iron, basis price.....	10 0 0 ...	—
" " Galvanised.....	17 10 0 ...	—
(*And upwards, according to size and gauge,)		
Sheet Iron Black—		
Ordinary sizes to 20 g.	10 5 0 ...	—
" " 24 g.	11 5 0 ...	—
" " 26 g.	12 15 0 ...	—
Sheet Iron, Galvanised, flat, ordinary quality—		
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15 10 0 ...	—
Ordinary sizes to 22 g. and 24 g.	16 0 0 ...	—
" " 26 g.	17 0 0 ...	—
Sheet Iron, Galvanised, flat, best quality—		
Ordinary sizes to 20 g.	18 10 0 ...	—
" " 22 g. and 24 g.	19 0 0 ...	—
" " 26 g.	20 10 0 ...	—

METALS (*Continued*).

IRON (*Continued*)— Per ton, in London.

	£ s. d.	£ s. d.
Galvanised Corrugated Sheets—		
Ordinary sizes, 6ft. to 8ft. 20 g.	15 0 0 ...	—
" " 22 g. and 24 g.	15 5 0 ...	—
" " 26 g.	16 15 0 ...	—
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker.....	12 10 0 ...	—
Best Soft Steel Sheets, 2 g. & 24 g.	13 10 0 ...	—
" " " 26 g.	15 10 0 ...	—
Cut Nails, 3 in. to 6 in.....	11 0 0 ...	11 10 0
(Under 3 in., usual trade extras.)		

LEAD, &c.

	£ s. d.	
LEAD—Sheet, English, 4lb. and up	19 10 0 ...	—
Pipe in coils	20 0 0 ...	—
Soil pipe	23 0 0 ...	—
Compo pipe	24 0 0 ...	—
ZINC—Sheet—	In casks of 10 cwt.	
Vielle Montagne	33 10 0 ...	—
Silesian	33 5 0 ...	—
Zinc, in bundles, 1s. per cwt. extra.		
COPPER—		
Strong Sheet .....per lb.	0 1 0 ...	—
Thin "	0 1 1 ...	—
Copper nails ..... "	0 0 10 ...	—
Copper wire ..... "	0 0 10 ...	—
BRASS—		
Strong Sheet ..... "	0 0 11 ...	—
Thin ..... "	0 1 0 ...	—
TIN—English Ingots..... "	0 2 0 ...	—
SOLDER—Plumbers' ... . "	0 0 8½ ...	—
Tinmen's ..... "	0 0 11 ...	—
Blowpipe ..... "	0 1 2 ...	—

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

15 oz. thirds	2½d.	26 oz. fourths	3½d.
" fourths	1½d.	32 oz. thirds.....	5d.
21 oz. thirds.....	3d.	" fourths	4½d.
" fourths	2½d.	Fluted Sheet, 15 oz.	3½d.
26 oz. thirds.....	4d.	" 21 oz.	4½d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

⅛ Hartley's	2d.	Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white.....	3½d
⅜ "	2½d.		
½ "	2½d.	Ditto, tinted.....	5d.

* Not less than three crates.

OILS, &c.

		£ s. d.
Raw Linseed Oil in pipes	per gallon	0 3 6
" " " in barrels.....	"	0 3 7
" " " in drums	"	0 3 9
Boiled ,, " in barrels.....	"	0 3 9
" " " in drums	"	0 4 0
Turpentine in barrels	"	0 3 0
" in drums	"	0 3 2
Genuine Ground English White Lead, per ton		26 10 0
Red Lead, Dry	"	23 5 0
Best Linseed Oil Putty	per cwt.	0 10 0
Stockholm Tar	per barrel	1 12 0

VARNISHES, &c.

	Per gallon. £ s. d.
Fine Pale Oak Varnish	0 8 0
Pale Copal Oak	0 10 6
Superfine Pale Elastic Oak	0 12 6
Fine Extra Hard Church Oak.....	0 10 0
Superfine Hard-drying Oak, for seats of Churches	0 14 6
Fine Elastic Carriage	0 12 0
Superfine Pale Elastic Carriage	0 16 0
Fine Pale Maple	0 10 0
Finest Pale Durable Copal	0 18 0
Extra Pale French Oil	1 1 0
Eggshell Plating Varnish	0 18 0
White Pale Enamel.....	1 4 0
Extra Pale Paper	0 12 0
Best Japan Gold Size	0 10 6
Best Black Japan.....	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Knotting	0 10 9
French and Brush Polish	0 10 6

TO CORRESPONDENTS.

NOTE.—All communications with respect to literary and artistic matters should be addressed to "THE EDITOR" (and not to any person by name); those relating to advertisements and other exclusively business matters should be addressed to "THE PUBLISHER," and *not* to the Editor.

All communications must be authenticated by the name and address of the sender, whether for publication or not. No notice can be taken of anouymous communications.

The responsibility of signed articles, letters, and papers read at meetings rests, of course, with the authors.

We cannot undertake to return rejected communications; and the Editor cannot be responsible for drawings, photographs, manuscripts, or other documents, or for models or samples sent to or left at this office, unless he has specially asked for them.

All drawings sent to or left at this office for consideration should bear the owner's name and address on either the face or back of the drawing. Delay and inconvenience may result from inattention to this.

Any commission to a contributor to write an article, or to execute or lend a drawing for publication, is given subject to the approval of the article or drawing, when received, by the Editor, who retains the right to reject it if unsatisfactory. The receipt by the author of a proof of an article in type does not necessarily imply its acceptance.

N.B.—Illustrations of the First Premiated Design in any important architectural competition will always be accepted for publication by the Editor, whether they have been formally asked for or not.

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than* 10 *a.m. on Thursday.* [N.B.—We cannot publish Tenders unless authenticated either by the architect or the building owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is stated, nor any list in which the lowest Tender is under 100*l.* unless in some exceptional cases and for special reasons.]

* Denotes *accepted.* † Denotes *provisionally accepted.*

ABERAVON.—For construction of a brick well, boiler-shed, etc., at the rear of the slaughter-house. Mr. J. Roderick, Borough Surveyor. Quantities by Surveyor

Barnes, Chaplin, & Co.	£206 5	L. George	£188 8
C. Sayers	205 0	A. Scott, Port Talbot*	150 0

BEXLEY WELLING. For proposed new infants' school, for the Kent Education Committee. Mr. Wilfrid H. Robinson, M.S.A., architect :—

L. Lown & Co.	£3,320	A. S. Ingleton	£3,288 10 0
E. Proctor & Son	3,760 0 0	C. H. Hunt & Son	3,177 12 11
E. J. Garlick	3,720 0 0	Friday & Lung	3,175 0 0
Fassnidge & Son	3,660 0 0	R. A. Lowe & Co.	3,147 0 0
Musselwhite & Sapp	3,618 0 0	Ellis Bros	3,144 0 0
C. E. Skinner	3,550 0 0 †	F. & G. Foster	2,994 0 0
Milton Bros	3,500 0 0	L. Kazuk, Belvedere†	2,912 0 0
W. F. Blay, Ltd.	3,300 0 0		
G. E. Wallis & Sons, Ltd.	3,289 0 0		

‡ Recommended for acceptance.

COULSDON.—For making up Red Down-road. Mr. R. M. Chart, F.S.I., Council Surveyor, Croydon :—

W. Hall	£1,086	E. Yewen	£933
Free & Sons	1,038	E. Iles, Mitcham and Leigh, Surrey*	889
E. Streeter	1,014		

[Surveyor's estimate, £986.]

EPWORTH.—For alterations and additions at the Council school, for the Lindsey Education Committee. Messrs. Scorer & Gamble, architects, Lincoln. Quantities by architects :—

A. E. Backhouse	£385 15 0	H. Trimmingham	£573 7 6
F. Horton	677 7 4	B. Pumfrey	566 5 0
F. Waite	630 0 0	H. Kelsey, jun.	563 14 0
Stanley Bros.	608 6 11	Moody Bros.	563 3 6
W. H. Smith & Son	590 8 8	S. Lawrence, Thorne*	495 17 6½
T. E. Thompson	585 10 0		
S. R. & T. Kelsey	577 0 0		

HADDENHAM. For erection of a new elementary school and special subjects centre, for the Bucks County Education Committee. Mr. C. H. Riley, Architect, Education Office, Aylesbury. Quantities by Messrs. W. T. Farthing & Son, Strand, W.C.

Hyde & Merrick	£3,562 9 11	G. B. Gibson & Sons	£2,688 0 0
J. Mead	2,946 17 6	G. Biggs & Sons	2,686 0 0
H. W. Ricketts	2,900 19 8	J. T. Harris	2,577 0 0
H. J. & A. Wright	2,840 0 0	Webster & Cannon	2,498 0 0
C. H. Hunt & Son	2,787 0 0	Crook & Judd, Waddesdon*	2,364 4 0
B. Holland	2,750 0 0		
A. E. & C. Saw	2,744 17 0		

LONDON.—For erection of a house for the First Assistant Medical Officer at Long-grove Asylum, for the London County Council :—

G. Potter	£1,145	Cropley Bros.	£1,040
G. Parker & Sons	1,072	J. Carmichael	1,014
F. Potter	1,067	Roll & Taylor	939

LONDON.—For erection of four triple expansion vertical engines, two surface condensing plants with air and circulating pump, at the Crossness pumping station, for the London County Council :—

	1st Tender. £	2nd Tender. £
Gwynnes, Ltd.		(12,452 (13,187
Browett, Lindley, & Co., Ltd.	9,600 10,200	10,900
M. Paul & Co., Ltd.	10,500	10,300
Bellas & Morcom, Ltd.	10,876	10,248
J. Howden & Co., Ltd.	9,760	9,996
Fullerton, Hodgart, & Barclay, Ltd.	9,750	9,500

YEOVIL. For Yeovil Housing Scheme. Messrs. Petter & Warren, architects, Yeovil :-

	Group 1. £ s. d.	Group 2. £ s. d.	Group 3. £ s. d.	Total. £ s. d.
J. Francis	9,866 0 0	10,358 0 0	10,358 0 0	30,588 0 0
Pollard & Son	9,862 10 0	9,854 0 0	9,838 0 0	29,554 10 0
Pollard & Co.	9,508 0 0	9,966 0 0	9,957 0 0	29,431 0 0
Wort & Way	9,185 11 7	8,980 10 9	8,975 7 0	27,141 9 4
Coles Bros.	8,827 6 0	9,094 0 0	9,097 0 0	27,018 0 0
Stockham	8,961 0 0	8,867 10 0	8,844 0 0	26,701 10 0
Steer & Pearce	8,704 0 0	8,718 0 0	8,748 0 0	26,200 0 0
Parsons Bros.	8,595 0 0	8,495 0 0	8,485 0 0	25,575 0 0
Hillard Bros.	8,622 10 0	8,398 0 0	8,507 10 0	25,528 0 0
Wakeham Bros.	8,636 0 0	8,458 0 0	8,430 0 0	25,525 0 0
Bryer	7,555 0 0	8,785 0 0	8,685 0 0	25,025 0 0
Avery	8,233 10 0	8,086 0 0	7,985 0 0	24,304 10 0
Childs	8,051 8 6	7,745 19 11	7,810 14 5	24,608 2 10
Chamberlain	7,364 0 0	7,196 0 0	7,328 0 0	21,888 0 0
Pittard & Son	7,192 0 0	7,340 0 0	7,340 0 0	21,872 0 0
Moggridge & Son‡	6,848 0 0	6,817 0 0	6,813 0 0	20,478 0 0
A. J. Colborne	6,892 11 0	6,775 16 0	6,595 0 0	20,267 7 0

‡ Tender for Group 1 provisionally accepted.

LONDON.—For supply of electric lighting materials at tramway buildings, for the London County Council :

General Electric Co., Ltd	£260 10 1†	
Pinching & Walton	254 2 0‡	
Edison & Swan United Electric Light Co., Ltd.	251 16 6‡	
Armorduct Manufacturing Co., Ltd., Farrington avenue, E.C.*	249 8 7‡	

† Less 2½ per cent. discount.

[The estimate of the Chief Officer of Tramways, comparable with the tenders, was £320.]

LOOSE.—For Council school, for the Kent Education Committee. Mr. Wilfrid H. Robinson, M.S.A., architect :—

R. Gibbons & Son	£5,206 15 7
Musselwhite & Sapp	5,085 0 0
Cox Bros.	4,997 0 0
Barden & Head	4,894 0 0
Martin & Newman	4,865 0 0
A. S. Ingleton	4,840 10 0
D. Goddon & Son	4,716 0 0
I. A. Davison	4,713 0 0
J. Wood & Son	4,712 0 0
G. E. Wallis & Sons, Ltd.	4,664 0 0
C. E. Skinner	4,551 0 0
Ellis Bros	4,530 0 0
G. H. Hunt & Son	4,515 0 0
W. T. Burrows	4,331 0 0
G. Bowes & Son	4,312 10 0
Clarke & Epps, Maidstone†	4,296 0 0

‡ Recommended for acceptance.

YEOVIL, MONTACUTE.—For Montacute Housing Scheme. Messrs. Petter & Warren, architects, Yeovil :—

	Houses.	Stone Wall.
Pittard & Son	£2,041 0 0	£96 0
Walbridge & Son	1,995 0 0	118 2
T. Stockham	1,960 0 0	175 0
Yandle & Son	1,850 0 0	100 0
Childs Bros.	1,807 0 0	150 0
Gleed Bros.	1,800 0 0	139 10
J. Francis*	1,541 0 0	85 0

Ham Hill Stone.
Doulting Stone.
Portland Stone.

The Ham Hill and Doulting Stone Co., Limited
(incorporating the Ham Hill Stone Co. and C. Trask & Son, The Doulting Stone Co.).

Norton, Stoke-under-Ham, Somerset.
London Agent :—Mr. E. A. Williams, 16, Craven-street, Strand.

Asphalte.—The Seyssel and Metallic Lava Asphalte Co. (Mr. H. Glenn), Office, 42, Poultry, E.C.—The best and cheapest materials for damp courses, railway arches, warehouse floors, flat roofs, stables, cow-sheds and milk-rooms, granaries, tun-rooms, and terraces. Asphalte Contractors to Forth Bridge Co. T.N. 2644 Central.

SPRAGUE & CO., Ltd.,
LITHOGRAPHERS AND PRINTERS.
Estate Plans and Particulars of Sale promptly executed.
4 & 5, East Harding-st., Fetter-lane, E.C.

J. J. ETRIDGE, Jr.
SLATE MERCHANTS. LTD.

EXPERTS IN
SLATING, TILING.
BEST WORK ONLY.
Telephone 2685 Wall, or write—
BETHNAL GREEN SLATE WORKS,
BETHNAL GREEN, LONDON, E.

PILKINGTON & CO.
(ESTABLISHED 1838),
DEPTFORD WHARF,
190 & 192, CREEK ROAD, DEPTFORD, S.E.
Telephone No.: New Cross 1102 (two lines).

Registered Trade Mark.
Polonceau Asphalte.
PATENT ASPHALTE AND FELT ROOFING.
ACID-RESISTING ASPHALTE.
WHITE SILICA PAVING.
SEYSSEL ASPHALTE (*Direct from the Mines*).

"Drop Dry" Glazing
ECONOMICAL, EFFECTIVE. THE PERFECT SELF-SUSTAINING BAR.
Copper & Zinc Roofing.
The most Efficient and Economical System in the Kingdom.
Designs and Estimates Free on Application.
Telegraphic Address: "COURTEOUS, LONDON."
F. BRABY & CO., LTD.
Telephone: North 3032 (4 lines).
Chief Offices: 352-364, EUSTON ROAD, LONDON, N.W.
Works: LONDON, LIVERPOOL, BRISTOL, GLASGOW, FALKIRK.

THE BUILDER

VOL. CII. -No. 3660. FEBRUARY 2, 1912.

CONTENTS.

PAGE

HE R.I B.A. STUDENTSHIPS 113
NOTES 114
THE ARCHITECTURAL ASSOCIATION 115
HOUSE AT SKIRLING (WITH ILLUSTRATIONS) 118
ARCHITECTURAL EDUCATION 118
ARCHITECTURAL SOCIETIES 119
ENGINEERING SOCIETIES 120
GENERAL NEWS 120
KHARTOUM CATHEDRAL (WITH ILLUSTRATION) 120
COMPETITION NEWS 121
CORRESPONDENCE 121
INTERCOMMUNICATION COLUMN 121
EDITORIAL SUMMARY 122
MEETINGS 122
NOTES TO ILLUSTRATIONS 122
FIFTY YEARS AGO 123
MONTHLY REVIEW OF CIVIC DESIGN:—
SCHLOSS LINDERHOF (WITH ILLUSTRATION) 125

PAGE

MONTHLY REVIEW OF CIVIC DESIGN (*continued*):—
THE GROWTH OF THE COMMERCIAL QUARTER OF A TOWN (WITH ILLUSTRATIONS) 125
TOWN PLANNING, HALIFAX 126
EARLY VICTORIAN ESTATE DEVELOPMENT (WITH ILLUSTRATION) 127
THE THIRD INTERNATIONAL ROAD CONGRESS 127
NOTES 128

THE BUILDING TRADE:—
NATIONAL FEDERATION OF BUILDING TRADES EMPLOYERS OF GREAT BRITAIN AND IRELAND 129
THE NATIONAL CHAMBER OF TRADE 130
THE LONDON MASTER BUILDERS' ASSOCIATION 130
THE BUILDERS' FOREMEN'S ASSOCIATION (ANNUAL DINNER) 130
GENERAL BUILDING NEWS 130
APPLICATIONS UNDER LONDON BUILDING ACTS, 1894 TO 1909 130
PROJECTED NEW BUILDINGS IN THE PROVINCES 131

PAGE

FOREIGN AND COLONIAL 131
HENDON FIRE STATION (WITH ILLUSTRATIONS) 132
THE LONDON COUNTY COUNCIL 132
THE CARPENTERS' HALL LECTURES (WITH ILLUSTRATIONS) 133
OBITUARY 136
LAW REPORTS 136
PATENTS 136
LIST OF COMPETITIONS, CONTRACTS, ETC., OPEN 137
SOME RECENT SALES 138
PRICES CURRENT 139
TENDERS 140

Illustrations.

R.I B.A. SOANE MEDALLION COMPETITION:
HON. MENTION AND 50*l*. DESIGN BY MR. PIET DE JONG.
HON. MENTION AND 50*l*. DESIGN BY MR. WM. FRISKIN.



House at Skirling, Peeblesshire, for Sir T. D. Gibson-Carmichael, Bart. (*See page* 118)

Mr. Ramsay Traquair, A.R.I.B.A., Architect.

THE R.I.B.A. STUDENTSHIPS.

WHILE the open prizes designs are on exhibition in the rooms of the R.I.B.A., whilst the official criticism of the drawings is still to come, while interest in all aspects of the Prizes in Trust, the subjects and their setting, the awards and their reasons, implicit and defined, is still quick, we would venture into publicity a proposal which might, in our opinion, if carried into effect, obviate some of the defects involved in the way in which the competitions are conducted, defects of which the competitors themselves must for some time have been conscious. Our concern at the moment is not with the issue raised by a speaker at the end of the last meeting—the *bona fides* of the competitors. That is a matter which certainly seems to require some investigation. It is full of doubt and of difficulty; it is a question which concerns the Council of the R.I.B.A.; we think the trustees may be depended upon to make the relevant conditions more definite, and everything will then depend upon the personal honour of the competitors themselves. In any case, it is a question of method and of what is fair; and it has little to do with the welfare of the art. It is the welfare of architecture considered as an art which is here and now our primary concern—our topic, the use and misuse of these prizes. That this is of considerable importance no one who realises that a substantial agreement between all those who award studentships might, in a decade, fix the quality of architecture in this country for at least a generation, or perhaps a century, will be disposed to deny. But the subjects are set and the awards are made seemingly at haphazard—and so, at haphazard, too, our towns are built. This conviction of the power of direction latent in the control of the studentships was expressed in our columns on August 18, 1911, in an article in which the following proposal was foreshadowed.

Referring last week to the Soane award—divided honours and clear confession of dubiety—"The whole incident is unsatisfactory and suggests that the programmes for these competitions are perhaps drawn up in too casual a manner":—a gentle expression of our constant contention and almost weekly complaint.

Contention and complaint, we mean, that architectural competition, of all kinds, is carried on amid a clash of merely opportunist considerations as to what is required to be done by hap, and mishap to a bluntly empirical award—through a cloud of incoherence and by chance-besmitten hope. It may be that this state of things cannot be changed until a new generation is in control. But how shall it ever pass, if, with the new generation in their power, young and unhardened, young and hopeful therefore, those who manage the student-ships, those who set the standard, act as ever in the old unprincipled way? It seems as though those at the head of affairs have, in their corporate capacity, no realisation of the potentialities of their function—and indeed one doubts, incidentally, if, even supposing they had an adequate conception, that any concensus could be arrived at, in view of the educational chaos and combat of ideals in which the earlier days of our leading men were spent. A sensibility to the play of cause and effect in these matters prevents us from assigning blame or indulging in individual denunciation—that being futility where no purpose is to be served. On the other hand, the passivity of a mere observer befits no one at a time so doubtful, therefore perhaps so hopeful, as the present. What is required, then, in our view, is a scheme of coherence that shall impose upon assessors and students alike certain *criteria* to which they may refer and by which they may proceed—the *criteria* may be wrong at first, or not so wrong, but the principle that *there are principles* must first be effectively granted, and some principles found and stated; something to counteract what seems to be almost a national tendency to empiricism in judgment, and, as a natural consequence, anarchic opportunism in design. We are speaking now of students' work and of the open prizes in particular; and we put before our readers, R.I.B.A. Councillor and student alike, the following scheme in outline, as something certainly new, something possibly interesting, and something which is, in any case, an attempt to indicate a way which should modify, improve, and eventually render impossible the existing state of affairs. We believe that a scheme by which designer and assessor alike, of a part, should have for constant reference a greater entity to which that part should be related and proportioned would make for this end. Now the Soane and the Tite and the rest are prizes for the design of single buildings or parts of buildings, and may not be perverted from their purpose. What we propose is that there should be supplied for them the greater entity of which each separate design shall be considered as a part—a higher, the highest architectural unit that is to say—a City. Objection meets us that this is but raising the difficulty to a higher sphere—which is true. But the principle would be gained that the city is the unit, and those submitting designs for the present prizes would no longer have to do so on conditions having no relation to anything but themselves or bow to decisions confused by the multiplicity and wildness of their own imaginings. Suppose, then, that an Essay subject be set, definitely to settle, for the time being, the qualities of an ideal city, in our time and in this country. Perhaps one of this year's essays might serve, though not written with precisely this intention. It would be a sufficiently difficult matter; the essentials would have to be disinterred and set forth, not in generalities, but in definite terms. And we would like to see the students themselves, at this stage, having some voice in choosing the essay to be adopted. The next step would be to institute a special competition for a general plan of the City, in which the principles set forth in the essay (which would itself be the chief item in the conditions) were to be embodied. The sites and levels might be given perhaps and the manner of draughtsmanship—to be easily reproducible—ordered. And the plans submitted should be judged strictly in the light of the essay precedent and dominating the problem. On this plan there would be sites for all the chief buildings, in their determined relation and proportionately placed, and the plan itself would form part of the conditions of the R.I.B.A. prizes for some years to come. So that the competing student might know where his building was, and what the function, æsthetically as a part, as well as socially, it had to perform. He could design ideally in the right meaning of the word, but no longer vaguely in the void and be judged—who knows how? And so gradually the city would get built up with prize designs. The Soane one year would supply the Guildhall and the Tite the Royal Exchange. The Grissell an Exhibition building, or it might be a grand stand or a water-tower—in due relation to the rest of the place—or perhaps some interesting piece of construction involved in a design of the preceding year. Part of the Owen Jones might be devoted to a colour scheme for the Guildhall itself. . . . Until all the interesting things to design had been done. And at the end perhaps a special prize for makers of bird's-eye views to fix the whole of it, and so raise the students' work of a decade or so from oblivion to make it part of enduring architectural history. And afterwards? A clearer essay and a finer plan, and better and more justly related buildings. By that time, too, the influence of this schooling would be beginning to be felt in the real towns and real cities of this country.

THE WELLINGTON MONUMENT IN ST. PAUL'S.

The scaffolding has now been taken down from the Wellington Monument and the screens removed, so that the whole work can be seen, finished as closely as possible according to the intentions of its designer and sculptor, Alfred Stevens. The equestrian statue of the Duke has been copied and completed by Mr. John Tweed, after the original model. The work was cast in bronze by Messrs. Singer, of Frome.

UNIVERSITY OF LONDON.

The Goldsmiths' Company have made grants to the Senate of the University of London for the Building Fund of King's College for Women, 10,000*l.*; the Endowment Fund of Bedford College for Women, 5,000*l.*; and the Building and Equipment Fund of the Chemical Department of University College, Gower-street, 1,000*l.* The Senate have appointed Professor Simpson as architect of the new chemical laboratories to be built on the site in Gower-street.

NOTES.

Mr. Pierpont Morgan's Art Treasures.

THE published statements concerning the intention of Mr. J. Pierpont Morgan to remove a large part of his loan collection from the Victoria and Albert Museum, at South Kensington, have naturally occasioned many inquiries as to the cause and many regrets at the apparently accurate statement of Mr. Morgan's intentions. We are glad that the suggestions first made, that Mr. Morgan was removing his valuable collection in consequence of his dissatisfaction at the way in which his exhibits were shown, is emphatically denied by those who ought to know, and the much more reasonable explanation put forth that Mr. Morgan's art collections are to be removed not only from London, but also from Paris and other continental cities because the heavy American duties on objects of art earlier than the XVIIIth century have now been abolished, and the treasures can now enter New York free. This is a much more probable explanation of what, after all, is a very natural desire on the part of an owner to see his collections housed in the museums of his own country; but, nevertheless, we regret the result, and can only hope that a goodly part of the collection will be left to us, and that other private collectors will be willing and able to add to our national exhibits.

The Royal Academy Lectures on Sculpture.

PROFESSOR COLTON'S second Royal Academy lecture on "Ideals and Ethics of Sculpture" was a much more serious effort than the first lecture, in which the subject was treated generally and more or less humorously. In his second lecture Professor Colton made many admirable points, especially in regard to the fashions in modern art and the importance of craftsmanship; and his opinions on Post-Impressionism were emphasised when he remarked that from a strictly business point of view he would advise students to take up Post-Impressionism. It had many advantages. Pictures could be dashed off quite rapidly; in fact, it was essential that they should be dashed off without thought, or they would lose that innocence of expression which was supposed to be their merit. The profit was great. No weary years of preparation or study were necessary or desirable. To be an apostle of this art they had only to throw aside all facts and deny everything. If they were brought to book with the criticism that the nose should be in the middle of the face and not on one cheek they had only to reply that they saw it thus! Subsequent remarks by the Professor were also very much to the point: The ideal before the sculptor must be a fine idea perfectly executed. The question then had to be answered, What is perfect execution, and is such and such an idea fine or commonplace? The Greeks and Romans thought one thing: the craftsmen of mediæval Italy thought the same. In the greatest period of modern French sculpture there was still the same ideal; but of late there had come over us a mist, a straying of aim, a straying after the brazen serpent set up in our midst. Brutal expression and

xecution was called power, and passed
or the highest in sculpture. In the ideal
rt school he would reverse the procedure
sually adopted, and make elementary
udents study living models. He would
ide all antiques until the students
ecame proficient modellers from life.
he aim should be high; and the domestic,
ie frivolous, or the grotesque should not
nd a place in sculpture.

Cold Houses. THE illuminating correspondence in the daily Press on the subject of
ie heating of houses, in which English
ethods have been unfavourably com-
ared to those of U.S.A. and Canada,
ecognises such difference as that of
imate, but seems to lose sight of an
conomic question which is perhaps at
ie root of the whole matter. To instal
heating apparatus requires capital
rtlay. In Canada, and also, we under-
and, in U.S.A., the average middle-
ass householder owns his own house.
n England he does not. The leasehold
ystem explains a good deal. At present
proper system of heating is not con-
dered a necessity of existence. Houses
an be let without it, therefore they
re built without it. Not so long ago
ouses would let without bathrooms,
ut nowadays the speculative builder has
supply them. The same demand
ill probably arise in due course for a
ood heating system, which will be
pplied in the same way. Commenting
n this correspondence a daily contem-
orary thinks that we should drop the
ndividualistic method of heating each
eparate room by a separate fire and adopt
ie co-operative system, and remarks
iat "we are wasting coals and sacrificing
omfort because our architects will not
uild with the simple object of warmth."
s there are other matters to con-
der in designing a house, perhaps
is just as well for their clients that they
o not. If warmth were the only object
brick oven might meet the case. But
a rule it is the client, not the architect,
ho insists upon displaying his truly
ritish individualistic outlook by the
se of open fireplaces, whereby he sacri-
ces not only comfort and economy, but,
we are to believe a recent medical
ronouncement, a considerable amount
f health also.

Warming Houses. DESPITE the various improvements made in the design of firegrates, the
xcellence of the anthracite slow-com-
ustion stoves now on the market, and
ie availability of hot-water radiators,
welling-houses in this country are rarely
armed as they should be, and we are
clined to doubt whether any marked
teration will be effected by reiterated
atement of the fact in newspapers.
is quite easy to warm any house or
ottage by hot-water apparatus and at
ie same time to reduce the coal bill.
ut, as most houses are simply rented,
w tenants care to lay out a sum of from,
y, 30*l.* to 150*l.*, even if they have
ie money to spare, on an installation
hich cannot be moved from place
place like furniture, and property-
vners do not fit hot-water boilers,
pes, and radiators, because so far
there has been no general demand for comforts of the kind. Some tenants would object to use heating apparatus, and the majority would probably decline to pay the enhanced rent necessary to recoup the owner for his original outlay and annual maintenance costs. If our climate were consistently cold for half the year it is probable that house warming would be placed on a more scientific basis. As matters stand, however, we believe that central heating in dwelling-houses will not become general for a long time to come, except in cases where the occupier is also the owner.

The Control of London Statues. THE curious fact to which attention is drawn in *Notes and Queries* that an equestrian statue of the Duke of Cumberland erected in Cavendish-square in 1770 was about a century later removed and melted down by order of the fifth Duke of Portland owing to its insecure condition again draws attention to the need of enlightened public control over the monuments of London. Possibly this particular statue had no great artistic merit, and Cavendish-square may not have suffered any very grievous loss; but even had the statue been of first-rate merit it would probably have been allowed to get into the same state of insecurity, and finally have suffered the same ignominious fate. While statues are left under the control of private landowners there is no guarantee that however great their historic interest or artistic value may be they will not suffer the same neglect. It is well that the attention of the Office of Works and of the London County Council should be called to a matter which, though trivial perhaps in itself, is yet of some importance as illustrating a question of principle.

The Crystal Palace and the National Folk Museum. COUNT PLUNKETT, late Director of the Dublin Museum, has an interesting letter in the *Times* of the 29th ult. in support of the proposal to establish at the Crystal Palace a National Folk Museum illustrating the history, conditions of life, arts, and fashions of the inhabitants of the British Isles. In such a museum, he says, relics of all periods since men first left traces of their existence in the land will be shown in historical sequence, "and, as the ground at Sydenham affords space for the reproduction of dwellings of various periods, decorative arts, furniture, household objects, weapons, and dress will be shown as if actually for use. The Stockholm Museum at the Skansen is an admirable model, and forms one of the most interesting and instructive sights. Among other objects which could be reconstructed with sufficient accuracy are a lake dwelling, British fortified camp, Roman British villa, Saxon thane's house, Norman stockaded castle, mediæval keep, baronial hall, Elizabethan house, and so on, to interiors in the styles of Inigo Jones, Adam, and other architects, and furniture of the great XVIIIth century makers; in their proper places would be shown on lay figures the dress of each period."

Signs of Unrest. THE incident at the close of the last ordinary meeting of the R.I.B.A. after the prize awards had been announced—as reported in our columns "a speaker asked if the *bona fides* of the designs would be inquired into"—is not, we believe, the result of an isolated instance of discontent. Many feel what one may be screwed up to say, and others yet more numerous may have abandoned all interest in the prizes—as being beyond them—office-workers toiling in the evening—as against those with more leisure, or working all their time in schools with a professor's assistance. One prize markedly, the Owen Jones—we do not hesitate to be particular—goes almost always to a student of South Kensington. We are inclined to think that the remedy lies not so much in making the stipulation on this account more precise—though that will have to be done perhaps—as in raising the desiderata entirely out of the realm of draughtsmanship, so that, however well a design may be rendered, it will avail nothing at all if it be not right in itself; to the condition, that is to say, of the Beaux-Arts School in Paris, at which the prize of the year may go to one of the worst-rendered designs. We do not for an instant advocate poor draughtsmanship—on the contrary. But we do deplore the natural tendency—natural in view of the absence of any other common ground of agreement among the assessors—to take draughtsmanship so much into account. Were this not so the office-harassed man might have a chance—if he were a sound designer Also, surely, the mere amount of work demanded is excessive.



COMBINED ORDINARY GENERAL AND CAMERA, SKETCH, AND DEBATE CLUB MEETING.

A COMBINED meeting of the Architectural Association and the Camera, Sketch, and Debate Club was held on Monday at No. 18, Tufton-street, Westminster, Mr. Gerald Horsley, President, in the chair.

Mr. Hall, Hon. Secretary, made the following announcements:—

The third Spring Visit, on February 17, to the British Museum extension (architect, Mr. J. J. Burnet). 2 p.m.

The Camera, Sketch, and Debate Club annual dinner at the Café Monico, Piccadilly-circus, on Friday, February 2.

Meeting of the Camera, Sketch, and Debate Club on February 15 at 7.30, when Mr. John Gaymer will read a paper, entitled "Thoughts

and Impressions of a Tour Round the World."

The following gentlemen were then elected as members :—Messrs. B. R. Hebblethwaite, Beckenham, Kent; H. J. Higgs, Russell-square, W.C.; J. H. Jacob, Salisbury; and H. S. Stephens, Church End, Finchley.

The President proposed a vote of thanks to Mr. G. A. Mitchell for conducting a party of members round the new Polytechnic on the occasion of the second Spring Visit and for providing tea. This was agreed to.

Mr. A. G. R. Mackenzie then read the following paper, entitled :—

THAT MODERN HOUSE PLANNING DOES NOT TEND TO OVER-ELABORATION.

"When I was asked to read a paper on the subject chosen ("That Modern House Planning Tends to Over-Elaboration") I consented to take the negative side in a debate, someone else taking the positive. I hope, therefore, I will be excused if I open the debate on the negative, leaving the positive side to be brought out in the discussion.

There is no doubt whatever that modern house planning yearly becomes more elaborate; but the question which it is proposed to discuss to-night is not the amount of this elaboration, but whether or not it is carried to excess. I think it is essential in considering the question to remember the stages through which house planning has passed, and in doing so to realise that the whole process is part of a natural growth.

I think so all the more because remembering this helps us to take a broader view of the subject and not to hastily reject forms of building which have so naturally come down to us that they appear unimportant, and, on the other hand, not to be afraid to adopt new arrangements and to carry the development further—to carry it on in its logical course.

Of all the characteristics of the modern house, the most striking when compared with the planning of former times is the multitude of purposes which it serves. I have on the walls two sets of plans and photographs of recent large country houses. Keeping pace with our more complicated ways of living, we have not only greatly increased the number of rooms, but have assigned to each a special purpose. Instead of the hall and single chamber of the Middle Ages, with which even kings were content, every ordinary house must have a number of separate bedrooms, at least three public rooms, and a complicated arrangement of servants' offices, as with the development of civilisation we could not now live in those old palaces, in which the only communication for a suite of rooms was by passing through each in succession.

I do not propose to trace the history of the house from prehistoric times, but merely to refer to the advent of prosperity in the times of Elizabeth, when the system of planning was revolutionised, which previously consisted of more or less detached buildings round a central courtyard, and the house was made one by connecting all the parts together by means of corridors or galleries. It was to this period that Mr. Norman Shaw and his contemporaries reverted when, forty years ago, they awakened the architectural world to the realisation that modern houses could be planned with a spirit of the ancient work and with all the comforts which modern conditions demand. It is to them also that to some extent the initiation of the recent movement of the planning of smaller houses may be traced; at any rate, they were the first to realise the possibilities of the good architectural treatment of the smaller suburban house, which, now that garden cities have come into existence, has become so interesting a subject for the man in the street and his wife, as well as the architect.

We are not considering whether over-elaboration is a demerit or simplicity a merit, but whether the present tendency is to over-elaboration, and I contend it is not. I regard elaborate planning as not necessarily leading to elaborate results. That is to say that a house which looks the simplest in the world may, to attain this simplicity of effect, have caused much elaborate planning on the part of the architect. An elaborate house is not the same thing as an elaborately-planned house; the one conveys the idea of complication, the other simplicity in its considered result.

Although an elaborately-planned house does not always bring simplicity, a house that is planned without due elaboration or consideration of detail certainly can only bring simplicity of effect by the sacrifice of comfort. Lord Bacon says somewhere in one of his essays, "Houses are made to live in, not to look upon." The ideal house is, firstly, one which is comfortable to live in, and, secondly, fair to look upon. The one follows the other.

Of the works of man that approach more nearly to Nature in their perfection one may instance sailing-ships. These have not been designed to look beautiful, but have become so by the process of elaboration and elimination, which has continued through centuries till this ideal has been reached. And so it is with house building; the planning is the key to the situation, and it is by elaboration and elimination of everything that has not a *raison d'être* (for elaboration includes elimination) that the perfect house is attained.

That there are numerous examples of over-elaboration is true, but that some have fallen into traps ambushed by the wayside does not affect the general forward movement.

When Professor Reilly at the Architectural Congress made his plea for a more classical treatment of the garden city I confess I was captivated by the idea, and saw in my mind's eye relief from continual picturesque bits and fussy detail. (It is curious how pleased one is with one's own happy thoughts in picturesque features, and how impatient one is with other people's.) I was captivated by the idea of a Georgian garden city designed with due regard to axial lines and symmetry. That great dignity can be obtained by axial planning goes without saying; the architects of the Georgian period knew this, and those who follow them now recognise the value of the vista and balance. How far this can be carried, however, in the smaller house is, to my mind, a very debatable question. Though Mr. Geoffry Lucas and others have succeeded, I very much doubt if they are on the true road to the ultimate solution of the problem.

An elaborately-planned house is, to my mind, one in which everything is considered, so that there is no waste of material and useless space is reduced to a minimum. This is particularly true of smaller houses; indeed, the smaller the house the more elaborate should be its planning.

As an illustration I would take the question of cupboards. In small houses inhabited by people of moderate means it is much more necessary to fit in cupboards to every possible nook or corner than it is in larger houses, where space is not so valuable, because in the former case not only is every inch of space required, but the cost of purchasing furniture such as wardrobes becomes a consideration. In the larger houses the elaboration of planning would probably consist in the fittings suiting the decoration.

Garden cities have led to the study by architects of small houses, and the elaboration of planning which has followed has all been to the good. If one compares the best or even the average houses designed by architects at the recent exhibition at Gidea Park with the builders' erections of ten or fifteen years ago it is ludicrous to maintain that there is any tendency except towards improvement.

Two houses in Gidea Park gave an excellent illustration of my contention that elaboration leads to apparent simplicity, and showing how misleading it is to talk about a simple little house as if the simplicity was attained by obvious methods.

They show how by an elaborate arrangement of chimneys and clever distribution of the rooms a very simple external effect is obtained, while, the fires being in the centre of the house, all the heat is conserved for the benefit of the rooms.

How much more simple to plan a house such as is my third illustration, with all the chimneys in the walls and the scullery projecting behind in the usual way, but how much less pleasing is the result!

Although Mr. Curtis Green, the author of my first illustration, has described it as "planned in the simplest possible manner," I think he will agree with me that it would have been more truthful to have said, "planned with much thought and elaboration, eventually arriving at a simple result."

In the larger houses of to-day the same principles of planning are being applied, though the object of the elaboration may not necessarily be directed towards obtaining the most efficient result with the minimum of space and expense as to obtaining a fine architectural building with the maximum of luxury and convenience for the owners.

I take it we are not here to discuss whether or not people should lead simple lives; we must take our clients as we find them, and the question which architects have to solve is not how a rich country squire can so modify his requirements that a quiet, dignified, and beautiful house can be built for him, as how to build him a house and still give him all the conveniences and luxuriousness he desires. By the facilities for intercommunication now available, among other reasons, life in country houses has become much more complex than it was in the past. Huge house-parties can easily be gathered together, and their successful entertainment greatly depends on the provisions made by the architect, more particularly perhaps in the servants' quarters. Ladies now take a much greater part in life generally, and their not being banished to their withdrawing rooms has led to the development of the hall, where they and the men can meet, and both can come and go without formality. That this apartment has to be a sitting-room, sheltered from draughts, and yet still the hall of the house, has led to much ingenuity in planning.

The necessity for bathrooms and suites of rooms which may or may not be used in connexion with each other also leads to further complications.

The desire for unlimited fresh air is a consideration which is daily becoming more urgent. No one now sleeps with his or her window shut, and the fresh-air habit, like any other, tends to grow. To a person like myself, who habitually sleeps with both windows and door wide open, it is perfect torture to be closed up and to waken in the morning with the feeling of oppression that want of fresh air gives; it is all a matter of habit, and this habit is on the increase. Very soon the desire for open windows will lead, as it already has done in America, to the provision of sleeping balconies attached to the bedrooms, surrounded by a dwarf wall and open on two or more sides, so that by means of shutters the side sheltered from the wind that may be blowing can be left open and the others closed. The American plan shows one example of this, and also a sun parlour, which, I take it, can be used for meals in hot weather. Another set of plans have loggias facing east and west available for this purpose whichever quarter the sun is in, and the balconies over are ready to be converted into sleeping balconies with the addition of roof and shutters. I feel there is a great future for the open-air room, not merely a verandah, but wide enough—at least 10 ft.—to have dinner served in. When these have been provided I anticipate that the next demand will be for places where one can take an air or sun bath. There is nothing which is more delightful and, as many authorities now agree, more health-giving than to expose the whole of one's skin to the sun, or at least to the air. This is impossible in our climate without the erection of shelters or screens, and I foresee that greatly additional elaboration of planning will be required in the future to provide such spaces, either attached to the water bathrooms or forming adjuncts to the sleeping balconies.

But, to conclude, there can be no doubt that the subject of domestic architecture is one which interests us as English architects more nearly than any other; if one looks for fine general planning and magnificent public buildings designed on a scale to impress the mind with the greatness of the nation, one is disappointed. It is in domestic architecture that England excels, and I claim that it is by continual study and elaboration of planning that this reputation has been built up, and it is by that alone that it can be maintained in the future."

Mr. J. H. Jenkins

said he was afraid that it was impossible, unless the resolution be entirely recast by the President, to follow the usual custom of

endeavouring -out of pure sport—to carry an amendment. Although Mr. Mackenzie stated that he had altered the terms of the resolution because he had stipulated that he desired that the subject should be a debatable one, he had been most careful not to alter it so that the amendment could stand the least chance of being carried.

Evidently he had defined "elaboration" as "the process of improving or refining by successive operations. We should, therefore, all agree that modern house planning did not tend to over-elaboration."

Proceeding, Mr. Jenkins said: I hope I shall be pardoned for an apparent digression from the main argument in order to counteract as far as it lies within my power, heresy relating to art which is being consistently preached by certain of the younger school of architects, the heresy that beauty is not a thing to be sought for its own sake, but is only a side issue, a something which cannot be attained by effort, but which, like Fame, as portrayed by Keats in one of his sonnets—

"Will still be coy
To those who woo her with too slavish knees."

Mr. Mackenzie states that "the ideal house is, firstly, one which is comfortable to live in; and, secondly, fair to look upon." It is to be hoped that architects worthy of the name may fairly claim to be regarded as being artists as well as men of business, and it follows that a house cannot be comfortable if it is not fair to look upon, as, if everything is displeasing to the eye, peace of mind will not accompany ease of body. He pretends to instance sailing ships as one of the works of man that approach more nearly to nature in their perfection, and states that these have never been designed to look beautiful, but have become so by mere chance in the process of their development. He might as well maintain that a thirty-five-knot destroyer, her decks inches deep in grime thrown from her funnels in the effort to obtain the last inch in speed, is as beautiful as Lord Brassey's *Sunbeam*, with her fine lines, white and gold paint, and everything designed not only to be absolutely fit for its purpose, but to please the eye. I maintain that the cultivation of an appreciation of the various forms of beauty in art is worthy of being placed in the forefront of those attainments which should form the equipment of every artist, be he architect, painter, sculptor, or craftsman, and it is in proportion to its study that the artist attains or falls short of real greatness. A man may have great knowledge of technique, fitness of material and workmanship to its purpose, and of the work to its use, and yet the result of his labours will be universally condemned if he has not added to it a knowledge of charming composition, beauty of line and mass, appreciation of good colour, and all those attributes which have nothing to do with the fitness of purpose but solely concern themselves with appealing to the eye. People nowadays are fond of collecting, and some people have collected beautiful old household utensils of bronze, copper, brass, or iron, but I cannot conceive anyone adding to it a double-lined saucepan, although this has been proved to be the most perfect for its purpose in cooking.

So my first point is that the modern house is insufficiently elaborated to ensure its being beautiful as well as being convenient. Beauty is only a secondary consideration instead of being of equal importance with convenience in producing the ideal home. If we do not realise this we shall tend to fall behind the times. There is distinct evidence at the present time that a large and increasing section of the community does believe that our streets and buildings should be beautiful as well as fit for their purpose.

Mr. Mackenzie, while recognising the value of vista and balance, hesitates to conceive a garden city in which full play is given to these means in producing a fine effect, though he confesses he is depressed by continual picturesque bits and fussy detail.

This brings me to my second point, viz., that the elaboration of modern house planning tends more to the multiplying of unnecessary conveniences than the elimination of needless features both inside and outside, because it is much more difficult to eliminate than to do the reverse; we see it practised so rarely that a doubt is thrown upon such a course being successful. Mr. Geoffry Lucas has been bold enough to dare to eliminate, and I leave it to the meeting to judge as to whether fine results may not be obtained by this means.

Mr. W. H. Wigglesworth
said he thought the practicability of the plan was the first and essential point in any scheme. If an architect had not nice ideas and some feeling for beauty he doubted whether he would have gone into the profession; and if he had that sense of beauty he would express his ideas with beauty.

Mr. Geoffry Lucas
said he was prepared to support the proposition that modern house planning did not tend to over-elaboration. Everyone was acquainted with the drawings of Phil May, which seemed exclusively simple, but he believed the artist was prepared to redraw and omit again and again until he arrived at the simple results we know. The same thing might be done by the architect; he had his plan full of ideas, and it was his duty and pleasure to rid himself of some of those ideas—to pare them off from the design and get it down to its rudiments. In domestic work it was more or less easy to get a picturesque effect by means of tricks, but to do a simple thing that relied on proportion, and perhaps on colour, was difficult, as was central line design—balanced design, though it might be easier when done on a large scale, the duplication of features driving one to bigness. It was when one came to attempt this in a small thing that the difficulties increased. There was no doubt that in the balanced design, or in the symmetrical treatment, proportion and form were more important than in the picturesque cottage-gable-ingle-nook-chimney type of building. If we were to progress in house design it must be done by culture and by what he would call cruelty to oneself in the way of throwing off the feeling one had for antiquity and the repetition of old features. It is hard not to do them if one liked them, but what did they lead to? House design should keep pace with the culture shown in the design of municipal buildings; there was progress there, and such buildings were put up, perfectly fulfilling complex and new requirements. In his opinion, having got their plan, they should let it make its own elevation, and if it was a good plan it would more or less do this from the roof downwards.

Mr. Dale
supported Mr. Jenkins and referred to the charming effects got in the houses of the Middle Ages. It was the absence of elaboration that was the secret of their charm. In building a house they should remember that it was for the client, who did not want to be worried all the time by the little tricks and eccentricities of the architect in his design.

Mr. H. V. Ashley
said he had listened to the paper with interest, but regretted to be in total disagreement with the reader of the paper. He found the word elaborate had a positive and certain meaning. Murray's Dictionary gave the definition of the word as follows:—"To produce or develop by application and labour; to fashion a product of Art or Industry from the raw material; to work out in detail; to give finish or completeness." He laid stress on this definition because from a certain amount of study of modern houses it became evident to him that house planning was seldom elaborate, and he ventured to say never over-elaborate. He thought that the houses of the XVIIth and XVIIIth century were probably more elaborately planned than is the case now; they were built, the large houses anyhow, with fine lay-outs, dignified suite and reception rooms and noble approaches; but even at this period we find the architects failed again and again to work out in detail or elaborate the upper and lower floors, etc. Again, in the work of the early part of the last century we find the reception suites elaborated, particularly in town houses, but in the bedrooms, kitchen, and servants' accommodation, we have a hopeless muddle of badly-placed rooms which results from failure to work out in detail or elaborated. As to modern house planning, he thought that during the last twenty years it had improved tremendously; it had been elaborated, but to suggest over elaboration seemed to him to invite incompetence, and to suggest to architects that the limit had been reached, and further progress impossible—a truly deplorable proposition. To plan perfectly a modern house, either large or small, demanded a great deal of application and labour and working out in detail, all which meant elaboration. He realised the requirements were greater now than used to be the case, but this simply meant more working out for the architect. How many modern plans of houses could be said to be perfect in, say, only the following points:—their lay-out on the site and treatment of levels; aspect, sunlight in rooms, etc; convenient and dignified entrances, halls, and reception-rooms; convenient services from kitchen to pantry, and so to dining-room; right position of doors, windows, and fireplaces in rooms; proper and economical planning of the sanitary arrangements, baths, lavatories, sinks, etc., and their wastes and supplies? In obtaining a proper note of distinction over the whole house and reflecting on clients' wishes and the architect's liability to grapple with them and elaborate the house, or, as the definition has it, to fashion a product of art from the raw material.

Mr. A. E. Bullock said he thought there was a slight tendency to over-elaboration in house planning.

Mr. C. G. Boucher said that simplification was elaboration. There was over-elaboration in the use of materials, as in some garden city houses.

Mr. P. M. Fraser having spoken,

Mr. W. Curtis Green
said that Mr. Mackenzie's paper was eminently sane and reasonable, but having said that he had to confess to a most profound depression in regard to the subject, more particularly in regard to the small house. There were those who, like the Chairman, Mr. Ernest Newton, Mr. May, and others, produced the beautiful small house, and those who did not were inclined to say that that was because the conditions were unfavourable. The majority of small houses in the suburbs were extremely depressing, but if we went back to the time when these small houses were beautiful things and tried to analyse them we found they were very simple, and not only that, but the instinct of good craftsmanship seemed to pervade them. The builders of them did not design them so much, nor did they build them for the admiration of their contemporaries, or to show their own skill. They did them quite naturally and in spite of difficult conditions—difficulties which we did not have to face; and they produced buildings which, as we see now, were admirable. He did not know that the discussion had risen to the height of architecture; the small house was largely the problem of the simple straightforward building, and the development of the small house building had been extremely rapid and very simple. There was not a great deal of difference between the requirements of to-day and those of the XVIIIth century; a few more sanitary arrangements might tend to complicate things, but they did not really alter the conditions which the architect had before him. He remembered hearing an architect say once that he and a friend were very depressed by the houses they saw in the suburbs, and they tried to find one they liked. They succeeded, and they found that the architect was the occupier. We have to discover all the factors and know exactly what is wanted, and then to put them together in the simplest possible way. He thought the question of the small house would have to be solved in a much larger way than was attempted at present. The Garden City movement was all in the right direction, but he believed rather in what Mr. Paul Waterhouse had suggested—*i.e.*, a sort of hospital, to which people who could not afford an architect should go for their designs; they would have the best advice and they would have to carry it out. He thought cupboards and ingle-nooks went together and meant bad design. Cupboards filled spaces which architects did not know what to do with as a rule, and ingle-nooks were the most pernicious things, but people loved them, and architects had to provide them, though they were well enough in an old farmhouse. If one studied

the evolution of house design or cottage design one would find it was a question of roof, and it was the roof which the old men regarded as of the first importance. Architecture had always been governed by the roof.

The Chairman,
in putting the vote of thanks to the meeting, said that all architects must view this question of elaboration in house design as being a question of taking infinite pains. The large house had not been so fully discussed as the small house, and there were certainly difficulties in that connexion after the architect had tried to make his building good in its proportions, etc. The necessity of providing a large number of bathrooms in a house was one of those difficulties. They could be provided, of course, but they had to have their supply and waste pipes, etc., which did not improve the appearance of a house when they were put up, and he would like to ask Mr. Mackenzie if he knew any way in which these modern additions could be best dealt with.

The vote of thanks was heartily agreed to, and

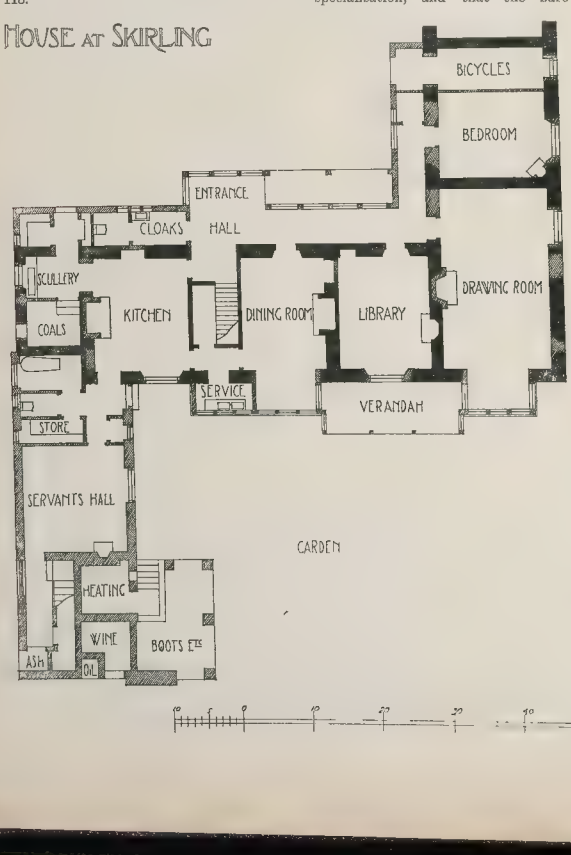
Mr. Mackenzie,
in reply, said as to Mr. Curtis Green's dissatisfaction, he thought that the fact that people who had studied a problem were dissatisfied showed progress was going on, for it was only from dissatisfaction and striving to do better that progess resulted.

It was announced that the next meeting would be held on February 12, when a paper would be read by Mr. Paul Waterhouse, M.A., F.R.I.B.A., entitled "Bridges" (combined meeting with the Junior Institution of Engineers).

The meeting then terminated.

HOUSE AT SKIRLING.

THIS house has been built at Skirling, a small village near Biggar, for his Excellency Sir T. D. Gibson-Carmichael, Bart., Governor of Madras, who was recently raised to the peerage. A view of the house is shown on p. 113.



The site of the house was originally occupied by a small five-roomed farmhouse. This has been retained practically without alteration, and new corridors, bays, and rooms have been added round it. This explains the narrow staircase and thick internal walls.

The house faces the village green, of which it occupies one end. In order to obtain privacy all the rooms look on to the garden on the opposite side.

The external walls are of brick, lined with weatherboarding. The roof is covered with grey slates; heating is assisted by a low-pressure hot-water system. Almost the whole of the work was done by local tradesmen.

Mr. Ramsay Traquair, A.R.I.B.A., was the architect.

ARCHITECTURAL EDUCATION.

AT a meeting of the Manchester Society of Architects on January 24, Mr. H. P. G. Maule, Headmaster of the Architectural Association, London, read a paper entitled, "Architectural Education; a Plea for Breadth and Sanity," in the course of which he said:—

"I desire to take my stand on the broader basis of the general architectural education of the English architect, not with reference to any particular city, university, or school, not to the superperfect equipment of the giant few, but for the solid, sound, sane, and sober training of the many. I assume that, as in all educations, the first step is to establish a basis of general training, for we must ensure that all who in the future profess and call themselves architects should have had at least a definite and comprehensive training in the broader aspects of architectural history, of materials, construction, and design; to say nothing of the business aspects of practice.

Even in a small country such as ours, conditions vary greatly, and, while too much district specialisation is to be regretted, it would be both unwise and impolitic to lay down hard and rigid rules, or a universal system; yet at the same time we must not forget that general training must precede specialisation, and that the bare outline enumerated above is the minimum, and that there remains vastly more than this if we are to rise to the vast conceptions and great ideals that a modern civilisation must require from us.

It is an educational truism that to specialise too soon is the curse of secondary education. Hence follows the need to distinguish clearly between what is general and what is special, and to realise that all who desire to equip themselves fully as modern architects must be prepared to devote a longer initial period to that end.

The Psychology of Education, or Mind Training.

In England, until comparatively speaking a very few years ago, the training of the architect was accomplished almost entirely by apprenticeship or pupilage, and, so long as life is comparatively simple, this system has many advantages. But with the growing complexity of all forms of modern development, the difficulty of acquiring a general training in any one profession has enormously increased, and the educational conscience has at last awakened, and is now actively engaged in standardising and perfecting all forms of professional and æsthetic training.

Unfortunately for various reasons there has not always been sufficient regard paid to what is now termed the Psychology of Education, by which I mean the induction, by training, of certain habits and qualities, apart from the particular objective; in our case, the study of architecture.

If we architects are really going to take the matter of our own education in hand, we must recognise this great question of psychology in teaching; we must not overburden the natural mind of youth with more than it can possibly (in all but exceptional cases) absorb; and we must be content to run the risk rather of doing too little than of confusing, by attempting too much.

Yet there will continue to be mistrust of school and university teaching, among the vast body of practising and practical men, until we can show them that the school training is not devoid of those formative characteristics which promote the habits of observation and self-reliance, so inseparable from achievement in the matter of fact and workaday world of practice.

Is there any recognised training in the arts, sciences, or professions, in which the highest ultimate problems are given generally at an elementary stage? I think there can be only one answer to this; and that we would be wise to make the advanced study of monumental design dependent upon proved individual capacity, or treat it as a specialised form of advanced education, only to be attempted after a very thorough general course has been completed, and thus, only when the student's initial sketch study for the design can be fairly the result of his own imagination and knowledge. It does not follow, as is sometimes assumed, that because monumental problems are relegated to an advanced period the qualities which underlie the production of great architecture would be neglected. On the contrary, in any training worthy the name, those qualities and principles would be insisted upon from the very commencement, and almost all design problems, no matter on how simple or small a scale, would be given with a view to the ultimate and larger conception of monumental architecture. Nor does it follow that what may be termed "advanced design" would be, or is, excluded, but the average English student has certainly a great deal of ground to cover before he is really ready to tackle monumental problems without monumental confusion.

It is the distinction between what is general and what is special, and the amount of time that should generally be allotted to each, that I should like to see more generally understood and more clearly defined.

The main principles are therefore, first the recognition by architects of a science of mind training, the peculiar province of the practical educationalist, to be attained by method and system. Secondly, the recognition of a broad distinction between general and special education; for surely there is no greater fallacy than in specialising too soon and in not recognising that while all may not attain the same ultimate heights, all must b

n the basis from which those heights can ttacked.

rgeness of view, dignity of conception, ymmetry, balance, proportion, all great itectural principles, can be inculcated the commencement; but whatever else do you must not confuse, for as Bacon "Truth comes out of error sooner than of confusion," and if, by attempting too h, you merely confuse, not only do you educate, but you destroy that very vital bute of mind, clearness, and breadth of tal vision, which it is your peculiar llege to build up and develop.

chitecture and the Functions of an Architect.

viously, the whole question of archi- ral education hinges upon our correct rpretation of the true functions of an itect, and the fact that the education ne future will have to be, first for the fit of the average many, and not for exclusive benefit of the privileged few, as been so largely the case in the past. ould it not also be well to realise more rally that national architecture should consist merely in the production of the er buildings of our civilisation, but in and every kind of structure, to which term building can be given, from the ble dwellings of the proletariat to the icipal palace or great Government office. citecture has a far deeper significance the mere gratification of the eye and s, or as an emblem of power and wealth. s largely a nation's sign manual of acter. The refinement and subtlety of Greek, the driving power of the Roman, the mysticism of the mediævalist, are not fitly expressed in their buildings? not the present unrest and dissatisfaction ur peoples equally portrayed by the ess and unrest of much of our building? not our governing and commercial acteristics more faithfully discovered in great engineering works, ships, and en- ? Is not this because we have divorced tecture from reality in all but plan, and p false gods and fashions of styles and ds, whilst engineers and shipbuilders clung faithfully to reality and purpose? we not, one and all, desire to see that h is now debased and ugly shut out, and nation at large, as well as our noble s, rise to a consciousness of the inherent ity and power for good, which a great tecture should bestow upon the material spiritual welfare of the modern State?

we turn to the past for guidance, a of the history of architectural develop- forces us to the conclusion, beyond te, that architecture is primarily a tural art: lavish on it the genius of a ias, or the brush of a Raphael, it remains th a structural entity.

terials and methods may vary, from the e column and lintel unit of the Classic ; through the brick reinforced arch and of the Roman and Byzantine; and the æval conception in stone of these same tural units, down to the latest inven- of ferro-concrete; but all show one me fact: that great buildings have been ages great organisms, as great in con- on and structure as in architectural ssion, that architecture is, in fact, a tural art decorated, and not a decorated onstructed.

scene-painting here, gentlemen, but , pulsating, compelling structure, the g inventions of great minds, tempered adition and building experience, and by lofty ambition to beautify all that ins to the Mistress Art, and her handy satellites, Sculpture and Painting.

ve we then so far changed in our rn conditions, that Architecture has d to be a structural Art, but has become iful matter of scene-painting in stone, the engineer as stage carpenter?

at, then, do we mean by essential quali- n this general training? Briefly they e summarised as follows:

The scientific study of materials and ruction in their more elementary form, special reference to locality and climate. The analytical study of past building ds and architectural expressions, to we give the generic name of "His- The deduction from this study of principles in design; the deduction, that is, of such principles as, for instance, symmetry and balance, the ever-recurrent effort of all great building epochs.

3. The application of the above, that is the producing of architectural design from our scientific knowledge of materials and construction, co-ordinated with the principles deduced from past and present forms.

This comprehensive co-ordination in teaching design and construction (which are really inseparable in all the arts) should be the foundation, from the beginning, of all elementary training.

It is really quite incomprehensible how we have drifted into separating design from construction in our approach to architectural study.

If it be once conceded that architecture is still a structural art, the key to a sound architectural education lies, to my mind, in the skill with which we combine and co-ordinate all the component parts. There is no reason why the study of materials, construction, and design should not be one indivisible operation. Once you achieve this; once you bring the student into harmony with the central fact of architectural development, and augment his faculties for rapid initiative and imagination, you are free to go on and build up advanced design upon that structure, without burdening him overmuch with the more mechanical and engineering problems.

4. The whole course being livened and quickened, by being founded upon a system of mind training, by which the student is stimulated and not sterilised; together with the creation of a standard of taste, that is a knowledge and appreciation of all that is beautiful in art and nature; for this study of the humanities of Art should form part and parcel of the student's training from the very first.

I do not want to be misunderstood. It is more than probable that the world has passed that stage of human activity when any one form of architectural expression can be evolved, adapted to our many and varied activities in building; Domestic, Commercial, Municipal, and Imperial. Some form of deliberate eclecticism is almost certainly inevitable, but if we deliberately decide that Neo-Greek, or Neo-Turk, is the one form most suitable for monumental building, we can in our education specialise in that to our heart's content later on, but it should not form part of the elementary training, which, I am sure, from a varied experience, cannot be thoroughly mastered by the average student in a shorter period than four years."

ARCHITECTURAL SOCIETIES.

Leeds and Yorkshire Architectural Society: East Anglian Rural Churches and Their Decorations.

At a general meeting of this Society, held on January 25, Mr. Wm. Davidson delivered an interesting lecture on "East Anglian Rural Churches and their Decorations." The chair was occupied by Mr. A. E. Kirk, A.R.I.B.A., Vice-President, and there were present a number of Associates and friends.

In opening the lecture Mr. Davidson stated that in no other part of England during the Middle Ages had there been a greater activity in ecclesiastical architecture and decorative and applied art than in East Anglia. Many fine examples of all periods of architecture from the Pre-Conquest work, as at Great Dunham, to the great Perpendicular rural churches of the XVth century, such as Walpole, St. Peter, Cawston, Sall, etc., were shown and described. The influence of material on the design was illustrated by the great prevalence of flintwork (no other building stone being readily available), built either as a concrete wall or used as a mosaic facing in various colours. The frequent use of round towers was also held to be due to the same reason—lack of stone for corners and dressings. Of Norman work the central tower at South Topham, the arcades at Castle Acre, Walsoken, Binham, Wymondham, Hales, and Hadleigh, and the doorways at Thwaite, Aldeby, South Burlingham, and Easton were described as fine examples. The beautiful Parish Church at West Walton, with its magnificent lich-gate, bell campanile, and the west front at Binham, were stated to be as fine Early English detail as any in the country. The stone carving of the nave pier caps at West Walton marked the high-water mark of such work in England. The Pilgrims' Chapel at Houghton-le-Dale was given as an exquisite example of Decorated work. In discussing the transition from Decorated to Perpendicular instances were quoted which, in the lecturer's opinion, proved conclusively that these two styles were very much mixed up, as it was perfectly evident that much of the Decorated work was executed long after the birth of the Perpendicular, showing that even in the best and most traditional of the so-called "good old days" men were not above copying a "good old style." This mixture of the ridged and flowing lines gave the Perpendicular work in Norfolk a freedom and charm which was not to be found in work of the same period in other parts of the country. In speaking of the great churches of the XIVth and XVth century the main dimensions of a few were given and the evolution in plan described. In the East Anglian church the chancel roof was usually lower than the nave (Long Melford and Southwold were quoted as notable exceptions), from which it was generally separated by a chancel arch and a rood-screen, and in some cases a window existed in the east gable of nave over chancel arch. The loftiness of many of these churches with their high clearstory windows was shown by examples at Sall, Cawston, Upton, and Potter Heigham. Views were shown of the great towers at Sall, Cawston, Blofield, Tunstead, Wymondham, Lavenham, etc., which in some cases, Mr. Davidson considered, from their unfinished appearance, must have originally had a wood or lead lantern, such as we find at East Harling, Swaffham, Aylsham, etc. The walls of some of these towers were 7 ft. thick at the ground level. Many north and south porches with decorative flintwork and carving existed among others, Worstead, Lavenham, Kersey being mentioned and shown as good examples. The great wealth of fine fonts and font-covers was illustrated by many notable examples, Walsingham, Upton, Hadleigh, and Palgrave being specially mentioned, also the font-covers of various types, particularly those of Trunch and Sall, which showed traces of the original colour. A very special feature of the lecture was the numerous slides of single and double hammer-beam roofs, which, along with the rood-screens and fonts, were the glory of these Eastern Counties. Of the single type Ludham, Potter Heigham, North Burlingham, Trunch, and Southwold were stated to be among the most beautiful in composition, line, and design. The magnificent double hammer-beam roofs at Knapton and Cawston were illustrated by many detail slides, giving a poetic impression of their beauty under various conditions of lighting. The evolution in design from the stone roof was traced and the various schemes of roof painting given in detail. A short account was then given of the famous painted rood-screens of Norfolk and Suffolk, and many beautiful examples of the figure-painting shown with details of mouldings and floral-painted ornament. A description of the main colour schemes was given. Several schools of figure-painters were shown to have existed, and the lecturer had no doubt whatever as to nearly all the work being that of English artists, though foreign influences were clearly evident, notably Florentine, Flemish, and German. The archaic influence of the Byzantine was said to have survived to a later date in the English Gothic than the Italian, probably about 100 years. In speaking of screen and wall paintings Mr. Davidson expressed the opinion that these do not seem to have been properly studied, otherwise the great beauty of many of these fragments would be pointed out more to students of decorative art. Mr. E. W. Tristram, of London, has, however, taken the study of English mediæval wall-painting up seriously, and it was to be hoped his fine collection of drawings and research would one day be published. On the Continent such work is done at the expense of the State. Many rooms at the National Gallery were devoted to Italian and other foreign schools, but we may hunt in vain for a solitary example of our own great Mediæval School of Decorative Art. No one wished to

see these paintings taken out of their right place in the churches, but there are many fine examples in the hands of private individuals, a few of which could surely be acquired for the nation. In concluding his paper Mr. Davidson showed and described the work of various crafts, such as glass, iron, brass, and leather work, the fine quality of which showed how all the arts arose and developed with that of architecture. The mediæval church in East Anglia at the height of its splendour possessed a great architectural and decorative unity, and must have simply glowed with colour, the floor, frescoed walls, painted screens, painted roof, and stained glass all blending harmoniously together. In such work we have a great heritage and inspiration, but under existing conditions it is difficult for even the best of men to do their best and to emulate such glorious work. The lecture was illustrated by numerous detail drawings, water-colours, and lantern slides.

Mr. A. Willetts proposed a vote of thanks to the lecturer, which was seconded by Mr. J. E. Braithwaite, A.R.I.B.A., and agreed to.

Leicester Society of Architects.

A meeting of this Society was held in the Society's Rooms in St. Martins East recently, there being a good attendance. The President, Mr. W. M. Cowdell, F.R.I.B.A., was in the chair. An interesting lecture on "The Architecture of Stamford" was given by Mr. H. F. Traylen, A.R.I.B.A., who, after giving a brief introductory history of the town, dealt with XIth century architecture, drawing attention to important points of development. He then went on to speak of characteristic XIIIth, XIVth, and XVth century work, and also examples of Tudor, Queen Anne, and Georgian houses, almshouses, and other characteristic local work, including some Sheraton shop fronts. The lecture was illustrated by some very beautiful lantern slides, including a number of views of Burleigh House. A vote of thanks was accorded the lecturer, on the motion of Mr. S. Perkins Pick, seconded by Mr. B. J. Fletcher, headmaster of the School of Art, and supported by Alderman A. E. Sawday, Mr. Herbert, and the President. In responding, Mr. Traylen expressed his willingness to give to the Society a number of the architectural drawings of the late Mr. F. W. Ordish, with whom his father was formerly in partnership. The suggestion was heartily applauded.

ENGINEERING SOCIETIES.

Junior Institution of Engineers.

A party of members of this Institution, in response to the permission of Mr. G. E. Pingree, Managing Director, paid a visit recently to the works of the Western Electric Company, at North Woolwich, and were shown over the various departments. The thanks of the party were voiced by Mr. Walter T. Dunn, Chairman of the Institution, to which Mr. G. H. Nash and Mr. Chas. Rice replied. On February 12, the Institution is holding a combined meeting with the Architectural Association, to hear and discuss a paper by Mr. Paul Waterhouse, M.A., F.R.I.B.A., on "Bridges," and on February 17, the Institution's Annual Dinner is to be held.

GENERAL NEWS.

Professional Announcement.

Mr. T. Millwood Wilson has removed his offices from 34, New Bridge-street, E.C., to 4, Staple Inn, Holborn, W.C.

Royal Society of Antiquaries of Ireland.

Count Plunkett, F.S.A., Hon.A.R.I.B.A., has been elected President of the Royal Society of Antiquaries of Ireland.

Royal Academy Appointment.

At a general assembly of the Royal Academy Mr. A. P. Laurie, M.A., D.Sc., sometime Fellow of King's College, Cambridge, Principal of the Heriot Watt College, Edinburgh, was elected to the Professorship of Chemistry in the Royal Academy vacant by the resignation of Sir Arthur Church, K.C.V.O., F.R.S.

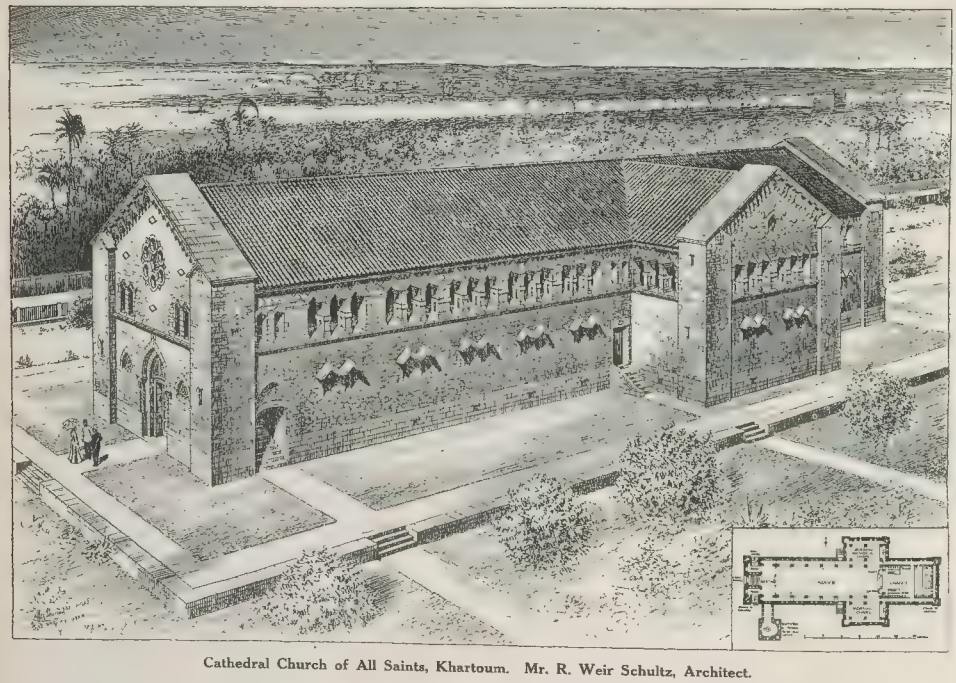
The National Insurance Act Advisory Council.

The National Insurance Advisory Council, of No. 3, Northampton-square, London, E.C., is prepared to advise inquirers, whether employers or employed, who are desirous of ascertaining their position under the National Insurance Act. Any person desirous of making an inquiry should forward a letter containing full particulars and a stamped addressed envelope for reply to the Secretary. No charge is made for any information given in response to any inquiry.

The Commerce of Cape Town.

The commercial, agricultural, and manufacturing opportunities of Cape Town are clearly set forth in an official handbook, "The Industrial and Commercial Inducements

KHARTOUM CATHEDRAL.



Cathedral Church of All Saints, Khartoum. Mr. R. Weir Schultz, Architect.

THIS building, erected to the memory of General Gordon, was consecrated on the 26th ult. on the twenty-seventh anniversary of his death. The Building Committee selected Mr. R. Weir Schultz to be architect of the Cathedral, and he has designed a church built in the form of a Latin cross. The nave and chancel are the same width, about 26 ft., with the addition of narrow passage aisles on each side, so that the total width over the walls is about 42 ft. The north transept forms the Gordon Memorial Chapel. The principal entrance is at the west end, the doorway being at the level of the ground outside, with a broad flight of steps inside leading to the narthex, but the usual entrances are from the north and south through covered porches into the narthex. Over the narthex, which extends the full width of the Cathedral, a gallery will be erected at some future date. Two circular staircases at the eastern corners of the building lead to a crypt, containing vestries. The stone used in the building is sandstone of two colours, yellow and pale red. The floor of the sanctuary is laid with Sudanese marble, and it is hoped that eventually funds will allow this marble to be used for the floor throughout. The roof, which is to be covered with green glazed corrugated tiles, is laid to a slope with projecting eaves. The church is lighted by means of small electric lamps. Mr. John Latimer was the clerk of works.

of Cape Town," compiled under the joint auspices of the Corporation of the city of Cape Town and the South African Railway Administration. The book reviews those facts with which the manufacturer who is considering the possibilities of Cape Town as a centre for the establishment of a local factory will desire to be acquainted For the establishment of factories in Cape Town and district the handbook contains much useful statistical information and a number of illustrations. Copies of the handbook may be obtained gratis on application to the Office of the High Commissioner for the Union of South Africa, 32, Victoria-street, London, S.W.

Scholarships in Science and Technology.

The London County Council is prepared to award in 1912:—(i.) Not more than fifteen scholarships in science and technology, consisting of free education in day classes at recognised polytechnics, technical institutes, or institutions of university rank, together with, in cases where the Council thinks fit, maintenance grants to be fixed after consideration of the circumstances of each candidate, but not to exceed 50*l.* a year in any case; the scholarships will be tenable for a period of two years, with a possible extension for a third year, and will be open to persons engaged in industrial pursuits who have attended evening classes at polytechnics, technical institutes, or at colleges of university rank. The Council's intention in establishing these awards is to provide a means whereby intelligent artisans who have already taken up a skilled trade as their life's work, and who are prepared to devote themselves to study for a certain period with a view to their advancement in that trade, may be given facilities for relinquishing their occupation for two years or more in order to follow a course of courses of advanced scientific instruction. (ii.) Not more than 180 evening exhibitions in science and technology, to be open to persons engaged in or intending to engage in industry, each exhibition to consist of payment of tuition fees together with a grant of 3*l.* a year, and to be tenable for two years with a possible extension for a third year.

Barnard Castle Sewerage.

The Barnard Castle Urban District Council have approved plans prepared by Mr. Harry W. Taylor, A.M.Inst.C.E. (Messrs. Taylor & Wallin), of Newcastle-upon-Tyne and Birmingham, for intercepting sewers along the side of the River Tees and a long retaining wall in Galgate. The scheme has been approved.

The "'Sanitary Record' Year-Book."

The "'Sanitary Record' Year-Book and Diary for 1912" (The Sanitary Publishing Company, Ltd., Fetter-lane, E.C.) is the thirtieth year of issue of a useful year-book. It includes articles on "Sanitary Legislation of 1911," "Useful Memoranda for Sanitary Engineers and Surveyors," by Mr. Gerard J. G. Jensen, C.E., and much other information of value to sanitary engineers and surveyors.

The Surrey County Council and Disfiguring Advertisements.

The Surrey County Council have adopted a by-law, in terms of the Advertisements Regulation Act of 1907, and approved by the Home Secretary, to prohibit the exhibition of any advertisement "on any hoarding, stand, or other erection, so as to be visible from any public highway (whether carriageway, bridleway, or footway), or from any public waterway or from any railway, and to disfigure the natural beauty of the landscape." The by-law does not apply to boroughs or places having more than 10,000 inhabitants, and existing hoardings are exempted for a period of five years.

COMPETITION NEWS.

Winnipeg Legislative Buildings Competition.

Copies of the conditions of the competition may be obtained by British architects on application to the High Commissioner for Canada, 17, Victoria-street, London, S.W. A copy may be seen at the Commercial Intelligence Branch, 73, Basinghall-street, E.C.

New School for the Coseley Education Authority.

The assessor in this competition, Mr. Arnold Mitchell, has made his award as follows: The winners are Messrs. Ewen Harper & Bro., of Birmingham. The second place is taken by Messrs. Cleland & Hayward, of Wolverhampton. The Education Committee, after inspecting several of the designs, have appointed Messrs. E. Harper & Bro. as architects for the school.

Competitions for Town Planning, Garden Suburb Scheme, etc.

Acting on the recommendation of the R.I.B.A. Competitions Committee, the Council of the Royal Institute give notice that in the case of competitions for town planning, garden suburb schemes, and kindred enterprises the competition amongst architects should be confined to the design, and architects should not undertake the erection of the buildings they have designed for competition purposes. Further, the Council are of opinion that members of the Royal Institute should not act as assessors to, or otherwise countenance, a competition unless it is limited to the design only.

Erection of Statue, Cuba.

With reference to the notice on p. 417 of the *Board of Trade Journal*, of August 31, 1911, relative to a competition for the erection in Havana of an equestrian statue of the Cuban General Maceo, the *Gaceta Oficial* of January 3 states that the date for the receipt of plans and models has, in consequence of representations from abroad, been extended to July 20. British sculptors proposing to compete should first put themselves into communication with the Commercial Intelligence Branch of the Board of Trade, 73, Basinghall-street, London, E.C., where further particulars (in Spanish) may be seen.

BOOKS RECEIVED.

ARCHITECTURE. By Professor W. R. Lethaby. (London: Williams & Norgate. Price 2s. 6d. and 1s. net.)

THE CONSTRUCTION OF LOMBARD AND GOTHIC VAULTS. By Arthur Kingsley Porter. (London: Henry Frowde. 8s. 6d. net.)

THE WORKMEN'S COMPENSATION ACT, 1906. By W. A. Wills. (London: Butterworth & Co.)

BUTTERWORTH'S WORKMEN'S COMPENSATION CASES. (London: Butterworth & Co.)

BUILDING CONSTRUCTION AND ARCHITECTURAL DRAWING. By John A. Reid. (London: Blackie & Son.)

CORRESPONDENCE.

The Policy of the R.I.B.A.

SIR,—The letter of "A Reader" in your issue of the 26th ult. and others which have appeared previously concerning the policy of the R.I.B.A. and the supposed severity of its examinations are such, I think, as to merit some comment. To allow the examinations to be taken in two or more parts is to lower an already low standard.

The examiners are unanimous in thinking that most of the candidates would do much better than they do now if the test were compulsory.

I doubt if it is necessary for any ordinary student to have the services of a coach or even to take up special classes; though the latter course will no doubt facilitate matters with regard to some of the subjects.

And it certainly is not necessary to use up "every minute that can be spared after office hours."

Two hours a night for a couple of months should be quite sufficient for the work, excluding, of course, the drawings and testimonies of study.

If "A Reader" would set about it with energy and in a businesslike manner and divide his time up suitably for recreation and study his difficulties would soon vanish.

Let him look round and note the fury of enthusiasm with which the devotees of any of the sister arts, or the crafts, or even of the engineering trades, pursue their avocations, and he will see that most of the young architects of to-day have much to learn in that direction.

All things that are worth having have to be paid for.

What is needed is, not that the standard of the examinations should be lowered, but rather that it should be raised until the passing of them becomes a guarantee of efficiency, a criterion by which a student may judge of his qualifications for the profession of architecture, and a test which will ensure the successful candidates certainty of employment and reasonable remuneration while he remains in it. H. S. FLEMING, A.R.I.B.A.

The Land Taxes and Building.

SIR, I have read with considerable interest your excellent leading article in the *Builder* of January 19 on the subject of "The Land Taxes and Building," but it is with some concern I note you say that "no organised movement has been instituted to protect property from a policy which is crippling the building industry," etc. May I call your attention to the Land Union, of which Mr. E. G. Pretyman, M.P., is President, and which has since the early part of 1910 carried on a determined and ceaseless agitation against the land taxes, backed by a large and influential Council and with 160 branches formed throughout England and Scotland? This non-party organisation has not only become a powerful fighting machine, with its many thousands of members, but it is ready to give general advice to its members—be they Liberals, Conservatives, or Socialists—on the many difficulties surrounding this grotesque legislation.

The Land Union has held many meetings throughout the country, and it may, I think, take chief credit for the recent decisions in the Court of Appeal, and also for the inquiry now promised by the Chancellor of the Exchequer into the working of the Act.

I enclose you a prospectus, and also some of the literature which has been published, and I hope if any of your readers are in any doubt or difficulty on points connected with Part I. of the Finance Act, 1909-10, that they will communicate with me.

The Land Union is in close and constant touch with the Budget Committee in the House of Commons, and also publishes a monthly journal, which has become the recognised medium for dealing with the anomalies and injustices of the Act which are constantly arising. The Land Union has now become a national organisation, and it is difficult to know how it can have escaped the attention of the writer of your article.

C. H. KENDERDINE, Secretary.
The Land Union, Westminster, S.W.

Portland Cement and Colour

SIR, —In reference to the subject of "Colour as Applied to Architecture," papers on which were read at the R.I.B.A. by Sir Alfred East and Mr. Edgar Wood respectively on Monday last week, and which are reported in the current issue of the *Builder*, I should like to mention the extremely beautiful colours obtainable in Portland cement.

Before giving particulars of same, in my small handbook on Portland Cement recently published, I made a large number of tests, many of which I still have, and which I shall be pleased to forward on request.

These colours are rich and delicate, and their juxtaposition produces the most beautiful harmonies.

As a building material cement possesses this advantage: unlike others the colours of which are fixed before they reach the craftsman's hands, it is capable of modification to any extent, and this, as a rule, increases its hardness. OLIVER WHEATLEY.

21, *Broomhouse-road, Hurlingham, S.W.*

INTERCOMMUNICATION COLUMN.

Rotting of Floors.

SIR,—I should be greatly obliged if any of your readers can inform me of any treatment which will prevent the rotting of floors under linoleum. Several cases have come to my knowledge where this material has been laid on new floors which are apparently adequately ventilated and has caused complete rotting of portions of the flooring within two or three years. Possibly it is the washing of the floors and the soaking of the water under the linoleum which causes the injury.

F. S.

EDITORIAL SUMMARY.

The leading article deals with the R.I.B.A. Studentships and offers some suggestions.

In Notes columns (p. 114) will be found comments on: "The Royal Academy Lectures on Sculpture"; "Mr. Pierpont Morgan's Art Treasures"; "Cold Houses"; "The Control of London Statues"; "Warming Houses"; "Signs of Unrest"; "The Crystal Palace and the National Folk Museum."

A meeting of the Architectural Association, combined with the Camera, Sketch, and Debate Club, was held on Monday, when Mr. A. G. R. Mackenzie read a paper, entitled "That Modern House Planning Does Not Tend to be Over-Elaborated." An interesting discussion followed (p. 115).

An abstract of a paper on "Architectural Education," recently read by Mr. P. G. Maule, Headmaster of the Architectural Association Schools, before the Manchester Society of Architects, appears on p. 118.

Short notices of recent meetings of the following architectural societies appear on p. 119: "Leicester Society of Architects"; "Leeds and Yorkshire Architectural Society."

An abstract of a paper on "East Anglian Rural Churches and their Decorations" appears on page 119.

In Correspondence columns (p. 121) are letters on: "Portland Cement and Colour"; "Land Taxes and Building"; "The Policy of the R.I.B.A."

The Monthly Illustrated Review of Civic Design (p. 125) includes: "The Growth of the Commercial Quarter of a Town"; "Schloss Linderhof"; "Town Planning, Halifax"; "International Road Congress"; "Early Victorian Estate Development"; and Notes.

The Building Trade Section (p. 129) contains: "The London Master Builders' Association"; "The Builders' Foremen's Association Annual Dinner"; "Projected New Buildings in the Provinces"; "The National Chamber of Trade"; "The National Federation of Building Trade Employers"; "Applications under the Building Acts, 1894 to 1909."

The successful designs in the Hendon Central Fire-Station Competition are given on pp. 132-135.

The first of the new series of Carpenters' Hall lectures on "The Arts Connected with Building" was delivered on January 24 by Mr. Thackeray Turner, F.S.A., on "The Unity and Difference in Arts and Crafts." (For report and illustrations see p. 133.)

In Law Reports (p. 136) will be found reports of "Lyons *v.* Runtz"; "Rutter *v.* The Great Western Land Company, Ltd."

MEETINGS.

FRIDAY, FEBRUARY 2.

Royal Sanitary Institute.—Mr. Charles Porter, M.D., B.Sc., on "Sanitary Law (c): Factory and Workshop Acts," etc. 7 p.m.

Glasgow Technical College (Architectural Craftsmen's Society). Mr. J. A. Lanchlan on "A Cistercian Monastery." 8 p.m.

Battersea Polytechnic (Lectures on Illuminating Engineering). Mr. J. S. Dow, B.Sc., on "Daylight and Artificial Lighting Compared." 7.30 p.m.

The Institution of Civil Engineers (Students' Meeting).—Lecture on "Steam-Turbines: Some Practical Applications of Theory," by Capt. H. Riall Sankey, R.E., M.Inst.C.E. 8 p.m.

SATURDAY, FEBRUARY 3.

Aberdeen Architectural Association.—Paper by Mr. A. J. Wood, entitled "Under Italian Skies." Illustrated. 7.30 p.m.

MONDAY, FEBRUARY 5.

Royal Institute of British Architects.—(1) Address by the President, Mr. Leonard Stokes, to students. (2) Presentation of prizes and studentships. Mr. Gerald Horsley to read a criticism on the work submitted for prizes and studentships. (3) Nomination of the Royal Gold Medallist. 8 p.m.

Royal Academy of Arts.—Professor R. T. Blomfield, A.R.A., on "Architectural Drawing and Illustration: Villars de Honecourt." 4 p.m.

Surveyors' Institution.—Mr. Edwin Savill on "The Single Tax Movement." 8 p.m.

Society of Engineers.—Presidential address, by Mr. John Kennedy. 7.30 p.m.

Royal Sanitary Institute.—Dr. Charles Porter on "The Duties of a Sanitary Inspector: (a) Outdoor." 7 p.m.

Liverpool Architectural Society.—Mr. H. L. North, B.A., on "The Old Buildings of Snowdonia." Illustrated by lantern slides. 6 p.m.

TUESDAY, FEBRUARY 6.

Northampton Polytechnic Institute.—Mr. F. M. Denton on "The Production of Electric Light and its Distribution." 7.30 p.m.

The Institution of Civil Engineers.—Papers on "The Water-Supply of the Witwatersrand," by Donald Calder Leitch, M.Inst.C.E.; "Investigations Relating to the Yield of a Catchment-Area in Cape Colony," by Edward Cecil Bartlett, M.Inst.C.E. 8 p.m.

WEDNESDAY, FEBRUARY 7.

Carpenters' Company (Lectures on Arts Connected with Building). Mr. Herbert W. Wills on "Past and Present Conditions of Building." 7.45 p.m.

Royal Archæological Institute.—Mr. J. A. Gotch, F.S.A., on "The Original Drawings for the Palace of Whitehall Attributed to Inigo Jones." With lantern illustrations. 4.30 p.m.

Royal Sanitary Institute.—Dr. Charles Porter on "The Duties of a Sanitary Inspector: (b) Indoor." 7 p.m.

Royal Society of Arts.—Mr. Leonard Hill, M.B., F.R.S., and Mr. Martin Flack, M.A., M.B., B.Ch., on "The Influence of Ozone in Ventilation." 8 p.m.

Northern Architectural Association.—Paper by Mr. P. S. Worthington, M.A., on "Style in Architecture." 7.30 p.m.

Edinburgh Architectural Association (Associate Section).—Mr. Oscar Paterson on "An Elementary Introduction to the Study of Taste in Stained Glass."

THURSDAY, FEBRUARY 8.

Royal Academy of Arts.—Professor R. T. Blomfield, A.R.A., on "Some Draughtsmen of the XVIth Century: Bramante, Da Sangallo, Du Cerceau, Del' Orme." 4 p.m.

Society of Antiquaries.—8.30 p.m.

Society of Architects.—8 p.m.

Concrete Institute.—Discussion on Professor Beresford Pite's paper on "The Æsthetic Treatment of Concrete," read at a recent meeting. 8 p.m.

Sheffield Society of Architects and Surveyors.—Mr. J. H. Cockburn on the "Law of Support to Building."

Institution of Electrical Engineers.—Mr. E. H. Rayner on "High Voltage Tests and Energy Losses in Insulating Materials." 8 p.m.

FRIDAY, FEBRUARY 9.

Royal Sanitary Institute.—Dr. Charles Porter on "The Duties of a Sanitary Inspector: Offensive Trades." 7 p.m.

Royal Institution of Great Britain.—Mr. J. Allen Harker on "Very High Temperatures." 9 p.m.

The Institution of Civil Engineers.—Lecture on "Steam-Turbines: Some Practical Applications of Theory," by Capt. H. Riall Sankey, R.E., M.Inst.C.E. 8 p.m.

Battersea Polytechnic (Lectures on Illuminating Engineering).—Mr. J. S. Dow, B.Sc., on "Colour of Artificial Illuminants." 7.30 p.m.

Leicester and Leicestershire Society of Architects.—Mr. Beckwith A. Spencer (Royal College of Art) on "Italian Mural Decoration in the XIVth and XVth Centuries." Lantern slides. 8 p.m.

SATURDAY, FEBRUARY 10.

Clerk of Works' Association. Twenty-ninth annual dinner, King's Hall, Holborn Restaurant. 6 p.m.

Royal Sanitary Institute (Meeting in the Board Room, Poor Law Offices, Shakespeare-street, Nottingham).—Discussion on "Local Public Health Administration and the Insurance Act," to be opened by Alderman T. J. Dabell, M.R.C.S., J.P., Chairman, Health Committee, Nottingham. 11 a.m.

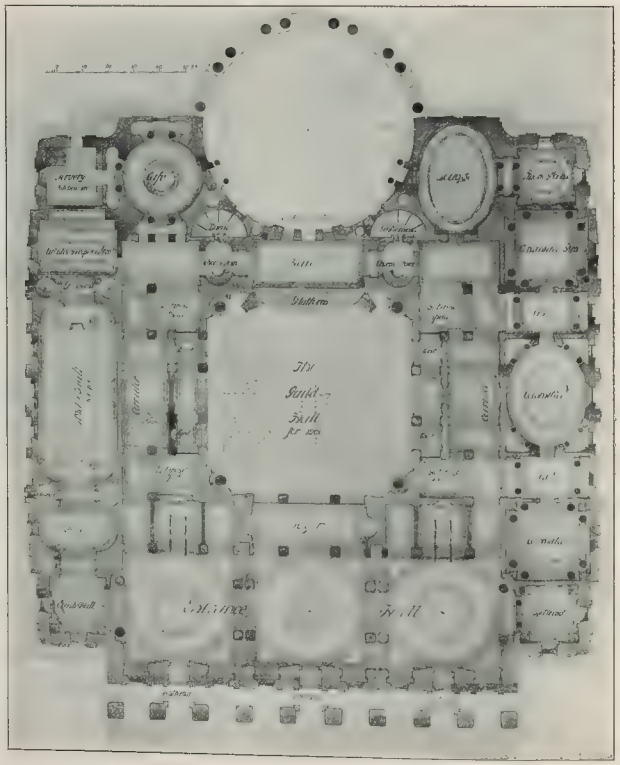
ILLUSTRATIONS.

The Soane Medallion Drawings.

WE illustrate this week the designs submitted in the Soane Medallion Competition of the R.I.B.A. by Mr. W. Friskin and Mr. Piet de Jong, which were each awarded a certificate of Honourable Mention and 50*l.*, as the Council were unable to give the prize to any one competitor.

Mr. Friskin has sent the following notes in explanation of his intentions—

"In the working out of this scheme an attempt has been made so to arrange it that the three main apartments—the large hall,



Ground Floor Plan.

R.I.B.A. Soane Medallion: Certificate of Hon. Mention and 50*l.* Design for a Guild Hall.

By Mr. Piet de Jong.

he small hall, and the banqueting hall—shall e the dominating features. A building in a ark demands open planning; hence the round ith the dome over represents the large hall, nd the two wings represent the small hall nd the banqueting hall. The main entrance all gives immediate access to all three, and he exits lead directly to open ground. The ay-out of the surroundings is shown by the lock plan, with the road as the boundary of he park, the avenues and paths in the park eing arranged with the vista terminating in he central feature—the dome."

The author of this design is a former student f the Glasgow School of Architecture.

The name of the author of the other design was incorrectly given in our last issue, though we are not responsible for the error. Mr. Piet de Jong writes—

"This scheme is so laid out that the spectator approaching along the main contour roadways sees the building in easy perspective, gradually changing until detail claims his attention. The building is set upon a raised terrace, above which the Caryatide portico is reached by steps extending the whole length of this centre feature, behind which are three separate entrance doorways, opening into the main entrance hall.

This hall, which is symmetrically treated, contains the staircases and elevators, and gives access through a foyer to the Guild Hall, surrounded by its retiring spaces and corridors leading to the café and lounge in the rear.

A smaller hall for 400 is also entered from the main central hall, and is balanced by a suite of committe-rooms on the other side of the buildings.

On the first floor, ascended by two staircases, is the assembling hall for the reception and banqueting halls. The kitchens and toilet-rooms are placed on a floor above, and are entered from unobtrusive niches in the ante-rooms.

The Guild Hall galleries are also entered from the assembling hall, though at a slightly higher level, and are disconnected by heavy curtains hung between the columns.

The exterior and interior treatment has been as simple and refined as possible with pure unbroken mass and line, detail only being applied when called for. To keep the scale of the building throughout, the main horizontal lines have been used inside and out.

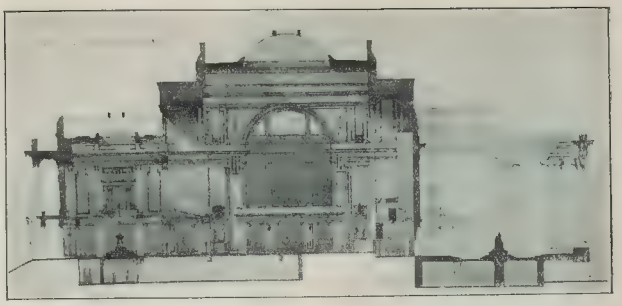
To obtain an easily balanced scheme, suitable for its purpose, without uncalled-for extravagance, has been the desire of the author."

FIFTY YEARS AGO.

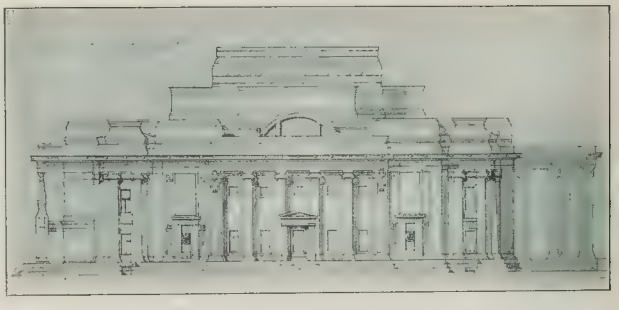
From the *Builder* of February 1, 1862.

The Proposed Memorials of the Prince Consort.

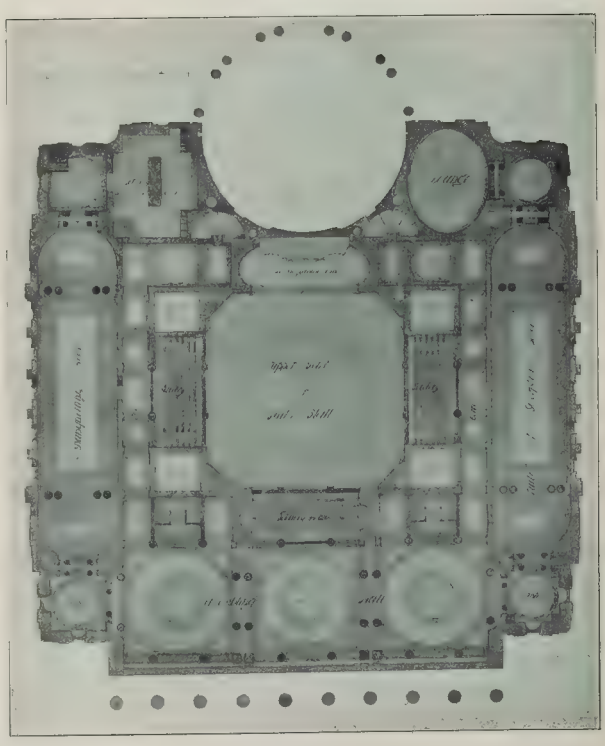
THE Sub-Committee met in the Mansion House on Wednesday last and proceeded with the organisation of arrangements for procuring subscriptions. Numerous suggestions as to the form the memorial should take have been addressed to the Committee, but at present they confine themselves solely to raising a fund. When the amount is known they will then be better able to consider what should be done with it. For our own part we desiderate a grand union of the arts in honour of one who knew and loved them all. We see in the mind's eye a magnificent Temple enshrining a noble statue of the Honoured One. Upon and around the pedestal are groups and *relievi* illustrating his character; while other *relievi* and paintings, in the entablature and elsewhere, set forth the incidents of his life. The worker in metal, the glass-painter, the mosaicist have co-operated with the architect and sculptor; marbles of all sorts join with the richest materials of their several kinds and the cunningest art; and we have at once a fitting monument for the Hero of the family-life, and an evidence of the position to which the arts have attained amongst us. A large sum would, of course, be needed to make the vision a reality—but what of that? It would be a good investment for the country; a worthy evidence of the national feeling; that which would give joy and elevation of thought to generations would be cheap at a very large sum. The genius required to produce it might be more difficult to find than the money, but even that, we think, would be forthcoming if properly called out.



Section.



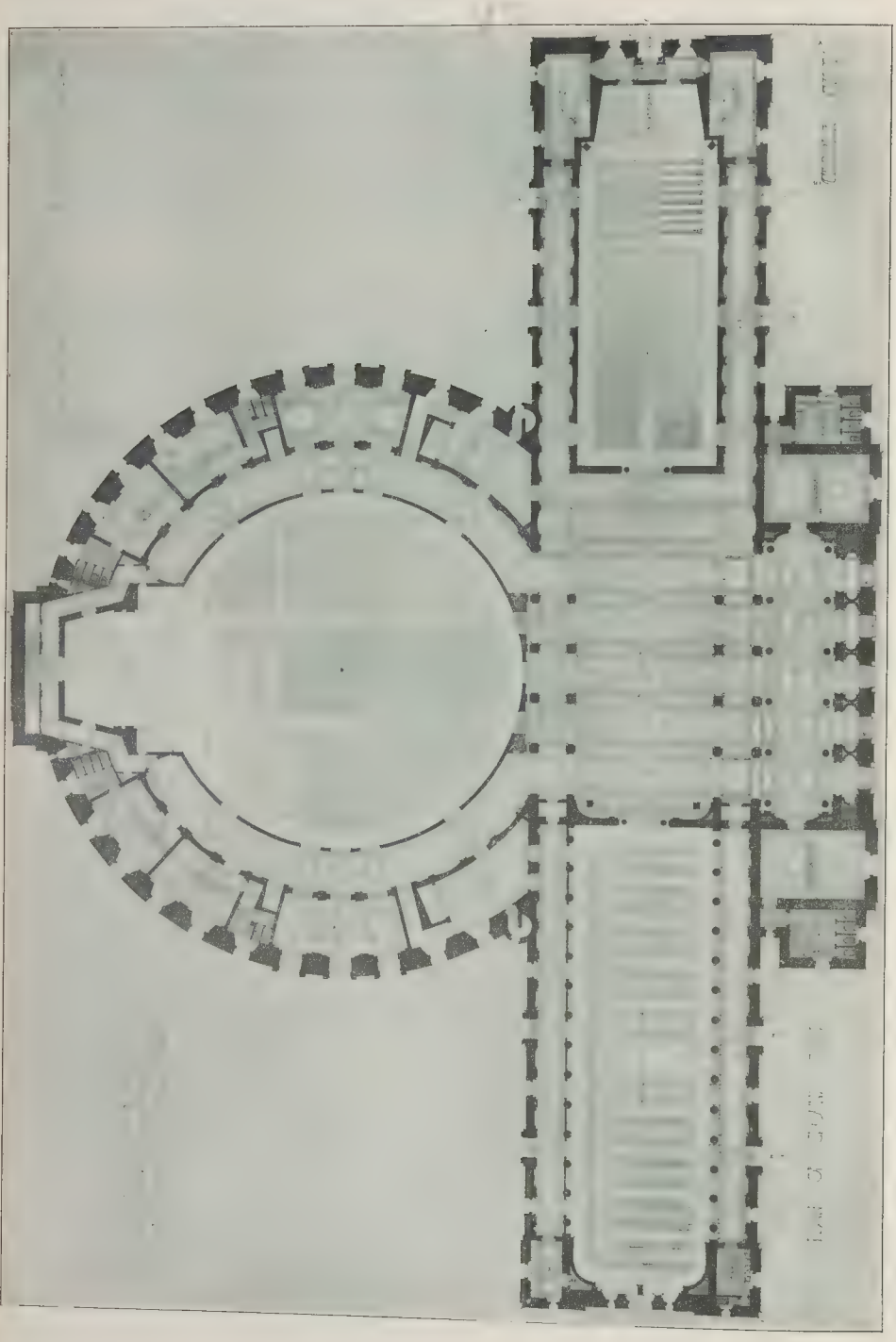
Side Elevation.



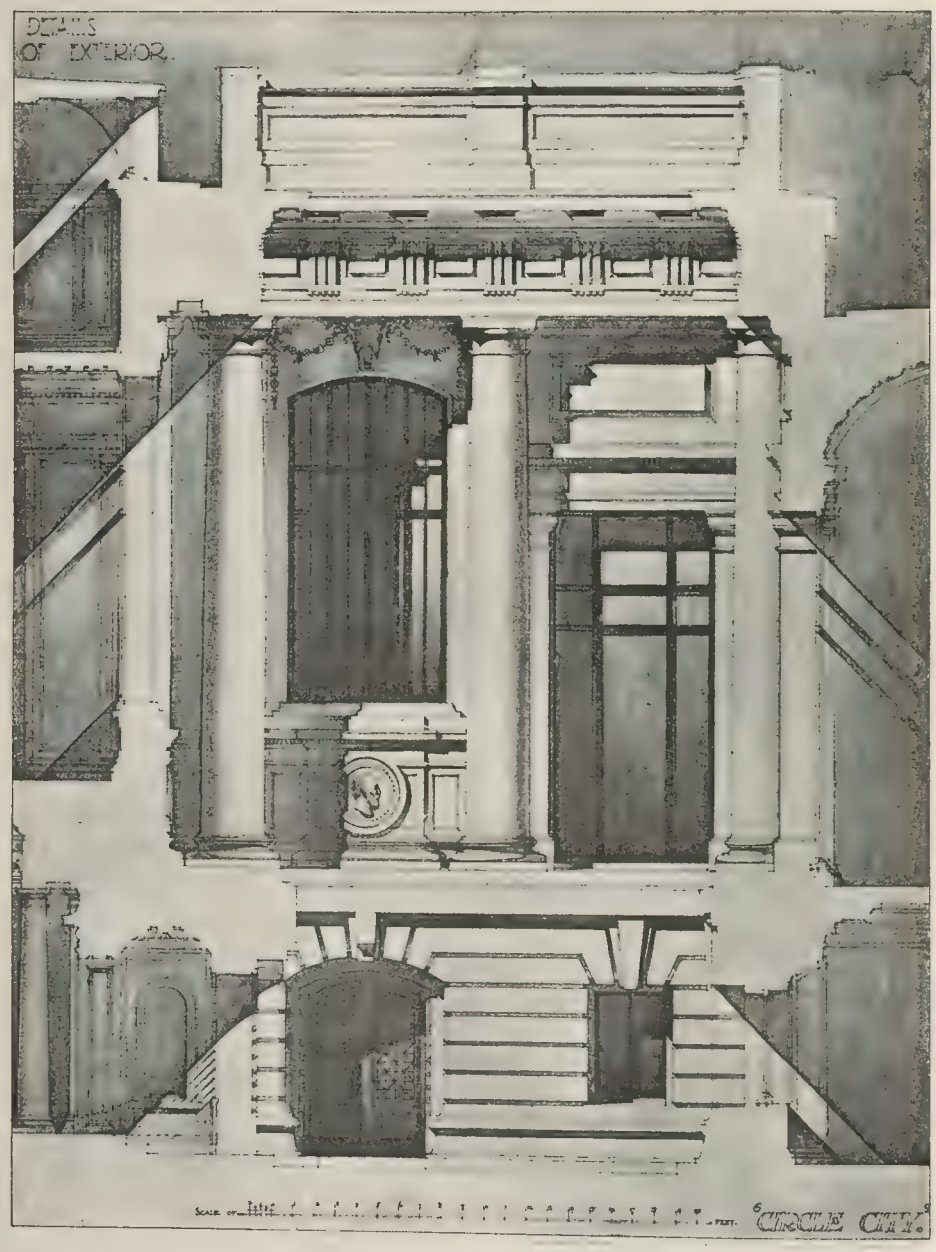
First Floor Plan.

R.I.B.A. Soane Medallion: Certificate of Hon. Mention and 50*l*. Design for a Guild Hall.

By Mr. Piet de Jong.



R.I.B.A. Soane Medallion: Certificate of Hon. Mention and 50/. By Mr. Wm. Frickle



DETAIL.

R.I.B.A. SOANE MEDALLION: CERTIFICATE OF HON. MENTION AND £50.—By Mr. Wm. Friskin.

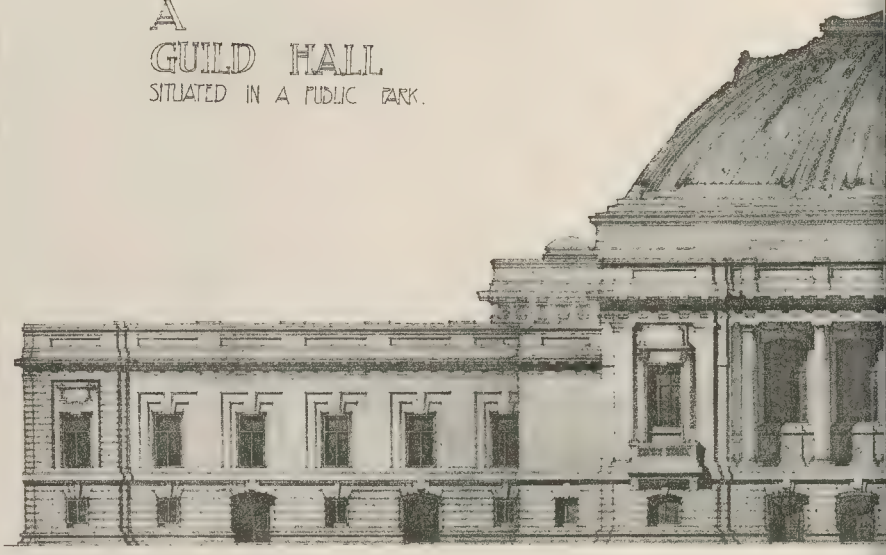


R. I. B. A. SOANE MEDALLION · CERTIFIC

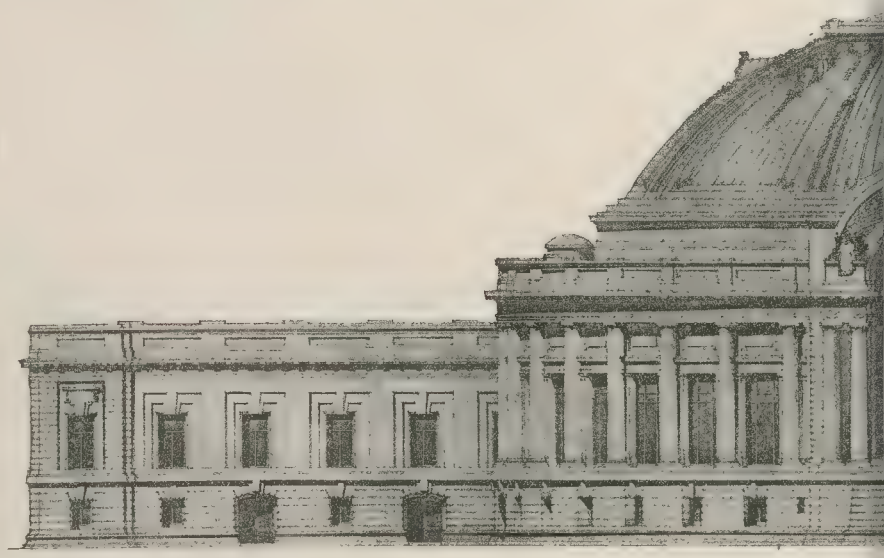


ENTION AND £50.—By Mr. Piet de Jong.

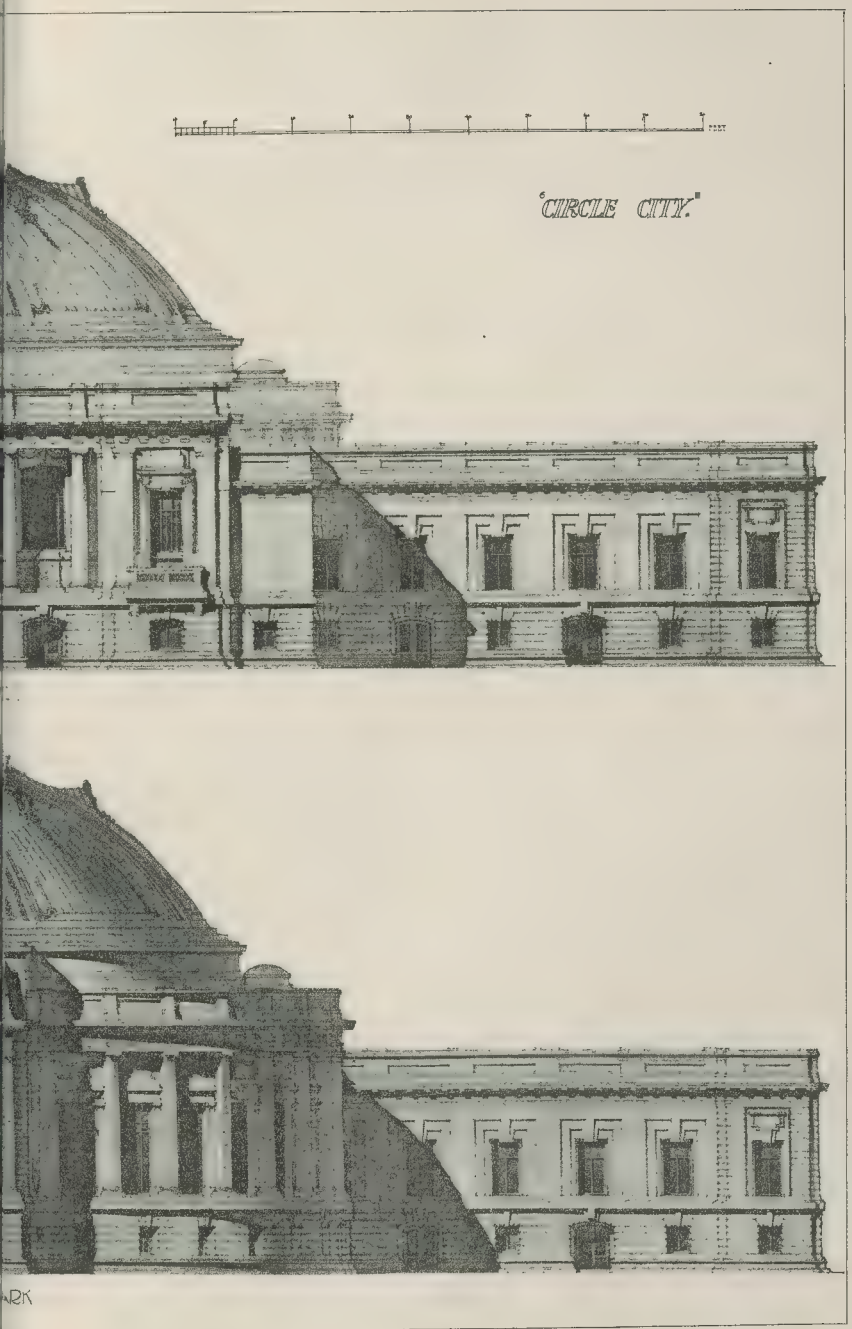
A
GUILD HALL
SITUATED IN A PUBLIC PARK.



ELEVAT

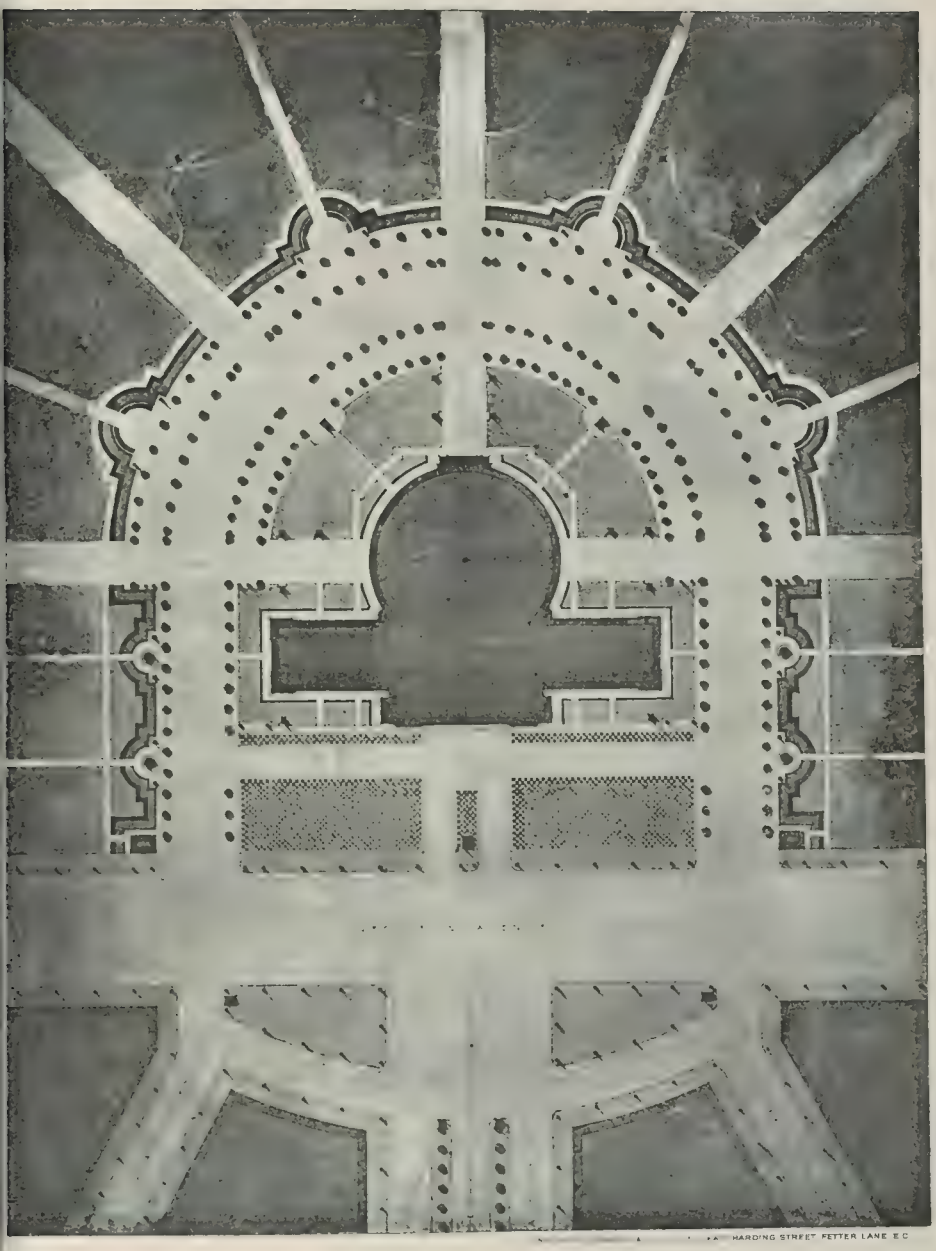


ELEVATIO



INK PHOTO SPRAGLE & Co LTD 4 & 5 EAST HARDING STREET, FETTER LANE E C

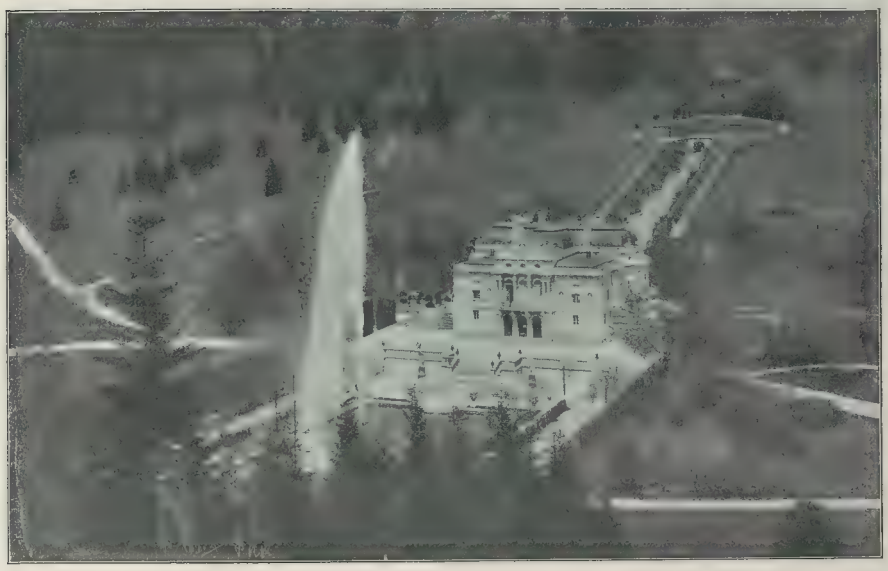
NTION AND £50.—By Mr. Wm. Friskin.



BLOCK PLAN.

R.I.B.A. SOANE MEDALLION: CERTIFICATE OF HON. MENTION AND £50.—By Mr. Wm. Friskin.

MONTHLY REVIEW · *of* · CIVIC DESIGN.



Schloss Linderhof, with Fountain and Cascade.

SCHLOSS LINDERHOF.

THE advantages to be obtained by a proper study of the surroundings and approaches to a building have ays been realised on the Continent; it is only since the XVIIIth century, ing the last few years—and in fact since recent impetus given to the town nning movement — that any general ention has been given to the subject in s country.

The view of Linderhof presents a charm- example of a formal lay-out amidst antic surroundings, and illustrates very cibly how much an otherwise uninterest- building may gain by being placed in a table setting.

HE GROWTH OF THE COM- MERCIAL QUARTER OF A TOWN.

THE gradual expansion of the business tre of a commercial town, absorbing in growth the inner ring of the outlying dential quarters, presents a problem that all probability will always be with us.

Even in a comprehensive city plan which s down definite and stringent limits for commercial and residential areas some cession must be made for future changes l for the possible growth of the business a. This process may be seen going on most suburban districts as the shops dually spread out from the railway- tions along the main roads and overflow the side streets. The condition of most these main roads, many of them now rying tramlines, in which the shops e been built up to the frontage line of original gardens, is such that they are able to fulfil their double functions of n traffic route and of shopping centre or ket without grave inconvenience and ger to life and limb. Indeed, it is ques- hable whether any street, however well arranged, can adequately serve purposes which are so different and provide facilities for uninterrupted through traffic and also for those loitering from shop to shop. The two functions are in a sense contradictory and difficult to reconcile. Failing a definite separation of the two functions and the banishment from the main traffic routes of such types of shop as tend to encourage crowds and general loitering, the state of some of our suburban streets on a Saturday night suggests very forcibly that some measure of relief is necessary. Where houses with front gardens or forecourts are turned into shops the house fronts might still be the building line so that the whole of the garden space could be given up as extra pavement space for the shop



Street in Winnipeg.

(Showing abrupt transition from commercial to residential district.)

discussion of which should make the London Congress a notable event in the history of road engineering.

An Organising Council has been formed by representatives of Local Authorities and of engineering, scientific, automobile, and other kindred societies. General and Executive Committees have been elected to carry out the work of organising the Congress, with Sir George S. Gibb, Chairman of the Road Board, as Chairman; Lord Montagu of Beaulieu, Mr. Joynson Hicks, M.P., and Mr. F. Berryman, as Vice-Chairman; Sir Charles Rose, M.P., as Honorary Treasurer; Mr. Rees Jeffreys, Secretary of the Road Board, as Honorary Secretary; and Mr. Montagu Harris, Secretary of the County Councils Association, as Deputy Honorary Secretary. The membership of the Congress is open to all; the individual membership subscription being 1*l*. The subscription covers full membership, and entitles the subscriber to take part in all the proceedings and excursions connected with the Congress, to receive the daily agenda published during the Congress, and further, a complete set of the various papers on different subjects sent in by members. These papers will comprise reports by leading authorities from all parts of the world, of experiments and recent experiences in road engineering methods of preventing dust and mud, the laying of light railways and tramways on roads, the choice of surfacing materials, the influence of weight and speed of vehicles on roads and bridges, the conditions to be fulfilled by horse-drawn or mechanically-propelled vehicles, in order that they may not damage or suffer damage from the roads, etc.

CIVIC DESIGN NOTES.

Open Spaces and Recreation Grounds.

At their meeting on January 5 the Islington Borough Council unanimously resolved to purchase, for 2,000*l*., the freehold of Barnsbury-square, which they have maintained as a public garden for many years, with a view to its preservation in perpetuity as an open space. Sir Stafford and Lady Howard have just presented to Llanelly a public park of 20 acres, together with Bryncaerau Castle, which will be converted into a local museum. A fund is opened for the acquisition of the Rookery estate as an addition to Streatham Common. The Middlesex County Council will contribute 5,625*l*. towards the purchase by the Southgate Urban District Council of 90 acres at Winchmore Hill for a public park. An old English garden is to be formed in Battersea Park; and the site of the house known as "Inglewood," Norwood Park, is to be cleared and laid out as an extension of the park. A sum of 1,500*l*. is contributed to the amount of 7,500*l*. required for the purchase of 60 acres on Colley Hill, Reigate, being part of the North Downs range, rising to an altitude of more than 700 ft., and traversed by the track of the Pilgrims' Way. The National Trust propose to co-operate with the Selborne Society in adapting portions of the land as a sanctuary for birds, insects, and flowers. At their last monthly meeting the Metropolitan Public Gardens Association agreed to reinstate the garden of Barnsbury-square, if bought by Islington Borough Council, and approved a scheme for acquiring some riverside land at Fulham. The income of the Association for the last year was 2,700*l*., including a special donation of 500*l*.

A New Arterial Road.

The Road Board is reported to be considering the necessity of opening up a main arterial road from London to the west. As things are now it is necessary to pass the narrow and congested bottle-neck at Brentford in order to get on to the main Bath-road. Anyone who has had any experience of this dangerous spot, and has seen the endless procession of brewers' drays, market carts, and heavy traffic of all descriptions through which the double line of tramways endeavours to force its way, will realise that it is necessary to take the matter in hand without further delay. Suggestions have been made both for widening the present route and for the construction of a new one, which will link up with the main western roads without passing through Brentford. This, though more expensive, would probably be cheapest in the end.

Housing at Yeovil.

At a recent meeting of the Yeovil Town Council the Housing Committee reported that seventeen tenders had been received for the erection of the houses the Council proposed to build, and eight for the surveying and constructing of the streets. The houses are divided into three groups of fifty each. Group 1 (to be erected during 1912)—thirty-six five-room houses, proposed to be let at 5s. per week each; six four-room houses at 4s.; and eight to be let as sixteen flats, at 2s. each. Group 2 will consist of forty-eight five-room and two four-room houses; and Group 3 likewise. The five-room cottages will have a frontage of 16 ft. and a depth of 25 ft., and the four-room cottages a frontage of 15 ft. 4 in. and a depth of 20 ft. 9 in. The Committee recommended that, subject to their references being satisfactory, the tender of Messrs. T. H. Moggridge & Son, of Taunton, amounting to 20,748*l*., for the houses, be accepted. The details are—Group 1, 6,848*l*.; Group 2, 6,817*l*.; Group 3, 6,813*l*. The Committee also recommended that the tender of Messrs. Steer & Pearce, of Plymouth, amounting to 2,536*l*. 14s. 10d., for the surveying and constructing of the streets, be accepted; and that the Local Government Board be asked to sanction the borrowing of 24,035*l*., being the sum required for the carrying out of the scheme, in addition to the cost of the land, which has already been applied for. After discussion the report was adopted, on the understanding that only the first group of fifty would at present be proceeded with.

Town Planning, Southport.

Mr. S. A. Kelly, F.S.I. (Liverpool), recently read a paper on "Town Planning" at a meeting of the Southport and District Property Owners' Defence Association. He said Southport was in need of some improvements as regarded road communications, and as Southport could not bring herself to the existing main road it was justifiable to propose that the main road should be brought to Southport. His scheme, if carried out, would reduce the distance between Liverpool and Southport from twenty to seventeen miles, and the distance from Southport to Preston from twenty to fifteen miles. It would also encircle Southport with a boulevard. The reclamation of the sandy tracts on the sea front might provide not only open spaces, but possibly form a development area in years to come, and the possession of which may bring in a fruitful revenue to the municipal coffers. The provision of an extended marine drive and the allocation of a proper space or spaces for the housing of the amusement department must be thought of and contrived to be placed where it was least offensive to the eye of the more æsthetic visitor.

Town Planning.

The Southgate (Middlesex) Urban District Council will seek authority for a scheme to deal with the entire 3,600 acres of the district. They have already purchased 63 acres for a park, and will lay out the surrounding estate (240 acres) upon town-planning lines, according to agreement with the late owners.—The Portsmouth Corporation have directed the Borough Engineer to draw up a preliminary "town plan," showing outlines of roads and plotting sites for public buildings, for submission to a conference of landowners.—The Town-Planning Committee of the Heston and Isleworth Urban District have recommended the local Council to submit, at an estimated cost of 300*l*. for the preparation, a scheme for the whole area, exclusively of lands already developed.—Mr. A. F. Brown has been appointed by the Council to undertake all the work in the first stage of the Richmond (Surrey) Town-Planning Scheme.

Aldwych Site.

The London County Council are selling the eastern portion of the island site between the Strand and Aldwych to the Commonwealth of Australia for the erection of Government buildings which it is proposed to erect in harmony with that already built by the Victorian Government. The price is stated at 379,756*l*. It is anticipated that the erection of such an important building there will lead to the more speedy development of the rest of the unoccupied sites in this neighbourhood which have for so long been a public eyesore.

Town Planning in Yorkshire.

Representatives of Yo[rk]shire local authorities met [at] conference a short time si[nce] at the Leeds Town Hall [to] discuss town planning. Mr. Alderman F. [W.] Lupton, of Leeds, who presided, said that [a] great deal of planning had been carried out [in] Leeds, though the city had not yet applied [to] the Government for a town-planning schem[e]. During the last forty years 25 miles [of] streets where there were few buildings h[ave] been widened, whilst 6½ miles of buildi[ngs] bordered streets had been widened a[nd] 5 miles of new streets had been constructe[d]. The Chairman emphasised the value of maki[ng] roads and streets the right width before th[ey] were lined with buildings. The cost of widenin[g] one of the streets in Leeds had worked out [at] 1,700,000*l*. per mile. Happily only 90 y[ards] were carried out at that rate. In Canad[a] the authorities were aiming at making the ma[in] roads 100 ft. wide. They were not going [to] that extent at present, but were reserving [a] portion of the land needed for the temporar[y] purposes of cultivation.—Mr. H. R. Aldridg[e] gave a lecture on town planning.

The Fate of Orleans House.

Orleans House, Twickenham, at different times th[e] home of the Duc d'Orleans and of the Duc d'Aumale, and [a] Don Carlos, the claimant of the throne [of] Spain, is once more in the market for sale [by] private treaty. This, it is to be feared, will mark the last stage in the downward path of [an] historic estate. Built in the XVIIIth centur[y] by a Mr. Johnstone, Secretary of State f[or] Scotland in the reign of Queen Anne, the hous[e] which is a characteristic building of the perio[d] was added to by the Duc d'Aumale, who erecte[d] a library and picture-galleries. Of late yea[rs] it has been used as a clubhouse. Originall[y] surrounded by some 40 acres of extreme[ly] beautiful gardens, it has shared the comme[on] fate of all such residences as are situated on th[e] outskirts of a growing city, and has gradually been encroached upon by the surrounding population till its gardens have been reduced [to] some 12 acres only, though they still retai[n] much of their original charm. Considering th[e] ever-increasing interest that is being taken [in] the necessity of preserving the beauty of th[e] riverside districts, it is possible that some u[se] may still be found for this interesting propert[y] which will save it from immediate destruction.

The Garden Cities and Town-Planning Association.

Earl Grey will preside at th[e] Holborn Restaurant on Marc[h] 19th at a dinner which [is] being organised by the Garde[n] Cities and Town-Planning Association as a mark [of] personal honour to Mr. Ebenezer Howard, th[e] founder of the garden city movement. Fe[w] men have seen the fruit of their labours in [so] short a time as has Mr. Howard. The dinn[er] promises to be not only a national but an inte[r]national tribute. The Committee promoting the dinner includes prominent housing an[d] social reformers in various European countries and in the United States. Tickets for the dinn[er] may be obtained from Mr. E. G. Culpin, 3, Gray's Inn-place, Gray's Inn, W.C.

Building New Cities.

Unless there is some all sufficient reason for building and equipping a complete city or town, much as a garden suburb is created, in one operation extending over a limited period of time, the enterprise involves considerable risk of failure. An example is furnished by the case of Heungchow, a new seaport constructed in 1909 not far from Macao Harbour. The town was equipped with waterworks, tramways, electric light, telephones and other modern facilities, and it was hoped that the port would compete favourably with Macao and Hong-Kong. The project, however, has by no means realised the hopes of the promoters, for the population is now only 2,000 persons, and comparatively little trade has been attracted. A remarkably successful instance of similar policy is afforded by Port Sudan, on the Red Sea, which furnishes an invaluable channel for commerce, and has done much for the development of the Sudan. Gary City in the United States is a good example of complete town building, the justification for this venture being the establishment of large manufacturing works by the United States Steel Corporation and other companies making certain a large population of employees in a place quite unprovided with dwelling accommodation.

THE BUILDING TRADE.

IONAL FEDERATION OF ILDING TRADES EMPLOY-S OF GREAT BRITAIN ID IRELAND.

IE annual general meeting of the Federation of Building Trades Employers of Great Britain and Ireland eld on Wednesday at the Trocadero rant, London, W. Mr. J. W. White erland), the President, took the chair, nongst those also present were :—Messrs.

gs, London	J. B. Johnson, Liverpool
omas, Cardiff	W. Cooke, jun., Preston
Sinclair, Scarugh	F. Woods, Bolton
epherd, London	F. G. Whittell, Birmingham
thurst, Oldham	A. S. Smith, Birmingham
M. Blackburn.	J. H. Walker, Derby
port, Mon.	L. Horner, London
Wright, Notting	F. Maitland May, London
lacfarlane, Manter	S. B. Depree, London
Brown, London	G. R. Chamberlain, Portsmouth
sten, Newcastle-yne	E. W. Wooster, Bath
England, Barns-	W. F. Drew, Stroud
Ledgard, Leeds	A. G. White (Secretary)
wnaley, Hull	
rrs, Stalybridge	

Annual Report.

Annual Report stated that the ation now comprised the following y federations and local associations : - ern Counties Federation, Lancashire, ire, and North Wales Federation, hire Federation, Midland Federation, n Federation, Southern Counties ation, Eastern Counties Federation, -Western Counties Federation, South Federation, Belfast Association, Dubssociation, colonial members (the South an Federation), and hon. members (the sh Federation). There was no marked e to record in the state of trade. The nal Conciliation Board had held six ngs to consider various appeals. The t dealt with a large number of matters, ling wages and hours of labour, agreed of contracts, Trade Dispute Acts, ng of apprentices, town planning, etc. President, in moving the adoption of Report, said it fairly indicated the ties of the Federation during the year. were two things in the Report which strike them as being outstanding. The was with reference to the Conciliation d, and it showed that good work had done in settling numerous disputes in a dly way. Whether the Conciliation d would be as effective when trade e a little better than it had been in the ix years they would have to wait to ut, whatever might happen with regard e conciliation scheme, he thought both mployers and the operatives would apate what a benefit it had been in the few years. The Federation had had an nse amount of work to do during the in regard to industrial legislation. To ind industrial legislation was going to a very important part in the future, and oved employers to organise themselves. as, he thought, a great pity that there no good combination, not only of the of the employers in the building trade, of the whole of the employers of the ry, so that they might deal with these rs. He hoped the employers would aim orough organisation, because, however their reasons might be, still when they attacked they would find that a strong isation was much more effective than arguments. The most important matter gard to legislation were the Bills relating surance. At the Newcastle meeting the ation passed a resolution asking the cellor of the Exchequer and the Presiof the Board of Trade to receive deputa-

They wrote to the Chancellor of the equer, but unfortunately received no . He considered it a great pity that mportant trade like the building trade should not have had the opportunity of presenting their objections to the Insurance Bill, because it would have a very serious effect in the future upon the trade. With regard to the Bill for the Insurance against Unemployment, he would like to say that their reception by the President of the Board of Trade and the officials had been everything that they desired, and he thought their representations had some effect on the character of the Bill. He believed that as a result of their representations the Bill had been very considerably modified. In the Bill as drafted all apprentices would have come under it, but now only those unindentured would come under it, whilst indentured apprentices would be excluded. Under the Loss of Health and Sickness part of the Bill, however, indentured apprentices would receive full benefits and unindentured apprentices would only receive partial benefits. Another thing which arose was as to what the defination of the building trades should be. They interviewed Mr. Buxton, and subsequently an official of the Board of Trade called on him, and the result had been a considerable modification in the Bill. As he understood it, the Bill now would mean that only those in the building trades who were actually working on the site would come under it, except the joiners. They had also, he thought, gained something on the question of the sympathetic strike.

Mr. Smethurst seconded the motion for the adoption of the Report.

Mr. Whitehouse, on behalf of the Midland Centre, mentioned the circular which had been issued by the National Conciliation Board with regard to the worked-stone rule. He pointed out that in his district they had a dispute over this, but they felt that the matter had been prejudged by the National Conciliation Board. Their feeling was that it was no part of the National Conciliation Board to make such a rule. If it was the business of anyone, it was that of the National Federation. They felt that if such a practice was extended it would result in a set-back to the work of conciliation.

The Report was adopted.

Mr. W. Thomas (Cardiff), the Hon. Treasurer, moved the adoption of the accounts, which showed 1,960*l.* carried to the balance-sheet, and this was seconded by Mr. A. W. Sinclair (Scarborough) and agreed to.

Mr. F. Higgs (London) moved a resolution altering rule 23c with regard to the rate of subscription.

Considerable discussion took place regarding the finances of the Federation, and complaints were made that many builders did not come into the Federation. It was also suggested that in some districts the proper returns could not have been made of the wages paid, or else more funds would come into the Federation.

Mr. Higgs, in reply, said that his observations showed him that builders in London and the South of England made proper returns of wages paid. It had to be remembered that in the South of England federation was practically confined to the towns.

The resolution was adopted.

Mr. G. Macfarlane (Manchester) brought up a report by the Journal Committee. He explained that the arrangements with the Technical Journals, Ltd., had been terminated, and it was proposed to bring out a sixteen-page publication quarterly containing the reports of the Federation. Copies would be posted to every member. The Secretary would act as editor. It was anticipated that eventually the *Journal* would become monthly.

The Report was adopted.

National Form of Contract.

The President said there was a proposal of the Lancashire Federation to further consider matters in connexion with the proposal to amend the national form of contract, and also a proposal of the Institute of Builders for a form of sub-contract for use where specialists were made sub-contractors, with consequential amendments to clauses 20 and 28 of the agreed form of contract. The resolutions had been considered by the Council the previous day, and it was agreed to approve of the alterations which had been carried out by the Institute of Builders.

Mr. Stirling said he hoped the Administrative Council would keep the matter before them. He did not see why they should be continually under the wing of the Builders' Institute. The Federation should certainly look after the matter themselves, for they were quite strong enough, and were more interested in the matter than the Institute of Builders, as they were more numerous.

The Secretary read a number of proposed alterations to the Institute of Builders' form of contract, and several new clauses which it was proposed to add.

There was some discussion over the proposed form, but, as the Council decided that the form should be considered private, any report of the discussion would be of no value in the absence of the form.

A delegate asked what the position of the sub-contractor would be. As they knew, a lump sum was put in the contract for certain work, and it was left to the architect to arrange for the work, so that the sub-contractor turned round and said he was not working for the contractor.

The Chairman said the form before them was specially prepared to deal with that matter. If the form of contract was adopted the architect and all parties would have to abide by it.

The alterations were agreed to, and it was stated that the new form would now go to the Royal Institute of British Architects for consideration.

Employers' Parliamentary Council.

Mr. W. Shepherd submitted a Report of the Employers' Parliamentary Council, which stated that the proceedings in Parliament during the year emphasised in a manner at once serious and significant the need for the closer co-operation of employers and employers' associations. Not only with respect to what Parliament actually did in the direction of legislation, but also with regard to what Parliament would not do to safeguard the interests of the community against an organised conspiracy to paralyse the country, the session of 1911 had provided a lesson and a warning which it might be hoped would not be thrown away.

On the motion of Mr. Smethurst, thanks were accorded Mr. Shepherd.

Fair Wages Clauses in Contracts.

Mr. Townsley (Hull) brought up the question of fair wages clauses in contracts. He said that it was generally agreed that they should have such conditions in national and municipal contracts, but they wished to see the Federation take the matter up and see that tenders of local authorities should only be given to those who did pay fair wages. A further point was that where a contract had been entered into and the wages were increased this should be recognised by the local authority and allowed for.

Mr. S. Easten pointed out that there was a danger in regard to the second suggestion. If a man had a contract and knew that he would be reimbursed for extra wages paid, he would not be in so strong a position on resisting an unfair claim, and hence other builders who had no such contracts would be placed in an invidious position.

Mr. Blackburn said the matter was not quite so easy. In his town they had the municipal employees asking for a 3*s.* a week rise. At present they were paid at the rates ruling in the building trade, and if they got the advance, and that was taken as the ruling rate, it would be hard on the builders.

Mr. Cooke said that at Preston they had an understanding by which the names of men to whom contracts were given were referred both to the Employers' Association and the Trades Union, and they reported whether the conditions were being observed.

Mr. Ambrose said in Bath, where there was a good deal of corporate property, there were a lot of small tenders given out, and in the past the difficulty was that those who paid fair wages stood no chance in a competition. Now they had got a fair wages clause adopted.

After further discussion the matter was referred to the Administrative Committee.

Our report of the proceedings will be concluded in our next issue.

THE NATIONAL CHAMBER OF TRADE.

FROM Circular 177 of the National Chamber of Trade (President, Councillor D. Dickinson, of Blackpool) we take the following comments, which may be of interest to our readers :—

"There are abundant signs of the necessity for strengthening the organisation of trading interests, both productive and distributive. The utter non-recognition of the commercial and trading classes from beginning to end of the National Insurance Act may possibly prove the last straw on the back of the camel, and, bearing in mind the purposes for which this Chamber exists, we are ready to welcome any scheme that will secure at least a reasonable recognition of those, on the results of whose enterprise and acceptance of the responsibility and risk of competitive business, these various schemes of social reform are totally dependent for maintenance. . . .

We are asked to give assistance to the Builders' Merchants' Alliance in getting through a Lien Law, which will prevent the builder in the future from being the tool and plaything of the financial speculator. The objects of the Town Tenants' League have already had sympathetic support. The necessity of an inquiry into the question of Technical Education and the wise replacement of the old apprenticeship system which has given way in so many directions are also matters for careful attention. To this end the Government might be asked to appoint a Departmental Committee to investigate the Trust Deeds of the London Liveried Companies with a view to a XXth-century interpretation being given to them. The Old Age Pension Act does away with the necessity for much of their charity, and each company might move in new and useful directions.

Local taxation, in which there has been no real reform since 1834, is another matter which greatly needs a XXth-century interpretation, and we are looking forward to an early report by the Departmental Committee appointed last year on this subject. A Bankruptcy Bill prepared by the Board of Trade, with a view to amending the Bankruptcy Acts on the lines recommended by the Departmental Committee, was introduced in the House of Lords just on the close of the Session, for the purpose of discussion by traders, and it will have the early consideration of the Parliamentary Committee. . . .

Desirable as attention to the above matters undoubtedly is, the necessity of dealing with current matters must, as in previous years, take the first place. For the moment, the most pressing matters are the attitude to be taken towards the National Insurance and the Shops Act, the latter coming into force on May 1 and the Insurance Act on July 1, unless steps be taken for postponement to a date, which the Act states must not be later than January 1, 1913. . . . We have much pleasure in announcing the formation of the London Chamber of Trade. Under the guidance of Mr. S. J. Ellis, Honorary Solicitor, and one of the pioneers of the National Chamber, it has been formed on businesslike lines and has every prospect of success. Its objects are similar to those of many of the large Chambers of Trade in the provinces, which are affiliated to this Chamber.

Mr. B. B. Evans, L.C.C., has accepted the first Presidency, and among the Vice-Presidents are :—Sir Edwin Cornwall, M.P.; Sir John Rolleston, M.P.; Sir H. Seymour King, K.C.I.E.; Sir Harry Samuel, M.P.; Alderman Sir William H. Dunn, J.P., L.C.C.; and Messrs. H. G. Chancellor, M.P.; Arnold Ward, M.P.; T. Wiles, M.P.; and Mr. E. Cubitt Sayers."

LONDON MASTER BUILDERS' ASSOCIATION.

A COUNCIL meeting of the London Master Builders' Association was held at the offices, Koh-i-Noor House, Kingsway, W.C., on the 18th ult., when the chair was taken by the President, Mr. G. Bird Godson.

The Finance Committee's Report was submitted, and the Council, on the Committee's recommendation, agreed to discharge in full up to date the claims made upon the Association on behalf of the National Federation Reserve Fund.

The Amalgamated Society of Carpenters and Joiners gave official notice to terminate the existing working rule agreement on June 8 next, and with the notice was forwarded a proposed new working rule agreement, which was signed jointly by the Secretaries of the Amalgamated Society of Carpenters and Joiners and of the Furnishing and Cabinet-Making Societies. It was proposed to hold a Conference with the object of discussing the recognition of the latter society, which the Council had declined to acknowledge as a branch of the building trade. The Council maintained its objection and declined to hold a Conference to consider the matter.

The following were elected ordinary members of the Association :—

Mr. B. E. Nightingale, Albert-embankment, S.E.

Messrs. E. A. Roome & Co., 36, Basinghall-street, E.C.

Messrs. W. Blay, Ltd., Dartford, Kent.

Messrs. F. & F. J. Wood, 64, Cleveland-street, Mile End, E.

Messrs. Lole & Co., 12A, Trafalgar square, Chelsea, S.W.

Messrs. Arthur Newman, Ltd., Cranbrook-road, Ilford, E., was nominated as an ordinary member.

It was decided to hold the annual general meeting on Thursday, February 29 next, and the annual dinner, in the Whitehall Rooms, Hotel Metropole, Charing Cross, on Thursday, February 22, and it is hoped that the President will be well supported by the members on both occasions.

Various matters of trade importance and interest were considered.

THE BUILDERS' FOREMEN'S ASSOCIATION:

ANNUAL DINNER.

THE eighteenth annual dinner of the Builders' Foremen's Association was held on Saturday last at the Holborn Restaurant, Mr. Joseph Randall presiding. A large company assembled, and among others present were Messrs. B. E. Nightingale, W. A. Harford, Brees Homan, J. W. Jerram, T. Costigan, and representatives of the Associated Portland Cement Manufacturers, Messrs. Val de Travers, and the Carron Company.

The loyal toast having been honoured,

The Chairman proposed the Builders' Foremen's Association. It was, he said, some years since the Association was first formed, and he was glad to say the institution had done great good and was still improving. His sympathies had been strongly in favour of their own and kindred societies, and he was glad to know that in the year in which he occupied the chair at their dinner the pensions would be increased by two shillings a week, commencing in June next. The increase proposed would, he hoped, help greatly to strengthen the Association, as well as be of undoubted service to their pensioners. This was the result of the careful and energetic management of the Committee. The Association also conferred benefits, both intellectual and social, upon its members, and he asked those present to introduce a friend, and so do that friend a good turn, and at the same time strengthen the position of the officials. He was sure not one of them would contest the statement that in these competitive times it is brains that tell, and he would urge them to use their Association to its utmost, and it would help them to reach the top position.

Mr. G. Holt, the President of the Association, acknowledged the toast. He said the strides that had been made towards placing the Pension Fund upon a sound financial foundation had exceeded the expectations of them all. The generosity of their friends could only be described as magnificent, and he wished to say on behalf of the Association that they deeply appreciated the Chairman's presence that evening, and were glad that he should see them at their pleasures as well as at their labours. Such meetings could only tend to strengthen their confidence in each other, and when mutual trust was firmly established success must follow. He did not wish to make a long statement of their affairs, as [illegible] balance-sheet contained in their *Journal* [illegible] before them, and he could give them [illegible] further facts; but he must say that no assoc[illegible] tion could hope to do better than they h[illegible] done since their inauguration, and, seeing th[illegible] the Pension Fund was only founded [illegible] years ago, the balance now in hand was so[illegible] thing to be proud of, and they were thank[illegible] for their many kind and generous frien[illegible] The Management Committee had recently be[illegible] through their rules and brought them up [illegible] date, and a generous pension allowance h[illegible] been arranged. He cordially invited all th[illegible] present who were not members to come in [illegible] once and assist them in the good work [illegible] preparing for the evening of their lives.

The toast of the building trades was p[illegible] posed by Mr. T. Costigan, who said the to[illegible] was one in which they were all interest[illegible] The conditions of the trade were very [illegible] favourable—prices were very low, competit[illegible] killing, and builders have great difficulties [illegible] fight. He would say this for builders, [illegible] never came across a more honourable [illegible] straightforward class. He frequently co[illegible] pared the tenders published in the papers, [illegible] afterwards, when discussing them with arc[illegible] tects and quantity surveyors, he found th[illegible] were astounded at the prices. Eve[illegible] man was entitled to a legitimate pro[illegible] and in such circumstances as these everythi[illegible] depended upon the foreman, who [illegible] responsible for the discipline of the works. [illegible] good foreman would get plenty of work wi[illegible] out disputes, but an incompetent one wo[illegible] cause constant friction and breaking of [illegible] rules of work.

Mr. B. E. Nightingale, who responded, s[illegible] he hoped trade would come back and th[illegible] would have the good old times of ten ye[illegible] ago. He considered it certain they must co[illegible] back eventually, and he suggested they [illegible] used their best endeavours to remove th[illegible] things which obstruct trade.

The toast of "The Visitors" was propo[illegible] by Mr. T. Evans, and acknowledged by [illegible] W. Townsend in felicitous terms, and [illegible] proceedings closed.

GENERAL BUILDING NEWS.

LIBRARY, DULWICH.

A new library and lecture hall has b[illegible] added to the Horniman Museum, Dulwi[illegible] by Mr. Emslie J. Horniman, and ope[illegible] by Sir Archibald Geikie, President of [illegible] Royal Society. The new building, which [illegible] from the design of Mr. C. Harrison Townse[illegible] consists of two principal floors, and over [illegible] main entrance is a small mezzanine. On [illegible] ground floor is the lecture hall. On the f[illegible] floor are the reference library and readi[illegible] room and a book store. The new building [illegible] been designed to harmonise with the muse[illegible] with which it has direct communication. [illegible] lecture hall will seat 210 persons, and the b[illegible] store can accommodate 10,000 volumes.

TRADE NEWS.

Under the direction of Messrs. Baker [illegible] Penfold, architects, Reigate, Surrey, [illegible] "Boyle" system of ventilation (natural), [illegible] bracing Boyle's latest patent "air-pum[illegible] ventilators and air inlets, has been applied [illegible] Chaldon Schools, Surrey.

The Wash Infectious Hospital is being s[illegible] plied with Shorland's patent Manches[illegible] stoves with descending smoke flues, Manches[illegible] grates and ventilators, by Messrs. E. H. Sh[illegible] land & Brother, Ltd., of Failsworth, M[illegible] chester.

The old St. Pancras Ironwork Company [illegible] now carrying on business under a receiver [illegible] the debenture holders, pending the revision [illegible] financial arrangements. We are inform[illegible] however, that work is being continued on [illegible] large scale, and that the new manage[illegible] entertain hopes of extending the operations [illegible] this company.

APPLICATIONS UNDER LONDO[illegible] BUILDING ACTS, 1894 to 1909

AT Tuesday's meeting of the London Cou[illegible] Council the following applications under [illegible] London Building Acts were dealt with. ([illegible] names of the applicants are given in pa[illegible] theses) :—

Lines of Frontages and Projections.

Kensington, North. — Erection of [illegible] windows, balconies, and a hood at houses [illegible] the western side of Wallingford-avenue, K[illegible] sington (Messrs. W. & E. Morgan).—Cons[illegible]

Kensington, South.—Wooden porch in f[illegible] of No. 15, Holland Park-road, Kensing[illegible] (Messrs. Stanley Krauss & Co.).—Consent.

ensington, South.—Erection of two signs at 51, Brompton-road, Kensington (Mr. B. L. in).—Consent.

ewisham.—Erection of a porch and bay dow at "Ellerslea," on the western side Amblecote-road, Grove Park (Mr. C. E. nscomb for Mr. W. Smith).—Consent.

Marylebone, East.—Erection of projecting conies in front of Nos. 3 and 4, Vere-street, Marylebone (Mr. L. Barrett for Mr. J. rton). Consent.

Mile End.—External wooden staircase at the r of Crown Works, Bancroft road, Mile H (Mr. J. M. Knight).—Consent.

St. Pancras, South.—Projecting sign at No. Percy-street, Tottenham Court-road (Birgham Guild, Ltd.).—Consent.

Woolwich.—House on the north-eastern side Enslin-road, Eltham, to abut also upon the th-eastern side of Ladysmith-road (Mr. M. Jones for Mr. W. D. Bowles).—Consent.

Width of Way.

ewisham.†—Addition to a greenhouse at rear of No. 11, Houston-road, Forest-hill r. W. F. Nicholson).—Consent.

Whitechapel.—Tunnel under the public-way Fulbourne-street, Whitechapel (Messrs. W. & Sons for Messrs. Kearley & Tonge, d.).—Consent.

Woolwich.—Building upon the site of No. 1, cesford-square, and Nos. 1a, 1b, 1, and 2, cesford-street (Mr. R. M. Allen).—Refused.

Width of Way and Lines of Frontage.

Paddington, South.—Addition at No. 3, de Park-square-mews, Paddington (Colonel H. Bethell).—Consent.

Southwark, West.—Projecting crane in front an iron building to be erected upon a site the eastern side of Gravel-lane, Southwark, thward of Dyer's-yard (Messrs Killby & yford, Ltd., for the Amalgamated Press, d.).—Consent.

Wandsworth.—Erection of a one-story building at the rear of No. 78, Charlwood-road, tney (Mr. J. C. Hooper).—Refused.

Lines of Frontage and Construction.

Fulham.—Iron and glass shelter in front of inematograph theatre at No. 583, Fulham-d, Fulham (Messrs. Gardiner, Sons, & Co., l., for Mr. M. A. Pyke).—Refused.

Hampstead.—Retention of a covered way in nt of No. 24, Groville-road, Hampstead r. W. Goscombe John, R.A.).—Consent.

Lewisham.—Wood and iron building of a nporary character at No. 184, Brownhill-d, Lewisham, abutting upon the western e of St. Fillan's-road (Messrs. Norfolk & or for Mr. H. Amey).—Consent.

St. Pancras, South.—Two iron and glass lters in front of the entrances to two cine tograph theatres at Nos. 31, 36, and 36a, ttenham Court-road (Mr. P. Dollar for the hy Syndicate, Ltd.).—Refused.

Strand.†—Iron and glass shelter in front of cinematograph theatre at Nos. 105-107, aring Cross-road, Strand (Messrs. Gardiner, ns, & Co., Ltd.).—Refused.

Width of Way and Construction.

Haggerston.—Temporary wood and iron ce building on the western side of Steanet, Shoreditch (Mr. J. A. Bissell).—nsent.

Islington, West.†—Temporary building at . 11, Hope-street, Islington (Mr. H. Mayd).—Consent.

Width of Way, Lines of Frontage, and Construction.

Holborn.—Wooden advertisement hoarding No. 116, New Oxford-street, abutting upon inbridge street, Holborn (Mr. H. B. Price the Borough Theatre Billposting Company, d.). Refused.

Paddington, South.—Temporary wood and n shed in front of No. 2, St. Petersburgh-ws, Paddington (Messrs. Ellerton & Wilbram) —Consent.

Wandsworth.—Iron and glass shelter in the yground of All Saints' Schools, Putney-dge-road, Wandsworth (Messrs. Read & lkinson for the Managers of the schools).—nsent.

Width of Way, Deviation from Certified Plans, and Cubical Extent.

St. George, Hanover-square.—Re-erection of garage building in Pembroke-mews, Halkinet, Westminster.—Consent.

Space at Rear and Projections.

Hampstead.—Two houses on the northern e of St. Cuthbert's-road, Hampstead (Messrs. & Wilkins).—Consent.

Formation of Streets.

Hampstead.—Erection of three buildings essrs. Farebrother, Ellis, & Co.).—Consent.

Uniting of Buildings.

Bermondsey.—Two buildings by the construction of tunnels under a yard at Greenwalk, Southwark (Mr. A. Lee for Sir W. P. Hartley).—Consent.

Chelsea.—Formation of openings exceeding in size the statutory limits in division walls at garage premises on the southern side of Draycott-avenue and the northern side of Sloane-avenue, Chelsea, and to the use of doors of special construction in lieu of iron doors (Mr. C. W. Stephens for Harrod's Stores, Ltd.).—Consent.

Finsbury, East.—Uniting of Nos. 13 to 17 and No. 19, Ironmonger-row, St. Luke, and use of doors of special construction on one side of the openings (Mr. G. Hubbard for Mr. J. Kent).—Consent.

Hoxton.—Formation of openings in the party wall, between Nos. 9-11 and No. 13, Worship-street, Hoxton, at the basement and ground-floor levels (Mr. T. E. Crossley for Messrs. Berliner & Co.).—Consent.

The recommendations marked † are contrary to the views of the Metropolitan Borough Councils concerned.

PROJECTED NEW BUILDINGS IN THE PROVINCES.*

Abbey Mount.—Halls (3,000*l.*); Mr. E. Calvert, architect, 16, North-street, Andrew-street, Edinburgh.

Ayr.—Engineering workshop, etc., West Sanquhar road (600*l.*); Mr. William Lees, Neptune Works, Ayr. Additions to school (2,000*l.*); Messrs. J. & H. V. Eaglesham, architects, Wellington-square, Ayr.

Barnet. Enlargement of Bying-road School (192 extra places); Mr. U. A. Smith, Surveyor, Herts County Council, Hatfield

Barrow-in-Furness.—Extensions to electricity works (14,000*l.*); Mr. H. R. Burnett, Electrical Engineer, Barrow Town Council.

Bedley (Beds).—School (5,000*l.*); Mr. J. T. Blackwell, architect, Market-place, Kettering.

Billericay.—School (5,000*l.*); Mr. F. Whitmore, architect, 73, Duke-street, Chelmsford.

Cambridge.—School (6,000*l.*); Mr. J. Julian, Guildhall, Cambridge.

Cathays Park (Cardiff).—Technical institute; Messrs. Jones & Thomas, architects, 18, St. Mary street, Cardiff.

Chorley.—Billiard hall (2,000*l.*), for Messrs. W. Holt, Ltd.; Mr. J. J. Edmondson, Burnley-road, Nelson.

Crichton (Edinburghshire).—Additions to Royal Institute (5,000*l.*); Messrs. Mitchell & Wilson, architects, 13, Young street, Edinburgh.

Dewsbury.—Two warehouses, Huddersfield-road (5,000*l.* and 1,000*l.*); Messrs. Barton & Sons, architects, Halifax-road, Dewsbury.

Dublin. School, near Dublin (2,000*l.*); Messrs. Orpen & Dickinson, 13, South Frederick-street, Dublin.

Dundee.—Motor garage, Bellfield street, and shops, Larch-street, for Messrs. Urquhart, Lindsay, & Co.; warehouse, Erskine-street, for Messrs. The Buist Spinning Company, Ltd.: additions to office, Kemback-street, for Messrs. H. Boase & Co.

Dunstable.—Enlargement of school, Chiltern-road (1,230*l.*); Messrs. J. Corby & Son, builders, Bedford.

Exeter.—Business premises and motor garage; Messrs. Westcott, Austin, & White, builders, Summerland-crescent, Exeter.

Featherstone (Yorks).—Block of houses for aged miners; Mr. W. H. Fearnley, architect, 95, Station-road, Featherstone.

Freshwater.—Additions to St. Andrew's Church, North Green (2,000*l.*); Mr. F. W. Newman, Station-road, Freshwater.

Galway.—School (2,000*l.*); Messrs. Orpen & Dickinson, 13, South Frederick-street, Dublin.

Glasgow.—Extensions to Messrs. Stuart & Young's Confectionery Works, Broad-street, Mile End (3,500*l.*); Messrs. Miller & Black, architects, 58, Renfield-street, Glasgow.

Halifax.—Wesleyan chapel, Warley road Mission; Mr. James Hartley, architect, Swadford-chambers Skipton.

Kelvinside (Glasgow).—Motor garage for Messrs. Gilmour, Ltd. (2,000*l.*); Mr. A. Leitch, architect, 30, Buchanan-street, Glasgow.

Kilvonwaig.—School (3,000*l.*); Mr. J. G. Falconer, architect, Cameron-square, Fort William.

Kirmichael.—Additions to school for the Kirmichael School Board (2,500*l.*); Mr. Lake Falconer, architect, 27, Union Bank-buildings, Blairgowrie.

Lees (near Oldham).—Additions to premises for the Glenmill Company.

Milton.—Hostel (20,000*l.*); Mr. C. W. Bevis, architect, Elm Grove-chambers, Southsea.

Monkseaton.—School (10,000*l.*); Mr. F. Forest, Moot Hall, Newcastle-on-Tyne.

Monkton.—Additions to school (2,000*l.*); Messrs. J. & J. Armour, architects, 43, Bridge-gate, Irvine.

Murton Colliery.—One hundred houses; Mr. Joseph Dobson, architect, Station Town, Durham.

Okehampton.—Territorial hall and buildings; Messrs. Ellis, Son, & Bowden, Exeter.

Padiham.—Additions, Padiham Green School (2,100*l.*); Mr. H. Littler, architect, 16, Ribbleslale place, Preston.

Paisley.—Halls for the High Parish Church, Oakshaw-street (2,000*l.*), and workmen's cottages, Fulside-road; Mr. T. G. Abercrombie, architect, 1, County-place, Paisley.

Pentrebach.—Forty-eight houses (8,790*l.*); Messrs. Jones Brothers, builders, Treharris.

Portland.—Council offices; Mr. R. S. Henshaw, Surveyor, Portland Urban District Council; architect to be appointed.

Pulborough.—Eight houses (1,240*l.*); Mr. W. Joyes, builder, Billinghurst.

Purfleet.—School (3,000*l.*); Mr. F. Whitmore, architect, 73, Duke-street, Chelmsford.

Redruth.—Proposed alterations and additions to infirmary (2,000*l.*); Mr. T. C. Peter, Clerk, Board of Guardians, Redruth.

Rock Ferry.—Parish hall (4,500*l.*); Vicar, St. Peter's Church, Rock Ferry.

Royton.—Enlargement of St. Ann's School (350 extra places); the Managers.

Sherwin.—School (5,000*l.*); Mr. W. Rushworth, Architect, Shire Hall, Durham.

Stevenson (Ayrshire).—School (2,000*l.*); Mr. H. Thomson, architect, 60, Hamilton street, Saltcoats.

Stirling.—Additions to police buildings (1,850*l.*); Mr. A. H. Goudie, Burgh Surveyor, Town Buildings, Stirling.

Swansea.—Steel works, The Burrows (about 150,000*l.*), for Messrs. Baldwin & Co., Swansea.

Taunton.—Additions to St Mary's Parish Church; Messrs. Naylor & Sale, architects, Irongate, Derby

Torquay.—Building for mentally defective children, also cookery centre; Messrs. Appleton & Son, architects, 10, Abbey-road, Torquay.

Usworth.—Housing scheme (12,030*l.*); Mr. J. H. Mole, Surveyor, Chester-le-Street Rural District Council.

Windermere.—Steam laundry (2,000*l.*-2,500*l.*); Messrs. Trubshaw & Gibson, architects.

Winsley (Bradford-on-Avon).—Extensions to sanatorium (9,000*l.*); Mr. W. S. Skinner, Edinburgh-chambers, Baldwin street, Bristol.

Winton (Bournemouth). — Congregational church (6,000*l.*); Mr. J. Donkin, Albert road, Bournemouth.

Wotton.—Church (10,290*l.*); Messrs. J. Byard & Son, builders, Stroud-road, Gloucester.

* See also our list of Competitions, Contracts, etc., on another page.

FOREIGN AND COLONIAL.

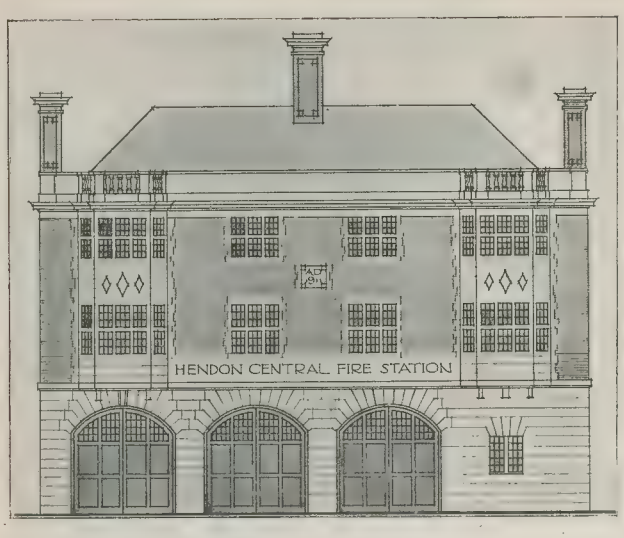
Building, etc., Works, Canada.

The Imperial Trade Correspondent at Toronto reports that several municipalities in Ontario ratified on January 1 by-laws authorising the execution of electric power and lighting works, street railway extension, extension of water supply system, and building construction. Further particulars may be obtained by British manufacturers on application to the Commercial Intelligence Branch of the Board of Trade, 73, Basinghall-street, London, E.C.

Building, etc., Works, Egypt.

A supplement to the *Journal Officiel* of December 25 contains the Egyptian Budget for 1912, from which are extracted the following items of expenditure:—

Ministry of Public Instruction: Construction and extension of schools, £E35,000. Public Health Department: Extension of hospitals, etc., £E30,800. Prisons Department: Construction and extension of prisons, £E15,400. Native Tribunals Department: Construction of court houses, £E35,130. Provinces: Construction of various public buildings, £E36,000. Ports and Lighthouses Administration: Workshop tools, £E800; iron blocks for Gabbary dock, £E1,000; construction of a warehouse on Quay D, £E15,600. Ministry of War: Construction of barracks in Sudan, £E24,000. Ministry of Public Works: Irrigation and drainage works in Lower Egypt, £E164,000: Upper Egypt, £E66,600; Sudan, £E55,000. Railways Administration: Continuation of bridge construction and other works on railways, £E258,000; improvement of stations and of signalling system, £E100,000.



Hendon Fire-Station Competition : Design Placed First.
By Mr. Herbert A. Welch, A.R.I.B.A.

HENDON FIRE-STATION.

THE Urban District Council recently selected six architects to submit designs for a Fire Station at Hendon, and in this limited competition Mr. Herbert A. Welch, A.R.I.B.A., was successful. We illustrate his design and that of Mr. T. Millwood Wilson, which was placed second.

The following notes have been sent by Mr. Welch :—

"The conditions for this competition asked for two complete schemes :—(1) With staff housed within the main building; (2) With staff (except chief officer) housed in cottages in the rear.

No cost was given and the designs were to harmonise with the existing Council offices adjoining.

The site is a corner one, well suited to the purpose of a fire-station.

The main consideration on the ground floor was of necessity the engine-room, which is of sufficient size to accommodate three motor engines. The width of frontage being insufficient for a symmetrical plan, the engine-room is placed on one side in order that the space remaining might be utilised for the watch-room, stores, stairs, entrance, wash-house, and drying-room, etc.

The workshop is placed to open directly off the engine-room, as well as from the washing space at the rear of engine-room. The hose tower is detached and of skeleton steel construction.

On the first floor and off the main staircase is provided the chief officer's quarters—entered off a separate balcony—dormitory for four beds for single men, mess-room, recreation-room, and bath-room, and water-closet. Sliding poles to engine-room are conveniently placed to suit the various rooms.

On the second floor provision is made for four married men's quarters, each containing living-room (with small "wash-up"), two bedrooms, and offices, with bath-room and two water-closets, for these families. Sliding poles connect this floor with first floor and engine-room. The basement contains the heating chamber only.

The elevations will be treated with brick and stone. The doors to engine-room are shown with circular heads, and bay windows over, in order to harmonise with existing Council offices. The roof will be covered with green Westmorland slates.

The low pressure system of radiator heating will be adopted throughout that part of the building which is not 'domestic.'"

Mr. Millwood Wilson writes as follows :—

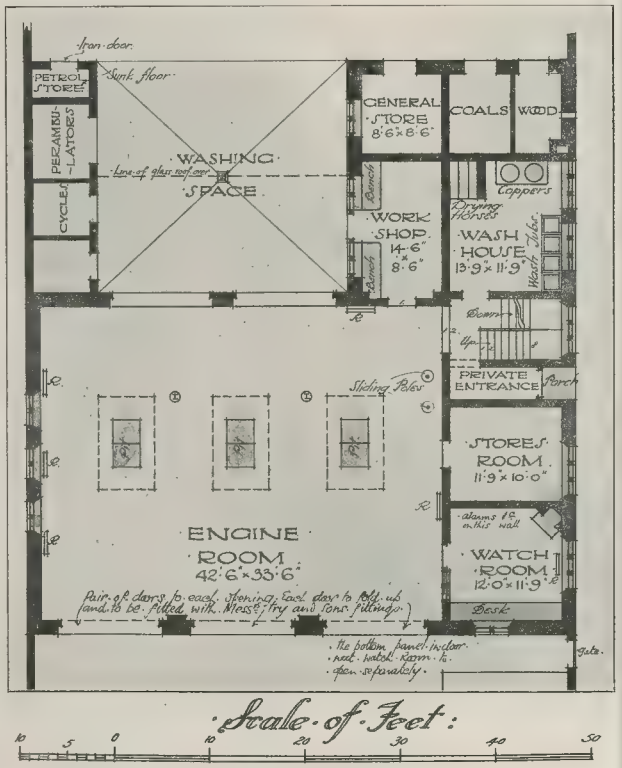
It was stated in the Conditions of Competition that the fire-station building was to harmonise with the Council offices adjoining; it was not, however, in my opinion, possible to do this, other than by the materials, as the buildings are so opposite in purpose, and features of the Council offices so entirely unsuitable to a fire-station.

In the plans, it will be noticed that a waiting-room has been provided next the watch-room for callers or the unmarried men. On the first floor are quarters for four unmarried firemen, entirely shut off from the rest of the building, and the chief officer's quarter also recreation and billiard-room, etc. On the top floor, quarters for four married men.

On the ground floor a clear run through to the covered washing place at the back has been provided for two of the engines, and motor pits have been provided in the appliance-room, and a hinged working bench would be fitted to the walls, the workshop being placed in the yard, as it is used for many other purposes, such as repairing hoses, etc.

The elevations would have been of sand-faced bricks with Portland stone dressings, and green slate roof.

The building cubes out at 88,000 ft., and contains some 17,000 ft. less than the first premiated design.



Ground Floor.

Hendon Fire-Station Competition : Design Placed First.
By Mr. Herbert A. Welch, A.R.I.B.A.

THE LONDON COUNTY COUNCIL.

THE usual weekly meeting of the London County Council was held on Tuesday in the County Hall, Spring-gardens, S.W., Mr. E. White, Chairman, presiding.

LOANS.—A loan of 4,500*l.* is to be made to the Battersea Borough Council for an electricity undertaking, and a loan of 1,300*l.* as a contribution towards street improvements.

KINGSWAY AND ALDWYCH.—It was recommended by the Improvements Committee, and agreed after some discussion, that the eastern horn of the crescent site between the Strand, Aldwych, and Melbourne-place should be sold to the Commonwealth of Australia, and the site will be utilised for the erection of the Commonwealth buildings.

CLERKENWELL FIRE STATION.—No. 42, Rosebery-avenue, has been acquired for the pur-

e of extending the Clerkenwell Fire tion.

ATTERSEA PIER.—This pier is to be re-ved, and the work is to be carried out ler the direction of the Highways Com-tee by the direct employment of labour a cost of about 125*l*.

THE CARPENTERS' HALL LECTURES:

HE UNITY AND DIFFERENCE IN ART AND CRAFT.

HE first of the new series of lectures on s connected with building arranged by e Worshipful Company of Carpenters was en on the 24th ult. at Carpenters' Hall, ndon-wall, by Mr. Thackeray Turner, Mr. R. Cobay, Master, presiding.

The lecturer, whose subject was "The ity and Difference in Art and Craft," d that at the present time much rk passed for art when it is not art at and with equal truth it might be said that ch work which is called craft is not craft all, so that we might with advantage efully consider both art and craft and ir relation to one another.

Art and Craft Defined.

Taking the subject of art first, it seems to , said the lecturer, that art must have an ment of creation in it. If it has not, n it falls short of being art. It must ve life, and there cannot be life without ation. I am fully aware of difficulties ich may be put forward, as, for example, question as to whether a really good copy a work of art, where the copyist has led nothing, is a work of art. Still, it d be found true that no work of art is void of life, and there is creation in it. If n persuaded two or three good artists to y the same work of art accurately you uld find that all the copies differed, and that u could recognise the work of each man in his copy. Thus each man would, as a matter of fact, have added something.

When we come to consider craft we have a still more difficult subject to deal with. One thing is certain, art cannot exist without craft. Where would the architect be without craftsmen? The painter and sculptor can, of course, each be his own craftsman. It seems as though craft in a low form could exist without art. For example, no one who has seen the pretty reed thatch work done by the Norfolk thatchers, and which, owing to foolish building by-laws has almost died out, can help admiring it or deny that it is a craft, and a very delightful craft too, but it can hardly be called an art. Or again, no one can help admitting that there is craft in the adze and drawshave work done by the village wheelwright who builds waggons and carts, and who used to make ploughs before the iron ones came in, but there can hardly be said to be art in these things which have been done just the same thousands of times before and on just the same lines.

The perfect example of craftsmanship is reached when the artist is also the craftsman, as, for example, when the sculptor cuts in wood or stone his own ideas, instead of doing as most sculptors do now, getting another man to do the carving for him. The real work of art in this case is the sculptor's clay model which the carver copies, and which is destroyed as soon as the carver has finished.

The painter is perhaps a better example still, as he always paints his own picture, so that he is the artist and craftsman combined. We must not forget that many of the greatest painters of old had pupils, and they used to allow them to paint parts of their pictures. It is a custom I would gladly see revived, for in this way they taught their craft better than it could be taught in any other possible way. We have to remember that the number of men and women who are artists—that is, who have the power of design and composition—is few when compared with those who are skilful in the use of tools and who can carry out work in an intelligent way. It seems to me that it is this capacity for working with thought which gives the workman the right to be called a craftsman.

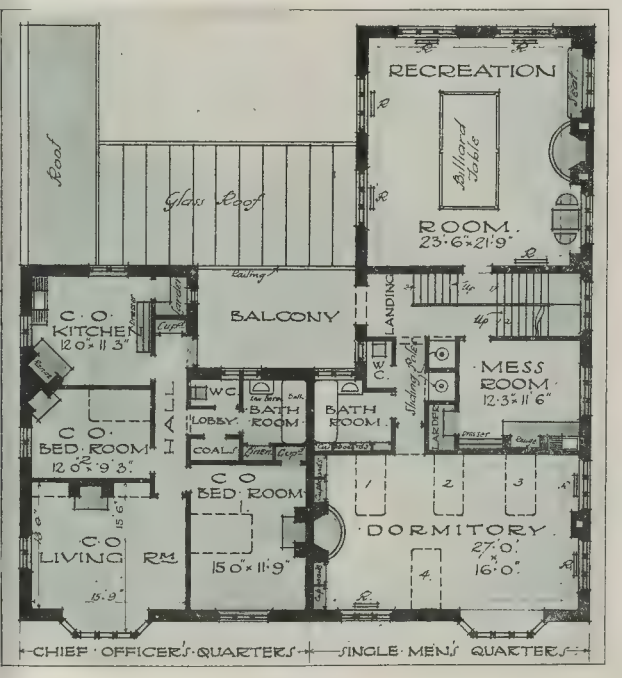
The Quality of Life.

Such a building as Durham Cathedral must be the conception of one or two men—at any rate, to a very large extent—but obviously no one man's lifetime would enable him personally to carry it out; so you see here is a clear case of the combination of the artist and the craftsman, and a perfectly reasonable arrangement too. Supposing the architect, or master mason, as he was then called, had craftsmen such as we have now—masons with their moulds and templates scratching the stone into shape with drags, not knowing what the design of the moulding is to be nor for what purpose the stone which they are scratching into shape is required, and caring less—would the building have possessed that wonderful charm and life, that quality of being a part of nature? A building the author of which is inspired with poetic and noble ideas will not have the effect upon us which our mediæval architecture has if the



Hendon Fire-Station Competition: Design Placed Second.

By Mr. T. Millwood Wilson.



First Floor.

Hendon Fire-Station Competition: Design Placed First.

By Mr. Herbert A. Welch, A.R.I.B.A.

craftsmen are not of a higher order than our machine craftsmen.

I think the ideal craftsman will always have sufficient interest in his work to make him think out the details and treatment of what he is at work upon, so that he will be certain to make varieties, even if not noticeable by the ordinary observer, and this human quality will just give that something which will keep it alive and turn the object into a work of art.

That is the keynote, "Keep it alive." If the human mind can be seen in man's work there need be no fear that the work will lack interest and life, or, to put it in one word, there need be no fear that it will lack art.

I think most people will agree with me when I say that it is easier for us to work with our hands than our heads, but art demands the higher work. It is so soothing to have some nice straightforward piece of work to do, but it should be the reward of mental work.

To my mind it is quite wrong that one man should do all the thinking—that is, all the designing—whilst another or others should do all the making and have no thinking to do. No satisfactory result can be obtained by such a system. In architecture it is quite possible for one mind to create a grand scheme, but to carry it out ought to be the work of many minds. Each craftsman ought to think as he works, and then noble buildings, such as were created in mediæval times, will result. It is astonishing how much interest—that is, humanity or life—each workman can put into his work if only he will take interest in it. If he will only think, he will certainly be rewarded by great pleasure and also by his work becoming art—that is, having life and giving pleasure to others. I find it is most useful when a workman asks me a question about the work we are doing to say, "Well, what do you think?" I recommend it as an excellent formula. It finds out the quality of your man. The good ones respond, the bad ones do not, and show that they think you are asking for what they are not paid for.

Harmony in Art.

Unity between art and craft demands that there shall be no discord. One pretty thing surrounded by ugly things does not make harmony in art, and without harmony there will not be art as a whole.

I made a pilgrimage the other day to Kensal Rise to see Batten's wonderful altar-piece which was exhibited in the last Arts and Crafts Exhibition held in the New Gallery in Regent-street. The only satisfactory way of seeing it, I think, is to get sufficiently near to exclude from view all the surroundings, and to my eyes its great beauty only intensifies the offensiveness of the church itself. Had the triptych not been there I could have gone into the church and walked out again with the usual feeling that it w just a commercial production, but as matte now are one cannot help being exasperate with the complete absence, save the presenc of the picture, both of art and of craft in th whole building. I will give one smal example. The pulpit is most elaborate worked in richly coloured alabaster. Th mason who fixed it used red putty, doubtles according to instructions or custom, to for the joints. In parts the alabaster is cream coloured, but still he used the red putty Could that man have had any spark of intere in what he was doing? Of course, it needless to point out that the whole pulpit as wrong as it could be. It is obvious tha if you have a natural material which richly figured in itself, and you pick out th most varied pieces as being most beautifu you should not carve it in order to ad beauty, because by doing so the carvin destroys the beauty of the marble, and it beauty destroys the effect of the carving.

Good Craftsmanship Redeems Weak Design.

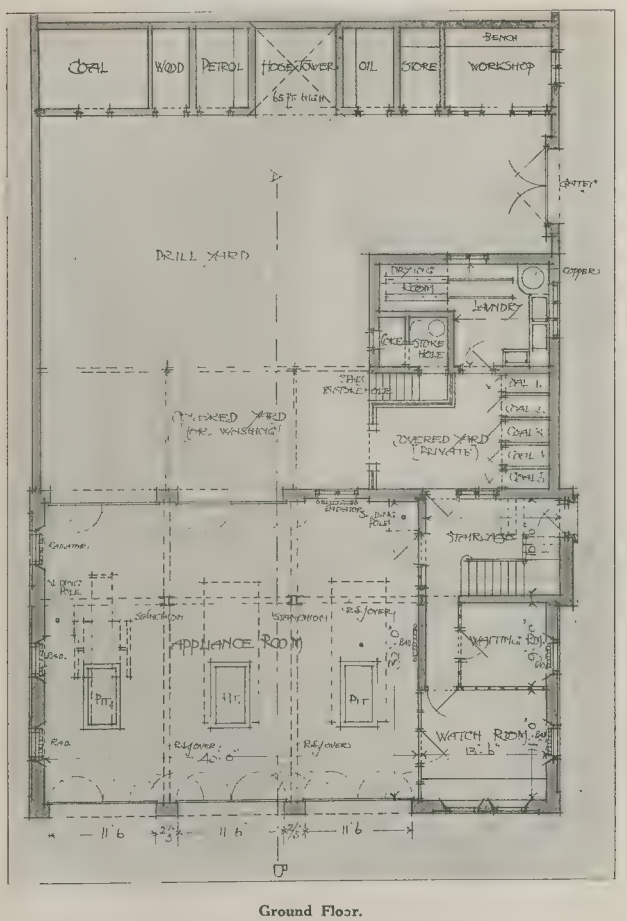
The unity of art and craft may be fill illustrated by taking two imaginary cases We will suppose that rare individual, a patro of art, decides to build a really fine buildin twice in his life. The first time he chooses really able architect, but the neighbourhoo only provides what I have previously calle machine craftsmen. He tries to inspire then and fails. He makes complete drawings every detail and makes them carry the wor out accurately from the drawings, but he ca give them no freedom, as they are no interested and do not wish for it.

The second time this very rare man, th art-patron, chooses a weak architect wit no great power of design, but the buildin is erected in a neighbourhood where th craftsmen are true craftsmen. They under stand their trade and love their work. The result is that the architect does not giv instructions in all details, and the building although having no great force of characte given it by the one man, viz., the architect is, nevertheless, full of the feeling and characteristics of the many. Which of the tw buildings shall we say cause the least pain Or, shall we say, give the most pleasure I believe myself that the absence of good design would be felt far less than the absence of good craftsmanship.

Needless to say, there is no reason wh the conceiver of the whole building should not be in complete harmony with the crafts man and have the power, which is, un doubtedly, best obtained by praise, of draw ing out the qualities of each craft, and yet o keeping all the crafts in their places and subservient to one another. A craftsman who only sees the beauty in his own craft and does not make an effort to understand other crafts and see their beauty will, prob ably, hardly be as perfect as he might be i his own craft, for he will not fully under stand how to make his own work harmonise with the surroundings.

Machine Craftsmen.

The craftsman, at times, seems to be want ing in proper respect for his craft. Fo example, if he has something which he wishes to repeat he may be found transferring i over and over again—a process which needs no craftsmanship—instead of drawing it If he has the skill in draughtsmanship which he ought to have it should be a pleasure t draw his repeat, whereas no one can say it is a pleasure to transfer. Moreover, if his repeat is drawn the human quality so neces sary to art will shine out, but if he trans fers his repeat he is doing his best t imitate the work of the machine, and is fitting himself to be called a machine crafts man. Again, if a craftsman spaces his work out by eye, provided he is skilful, inaccura cies will not be obvious, and the whole work will gain in richness; but if he spaces it ou by the aid of rule and compasses a mechan ical effort must be produced. The Japanese artist draws objects over and over again and he will not be satisfied until he can draw whatever it is he wishes to introduce int his picture with ease and certainty, and there can be no doubt that this is one of the reasons why their work has such a charm



Ground Floor.

Hendon Fire-Station Competition: Design Placed Second. (*See page* 132.)

By Mr. T. Millwood Wilson.

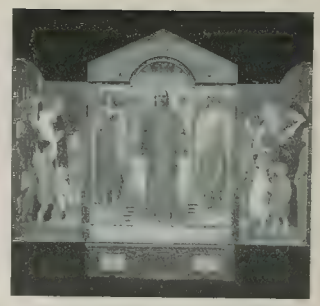
always appears to be so finished, even
n it is little more than a sketch.

Ancient and Modern Brickwork.

fter showing a slide of the XVth cen-
brickwork of the big chimney at
tead Manor House, near Godalming, and
w it some exceptionally good modern
e brickwork, the lecturer continued :—
The modern bricklayer is always think-
about his bond. This is what is called
English bond in both cases. That is, the
k is built with first a row of stretchers
bricks, laid with their length showing,
then a row of headers. A bricklayer
made a mistake would probably be
ed off the job, and yet, if you look at
old work, the pattern is constantly varied
most pleasing results. I feel almost
you will agree with me that the upper
e of brickwork is far the more pleasing.
ourse, it has gained by age, but time will
r make the brickwork shown on the
r half of the slide as beautiful, or nearly
eautiful, as the old work. In producing
heartless work the architect's specifi-
on has a great deal to answer for. The
der is given a hard-and-fast description
ow the brickwork is to be built. Archi-
, as a rule, do not write their own
ifications, but let the quantity surveyor
t for them, but even when they do write
r own specification it is usual to take
ld one and alter it to suit the new build-
Some of the clauses are of great age,
and the pupil learns them by heart. I have copies of some of Sir Gilbert Scott's specifications, and the clauses about brickwork run on the usual lines :—'The bricks are to be of a uniform colour.' To be pretty they should vary in colour as much as possible. 'The perpends are to be kept true.' That means that the perpendicular joints are to be exactly over one another. The very thing that is so ugly. The jointing is described to be done in various ways, but always in some ugly way. The matter is now receiving attention by architects, but the harm has been done, for the traditions of the bricklayer are now all wrong, and I doubt if you could find a properly qualified bricklayer who had an idea in his head about beautiful brickwork, and yet it can be most wonderfully beautiful.

Influence of Machinery.

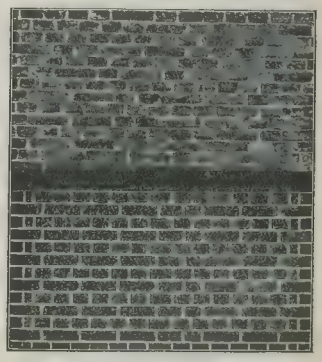
I fear it is true that what people do not understand they do not like. The present age does understand machinery, and if there is one quality more than another in machinery it is accuracy. It is, therefore, quite easy to understand how it comes about that our craftsmen sacrifice everything to accuracy. However, I think the blame lies at the door of the man who should be the artist rather than, with his subordinate or assistant, the craftsman. People will not believe that science is not art and that science cannot produce art, and, indeed, it is in some ways actually opposed to art. I doubt if the artist as such has not been thrown back by the advance of science, although indirectly through the craftsman he has gained somewhat, because they have gained. You see, people have said from time to time, 'If there is such a thing as beauty clearly there must be some law or laws of beauty.' When classic architecture was the rage in England they reduced it, or tried to reduce it, to a science. They measured the ancient examples of each period and then struck the average for each period and called it perfection.



Triptych, St. Martin's Church, Kensal Rise. By Mr. J. D. Batten.

Advantage of Full-Size Work.

I suppose there can be no doubt that doing things in small, or, if you prefer it, drawing things to scale, is justifiable; it is so in the case of architecture, and yet I am convinced that the architect more often comes to grief through its use than in any other way. We all know that if you bring a common outdoor object indoors how very big it looks. Personally, whenever I am designing a building I draw some portion the real size at quite an early stage, and I feel sure that one of the best training for beginners is to measure and draw existing work full size Of course, this can be done in South Kensington Museum, but not with as good results as upon a building, because you want to learn the size of the detail in relation to the actual buildings. However, of this I feel sure, that the sooner the architect, sculptor, and painter can get to work upon the actual piece of work he has to do the better the chance will he have of success.

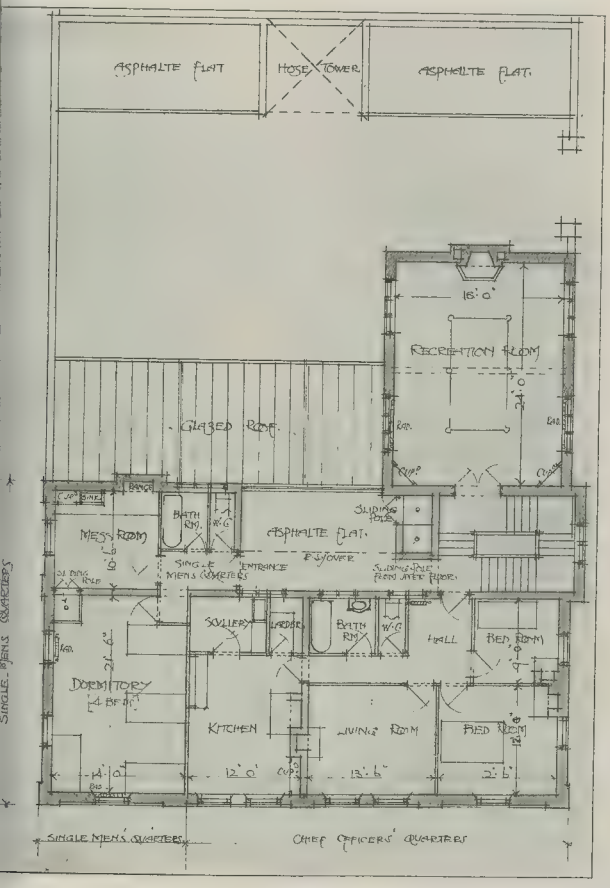


Brickwork: Unstead Manor House, near Godalming.

Craft Without Art.

Now let us turn from art and consider craft.

I maintain that a craftsman to be worthy of the name must have some creative power; otherwise, he is no more worthy of the name than the man who breaks stones on the road. Mind, I do not despise the stone-breaker, for I know full well how difficult his work is; but, still, the stone-breaker is not a craftsman in our sense. As we have seen in the case



First Floor.

Hendon Fire-Station Competition: Design Placed Second. (*See page* 132.)
By Mr. T. Millwood Wilson.

of the artist, the perfect craftsman is the man who is craftsman and artist combined: but to be a craftsman, if he has not the creative faculty, he must at least be able to carry out a good idea when it is given him, and this means that he must take the idea and make it his own, so that he may add to it and give it life.

Almost all who love the beautiful, if they begin young, can design if they will take the trouble, but remember that the power of designing, like everything else, will only come with practice; indeed, it seems to me that it needs almost daily practice. And do not be discouraged because your efforts are not successful. Remember that our very greatest artists have all produced some poor work, and they only know how much bad work they have destroyed.

If you can get no original idea to work upon, take an old one and see if you cannot



Unstead Manor House, near Godalming.

treat it in your own way. Take the idea from memory, but do not copy. If you have sketched some beautiful object do not use it at once, and do not look at your sketch before using it, but rely upon memory, and then you will be the more likely to put something of your own into it. To carry out your own design, to live with it in your mind, to see it grow to perfect its details, is more exciting than a first-rate novel or some splendid acting. How different from carrying out a design which is not your own, where you are timidly wondering what its author would wish, and fearing to do wrong!

Above all do not be ambitious. Do not try to do what you think others will consider beautiful, but try to please your own sense of beauty. Scribble ideas in spare moments. If you cannot think of anything else try to make varieties of diaper patterns. They are the easiest form of designing and endless in their variety, and help the mind to be active."

OBITUARY.

Mr. W. Glover.

We regret to announce the death in London, on January 18, of Mr. William Glover, of "St. Helen's," Southbourne, near Christchurch, Hants, aged eighty-two years. Mr. Glover was the son of the late William Glover, Tapissier-in Ordinary to Queen Victoria, and he was distinguished for his generous donations on behalf of the architectural profession and in other directions. He was elected a Fellow of the Royal Institute of British Architects in 1899, and served as a member of Council; he was President of the Northern Architectural Association for the sessions 1899 1901. He was chosen as the first Vice-President of the Architects' Benevolent Society in March, 1905, and was re-elected in that capacity for the sessions 1906-12 Until his removal to Windsor in 1901, Mr. Glover had practised in Newcastle-on-Tyne; he was the architect of the buildings there of the Royal Jubilee Exhibition, 1887, and of an extensive range of premises, with offices, work and pattern shops, and stores, and an approach road from St. Peter's Station, at St. Peter's Works, for Messrs. R. & W. Hawthorn Leslie & Co. Of his many gifts and benefactions to the Northern Architectural Association we may mention the Presidential chair and badge, a travelling studentship, and a sum of 1,000*l.* consols in promotion of the Association's educational work and in aid of the acquisition of their new premises, 1903; he supplemented that sum, in the following year, with 1,000*l.* towards three objects—the completion of the purchase of the house for the Association, the Architects' Benevolent Fund, and the scheme of Sir Aston Webb, R.A., for the higher education of architects. In his letter, dated November 22, 1904, to the Association, he writes:—"This will enable me to carry out three leading principles which have influenced me through life:—First—To spend my money where I made it. Second—To assist those poorer than myself. Third—To endeavour to leave the world better than I found it." He also gave 800*l.* to the Newcastle Corporation as a fund for the purchase, for the Laing Art Gallery, of works of art by local artists, in 1905, and (besides giving the money already mentioned) was a most liberal subscriber to the funds of the Architects' Benevolent Society. He gave 2,000*l.* to endow two beds in the King Edward VII. Hospital, Windsor, and, we understand, that institution will further benefit under his will. Mr. Glover was left a widower in July, 1905.

LAW REPORTS.

OFFICIAL REFEREE'S COURT.
(Before Mr. EDWARD POLLOCK.)

Theatrical Architectural Dispute: Lyons *v.* Runtz.

JUDGMENT was given, after a hearing of several days, in an action in which Mr. Isaac Nathaniel Lyons was the plaintiff and Mr. Ernest Runtz, F.R.I.B.A., practising at 64, Victoria-street, Westminster, was the defendant, against whom Mr. Lyons presented a claim in respect to a series of business transactions of a complicated nature. A counter-claim was advanced by Mr. Runtz in regard to architectural services, including the preparation of plans for the Elysée Theatre that was to have been built by Mr. Lyons on a site in the Haymarket.

Besides evidence of account, professional testimony was also forthcoming, Mr. Lyons calling Mr. Robert Briggs, of Messrs. Frank Matcham & Co., and Mr. Bertie Crewe; and Mr. Runtz calling Mr. Herbert Phillips Fletcher, F.R.I.B.A., of Messrs. Banister Fletcher & Sons, Mr. J. Priestley Briggs, F.R.I.B.A., and Mr. F. R. Farrow, F.R.I.B.A., the Vice-Chairman of the R.I.B.A. Science Committee.

Mr. Pollock, in the course of his judgment said that this was an unfortunate piece of litigation, being an action by Mr. Lyons against Mr. Runtz, concerning several intricate matters. The question of the Haymarket site was a conflicting one, and it was the most substantial item of the whole affair.

In 1907 the plaintiff's attention was drawn to a site in the Haymarket, on which he intended to build, with the assistance of the defendant, who was to make the plans, a theatre to be called the Elysée; but the project was eventually abandoned. Mr. Pollock remarked that at one time it had seemed to him that Mr. Runtz had entered with Mr. Lyons into this Haymarket scheme as a speculation, and that he would be content to abide by what he could get if the matter went through, but subsequent evidence had led him to the conclusion that such was not the case, but that Mr. Runtz was entitled to have whatever might be the proper remuneration for what he had done on this Haymarket site. Mr. Runtz's evidence was that he was entitled to an agreed sum of 1,000*l.* in respect of the work. He (the Referee) was quite prepared to accept that Mr. Runtz conscientiously believed that such an agreement was made; but he must entirely decline to accept the suggestion that there was such an agreement. It was a matter, the proof of which rested with Mr. Runtz, who, in accordance with the usual practice of gentlemen carrying on his profession, kept a diary. In that diary there was not one single item which suggested that any agreement of any sort or kind was made, and Mr. Lyons utterly denied that any such agreement was made, and there were, too, the documents, and in the light of all this he was forced to decide against Mr. Runtz. The next principle arising was — How was the remuneration Mr. Runtz was entitled to arrived at? Mr. Jones, the Counsel for Mr. Runtz, had suggested that it must be measured by the scale laid down by the Royal Institute of British Architects, and argued that under Clause 5 Mr. Runtz was clearly entitled to 2½ per cent. on the estimated value of the building. Mr. Jones had also urged that the parties must be taken to have agreed that the scale was to regulate Mr. Runtz's remuneration. But the parties had not agreed to abide by the scale. He doubted whether the scale was applicable, because it was perfectly clear that Mr. Runtz did not do all that which Clause 5 of the scale said had to be done by the architect to entitle him to the 2½ per cent. Mr. Jones had said—"I make a deduction of ½ per cent. in respect of that which is omitted." But, as he had said, the scale was not applicable; but it was not very material because the parties had not agreed to abide by the scale. Raising the question of the value of these plans, undoubtedly prepared by Mr. Runtz, the Official Referee remarked that they showed a very handsome building from an exterior point of view, but he had not the slightest information as to what the inside would be. He did not understand, too, how Mr. Fletcher arrived at the view that the general cost of the building would be 45,000*l.* as shown by the plans. The plaintiff's professional witnesses seemed to him to be able gentlemen of very large experience. Looking at the evidence to form a fair estimate of what was a proper figure to arrive at, he came to the conclusion that 500*l.* would be a fair sum to allow Mr. Runtz in respect of the Haymarket site. The Official Referee then dealt with the parties' figures, and, setting each against the other, and making a calculation, said that Mr. Lyons was entitled to a sum of 599*l.* 15s. 10d. in all, and there would be judgment in his favour for that amount with costs, and also in his favour on the counterclaim with costs.

Mr. Jones protested in effect that the Official Referee had determined the figure on a wrong basis; but his Honour adhered to his decision, remarking that if Mr. Jones had anything further to say he must go elsewhere.

Mr. Jones said it was very hard on Mr. Runtz.

Mr. Pollock said it was also hard on him to allow him to deal with the case as he had done and then to make this suggestion.

Counsel in the case were Mr. C. Wertheim (instructed by Messrs. Bartlett & Gluckstein) for the plaintiff; Mr. G. W. H. Jones (instructed by Mr. G. W. A. Edwards) for Mr. Runtz.

OFFICIAL REFEREE'S COURT.
(Before Mr. M. MUIR MACKENZIE.)

A Claim Settled: Rutter *v.* The Great Western Land Company Ltd.

THIS case, which had been in his Honour's warned list, was mentioned last week by Mr. Herbert Louis Tebbs, who stated that it was a claim for fees by Messrs. Rutter, land agents, surveyors, auctioneers, etc., of Norfolk street. The parties, said Counsel, had come to terms, and his application was that the learned Official Referee should direct judgment to be entered for plaintiffs for 515*l.*, and the costs to be taxed. His Honour agreed. It was understood that the claim had reference partly to work done in connexion with the development of Elthorne Heights, in West Middlesex.

PATENTS.

APPLICATIONS PUBLISHED *

334 of 1911.—Harry Shrubsole and Doctor Croft: Hearth ventilators for domestic fire places.

2,074 of 1911.—John Whalley Powell: Means for fixing gas and like brackets or other devices to walls.

3,199 of 1911. Edward Tindall and Albert Henry Richards: Wall fittings for supporting scaffolding and staging.

4,230 of 1911.—Walter Everett Singer: Casement windows.

7,163 of 1911.—Walter Williams: Sea wall and the like.

9,545 of 1911.—Thomas Kalla: Suspended bridges.

14,110 of 1911. — John Henry Tucker: Electrical wall sockets and the like.

17,667 of 1911.—Harry Herbert Burson: Studding for slab walls and partition.

* All these applications are in the stage in which opposition to the grant of Patents up them can be made

List of Competitions, Contracts, etc.

For some Contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) are advertised in this number:** Competitions, iv.; Contracts, iv. vi. viii. x.; Public Appointment, xviii. Auction Sales, xxvi.

Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Competitions.

FEBRUARY 3.—**Bolton.**—NURSES' HOME AT E INFIRMARY.—Premiums of 30*l*., 20*l*., and 10*l*. ssessor, Mr. John B. Gass, F.R.I.B.A.

FEBRUARY 14.—**Shanklin.**—Liberal Club, to t about 1,000*l*. Particulars from Mr. E. G. ddley, 1, Victoria-villas, Clarendon-road, ank.in.

FEBRUARY 17.—**London, E.C.**—NEW OFFICES.—e Port of London Authority invite preinary sketch designs for new head offices Trinity-square, and for laying out remainder land as a building site. See advertisement in ue of November 24 for further particulars

FEBRUARY 17. — York. — SCHOOL. — The York ucation Committee invite competitive designs r a public elementary school. See advertisent in issue of January 12 for further rticulars.

MARCH 15. — **Drammen, Norway.**—RAILWAYATION.—Particulars from the Norges Statsner, Christiania.

MARCH 15. — **Prestatyn, North Wales.**—YING-OUT ESTATE.—Lord Aberconway and the ustees of the Prestatyn Estate invite designs laying-out of the estate Three premiums e offered. Particulars from 33, Henriettareet, W.C. See advertisement in issue of nuary 5 for further particulars.

MARCH 16. — **Harlow.** — PUBLIC OFFICES.—The arrow-on-the-Hill U.D.C. invite tenders for the largement of and alterations to their Public fices. See advertisement in issue of January 5 further particulars.

MARCH 31.—**Manitoba, Canada.**—PARLIAENT BUILDINGS.—The Government of Manitoba vite designs for the new Parliament buildings be erected in the City of Winnipeg. See vertisement in this issue for further rticulars

MAY 1.—Society of Architects' Travelling ndentship. Design for a Town Hall. 25*l*. d medal.

JUNE 28. — **Hale, Cheshire.**—TOWN PLANNING HEME.—Premiums 50*l*. and 25*l*. Particulars om the Council Offices, Hale.

JULY 1. — **Dusseldorf.** — A plan for the tension of the City of Dusseldorf. Premiums 1,000*l*. to 375*l*. Conditions on application to e Chief Burgomaster, Dusseldorf. A translam appeared on page 365, September 29.

AUGUST 30. — SAXON SNELL PRIZE. — Fifty uineas; with medal, is offered for essay on a spital subject. Particulars from the Sanitary stitute, 90, Buckingham Palace-road, S.W.

No DATE.—**Edinburgh.**—MEMORIAL TO KING WARD.—Limited.

No DATE.—**Jordanhill, Glasgow.**—PROPOSED AINING COLLEGE.—Limited to six firms, named Competition News, December 1, 1911, page 635.

Contracts.

BUILDING.

The date given at the commencement of each ragraph is the latest date when the tender, or e names of those willing to submit tenders, ay be sent in.

FEBRUARY 2.—**Tregroes.**—ADDITIONS.—Alterans and additions to the school. Plans and ecifications with Mr. G. Dickens-Lewis, .S.A., County Architect, Aberystwyth.

FEBRUARY 3.—**Bandon.**—COTTAGES.—For erecn of twenty-two labourers' cottages. Plans, ecifications, and tender forms from Mr. oram Haynes, Clerk of District Council, uncil-room, Workhouse. Deposit of 5*s*

FEBRUARY 3.—**Haverfordwest.**—STABLING.—For ection of stabling accommodation at the unty Constabulary Headquarters. Drawings d specification from Mr. A. H. Thomas, R.I.B.A., County Surveyor.

FEBRUARY 5.—**Aberystwyth.** — REPAIRS.—For pairs to be done to Plascrug House. Specifiion with Mr. Rees Jones, Borough Surveyor, Corporation Offices, Smithfield-road, erystwyth.

FEBRUARY 5.—**Fast Bents.**—WALL.—For repairing and rebuilding of retaining wall. ecification and quantities from Mr. William atson, Burgh Surveyor, St. Andrews.

FEBRUARY 5. — **Exeter.** — FACTORY, ETC.—For ection of factory and stabling in the Comercial-road. Plans and specifications seen, and antities from Mr R. M. Challice, architect d surveyor, 14, Bedford-circus, Exeter.

FEBRUARY 6. — **Cambridge.** — CENTRE, ETC.— ection of a cookery and laundry centre in nsey-avenue Plan seen, and quantities and m of tender from the Borough Surveyor, ildhall, Cambridge. Deposit of 1*l*. 1*s*.

FEBRUARY 6.—**Dundalk.**—SHOPS.—The Great Northern Railway Company (Ireland) invite tenders for the erection of waggon repair shops at their Dundalk Station. Drawings and specification at the Engineer's offices at Dublin and Belfast, and quantities, on deposit of 2*l*. 2*s*., from Mr. T. Morrison, Secretary, Secretary's Office, Amiens-street, Terminus, Dublin.

FEBRUARY 6. —**Huddersfield.**—ALTERATIONS. — For alterations and additions to the lodges, Edgerton Cemetery. Plans, specifications, and general conditions seen, and quantities from Mr K. F. Campbell, M.Inst.C.E., Borough Engineer and Surveyor, 1, Peel-street.

FEBRUARY 6.—**Kingston-on-Thames.**—STAGE.—For the construction of a landing stage near High-street. Drawings and specification by the Borough Surveyor, Mr. R. Hampton Clucas, Municipal Offices.

FEBRUARY 6.—**Leeds.**—HOUSES, ETC.—Erection of two houses and shops at Beeston. Mr. W. Mason Cogrill, architect, 4, Airedale-terrace, Stourton Leeds

FEBRUARY 6.—**Nether Alderley.** ADDITIONS. For additions to the Council school. Plans and specifications with Mr. H. Beswick, F.R.I.B.A., County Architect Newgate-street, Chester. Quantities on deposit of 1*l*

FEBRUARY 6. **Sheffield.**—FOUNDATIONS.—The Sheffield United Gas Light Company invite tenders for the concrete foundations in connexion with the purifier-house extension at their Grimesthorpe Works. Specification, quantities, and drawing with the Company's Engineer, Mr. J. W. Morrison, Commercial-street, Sheffield.

FEBRUARY 7 **Batley.** HOUSES.—Erection of three houses in Bradford road. Plans and particulars from Messrs. Walter Hanstock & Son, architects, Batley.

FEBRUARY 7.—**London.**—EXTENSION.—For extension of the south-western district post-office. Drawings, specification, and a copy of the conditions and form of contract with Mr. J. Rutherford, 52, Carlisle-place, London, S.W. Quantities and forms of tender at H.M. Office of Works, etc., Storey's gate, S.W. Deposit of 1*l*. 1*s*

FEBRUARY 7.—**Southend.** — COVERING.—For erection of a timber covering over the south station of the pier tramways. Plans seen, and specifications, quantities, and form of tender obtained on deposit of 1*l*. 1*s*. to Mr. E. J. Elford, M.Inst.M.E., Borough Engineer and Surveyor.

FEBRUARY 7. **Sowerby Bridge.** HOUSES.—Erection of six houses in Clifton-street, off Bolton Brow. Plans and particulars from Mr. S. Wilkinson, architect, Sowerby Bridge.

FEBRUARY 8.—**Gravesend.**—KIOSK, ETC.—Erection of a concert stand and a refreshment kiosk, on the Gordon Promenade. Plans and specifications seen at the Borough Surveyor's Office.

FEBRUARY 9.—**Cudworth.** SCHOOL. -For erection of Cudworth new school. Plans seen, and specifications, with quantities, from the Education Architect, County Hall, Wakefield. Deposit of 1*l*.

FEBRUARY 9.—**Lancaster.**—SCHOOL.—Erection of a new Grammar School for Girls on the High-street Estate. Plans seen, and quantities from the County Architect, Mr. Henry Littler, 16, Ribblesdale place, Preston. Deposit of 2*l*. and 3*l*.

FEBRUARY 9.—**West Vale.**—BUNGALOW.—For erection of a bungalow at Woodside Plans, etc., with Mr. F. F. Resmont, Lic.R.I.B.A., Southgate-chambers, Halifax.

FEBRUARY 12. - **Colebrook.** VICARAGE.—Erection of a new vicarage. Plans and specification with Messrs. E. H. Harbottle & Son, architects, County-chambers, Exeter. Deposit of 3*l*.

* FEBRUARY 12.—**London, W.**—REPAIRS TO FLOORS AND ROOFS. The St. Marylebone Guardians invite tenders for repairing works to floors and roofs, etc., at Workhouse, Northumberland St. Marylebone. See advertisement in this issue for further particulars.

FEBRUARY 12.—**Pontymister.**—HOUSES.—Erection of fifteen houses in Clyde-street Plans seen, and specifications from the Surveyor, Mr. A. J. Dordis, Council Offices, Risca. Deposit of 2*l*. 2*s*.

FEBRUARY 13.—**London.**—GREENHOUSE, ETC.—For erection of a greenhouse and forcing-houses at cemetery at Brockley-road, Brockley, S.E. Forms of tender from the Borough Surveyor, Town Hall, New Cross-road, S.E.

* FEBRUARY 14.—**Dalston, N.E.**—EXTERNAL REPAIRS.—The Hackney Guardians invite tenders for external repairs at relief offices and dispensary at Mayfield-road. See advertisement in this issue for further particulars.

* FEBRUARY 14. — **Woodford.** — SCHOOL.—The Essex Education Committee (Woodford District Sub-Committee) invite tenders for a school for special instruction at Madeira-grove, Woodford. See advertisement in this issue for further particulars.

* FEBRUARY 15.—**London, E.**—REPAIRS AND ALTERATIONS. — The St. George-in-the-East Guardians invite tenders for alterations and repairs at Infirmary, Raine-street, Old Gravel-lane, E. See advertisement in this issue for further particulars.

FEBRUARY 15.—**Porthtowan.**—RESIDENCE.—For erection of a residence. Plans and specifications with Mr. S. Hill, architect, Green-lane, Redruth.

FEBRUARY 16. **Bangor.**—INFIRMARY.—For erection of a new Infirmary. Plans and specifications with the Guardians' Architect, Mr. Frank Bellis, Bangor. Quantities, on deposit of 5*l*. 5*s*., to Mr. R. Benjamin Evans, Clerk to the Guardians, Union Offices, Bangor, North Wales.

FEBRUARY 16.—**Bream.**—ADDITIONS.—Erection of additional classrooms, etc., at the Council school. Quantities from Mr. R. S. Phillips, Architect, Shire Hall, Gloucester. Deposit of 2*l*. 2*s*.

FEBRUARY 16. -**Gillingham.**—OFFICES.—For rebuilding the offices at the electric generating-station. Plans and specifications may be seen, and quantities and forms of tender from Mr J. L. Redfern, Borough Surveyor, Council Offices, Gardiner-street, Gillingham, Kent Deposit of 10*s*. 6*d*.

FEBRUARY 20.—**Lymm.**—SHED, ETC.—Erection of a stable and cart-shed in yard adjoining Council offices. Plan and specifications with the Surveyor, Mr David Mort, Council Offices

FEBRUARY 21 **Cardiff.** DRILL-HALL, ETC For proposed headquarter offices, drill-hall, engine room, waggon-shed, and various other offices, stores, and accommodation for the joint use of the Welsh Divisional Telegraph Company and the Glamorgan (Fortress) Royal Engineers, on the Cardiff Arms Park. Plans and specification with the architect, Mr. W. H Dashwood Caple, F.R.I.B.A., 2, Church-street, Cardiff. Quantities on deposit of 1*l*. 1*s*

* FEBRUARY 22. -**Alton.**—SCHOOL.—The Southampton C.C. invite tenders for new school, and alterations to existing school. See advertisement in this issue for further particulars.

FEBRUARY 22. **London.**—LAVATORIES. -Erection of new lavatories at the Infirmary, St. John's-hill, Wandsworth. Drawings, specification, and form of tender at the Guardians' Offices, St. John's-hill, Wandsworth. Deposit of 1*l*. to Mr. F. W. Piper, Clerk to the Guardians, Union Offices, St. John's Hill, Wandsworth, S.W.

FEBRUARY 24. -**Caithness.** DWARWICK PIER.—For an extension of the present pier; the construction of a new concrete hauling slip; the formation of an approach to the pier. Plans and specification seen, and quantities from Mr. James Young, County Clerk, County Clerk's Office, Thurso.

FEBRUARY 26. -**Bedlington.** -SCHOOL. -Erection of a new Council school. Mr. C. Williams, Secretary to the Education Committee, The Moothall, Newcastle-on-Tyne. Deposit of 2*l*. 2*s*. for specification and quantities.

FEBRUARY 27. -**Neath.** - INFIRMARY.—For erection of an administrative block, pavilions for sick and infirm, children's home, porter's lodge and lunatics' ward, laundry, engine-house and stack, nurses' home, boundary walls, roads and sewers, and electric lighting in connexion with Neath Graded Infirmary at Penrhiewtyn, Neath. Plans and specification with the architect, Mr J. C. Rees, Parade-chambers, Neath. Quantities on deposit of 5*l*. 5*s*.

* MARCH 1.—**Hounslow, etc.**—REPAIRS AND MATERIALS.—The Secretary of State for War invites tenders for repairs and materials to station and outstations. See advertisement in this issue for further particulars.

No DATE.—**Belfast.**—ALTERATIONS For alterations to licensed premises, known as The Mourne, corner of Station and Scrabo streets. Plans and specifications from Mr. Charles Macalister, architect, Whitehall-buildings. Ann-street. Belfast.

No DATE. — **Belfast.** — FRONT. — For cement-finishing front and supplying new windows to premises. Specification and plans with Messrs. Barrett, Robinson, & Barcroft, architects, 1, Lombard-street, Belfast.

No DATE. -**Birkenshaw.**—COTTAGES.—Erection of branch stores and cottages for the Birkenshaw Industrial Society, Ltd. Quantities from Mr. A. T Verity, architect, 7, Kirkgate-terrace, Birkenshaw.

No DATE. -**Bishop's Stortford.** LABORATORY. —Erection of a library and science laboratory at the Hockerill Training College. Mr. John Slater, F.R.I.B.A., 46, Berners street, London, W. Deposit of 1*l*. 1*s*

BUILDING—*continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

No DATE.—**Bradwell-on-Sea.**—OUTBUILDING.—Erection of an outbuilding at Peakes, Waterside. Names to Mr. J. A. Scheurman, architect, 9, Northgate-street, Ipswich.

No DATE.—**Bridlington.**—RESIDENCE.—Erection of a detached residence, Meadowfield-road, Bridlington. Quantities from Mr. A. Chas. Blackmore, M.S.A., F.A.S.I., 3, Alfred Gelder-street, Hull.

No DATE.—**Cardiff.**—OFFICES.—For proposed new offices and alterations at No. 35, Windsor-place, Cardiff. Architects, Messrs. Spear & Beavan, Borough-chambers, Wharton-street, Cardiff. Deposit of 2*l.* 2s.

No DATE.—**Cardigan.** HOUSE.—Erection of a dwelling-house on the St. Dogmaels-road. Plans and specifications with Captain J. Evans, Bridge-parade, Cardigan.

No DATE.—**Ewenny.**—HOUSE.—Erection of a house at Ewenny, near Bridgend. Plans and specifications with Mr. P. J. Thomas, architect, Bridgend.

No DATE.—**Harrogate.**—ADDITIONS.—For additions to Christ Church Schools. Messrs. Bland & Bown, F.R.I.B.A., architects, Harrogate.

No DATE.—**Leeds.**—INSTITUTE, ETC.—Erection of St. Oswald's School and Institute, Hunslet. Mr. Fred Mitchell, architect and surveyor, 9, Upper Fountaine-street, Albion-street, Leeds.

No DATE.—**Long Buckby.**—COTTAGES.—For erection of two blocks of cottages. Messrs. Franklin & Newman, Lic.R.I.B.A., M.S.A., architects and surveyors, Cranbourne House, Henry-street, Rugby.

No DATE.—**Middlesbrough.** -ADDITIONS, ETC.—For alterations and additions to business premises, No. 114, Linthorpe-road. Plans and specifications with Mr. Harry Moore, architect and surveyor, 123, Albert-road, Middlesbrough.

No DATE.—**Wallsend.** -SCHOOLS.—For erection of new schools. Plans and conditions by Messrs. Marshall & Tweedy, architects, 17, Eldon-square, Newcastle.

No DATE.—**Wolstanton.**—HOUSE.—For erection of a detached house. Mr. A. R. Wood, architect, Town Hall, Tunstall.

ENGINEERING, IRON, AND STEEL.

FEBRUARY 5.—**Burscough Bridge.**—ENGINES.—For fixing gas-engines, etc., at waterworks pumping-station, Dark-lane. Plans and particulars from Mr. T. Burrows, Surveyor, Council Offices, Mill-lane, Burscough Bridge.

FEBRUARY 5.—**Warrington.**—BRIDGE.—For a wooden bridge, near Fairclough's Mill, Bank Quay. Drawings, specifications, etc., seen, and forms of tender, quantities, and information from Mr. Thos. Longdin, Borough Engineer and Surveyor, Borough Engineer and Surveyor's Office.

FEBRUARY 6. **Berwick-on-Tweed.** -BOREHOLE.—For sinking a borehole at pumping-station, Tweedmouth. Specification and form of tender from Mr. Rob. Dickinson, Borough Surveyor. Deposit of 2*l.* 2s.

FEBRUARY 6.—**Rochdale.** LIGHTING.—For the extension of the electric lighting installation at the Art Gallery. Particulars from Mr. P. W. Hathaway, A.R.I.B.A., Town Hall.

FEBRUARY 6. **Whitehaven.** — BRIDGE.—For works in connexion with approaches to Braystones Bridge. Particulars from Mr. George Boyd, C.E., 33, Queen-street, Whitehaven. Deposit of 10s.

FEBRUARY 8.—**Great Yarmouth.**—FITTINGS.—For fittings for electric light at the Children's Homes, Clarence-road, Gorleston. Mr. E. Burton, Clerk, 11, Queen-street, Great Yarmouth.

FEBRUARY 14.—**Leeds.** — WATTMETERS. — For supply of 1,000 alternating-current wattmeters. Forms of tender from Mr. H. Dickinson, Manager, 1, Whitehall-road, Leeds.

FEBRUARY 20.—**Manchester.**—METERS.—For the supply of tramcar-type ampere-hour meters. Specifications and forms of tender from Mr. J. M. McElroy, General Manager, Corporation Tramways, 55, Piccadilly, Manchester.

FURNITURE, PAINTING, MATERIALS, etc.

FEBRUARY 2. — **Barnstaple.**—PAINTING.—For the external painting at the Cyprus-terrace School. Specification from Mr. E. Y. Saunders, P.A.S.I., Borough Surveyor, The Strand, Barnstaple

FEBRUARY 5. **Abergavenny.** PAINTING.—For painting and renovating the exterior of the Carnegie Library, Baker-street. Specification with the Borough Librarian.

FEBRUARY 7.—**York, etc.**—PAINTING. For painting station buildings, etc. Specifications and quantities from Mr. Charles A. Harrison, the Company's Engineer, Forth Banks, Newcastle-on-Tyne.

FEBRUARY 10. **Cleethorpes.** — DECORATING. For the decoration of interior of the Council-house, Cambridge-street. Plans seen, and specifications and forms of tender from Mr. E. Rushton, Engineer and Surveyor, Council-house, Cleethorpes.

✱ FEBRUARY 14.—**Hither Green, S.E.**—PAINTING AND REPAIRS.—The Metropolitan Asylums Board invite tenders for cleaning and painting works and repairs at the Park Hospital for Children. See advertisement in this issue for further particulars.

FEBRUARY 14. — **Oldham.** — PAINTING. — For painting, etc., at Central Baths, Union-street. Specification and form of tender at the Borough Surveyor's Office.

✱ FEBRUARY 14. — **Rotherhithe.** — CLEANING, PAINTING, ETC.—The Metropolitan Asylums Board invite tenders for cleaning, painting, and repairing works at the S. Wharf Smallpox Shelters, Trinity-street, Rotherhithe, S.E. See advertisement in this issue for further particulars.

✱ FEBRUARY 24.—**Bromley.**—VARIOUS MATERIALS.—The Bromley B.C. invite tenders for supply of timber, ironmongery, builder's materials, tools, oils, paints, ironfounder's work, tar-paving materials, steam road rolling, etc. See advertisement in this issue for further particulars.

FEBRUARY 29. — **Ashford.** — PAINTING. — For painting various buildings, for the Ashford U.D.C. Mr. W. Terrill, Surveyor, 5, North-street, Ashford.

No DATE. **Cork.**—PAINTING.—For painting gates and railings, Cork Technical Institute Particulars from the architect, Mr. Arthur Hill, B.E., George-street, Cork.

ROADS, SANITARY AND WATER WORKS.

FEBRUARY 5. **Manchester.**—CEMENT.—For the supply of 300 tons of Portland cement. Forms of tender from the Secretary of the Rivers Department, Town Hall, Manchester.

FEBRUARY 7.—**Birmingham.**—ROAD.—Reconstruction of Sandwell-road, Handsworth. Drawings seen, and specification, quantities, and form of tender, on deposit of 2*l.*, from Mr. Henry E. Stilgoe, M.Inst.C.E., City Engineer and Surveyor, The Council House, Birmingham.

FEBRUARY 8.—**Cork.**—PAVEMENT.—For the laying of Durax pavement on the Lower Glanmire road, Bridge-street, Great George's-street, and Lancaster Quay. Plans and specification with the City Engineer, City Hall.

FEBRUARY 8.—**Paignton.**—ROAD.—For widening Cliff-road on the south side. Plans and specifications at the Surveyor's Office.

FEBRUARY 8. **Southend.**—SEWAGE. -For the sewering of Birchwood-drive, Darlinghurst grove, Grange Park-drive, Hillside-road, Sea View-road, and Uplands-road. Plans and specifications seen, and quantities and forms of tender, on deposit of 1*l.* 1s., from Mr. E. Elford, M.Inst.M.E., Borough Engineer and Surveyor.

FEBRUARY 8.—**Thetford.**—DRAINAGE, ETC. For alterations to drainage, new outfall works, etc., at the Workhouse. Drawings and specification seen, specification and form of tender from Mr. Stanley J. Wearing, A.R.I.B.A., 15, Upper King-street, Norwich. Deposit of 10s. 6d.

FEBRUARY 10.—**Crick.**—GRANITE, ETC.—For supply of hand-broken and unbroken Hartshill granite, Mancetter, or Mountsorrel stone. Forms of tender from the Surveyor, Mr. W. Band, Newnham, Daventry.

FEBRUARY 12.—**Ilford.**—ROAD.—For making-up Coventry road. Plans and specification seen, and quantities from Mr. H. Shaw, M.Inst.C.E., Engineer and Surveyor to the Council, Town Hall, Ilford. Deposit of 2*l.* 2s.

FEBRUARY 12. -**Selby.**—STONE.—For supply of whinstone. Mr. Bruce McG. Gray, A.M.Inst.C.E., Engineer and Surveyor, Council Offices.

FEBRUARY 13. — **Abercynon.** — STREETS. — For private street works in Station-road. Plans and specification seen, and quantities from the Surveyor, Town Hall, Mountain Ash.

FEBRUARY 13. **Morley.**—MATERIALS.—For the supply of materials. Forms of tender from Mr. W. E. Putman, A.M.Inst.C.E., Borough Engineer and Surveyor, Town Hall, Morley.

FEBRUARY 14.—**Louth.**—GRANITE.—For supply of 11,000 tons of granite and 3,000 tons of slag. Forms of tender from Mr. F. C. Chard, Clerk, Council House, Louth.

✱ FEBRUARY 14.—**Woolwich, S.E.**—REPAIRS TO ROADS.—The Metropolitan Asylums Board invite tenders for repairs to roads at the Brook Fever Hospital, Shooter's Hill-road, S.E. See advertisement in this issue for further particulars.

FEBRUARY 17.—**Rotherham.**—ROAD.—For the making-up of Mary-street. Drawings and specifications seen, and quantities, etc., from Mr. E. B. Martin, A.M.Inst.C.E., Borough Engineer, Town Hall.

FEBRUARY 19.—**Windsor.**—SEWER.—For construction of a main sewer. Plan, with specification, with Mr. J. D. Gale, Clerk, 3, Sheet-street, Windsor. Quantities and form of tender from Mr. A. M. Fowler, civil engineer, 1, St. Peter's-square, Manchester. Deposit of 5s.

FEBRUARY 19. — **York.** — MATERIAL.—For the supply of material. Forms of tender from Mr. F. W. Spurr, City Engineer, Guildhall, York.

FEBRUARY 21.—**Goole.**—STORES, ETC.—For the supply of stores and materials. Forms of tender and specifications from Mr. C. G. Bradley, Engineer and Surveyor, Council Offices, Goole.

✱ FEBRUARY 22. **Wandsworth.**—NEW LAVATORIES. -The Wandsworth Guardians invite tenders for erection of new lavatories at the Infirmary, St. John's-hill, Wandsworth. See advertisement in this issue for further particulars.

Public Appointment.

Nature of Appointment.	By whom Advertised.	Salary.	Application to be in
*CLERK OF WORKS	Tottenham Education Com.	3*l.* 10s. per week	Feb 15

Auction Sales.

Nature and Place of Sale.	By whom Offered.	Date of Sale.
*DEALS, BATTENS, BOARDS, TIMBER, ETC.—Great Hall, Winchester House, E.C.	Churchill & Sim	Feb. 7
*FREEHOLD SITE, SPITALFIELDS—At the Mart	Debenham, Tewson, Richardson, & Co.	Feb. 20
*GROUND RENTS, KENNINGTON OVAL.—At the Mart	D. Smith, Son, & Oakley	Feb. 28

SOME RECENT SALES OF PROPERTY:

ESTATE EXCHANGE REPORT.

January 10.—By CHARLES MASON.

Belchford, Lincs.—Farm, 31 a. 3 r. 25 p, f..... £820
Fotherby, Lincs.—Pasture and buildings, 6 a. 2 r. 39 p., f 405
Grainthorpe, Lincs. Grainthorpe House Farm, 218 a. 1 r. 35 p., f..... 8,400
Marshchapel, Lincs. Poplar-grove Farm, 65 a. 0 r. 20 p , f 1,515
North Somercotes, Lincs.—Small holding, 36 a. 2 r. 23 p., f 1,200
House and 16 a. 1 r 10 p., f..... 420
South Somercotes, Lincs.—Pasture, 12 a. 2 r 21 p., f..... 585
Saltfleetby, Lincs. Rimac Farm, 102 a. 1 r 37 p., f..... 1,760
Maltby-le-Marsh, Lincs.—Pasture and buildings, 1 a. 0 r. 11 p., f. £410
Bilsby, Lincs.—Pasture and arable, 21 a. 2 r. 13 p., f 535

January 22.—By SALTER, SIMPSON, & SONS.

Northwold, Norfolk. -Wents Farm and Great Wood, 93 a. 0 r. 26 p , f. 1,850
Arable, 7 a. 3 r. 24 p., f..... 175

By EASTMAN BROS.

Forest Gate.—52 to 58 (even), Wellington-rd., f., w.r. 78*l.* 440
37, 39, and 41, Odessa-rd., f., w.r. 58*l.* 10s. ... 395

January 23.—By COOKES & BURRELL.

Hammersmith.—81, Iffley-rd., u.t. 80 yrs., g.r 6*l.* 15s., e.r. 40*l.* 305

By A. & W. RICHARDS.

Bloxham, Oxon.—Bloxham Waterworks, f. (as a going concern). £1,0

January 24 —By MAY & PHILPOT.

Brixton. -Water-in., f g. rents 18*l.* 10s., revers on 1n 53 yrs. 3
5, Torrents-rd , u.t. 61 yrs., g.r. 4*l.* 15s., e.r. 28*l.* 2
January 25 —By C. C. & T. MOORE.
Mile End. -16 and 28, Single st , f., w.r. 52*l* 3
Plaistow. -17, 19, and 21, Alexandra st., u.t. 45 yrs., g.r 10*l.* 17s. 6d., w.r. 6*l.* 8s. 5
Limehouse. 13, Pigott-st., u.t. 29½ yrs , g.r. 4*l.*, w.r. 46*l.* 16s. 1

By F. H. WORLEY.

Woodford.—George-la , Hope Laundry, u.t. 69 yrs., g.r. 4*l.*, y.r. 35*l.* 1

By STIMPSON & SONS.

am.—Commercial-rd., etc., f.g.r. 100l., version in 18½ yrs £3,950
mmercial-rd., etc., f.g.r. 63l., reversion in ¼ yrs 2,230
ncras.—Stibbington-st., f.g.r. 15l., rever- on in 28½ yrs. 300
co —33 and 35, Ranelagh-gr., u.t. 11 yrs., r 10l., y.r. 83l. 305
ou.—0, Knowle-rd., u.t. 50 yrs., g.r. 6l., r. 38l 210
nton Heath.—46, Quadrant-rd., f.r.y.r. 35l. 450
nham —52 to 58 even, Knighton Park-rd., t. 81 yrs., g.r 20 l., v.r 88l. 600

Abbreviations used in these lists.—**F.g.r. for freehold ground-rent; l.g.r. for leasehold ground-rent; i.g.r. for improved ground-rent; g.r. for ground-rent; r. for rent; f. for freehold; c. for copyhold; l. for leasehold; p. for possession; e.r. for estimated rental; w.r. for weekly rental; q.r. for quarterly rental; y.r. for yearly rental; v.r. for unexpired term; p.a. for per annum; yrs. for years; la. for lane; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; cres. for crescent; av. for avenue; gdns. for gardens; yd. for yard; gr. for grove; b.h. for beerhouse; p.h. for public-house; o. for office; s. for shops; ct. for court.**

TO CORRESPONDENTS.

TTE.—All communications with respect to literary artistic matters should be addressed to "THE 'OR" (and not to any person by name); those ng to advertisements and other exclusively ess matters should be addressed to "THE LISHER," and *not* to the Editor.

communications must be authenticated by the and address of the sender, whether for publica- or not. No notice can be taken of anonymous unications.

responsibility of signed articles, letters, and s read at meetings rests, of course, with the rs.

cannot undertake to return rejected communi- ns; and the Editor cannot be responsible for ngs, photographs, manuscripts, or other docu- s, or for models or samples sent to or left at this unless he has specially asked for them.

drawings sent to or left at this office for con- ion should bear the owner's name and address ther the face or back of the drawing. Delay and venience may result from inattention to this.

commission to a contributor to write an article, executs or lend a drawing for publication, is given t to the approval of the article or drawing, when ed, by the Editor, who retains the right to reject unsatisfactory. The receipt by the author of a of an article in type does not necessarily imply its ance.

.—Illustrations of the First Premiated Design in portant architectural competition will always be ted for publication by the Editor, whether they been formally asked for or not.

CES CURRENT OF MATERIALS.

ur aim in this list is to give, as far as possible, the e prices of materials, not necessarily the lowest. y and quantity obviously affect prices—a fact should be remembered by those who make use of formation.

BRICKS, &c.

Per 1000 Alongside, in River.

	£ s. d.
tocks	1 14 0
d Stocks for Facings	2 7 0

Per 1000, Delivered at Railway Depôt.

	£ s. d.		£ s. d.
ns	1 12 0	Best Blue Pressed	
Fareham		Staffordshire..	3 15 0
.....	3 12 0	Do. Bullnose.....	4 0 0
ed Pressed		Best Stourbridge	
bon Facing	5 0 0	Fire Bricks ...	4 0 0

D BRICKS

White,		Double Headers	13 17 6
y, and Salt		One Side and two	
Str'tch'rs	11 7 6	Ends	17 17 6
rs	10 17 6	Two Sides and	
Bullnose,		one End	18 17 6
½ in. Flats	14 17 6	Splays & Squints	16 7 6
Stretchers	16 17 6		

cond Quality £1 10s. per 1000 less than best.

	s. d.	
s and Pit Sand	6	9 per yard, delivered.
s Ballast	5	6 " "
ortland Cement.....	31	0 per ton, "
round Blue Lias Lime	19	0 " "

e—The cement or lime is exclusive of the ordinary charge for sacks.

tone Lime ..... 18s. 0d. per yard delivered. ridge Fireclay in sacks 27s. 0d. per ton at ry dpt.

STONE.

Per Ft. Cube.

	s. d.		s. d.
STONE — delivered on road waggons,			
ington Depôt	1 6½		
delivered on road waggons, Nine Elms t	1 8¼		
AND STONE (20 ft. average)—			
n Whitbed, delivered on road waggons, ddington Depôt, Nine Elms Depôt, or nlico Wharf	2 3		
e Basebed, delivered on road waggons ddington Depôt, Nine Elms Depôt, or nlico Wharf	2 4½		
Per Ft. Cube, delivered at Railway Depôt.			
er in blocks..	1 10	Closeburn Red	
blocks	1 6	Freestone	2 0
hill in blocks	1 10	Red Mansfield	
Dale in		Freestone	2 4
s	2 4	Talacre & Gwespyr	
orschill in		Stone	2 8
s	2 3		

STONE (*Continued*).

YORK STONE—*Robin Hood Quality.*

Per Ft. Cube, Delivered at Railway Depôt. s. d.

Scappled random blocks	2 10

Per Ft. Super., Delivered at Railway Depôt.

6 in. sawn two sides landings to sizes (under 40 ft. super.)	2 3
6 in. rubbed two sides ditto, ditto	2 6
3 in. sawn two sides slabs (random sizes).....	0 11½
2 in. to 2½ in. sawn one side slabs (random sizes)	0 7
1½ in. to 2 in. ditto, ditto.....	0 6

HARD YORK—

Per Ft. Cube, Delivered at Railway Depôt.

Scappled random blocks	0

Per Ft. Super., Delivered at Railway Depôt.

6 in. sawn two sides landing to sizes (under 40 ft. super.)	2 8
6 in. rubbed two sides ditto	3 0
3 in. sawn two sides slabs (random sizes)	1 2
2 in. self-faced random flags	0 5

SLATES.

Per 1000 of 1200 at Railway Depôt.

In. In.	£ s. d.	In. In.	£ s. d.
20×10 best blue Bangor	13 2 6	20×10 best Eur'ka unfading green	15 17 6
20×12 ditto	13 17 6	20×12 ditto	18 7 6
20×10 1st quality ditto.....	13 0 0	18×10 ditto	13 5 0
20×12 ditto ...	13 15 0	16×8 ditto	10 5 0
16×8 ditto.....	7 5 0	20×10 permanent green	11 12 6
22×10 best blue Portmadoc....	12 12 6	18×10 ditto	9 12 6
16×8 ditto.....	6 12 6	16×8 ditto	6 12 6

TILES.

At Railway Depôt.

	s. d.		s. d.
Best plain red roofing (per 1000)	42 0	Best "Hartshill" brand, plain sand-faced (per 1000) ..	50 0
Hip and Valley (per doz.).....	3 7	Do. pressed (per 1000)	47 6
Best Broseley (per 1000)	50 0	Do. Ornamental (per 1000)	50 0
Do. Ornamental (per 1000)	52 6	Hip (per doz.)..	4 0
Hip and Valley (per doz.)	4 0	Valley (per doz.)	3 6
Best Ruabon red, brown, or brindled (Edwards) per 1000)	57 6	Staffords. (Hanley) Reds or Brindled (per 1000)	42 6
Do. Ornamental (per 1000)	60 0	Hand-made sand-faced (per 1000)	45 0
Hip (per doz.)...	4 0	Hip (per doz.)..	4 0
Valley (per doz.)	3 0	Valley (per doz.)	3 6

WOOD.

BUILDING WOOD. At per standard.

	£ s. d.		£ s. d.
Deals: best 3 in. by 11 in. and 4 in. by 9 in. and 11 in.....	14 0 0 ...		15 10 0
Deals: best 3 by 9	13 10 0 ...		14 10 0
Battens: best 2½ in. by 7 in. and 8in., and 3 in. by 7 in. and 8 in.	11 10 0 ...		12 10 0
Battens: best 2½ by 6 and 3 by 6...	0 10 0 ...		less than 7 in. and 8 in.
Deals: seconds	1 0 0	less thn best.	
Battens: seconds	0 10 0 "		"
2 in. by in. and 2 in. by 6 in. ...	9 10 0 ...		10 10 0
2 in. by 4½ in. and 2 in. by 5 in.	9 0 0 ...		10 0 0
Foreign Sawn Boards— 1 in. and 1¼ in. by 7 in.	0 10 0	more than battens.	
¾ in.	1 0 0	"	
Fir timber: best middling Danzig or Memel (average specification)	At per load of 50 ft. 5 0 0 ...		5 10 0
Seconds	4 10 0 ...		5 0 0
Small timber (8 in. to 10 in.) ...	3 17 6 ...		4 0 0
Small timber (6 in. to 8 in.).....	3 5 0 ...		3 10 0
Swedish balks	2 12 6 ...		3 0 0
Pitch-pine timber (30 ft. average)	5 5 0 ...		6 0 0

JOINERS' WOOD. At per standard.

White Sea: first yellow deals, 3 in. by 11 in	24 10 0 ...		25 10 0
3 in. by 9 in.	22 10 0 ...		23 10 0
Battens, 2½ in. and 3 in. by 7 in.	17 0 0 ...		18 0 0
Second yellow deals, 3in. by 11in.	19 0 0 ...		20 0 0
" " 3 in. by 9 in.	18 0 0 ...		19 10 0
Battens, 2½ in. and 3in. by 7 in.	14 0 0 ...		15 0 0
Third yellow deals, 3 in. by 11 in. and 9 in.	14 0 0 ...		15 0 0
Battens, 2½ in. and 3 in. by 7 in.	11 10 0 ...		12 10 0
Petersburg: first yellow deals, 3 in. by 11 in.	21 10 0 ...		22 10 0
Do. 3 in. by 9 in.	18 10 0 ...		19 10 0
Battens	14 0 0 ...		15 0 0
Second yellow deals, 3 in. by 11 in.	16 10 0 ...		17 10 0
Do. 3 in. by 9 in.	15 0 0 ...		16 0 0
Battens	11 10 0 ...		12 10 0
Third yellow deals, 3in. by 11 in.	13 10 0 ...		14 10 0
Do. 3 in. by 9 in.	13 0 0 ...		14 0 0
Battens	10 10 0 ...		11 0 0
White Sea and Petersburg— First white deals, 3 in. by 11 in.	15 0 0 ...		16 0 0
" " 3 in. by 9 in.	14 0 0 ...		14 10 0
Battens	11 10 0 ...		12 10 0
Second white deals, 3in. by 11in.	14 0 0 ...		15 0 0
" " 3 in. by 9 in.	13 0 0 ...		14 0 0
Battens	10 10 0 ...		11 0 0
Pitch-pine: deals	19 0 0 ...		21 0 0
Under 2 in. thick extra.....	0 10 0 ...		1 0 0
Yellow Pine—First, regular sizes	48 0 0	upwards.	
Oddments	32 0 0	"	
Seconds, regular sizes	33 0 "	"	
Oddments	28 0 0	"	
Kauri Pine—Planks per ft. cube.	0 1 6 ...		0 6 0
Danzig and Stettin Oak Logs— Large, per ft. cube	0 3 0 ...		0 3 9
Small " "	0 2 6 ...		0 2 6
Waimscot Oak Logs, per ft. cube	0 6 6 ...		0 8 0
Dry Wainscot Oak, per ft. sup. as inch	0 0 10 ...		0 1 0
¾ in. do. do.	0 0 8½ ...		—
Dry Mahogany—Honduras, Tabasco, per ft. super. as inch..	0 0 10 ...		0 1 1
Selected, Figury, per ft. super. as inch	0 1 6 ...		0 2 6
Dry Walnut, American, per ft. super. as inch	0 0 10 ...		0 1 0
Teak, per load	18 0 0 ...		22 0 0
American Whitewood planks, per ft. cube	0 5 0 ...		0 6 0

WOOD (*Continued*).

JOINERS' WOOD (*Continued*)—

Prepared Flooring, etc.—	Per square. £ s. d.		£ s. d.
1 in. by 7 in. yellow, planed and shot	0 13 6 ...		0 17 0
1 in. by 7 in. yellow, planed and matched	0 14 0 ...		0 18 0
1¼ in. by 7 in. yellow, planed and matched	0 16 0 ...		1 0 0
1 in. by 7 in. white, planed and shot	0 12 0 ...		0 14 6
1 in. by 7 in. white, planed and matched.....	0 12 6 ...		0 15 0
1¼ in. by 7 in. white, planed and matched.....	0 15 0 ...		0 16 6
¾ in. by 7 in. yellow, matched and beaded or V-jointed brds.	0 11 0 ...		0 13 6
1 in. by 7 in. " "	0 14 0 ...		0 18 6
¾ in. by 7 in. white " "	0 10 0 ...		0 11 0
1 in. by 7 in. " "	0 12 9 ...		0 15 0

6 in. at 6d. to 9d. per square less than 7 in.

JOISTS, GIRDERS, &c.

	In London, or delivered Railway Vans, per ton. £ s. d.		£ s. d.
Rolled Steel Joists, ordinary sections	7 10 0 ...		8 0 0
Compound Girders, ordinary sections	9 10 0 ...		10 0 0
Steel Compound Stanchions	11 0 0 ...		12 0 0
Angles, Tees, and Channels, ordinary sections	9 10 0 ...		10 0 0
Flitch Plates	9 10 0 ...		9 10 0
Cast Iron Columns & Stanchions, including ordinary patterns ...	7 10 0 ...		8 10 0

METALS.

IRON—	Per ton, in London. £ s. d.		£ s. d.
Common Bars	9 0 0 ...		9 10 0
Staffordshire Crown Bars, good merchant quality	9 5 0 ...		9 15 0
Staffordshire "Marked Bars"	11 0 0 ...		—
Mild Steel Bars	9 5 0 ...		9 15 0
Hoop Iron, basis price	10 0 0 ...		—
" " Galvanised...	17 10 0 ...		—
(*And upwards, according to size and gauge.*)			
Sheet Iron Black— Ordinary sizes to 20 g.	10 5 0 ...		—
" " 24 g.	11 5 0 ...		—
" " 26 g.	12 15 0 ...		—
Sheet Iron, Galvanised, flat, ordinary quality— Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15 10 0 ...		—
Ordinary sizes to 22 g. and 24 g.	16 0 0 ...		—
" " 26 g.	17 0 0 ...		—
Sheet Iron, Galvanised, flat, best quality— Ordinary sizes to 20 g.	18 10 0 ...		—
" " 22 g. and 24 g.	19 0 0 ...		—
" " 26 g.	20 17 0 ...		—
Galvanised Corrugated Sheets— Ordinary sizes, 6ft. to 8ft. 20 g.	15 0 0 ...		—
" " 22 g. and 24 g.	15 5 0 ...		—
" " 26 g.	16 15 0 ...		—
Best Soft Steel Sheets, 6 ft. by 3 ft. to 3 ft. to 20 g. and thicker	12 11 0 ...		—
Best Soft Steel Sheets, 2 g. & 24 g.	13 10 0 ...		—
" " 26 g.	15 10 0 ...		—
Cut Nails, 3 in. to 6 in.....	11 0 0 ...		11 11 0

(Under 3 in., usual trade extras.)

LEAD, &c.

	£ s. d.		£ s. d.
LEAD—Sheet, English, 4lb. and up	19 7 6 ...		—
Pipe in coils	19 17 6 ...		—
Soil pipe	22 17 6 ...		—
Compo pipe	22 17 6 ...		—
ZINC—Sheet— Vielle Montagne	In casks of 10 cwt. 33 10 0 ...		—
Silesian	33 5 0 ...		—
Zinc, in bundles, 1s. per cwt. extra.			
COPPER— Strong Sheet .....per lb.	0 1 0 ...		—
Thin " ...	" 0 1 1 ...		—
Copper nails	" 0 0 10 ...		—
Copper wire	" 0 0 10 ...		—
BRASS— Strong Sheet	" 0 0 11 ...		—
Thin	" 0 1 0 ...		—
TIN—English Ingots.....	" 0 2 0 ...		—
SOLDER—Plumbers'	" 0 0 8½ ...		—
Tinmen's	" 0 0 11 ...		—
Blowpipe	" 0 1 2 ...		—

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

15 oz. thirds	2½d.	26 oz. fourths ...	3½d
" fourths	1¾d.	32 oz. thirds	5d
21 oz. thirds.....	3d.	" fourths	4¼d.
" fourths	2¾d.	Fluted Sheet, 15 oz.	3½d.
26 oz. thirds... ...	4d.	" 21 oz.	4¼d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

⅛ Hartley's	2d.	Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white ...	3½d
¼ "	2½d.	Ditto, tinted	5d.
⅜ "	2¾d.		

* Not less than three crates.

OILS, &c.

		£ s. d.
Raw Linseed Oil in pipes	per gallon	0 3 5
" " " in barrels.....	"	0 3 6
" " " in drums	"	0 3 8
Boiled " " in barrels	"	0 3 8
" " " in drums	"	0 3 11
Turpentine in barrels	"	0 2 11
" in drums	"	0 3 1
Genuine Ground English White Lead, per ton		26 10 0
Red Lead, Dry.....	"	23 5 0
Best Linseed Oil Putty	per cwt.	0 10 0
Stockholm Tar	per barrel	1 12 0

VARNISHES, &c.	Per gallon. £ s. d.
Fine Pale Oak Varnish	0 8 0
Pale Copal Oak	0 10 6
Superfine Pale Elastic Oak	0 12 6
Fine Extra Hard Church Oak	0 10 0
Superfine Hard-drying Oak, for seats of Churches	0 14 6
Fine Elastic Carriage	0 12 0
Superfine Pale Elastic Carriage	0 16 0
Fine Pale Maple	0 10 0
Finest Pale Durable Copal	0 18 0
Extra Pale French Oil	1 1 0
Eggshell Flating Varnish	0 18 0
White Pale Enamel	1 4 0
Extra Pale Paper	0 12 0
Best Japan Gold Size	0 10 6
Best Black Japan	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Knotting	0 10 8
French and Brush Polish	0 10 6

TERMS OF SUBSCRIPTION.

"THE BUILDER" (Published Weekly) is supplied DIRECT from the Office to residents in any part of the United Kingdom at the prepaid rate of £1 8s. per annum, with delivery *by Friday Morning's Post* in London and its suburbs

To Canada, post free, 21s. 8d. per annum; and to all part of Europe, America, Australia, New Zealand, India, China, Ceylon, etc., 26s. per annum.

Remittances (payable to J. MORGAN) should be addressed to The Publisher of "THE BUILDER," 4, Catherine-street, W.C.

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than* 10 *a.m. on Thursday.* [N.B.—We cannot publish Tenders unless authenticated either by the architect or the building owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is stated, nor any list in which the lowest Tender is under 100*l.* unless in some exceptional cases and for special reasons.]

*Denotes *accepted.* †Denotes *provisionally accepted.*

BALLYLESSON.—For erection of a dispensary and residence, for the Lisburn Board of Guardians. Mr. G. Sands, C.E., architect, Lisburn:—

Ifferson & Fullerton	£1,280
A. McDowell & Co.	1,248
W. I. & C. Law	£1,196
Beeds, Ballylesson‡	1,187

‡ Subject to approval of Local Government Board.

CANTERBURY. For new drill hall, Canterbury. Messrs. Worsfold & Hayward, architects, Market-square, Dover:—

W. Couzens	£5,777 0 0	F. E. Wallis & Sons	£4,883 0 0
J. W. Edwards	5,445 16 3	S. W. Stiff	4,875 0 0
West Bros.	5,145 0 0	G. Browning	4,737 0 0
C. E. Skinner	5,134 0 0	J. Parsons	4,774 12 0
C. T. Epps	4,998 0 0	G. H. Denne	4,774 0 0
F. T. Centry	4,995 0 0	A. S. Ingleton	4,475 0 0
T. T. Denne	4,963 0 0	R. W. Paramor*	4,460 10 0

CIRENCESTER. For erection of twenty-four houses in the Siddington road. Mr. V. A. Lawson, A.M.Inst.C.E., Lic.R.I.B.A., Cirencester.

Tydeman Bros.	£6,245 0 0	P. C. Cousins	£4,581 11 1
W. Jones	5,722 0 0	A. J. Colborne	4,500 0 0
Wall & Hook	5,722 0 0	Orchard & Peer	4,403 0 0
W. T. Nicholls	5,429 0 0	Saunders, Ltd.	4,255 0 0
G. Kilminster	5,050 0 0	W. Drew	4,180 0 0
J. Byard & Sons	4,840 0 0	G. F. & E. Newcombe	4,140 0 0
Drew & Sons	4,839 14 0	H. Fleetwood	3,848 3 8
J. C. Norman	4,760 12 0	W. G. Tanner	3,775 10 0
W. F. Drew	4,700 0 0		
H. & C. Spackman	4,665 16 8		

CLIFTONVILLE (Margate). For alterations and additions to Fort Paragon Hotel, Cliftonville, Margate, for the Fort Paragon Hotel, Ltd. Mr. F. Leonard Poole, architect and surveyor, 246, Balham High-road, S.W.:—

A. G. Lockwood & Co.	£1,298
Anderson Bros.	1,245
F. Eaton, Wandsworth, S.W.*	1,235

LLANBRADACH (Glamorgan).—For the erection of a new boys' Council school at Llanbradach, for the Glamorgan County Council. Mr. D. Pugh-Jones, F.S.I., M.S.A., County Architect, Cardiff:—

Hamilton & Millard, Caerphilly*	£5,850

LONDON. For erection of lifts at Woolwich Tunnel, for the London County Council:—

	Carrying Capacity of Lifts.	Time Required for Execution of Work.
	Persons.	Weeks.
Easton Lift Co., Ltd.	£3,390	45	30
Otis Elevator Co., Ltd.	3,280	40	26
R. Waygood & Co., Ltd.	3,150	40	22

LONDON.—For the remodelling of the hot-water supply system and the improvement of the drying-closet at the Cherry Garden-street Fire-Station, for the London County Council:—

Comyn, Ching, & Co., Ltd.	£409 0	E. Deane & Beal, Ltd	£331 8
Hayward Bros. & Eckstein, Ltd.	350 0	Cannon & Hefford	310 0
		W. G. Cannon & Sons, Ltd.	277 0

[The Architect's estimate, comparable with the tenders, is £250.]

LONDON.—For the laying of 3,580 yds. of 16 in. main from the 16-in. main in Clissold Park through Mildmay Park and Sourbgate-road, Stoke Newington, N., for the Metropolitan Water Board:—

	Per yard. s. d.
Reid Bros.	8 8
W. & C. French	6 9
J. Mowlem & Co.	5 9
Aird's, Ltd.	5 8
T. Docwra & Son	5 5

PENYBANK (near Bargoed, Glamorgan). For levelling playground of Penybank Council school, near Bargoed, for the Glamorgan County Council. Mr. D. Pugh-Jones, F.S.I., M.S.A., County Architect, Cardiff:—

D. Williams, Deri, near Bargoed*	£205 1 6

PERTH. For erection of stone walls and iron railings, for Perth Town Council. Mr. Robert McKillop, Burgh Surveyor:—

Ramage & Cooper, Perth*	£205

PONTLOTTYN (Glamorgan).—For additions to the infants' school at Pontlottyn, for the Glamorgan County Council. Mr. D. Pugh-Jones, F.S.I., M.S.A., County Architect, Cardiff:—

D. Francis, Shirley-road, Cardiff*	£986

PONTARDAWE. For construction of sewage disposal works. Mr. John Morgan, engineer, Pontardawe:—

R. Rankin	£40,089 8 7	T. J. Davies	£20,110 12
E. Powell	24,291 4 0	W. & J. R. Watson	19,937 4
Johnson Bros	23,647 6 11	Bennie & Thompson	19,627 10 11
J. Riley	23,057 4 8	R. Clarke	19,473 17
E. Thomas & Sons	21,815 19 0	G. Archer	18,775 2
B. Jones	21,805 2 0	T. Walker	18,601 3
Aird's, Ltd.	21,750 1 8	R. Lacey	17,593 0 11
Barnes, Chaplin, & Co.	20,844 0 6	A. Senton, Pontypridd*	17,145 17

[Engineer's estimate, £19,738.]

Ham Hill Stone.
Doulting Stone.
Portland Stone.
The Ham Hill and Doulting Stone Co., Limited
(incorporating the Ham Hill Stone Co. and C. Trask & Son The Doulting Stone Co.)
Norton, Stoke-under-Ham, Somerset.
London Agent:—Mr. E. A. Williams, 16, Craven-street, Strand

Asphalte.—The Seyssel and Metallic Lava Asphalte Co. (Mr. H. Glenn), Office, 12 Poultry, E.C.—The best and cheapest materials for damp courses, railway arches, warehouse floors, flat roofs, stables, cow-sheds and milk-rooms, granaries, tun-rooms, and terraces. Asphalte Contractors to Forth Bridge Co. T.N. 2644 Central.

SPRAGUE & CO.'S, Ltd.,
"INK-PHOTO" PROCESS,
4 & 5, East Harding-street, Fetter-lane, E.C.

OGILVIE & CO., Telephone: DALSTON 1388. Many years connected with the late firm of W. H. LASCELLES & CO., LTD., of Burnhill Row.
Amhurst Works, **DALSTON LANE, N.E.**
EXPERTS IN HIGH-CLASS JOINERY.
ALTERATIONS AND DECORATIONS. ESTIMATES FREE.

J. J. ETRIDGE, Jr.
SLATE MERCHANTS. LTD.
EXPERTS IN
SLATING, TILING.
BEST WORK ONLY.
Telephone 2685 Wall, or write
BETHNAL GREEN SLATE WORKS,
BETHNAL GREEN, LONDON, E.

ASPHALTE
For Horizontal & Vertical Damp Courses,
For Flat Roofs, Basements, & other Floors.
The best materials and workmanship are supplied by
THE
French Asphalte Co.
Whose name and address should be inserted in specifications.
For estimates, quotations, and all information apply at the Offices of the Company,
5, LAURENCE POUNTNEY HILL,
CANNON STREET, E.C.

EWART'S
Cures in 19 cases out of 20.
"EMPEROR"
Write to-day for Illustrated Catalogue Free to
EWART & SON Ltd.,
346-350, Euston Road, London, N.W.
Established 1834.
Telephone: 2570 North.
SMOKE-CURE

THE BUILDER

VOL. CII.—No. 3601. FEBRUARY 9, 1912.

CONTENTS.

	PAGE
ETON-FRAME BUILDINGS	141
CS	142
NATIONAL COMPETITION, 1911 (WITH ILLUSATIONS)	143
ROYAL INSTITUTE OF BRITISH ARCHITECTS	144
ARCHITECTURAL ASSOCIATION SECOND SPRING	
ITE	147
ROYAL ACADEMY LECTURES ON ARCHITECTURE	147
S (WITH ILLUSTRATION)	149
ENTERS' HALL LECIURES	150
ANDER THOMSON TRAVELLING STUDENTSHIP	170
RAL NEWS	151
ETITION NEWS	151
ESPONDENCE	151
COMMUNICATION COLUMN	151
ORIAL SUMMARY	152
TINGS	152
NEERING SOCIETIES	152
S TO ILLUSTRATIONS	152
YEARS AGO	152

	PAGE
MONTHLY REVIEW OF CONSTRUCTION:—	
NEW BUILDINGS IN CENTRAL PARIS (WITH ILLUSTRATIONS)	153
AUTOMATIC TEMPERATURE REGULATION	154
HEATING, ETC., MCGILL UNIVERSITY, MONTREAL	155
TESTING OF MATERIALS OF CONSTRUCTION	156
NOTES (WITH ILLUSTRATIONS)	156
THE BUILDING TRADE:	
THE NATIONAL FEDERATION OF BUILDING TRADES EMPLOYERS OF GREAT BRITAIN AND IRELAND	157
BUILDING PLANS v. BUILDING PROSPECTS	158
CLAY EXCAVATING PLANT, WARNHAM	158
BRISTOL MASTER BUILDERS' ASSOCIATION	158
LEICESTER BUILDING TRADES EMPLOYERS' ASSOCIATION	159
GENERAL BUILDING NEWS	159
APPLICATIONS UNDER LONDON BUILDING ACTS, 1894 TO 1909	159

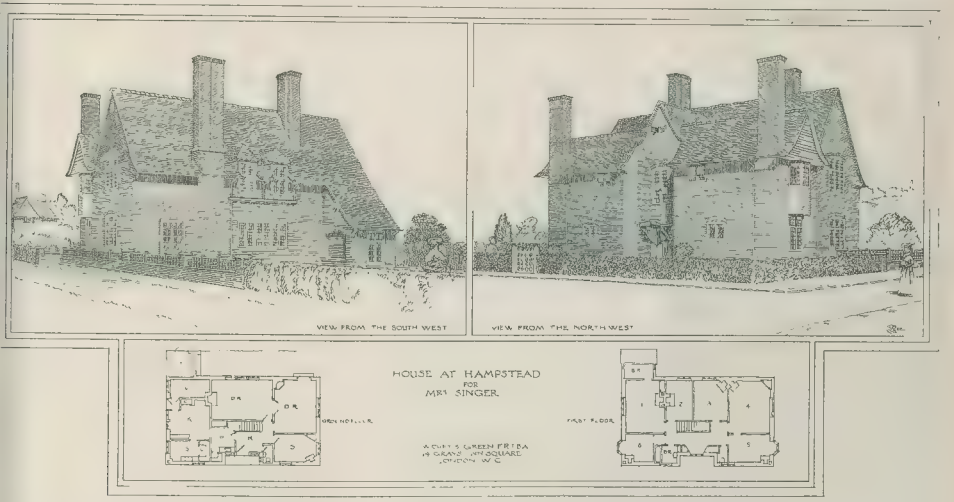
	PAGE
LONDON COUNCILS	160
FOREIGN AND COLONIAL	160
THE SURVEYORS' INSTITUTION	161
SMOKE ABATEMENT	161
TROPHY FOR "THE BUFFS" (WITH ILLUSTRATION)	162
THE LONDON COUNTY COUNCIL	162
LIST OF COMPETITIONS, CONTRACTS, ETC., OPEN	164
LAW REPORT	165
PATENTS	166
SOME RECENT SALES	166
PRICES CURRENT	166
TENDERS	167

Illustrations.

R.I.B.A. TITE COMPETITION:—

PRIZE DESIGN, BY MR. LOUIS DE SOISSONS.

CERTIFICATE OF HON. MENTION. DESIGN BY MR. THOMAS H. CHALKLEY.



House at Hampstead. Mr. W. Curtis Green, F.R.I.B.A., Architect.

The house illustrated above was built by Messrs. Moss & Sons. The walls are faced with hand-made sand faced bricks, and the roof is covered with hand-made sand-faced tiles. All the window-frames are oak, having iron casements and lead glazing by Messrs. Wainwright & Waring. The internal doors and staircase are in oak.

SKELETON-FRAME BUILDINGS.

AFTER waiting with unexampled resignation for a long series of years, London architects and ders were finally rewarded in 1909 n enactment releasing them from the ds established long ago and tied by the London Building Act of . We refer to the restrictions h virtually prohibited the employt of steel to full advantage in its imate capacity of a trustworthy ding material. By the regulations erning the construction of skeletonne buildings made by the London nty Council under Part IV. of their eral Powers Act, 1909, the useful erties of steel have at last been ially recognised.

In this article we do not propose to discuss the wide subject of skeleton construction, but rather to consider the conditions attending the application of steel to the branch of architectural practice indicated.

Sect. 22 of the Act provides that where any work in the nature of a skeleton frame is to be executed, for a new or an existing building, the customary notice to the District Surveyor under sect. 145 of the London Building Act, 1894, shall be accompanied (*a*), in the case of a new building, by detail drawings showing the proposed construction by calculations setting forth the loads and stresses contemplated, and by particulars of the materials to be used, and (*b*), in the case of an alteration or addition or other work, by such drawings, calculations, and particulars as the District Surveyor may reasonably require.

The section mentioned does not specify precisely what drawings, calculations, and particulars should be submitted, and relegates to the District Surveyor the duty of deciding this important matter, as will be seen by the words: – "And should such plans, sections, calculations, or particulars be, in the opinion of the District Surveyor, not in sufficient detail, the person depositing the same shall furnish the District Surveyor with such further plans, sections, calculations, or particulars as he may reasonably require." Therefore, according to the

terms of the section, the architect is left entirely at the mercy of the particular District Surveyor with whom he may have to deal in connexion with a new skeleton-frame building or any work in the nature of a skeleton frame executed in an existing building.

District Surveyors, in common with other human beings, are not produced like steel ingots in moulds of standard dimensions and from material of uniform composition and properties, and each of them regards things from his own standpoint, his judgment being affected largely by individuality and by the effects of professional training. Consequently sect. 22 does not give architects any assurance of uniformity in the reasonable requirements that may be made by the District Surveyors of London.

We cast no reflection on the competency or fairness of District Surveyors—a body of men who have in the past discharged, and will doubtless continue to discharge, onerous and by no means easy duties with general satisfaction to all concerned; but we cannot disguise the fact that the section to which reference is made distinctly favours the establishment of requirements varying from district to district and perchance from day to day.

That our views of the question are strictly reasonable is proved by the fact that the District Surveyors' Association (Incorporated) have recently issued a pamphlet formulating a uniform basis for the preparation of drawings, calculations, and particulars to be submitted relative to skeleton-frame buildings or work. This scheme has been prepared with the co-operation of the Royal Institute of British Architects and the Surveyors' Institution, and its advantages are set forth in the following terms:—"It will manifestly be convenient to the architect, engineer, and District Surveyor that the calculations shall be submitted upon a uniform basis, thus greatly reducing the labour of making and checking the calculations."

We are fully in accord with this expression of opinion, and can give two recent cases which confirm its justice. One is that of the drawings and calculations for the steel frame of the Regent-street Polytechnic, the first building of its kind constructed under the provisions of the new Act. When the notice was served on the District Surveyor neither that official nor the architect, nor the structural engineers, had any clearly-defined notion as to the scope or exact nature of the information required to comply with the true meaning of sect. 22, and the result was an elaborate series of drawings and calculations involving considerably more trouble and expense than were really necessary, the object having been to make absolutely sure that the proposal should be approved without the risk of delays. The other case is one quite unconnected with the new Act, but nevertheless illustrating just as well the need for uniformity of particulars. The writer was retained by a municipal council outside the London County boundaries to consider the drawings and calculations for a skeleton building. The drawings submitted were inconvenient and inadequate, not permitting the ready identification of the structural members denoted in the calculations, and not showing essential details. The calculations had been performed in a needlessly complicated and roundabout manner by the aid of laborious methods. Consequently various supplementary drawings had to be furnished, and the work entailed on both sides was fully four times that which would have been involved if the drawings and calculations had been got out more suitably. It will readily be understood that similar trouble caused to a District Surveyor, whose fees are limited by statute, would result in serious loss of valuable time.

The schedule of recommendations published by the District Surveyors' Association is intended to obviate difficulties to all concerned, and we are sure will be widely appreciated.

Part I. suggests methods of denoting piers, columns, girders, beams, floors, other structural elements, and parts of a building by letters and numbers, so that each of them can be readily identified; Part. II. is a schedule of notation for employment in all formulæ and calculations; and Part III. specifies the scope of the drawings required. These three parts are judiciously drawn, in our opinion, and are of perfectly satisfactory character.

Part IV. aims at the standardisation of calculations and the manner in which the data and calculated results are to be submitted. For the convenience of architects the Association have prepared standard tabulated forms for pillars, beams, and foundations respectively, making clear the exact nature of the particulars required. The necessary wording to introduce or accompany the required data and calculated results is printed in or at the top of the various columns in each form, and will undoubtedly save the user a good deal of time and make work delightfully easy in the office of the District Surveyor. We may add that the three kinds of sheets can be purchased in bulk from the printers to the Association or obtained through any stationer.

No sheet is provided for roofs, the design of which is to be shown by drawings, stress diagrams, and other specified particulars. Additional sheets are required for all special members to which the standard forms are not applicable, as, for instance, eccentrically-loaded beams, gusset plates, brackets, bracing, and connexions generally.

Part V. states formulæ suggested for calculations, and, although the equations do not cover all cases arising in practice, they will suffice for a large proportion of the work to be done.

The pamphlet concludes with a series of tables on the weight of materials, working stresses on steel pillars, safe loads on beams and pillars, permissible shear on rivets and bolts, and the bearing value of steel plates.

The pamphlet is commendably brief, while at the same time quite explicate in every respect. Having already stated our opinion as to the value of the recommendations, we need only say in conclusion that the hearty thanks of the profession are due to the District Surveyors' Association for their effort to make easy the application of the new regulations covering the design and construction of skeleton-frame buildings. The reasonable manner in which the question has been dealt with suggests the confident hope that the path of designers in reinforced concrete will be made equally smooth after the draft regulations of the London County Council have been finally amended and approved.

NOTES.

The Over-Elaboration of Plans.

THE need for a precise definition of terms before a discussion can be fruitful is suggested by the debate at the Architectural Association on the motion "That Modern House Planning Tends to Over-Elaboration." By the aid of Murray's Dictionary the meeting appears to have arrived at the conclusion that to elaborate means "to produce or develop by application and labour; to work out in detail; to give finish or completeness." From this we may perhaps conclude that the precise charge brought against modern house planning was that this process is carried too far, with the result that modern house plans are laboured or over-elaborated in the same way that a picture may be said to be over-painted. Over-elaboration in this sense is a fault to which all artists are prone—it is always difficult to know just when and where to stop; but it would not have occurred to us that the designers of houses were worse sinners than others. We should be inclined to regard it more as a matter of individual temperament or method of design. As Mr. Mackenzie says in the interesting paper with which he opened the discussion, there is no doubt whatever that modern house planning yearly becomes more elaborate. Here he seems to use the word as it is generally understood, implying that it becomes more complex, more full of detail. But when he goes on to say that "an elaborate house is not the same thing as an elaborately-planned house; the one conveys the idea of complication, the other simplicity in its considered result," he appears to attach a somewhat arbitrary and even paradoxical meaning to the adverbial use of the word which, though justifiable for the purposes of his argument, seems rather unfortunate, as possibly leading to confusion of thought. We doubt whether the term "elaborately planned" would convey the idea of simplicity to the ordinary mind; whether elaboration would generally be considered to include elimination; or whether the process whereby a well-studied plan attains this "simplicity in its considered result" would usually be regarded as a process of elaboration. The Chairman took a broad view of the matter by suggesting that "all architects must view this question of elaboration in house design as being a question of taking infinite pains"; but he does not appear to have ventured an opinion as to whether house designers take too much or too little. Neither will we.

The R.I.B.A. Meeting-Room.

APART from the practical reasons advanced by Mr. Alan Munby, in the *Journal* of the Institute, in favour of a rearrangement of the seats in the meeting-

om, there is another point of view ıich might be considered to support s proposal. It is much to be desired at every member of the Institute should el at home at the meetings and be couraged to take part in the discussion. t present the occupants of the back ws—or, indeed, of any but the few ont ones—are in a position which rather nds to discourage them. Under the est of conditions it probably requires me little courage for any but the most lf-confident of the younger members intervene in debate. To be obliged do so from a position which makes him el more or less of an "outsider" is help to him. He may feel that his tervention is almost an intrusion. he meetings being held in a gallery not iginally designed for meetings, its iape is naturally not an ideal one r this purpose; but there seems reason why its inherent defects ıould be aggravated by the arrangement the seats. In so long and narrow a om, seated as at present, the inevitable ndency is to confine the discussion to ıe occupants of the few front rows of ats, and for all the rest of the members feel somewhat "out of it." We elieve that Mr. Munby has only put ıto definite shape the feeling of a large ımber of the members, and we hope ıe Council will see their way to give his ıggestion a trial.

Dry Rot in Church Buildings. At the annual meeting of the Chester Diocesan Church Building Society the Bishop of Chester is eported to have called attention to the reat waste of money caused by the levelopment of dry rot in newly-built hurches and vicarages, some of which ıad been erected under the direction of vell-known architects. Such waste, of ourse, is to be regretted, but we should ike to have a little more evidence, specially as to the extent to which he dry rot prevails, before we are willing o let the implied criticism of architects ass; and as to the statement attributed o Archdeacon Barber, *i.e.*, that he was fraid that the church building of to-day vas not done with the same solidity as n former times, that is only a matter f opinion which the Archdeacon would ind it very difficult to substantiate, especially bearing in mind some recent ad cases of failure in some of our old athedral churches. Canon Gore thought hat defective church buildings were hiefly due to inefficient clerks of works—a statement to which clerks of works may have something to say. All we need remark is that as a body the clerks of works of this country are a most capable class, and that efficient clerks can generally be obtained when an adequate salary is offered.

The R.A. Lectures on Sculpture. Professor W. R. Colton, A.R.A., in his third Royal Academy lecture on "Ideals and Ethics of Sculpture," made some interesting remarks in regard to the works of sculpture which, in his opinion, had influenced modern sculpture more than any other works, and he showed some examples of foreign work which had had considerable influence upon sculpture, and referred particularly to the influence of Michelangelo and Donatello upon sculpture work even to the present day. He also considered what was necessary in this country to produce a great school of sculpture, contending that the soil and the cultivators were ready, but that what was lacking was the influence of faith, and he justified this belief by saying that with Michelangelo and Donatello there was the same great faith in life.

Hints to Students. In the last lecture of the course Professor Colton gave some excellent hints to students, dealing with the limitations which all sculptors had to recognise in their work, such as the impossibility or undesirability of treating some subjects in sculpture, and the importance of studying beautiful objects rather than ugly ones for the purpose of cultivating the artistic taste. He gave some admirable advice as to the necessity of letting sketches be sketches of intention, free from the idea of particular models and prepared under the influence of a sculptor's own ideas and the spiritual side of his nature. He recommended them to put the original sketch aside, but to refer to it now and then as they proceeded with the commission to see how far the first intention was being adhered to. Every great sculptor had two faculties, *i.e.*, the skilful manipulation faculty and the poetical faculty, and if an artist did not possess these two he would fail as an artist in one direction or another. It is interesting to note that in the opinion of the lecturer much sculpture is ruined in this country because the original idea of the sculptor is not carried out, with the result that many conceptions are weakened and spoilt. Professor Colton showed some beautiful lantern slides, and gave a review of some modern work, concluding with an interesting account of the work of St. Gaudens.

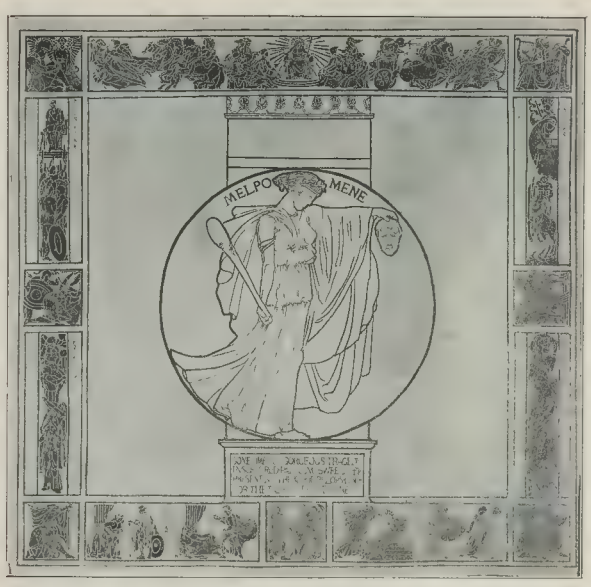
The Institute Gold Medallist. It was announced at the meeting of the Royal Institute of British Architects on Monday that the Council have decided to present the Royal Gold Medal this year to an English architect, Mr. Basil Champneys, and we are quite sure that this will be regarded as a very good selection, and that there will be no difference of opinion on the suitability of the choice. Mr. Champneys is an architect of distinction, whose work is pleasing and refined, and his claims to recognition could not very well have been overlooked.

THE NATIONAL COMPETITION, 1911.

From the designs sent in for the National Competition we have chosen for illustration examples of those awarded the Gold, Silver, and Bronze Medals. The number of works submitted was 13,153, and from these the judges selected ten for Gold Medals,



Modelled and Carved Design for Fireplace. By Mr. William H. Wright (Nottingham).
(National Competition: Gold Medal.)



Design for a Fireproof Curtain for a Theatre. By Miss Helen D. Copsey.
(National Competition: Silver Medal.)

103 for Silver Medals. 261 for Bronze Medals. 561 for Book Prizes, and 989 for Commendation. Four of the Gold Medals were won in London schools (Hammersmith, Islington (2), and Clapham), and the others went to Birmingham, Macclesfield, Nottingham, Warrington, and Dublin (2).

PRESIDENTIAL ADDRESS TO STUDENTS.

THE seventh ordinary general meeting of the session of the Royal Institute of British Architects was held on Monday at No. 9, Conduit-street, Regent-street, W., Mr. Leonard Stokes, President, in the chair.

Deceased Members.

Mr. H. T. Hare, Hon. Secretary, said he regretted to announce the decease of Mr. William Glover, Fellow, elected 1899. Mr. Glover was a Past-President of the Northern Architectural Association, and represented that body for a time on the Council of the Institute. He was well known for his generous gifts and benefactions to the Northern Association, to the Architects' Benevolent Society, to the King Edward VII. Hospital at Windsor, to the Laing Art Gallery, Newcastle, where he founded a fund for the purchase of works of local artists, and to various other institutions, educational and charitable. Mr. Glover, who retired from practice about twelve years ago, was eighty-two years of age.

On the motion of Mr. Hare, it was agreed that the regrets of the Institute at the loss it had sustained be entered on the minutes, and that a message of sympathy and condolence be conveyed on behalf of the Institute to Mr. Glover's nearest relatives.

Mr. Hare also announced the decease of Francis W. Humphreys, elected Associate 1880, Fellow 1892; and of John Codd, Associate, elected 1880.

The Royal Gold Medallist.

The President said the Council proposed to submit to his Majesty the King the name of Mr. Basil Champneys as a fit recipient of the Royal Gold Medal for his executed works as an architect.

The announcement was received with applause.

Some Licentiates attending for the first time since their election having been received,

The President delivered the following address to students:

"A year ago I made a promise which I am breaking to-night. I remember it, if you do not, so I am not going to plead forgetfulness, but only that I have been advised that my promise was an unwise one, which had better not have been made, and so had better not be kept. As I have failed, therefore, to produce for you an address to students from a student I will try to take myself back rather more than a quarter of a century to my own student days, and tell you, if I may, few of may own experiences and mistakes; for though at the time I was not of an age when mistakes are generally made, or, at any rate, admitted, yet now I can see very well that I was not quite so infallible as I thought myself to be at the time. Take warning, therefore, and remember that it has been very truly said that even the youngest of us may make a mistake. Well, my first one was that I began my architectural life much too young, and without proper preparation; but as my health broke down time after time at school, and as I had a taste for building rabbit-hutches and drawing tracery windows with a pair of compasses, a kind friend suggested that an architect's office was a nice easy place to be in—he was by way of being an architect himself and should have known better—and that as no examinations were necessary I could easily become an architect. So without more ado I was articled for three years. There may have been some excuse in my case, but from personal experience I can say that no young architect should begin his career without a thoroughly good all-round education. Whether, from an architectural point of view, he should go to one of the Universities or not I am not prepared to say; but from a worldly aspect I feel sure he would be wise to do so.

But to return to my mistakes. The first thing my master, who was quite a good architect in his way, asked me was whether I preferred Gothic or Classic architecture. Well, I thought of my rabbit-hutches and my tracery windows and answered, "Gothic!" The result was not what I expected, for I was set to cut my teeth on "the Orders," and as I could not use my instruments at all properly you may imagine what I made of them. Of course, I should have been taught to draw, and a good many other things besides, before I ever tackled "the Orders" at all, as is now so well done in architectural schools; but as a matter of fact, after the first few months, I never looked at them again—at least, not for many a long year.

My master was an old Architectural Association man, and a great believer in that body, so I was told I must join and look forward to holding some office in it, as he had done. That was my first ambition. Well; the "Brown Book" was studied, and, as the subjects in the advanced class of design seemed easier than those in the elementary class, I plunged into the advanced class without more ado, which, of course, was a great mistake, for whereas my first design was for a cricket pavilion—which taught me next to nothing—I might have been put through my facings on "an atrium to a Roman house" in the elementary class, for which I should have had to look up some authorities and go into the subject properly and refer to my old friends "the Orders." But, not having had any proper schooling, I must needs try a short cut to architectural fame.

This, of course, was the greatest of all mistakes, for the older I get the more certain I am that a good grounding in things architectural is absolutely necessary; so, if you will be advised by me, you won't try any shorts cuts whatever, but go steadily on up the ladder, round by round, from the bottom to the top, and if on looking back you remember having on occasions taken two or three rounds at one time, go back at once, however near the top you may be, and go over them again, one at a time, before it is too late, for we cannot be too thorough in our studies if we want to be authorities in after life.

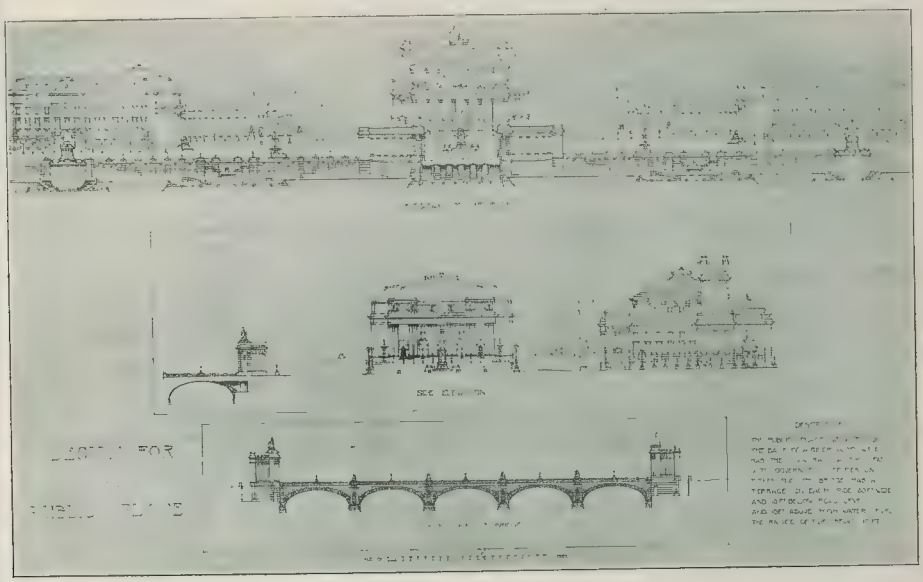
And if we want to be thorough we must cultivate our observation on all occasions. In my nursery days I well remember a little story we were very fond of, called "Eyes and No Eyes." There was a good little boy "Eyes"—who noticed everything, and his walks were full of interest, for he saw the cows milked, heard the birds sing, and smelt the flowers; whereas "No Eyes" came home having been impressed only by the hardness of the road and the length of his walk. Now, life is full of "Eyes" and "No Eyes"—principally "No Eyes"—and the "Eyes" get on and "No Eyes" do the reverse, particularly amongst architects, for what are we without observation? Is not our one way of learning how to produce desired effects to find out how others have done what we want to do, and to make quite sure how they did it? Do we not measure every inch of the admired object so that we may have it on paper, and by comparing the drawing with the original make ourselves able to judge work the other way round, *i.e.*, by beginning with our paper work, knowing in our mind's eye what it will look like when produced in bricks and mortar? "Eyes" can do this; "No Eyes" can't.

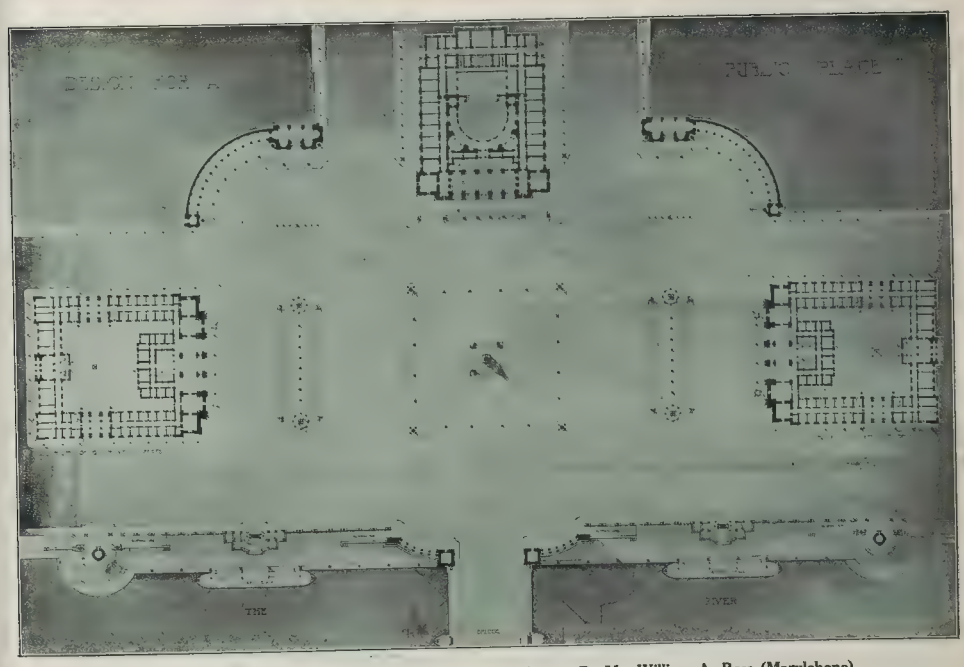
Of course, a sense of proportion is a very valuable gift—whether it can be taught or not I should not like to say; but observation will help us a great deal, and not only observation of the object itself, but also of its position, material, and surroundings, for it is obvious that a slender column which might look right in a screen would look quite wrong carrying a large building, so that we must use judgment with such rules as we have, and to get judgment I contend we must train our own eyes and not depend on other people's.

My three years of pupilage being over, I went by advice into a quantity surveyor's office for a year; and perhaps the only thing I ever learnt thoroughly in my life was how to "square dimensions," for I spent "six months' hard" at it. I also learnt how to

k abstracts and a few other accomplish-
nts which have been of no use to me since,
cept that I now have a general idea of what
ere should be in a bill of quantities—only
o often to find that it is not there. While
the surveyor's office I had a month's
liday, which I used largely in measuring
a fine old church, the drawings of which
t me into the Architectural School at the
oyal Academy as a probationer; but, of
urse, when I got into the schools I found
at I knew much more than my masters—a fatal thing; but I was still very young. The teaching in those days, however, was a very perfunctory performance. Each student got—if he was lucky—a few minutes' criticism once a week from the visitor, while, in my case, what I wanted was solid hours of instruction. But I suppose it was my own fault for going to the wrong shop.

While in the schools I made several vain attempts to win a big prize. The first time I think I might have had a chance but for a much better and more elaborate design. This elaborate design not only lost me that prize, but perhaps the next one also; for the second time I thought that elaboration evidently fetched the R.A.'s, so I would be elaborate, and I was. But Leighton, in giving out the prizes, said there was a want of "expressional fitness" about some of the designs—and there no doubt was. Elaboration had failed, so next time "expressional fitness" was my one idea. But this did not come off either. The mistake I made after my first attempt was not going quietly on





Design for a Public Place Situate upon the Bank of a River. By Mr. William A. Ross (Marylebone).
(National Competition: Bronze Medal.)

C

doing the best I could without any regard to my judges, or, at any rate, to my idea of them.

Take warning, therefore, and never, whatever you do, either play up or down to your judges, even if they are the Council of the R.I.B.A. Do justice to yourself and yourself only, and never bother about anyone else—until you get a client; and then, unless you have luck, you may perhaps even wish you hadn't got him.

After I had finished my year's quantity surveying—*i.e.*, about the time I got into the Academy schools—I went for nearly a year as clerk of the works on a big building, and saw a certain amount of life and its wicked ways in the building line; and then about another year or so at office work, during which time I won my only prize—the Pugin—more by good luck than anything else, for there were two other men better than I was, but they were so equal that the judges could not make up their minds which was the best, so they gave it to me, much to my surprise, for, although I had sent in some good honest work, I knew that either of the two other men was more likely to get it than I was, but I wanted to get my hand in for perhaps the following year.

Another mistake I made was to avoid the examinations established by this Institute by joining as an Associate amongst the last batch who were elected without examination, instead of even then taking to my books and fitting myself in the only right way—for a youngster—to become a member of this Institute.

I have now described to you my student days proper, and will let you off the old platitude about being a student all my life. The only thing that I have omitted to mention is that for about three months in each of four years I travelled—twice in England and twice on the Continent—my only regret being that the bulk of my work was not more serious and not quite so sketchy; but, in common with other students, my eye was caught by bits of pretty detail, and, instead of worrying out the general scheme and construction of a fine piece of work, some dodgy little corner which made a pretty sketch was too often selected.

Now, the lesson I want you to learn from all this is that I was too young and not half equipped for anything at the time I attempted it, and that I drifted into practice long before I should have done, and here I am in the chair holding forth to you some ten or fifteen years too soon—not that ten or fifteen years can make any difference to me now, but properly spent at the beginning of my career they would have enabled me to address you this evening with much greater advantage and profit to yourselves as students."

Works Submitted for Prizes and Studentships.

Mr. Gerald Horsley, Owen Jones Student 1887-88 and President of the Architectural Association, then made some criticism of drawings submitted for the Institute prizes and studentships 1911-12, in the course of which he said: -

"Time has not permitted me to read the essays which were submitted, but I am indebted to Mr. Reginald Blomfield, who took part this year in judging them, for some valuable remarks concerning them. He says:—

"The essays sent in for the Institute Silver Medal were unequal. Some of them were irrelevant to the subject, but that sent in by "Redundancy," to which the prize is awarded, is an exhaustive and thoughtful essay on a difficult subject, and has well earned the prize.

Certain serious literary faults appear in the majority of these essays, such as a tendency to rhetoric, which fails of its purpose; a habit of powdering the essay with quotations from every possible writer, poets, essayists, and others, many of them having little or no bearing on the points under consideration; flippancy and familiarity in style, occasional lapses of grammar, and, lastly, a mistaken conception of what either an essay or a book should be.

Many of these essays are mere strings of classification; the subject is divided and subdivided till it runs out like a river, lost among the sands. No central idea emerges as a result of all the industry, and the writer appears to forget that an essay or a book should be an organic composition with a beginning, middle, and end, and a backbone of some definite idea running through the whole.

The object of these essays is not a display of literary fireworks, but the clear and logical presentation of the ideas and conclusions that result from the careful study of facts. The art of the writer should not obtrude itself; it is shown in the orderly marshalling of his forces, in the lucidity and precision of his statement, and in a certain suppressed emotion that gives the deeper harmonies of his music. A method of writing which shocks and jars is wrong. It is with writers as with artists—the best are those who make least parade of their technique."

I would recommend this excellent criticism to the consideration of all architectural students. I am persuaded that much of the ignorance of the laws of composition shown in some of these essays may be traced to the inadequate literary training which obtains in our secondary schools. I believe that the time must come when the many-sided character of an architect's education will necessitate a better understanding and co-operation between our architectural schools and the secondary schools of this country. In the meantime I would like this admirable criticism of the essays to be in the hands not only of our students, but also of every schoolmaster in the land. Some of the mottoes displayed on the drawings bear out my contention. A motto should be in good taste, and at least grammatical. "Φερω κυκρετε" in Greek characters is senseless, and what can possibly be said of "Ego fecit" and "Fer dans blancmange"? In turning to the exhibition of drawings, we find it consists, as usual, of two parts—(1) that which comprises exercises in design, and (2) studies in ancient architecture.

In forming some judgment of these two divisions a careful observer will discover, I think, a certain weakness in the design section and a certain strength in the other. The fact that this year the Soane Medallion has not been awarded supports this view. The strength in the design section lies in the excellent work submitted by the winner of the Tite Prize. The way in which he has solved the problem presented for solution and the quality of his drawings should be particularly noticed. He has best fulfilled the purpose of this competition, which is to produce a fine design finely drawn. The Soane Medallion is not awarded this year for the reason that no one of the designs shows a real grasp of the conditions governing the competition or an entirely satisfactory solution of the problem. The Council have decided, in consequence, to bracket together the two designs under the mottoes "Circle City" and "Antæ" in honourable mention, and to divide the prize of 100*l.* between the authors of them. With the decision of the Council I agree, for when an exhaustive study of the drawings has been made it must be admitted that justice has been done in circumstances where the choice and decision were of considerable difficulty. The two successful designs represent two different views of the problem, and neither has wholly succeeded. "Circle City" has apparently been over-influenced by the fact that the building is intended to stand in a park. The simple lines of his plan, with all the principal rooms on the ground floor, suggest too much an enlarged garden pavilion. This suggestion is fatal to the expression of dignity a civic building should possess. Moreover, it is questionable whether in actual building the conjunction of a rectangular and circular structure would look well. It is possible it would rob the completed building of balance and grace. Personally, I should also fear, in a circular building of this size, the creation of tiresome echoes. The arrangement also of the plan has prevented the provision of a suite of reception-rooms in direct connexion with the principal apartments. Although a large and handsome reception-room is shown on the first floor, it is too remote, and is only directly connected with a small gallery of the Guildhall. "Circle City's" chief strength lies, first of all, in the restraint which is shown in the design of his elevations, a restraint which is very welcome in these days of what is called "free classic"; and, secondly, in the way in which he has displayed his design. The drawings in pencil, with light washes of colour, are the best in the room.

The author of the set marked "Antæ" has treated the problem very differently. His plan is of the type of an *hôtel de ville*, which would be quite suitable to the centre of a large town; but, on the other hand, the elevations, notably the façade adorned with caryatides, which give an unusual touch of gaiety to the design, are very appropriate to the open position proposed. The weak spot in the scheme is that the central Guildhall is too small. It would not be possible to seat 1,200 people upon the floor, the seats which are shown on the plan being far too near together from back to front. The small size of the hall has led to the entrance-hall being unnecessarily large, and it is doubtful whether the assembly-hall and reception-rooms on the first floors are of sufficient dignity or importance. By being only directly connected with the banqueting-hall and galleries of the Guildhall they would be likely to be circumscribed in use. Generally speaking, the author is to be congratulated upon a design which is restrained and dignified in character. The Greek *motif* adopted in the elevations has been carried out with discrimination. With the exception of the site plan and some accessories in the perspective drawing, which would be better away, the draughtsmanship is decidedly good, especially in the case of the detail drawing."

Having dealt with other designs submitted for the Soane Medallion, Mr. Horsley made the following observations in regard to the Tite Prize drawings: -

"Turning to the drawings submitted for the Tite Prize, mention has been already made of the excellent work provided by the winner, Mr. Louis de Soissons. The plan is admirable for the purpose—namely, the central courtyard of a Royal Exchange. It is thoroughly well thought out, stately, with ample and dignified entrances. The courtyard itself is as large as possible, a first consideration in a Royal Exchange. The proportions of the building are exceedingly good, especially in the well-designed "Order" of the interior. The drawings are beautifully executed, and gain technically by the careful showing of the jointing. Their good effect is rather marred by some signs of hurry in the detail drawings."

Other designs submitted in the competition having been referred to, Mr. Horsley said:—

"On leaving the consideration of these drawings for the Soane Medallion and the Tite Prize, permit me to congratulate the Royal Institute upon its recent decision to make a competition in design one of the compulsory features in its final examination. This competition will oblige the student in the future to study design systematically. Every architect who has seen the good work done by young students in French ateliers in the *petits concours*, or sketch design competitions so frequently held there, will surely hope such trials of strength may be more frequent among our own students. Even in the case of the youngest it is no bad thing to encourage him sometimes to "hitch his wagon to a star," or "dip his pencil in the hues of the rainbow."

In the competition for the Grissell Gold Medal four competitors have entered. To "MCMXII." the prize has been awarded. Undoubtedly this design best fulfils the requirements of this competition. The construction is extremely well adapted to a temporary building, and the plan is quite good, though, personally, I should prefer a more dignified architectural treatment for the housing of an art exhibition. . . .

Turning to the second part of the exhibition, I shall speak first of the Measured Drawings Prize and Silver Medal. This is a very good competition. Five sets of drawings are submitted. After a careful study of them and a scrutiny of the measured work and sketches done on the spot one feels that Mr. Maxwell has well earned the prize. His portfolio of measured studies is an admirable example of what such a collection should be. Taken together with his finished drawings, it shows that his study of this beautiful old house, Compton Winyates, has been

ough and exhaustive. In making his ey sympathetic and complete he has ised more than any of the other com- tors the special purpose of this prize— . to encourage a comprehensive and ily intelligent study of an ancient build- of importance. The result is that he produced a set of drawings in a manner thy of the interesting example of English itecture he chose to study. I should, ever, draw attention to the fact that the hed drawings consist of mounted tracings ı drawings made on the spot. I think ı a practice is to be strongly deprecated, the reason that tracing-paper, however mounted, is a fragile material of little ıral permanence. Measured drawings of importance may pass into our national ections, such as that at South Kensing- and should be on sound English drawing er."*

r. Horsley also referred to the drawings nitted for the Pugin Studentship, the en Studentship, and the Arthur Cates te.

Henry Miers,

ncipal of the London University, in ing a hearty vote of thanks to the sident for his address, and to Mr. rsley for his criticism, said the President shown himself an artist in words as as in stone, and what he said would no bt sink into the minds of those who heard and have as lasting an effect on them anything they could see in the admirable igns hung on the walls that evening. was glad the President had referred to the ortance of a good all-round education for itects, because, at the University, they that very much at heart, and they hoped r were laying the foundation of a really ng school of architecture in London pired by university traditions and carried on university lines, and they hoped they uld have, in carrying out that school, the ice and assistance of the Institute. They red forward to the co-operation of the titute in building up a strong school of itecture. They were looking forward to e before long a really dignified home for University of London which would bear parison with those other university build- s which grace other cities, and it might that one of the Institute students whose igns were on view might design a really and lasting building for the University London.

Alfred Keogh,

tor of the Imperial College of Science Technology in London, said the ching of architecture had been rather lected in the past, and one rejoiced hear the President say that attempts uld be made in the future for the provement in the education of the ng generation of architectural students. e necessity of improved education was gnised in all professions, and he knew s a good many members of the Institute recently considered the desirability of ing to architects a sounder scientific cation than they received at present. ey knew that efforts had been made by Institute to bring home to architects necessity for an acquaintance with entific work. It was desirable that archi- tural students should have a more close uaintance with the materials which they than they possess now, and attempts been made at the Imperial College to vide something in that direction—inade- ate, no doubt, but it was hoped that in e their efforts would meet with approval. that way, no doubt, the Imperial College uld do something to provide for the ciency of members of the architectural fession. He heartily seconded the vote of nks.

Mr. Hare, Hon. Secretary, put the motion, ich was heartily agreed to, and the Presi- nt replied on his own behalf and for Mr. rsley.

---

*In reference to these remarks, we have heard m Mr. Horsley as follows :—
I am glad to say that Mr. Maxwell informs that the paper is not tracing paper, but a nsparent, tough paper of a permanent racter, called 'English Bank.' I am inclined, wever, to favour the old-fashioned English d-made drawing paper as being the best for portant drawings of this character."

The prizes and studentships were then presented to the successful students. The list of successful competitors appeared in our issue for January 26.

The President announced that the next meeting will be held on February 19, when Mr. E. Warren, F.S.A., will read a paper on "Collegiate Architecture."

The meeting then terminated.

THE ARCHITECTURAL ASSOCIATION:

SECOND SPRING VISIT.

THE second visit of the session was made on Saturday, January 27, to the new building of the Regent-street Polytechnic. Members were met by Mr. G. A. Mitchell, A.R.I.B.A., by whom they were conducted over the building, which is conveniently arranged and fitted for the educational work of the Institution. The new front portion contains two basements, ground floor, and six stories above. The major part of the ground floor consists of an entrance hall 60 ft. square, approached by a well-planned lobby with revolving doors on either hand forming the sides, and ordinary swing doors across the width—not for general use, but for occasions of exceptional pressure. The hall is lined with marble sheeting and has columns of Skyros. At the rear are the stairs and two electric lifts. The basements are occupied by the workshops of the Engineering School, the Physical Laboratory, and the appliances for heating the building, which is accomplished by forced hot water, three sectional boilers (one as a standby) and two circulating pumps accomplishing this with a drop of only 10° on the return mains. The old gymnasium has been dropped one story—what was originally the floor being now the gallery, and the old gallery, floored completely over, now forming a suite of club-rooms easily approached from the hall by the straight lower flight of the main stair. The first floor is mainly administrative, the two succeeding floors contain the classrooms of the Polytechnic Day School, on the fourth floor are the School of Architecture and the School of Photography, while the two top floors are devoted to the art-rooms, the topmost series lighted by a sawtooth roof masked by the lofty slated curb of the front elevation. The building is of steel-frame construction, all riveted, and with ferro-concrete floor slabs averaging 21 ft. by 7 ft. 6 in. It is stated to be the first steel-frame building passed by the London County Council under their General Powers Act, making this system economically available. All this work was carried out by Mr. Mitchell. Descriptive articles have appeared in the *Builder* of November 17, 1911; December 8, 1911; and January 26, 1912.

The external façade is part of a general scheme for the treatment of the whole block, and is due to Mr. F. T. Verity, F.R.I.B.A. A perspective drawing showing the completed scheme was exhibited for inspection, and shows how much the effect will gain when the relatively solid end blocks are added and the columned screen extended. At present it shares the defect of other Regent-street rebuildings—that it is violently out of scale with its surroundings, for which the architects cannot be blamed; it may be hoped, however, that the completion of the scheme may not be delayed until the expiry of adjoining leases—perhaps neo-Greek will not then be fashionable. A detailed consideration of the design at once suggests comparisons with Selfridge's, where a somewhat similar problem arose. The solution, in this instance, though on somewhat similar lines, is in some respects hardly so successful. Half columns always have an air of unreality, and columns which are patently seen to carry nothing still more so. The device by which the main cornice surmounts the attic instead of the Order is a clever piece of design, and the detailing is harmonious, with the possible exception of the metal-screen front. The construction of the lowest stage of this screen in stonework is also a doubtful improvement. Comparisons apart, however, the front is a scholarly design, cohesive as a whole, and never descending to triviality.

THE ROYAL ACADEMY LECTURES ON ARCHITECTURE:

ARCHITECTURAL DRAWING.

PROFESSOR R. T. BLOMFIELD, A.R.A., delivered the first of his Royal Academy lectures on Monday, taking as his subject "Architectural Drawing and Illustration, and dealing in the subsequent part of his lecture with Villard de Honnecourt.

In the course of his remarks Professor Blomfield said he proposed to talk about architectural drawing, to endeavour to disentangle the ideals to be aimed at in such drawing and the point of view from which it should be approached. He intended to enlarge the scope of our conception of architectural drawing by tracing its development in the past and by reviewing the work of certain great masters of the art. Though we could not help noting the work of contemporaries, it was not here that we should search for our touchstone of criticism, but in the achievements of men long since dead. Fashion had so much to do with current reputations that the only safe standard to judge by was that set by the men who had long been recognised by competent judges as past-masters of their art. The verdict of time was seldom wrong, and students—at any rate, in their training—would be wise to take as their masters only those artists whose reputation had stood the test of time, and to regard with an open mind and even suspend judgment on methods and models that were still in the melting-pot. They must in selecting their models fortify their judgment by history and by the study and analysis of old work. A good deal of caution was wise in appreciating the progress of contemporary draughtsmanship. Was it better than the work of fifty years ago? Were our line-and-wash drawings up to the standard of Girtin? Was there any living draughtsman who could use his pen and his blot as Piranesi did in his lightning improvisations? One could safely say there were no such draughtsmen now. But if one shifted the standard, if one compared modern drawing or modern architecture with what was accepted as such in England fifty years ago, he did not doubt that there was a marked improvement. The architecture, and with it the draughtsmanship, of the middle of the XIXth century was founded on no solid basis of inheritance; it sprang out of nothing in history, and it had ended in nothing, except that, as a reaction against this unprofitable emptiness, artists had gone back to earlier traditions. In recent years they had attached themselves more particularly to the French tradition of draughtsmanship, which in the last twenty years had overrun this country and America. Fine as that tradition was, it was by no means the complete and only standard of architectural draughtsmanship. Far from it; it was itself only a very dexterous convention which attained its perfection by eliminating half the problem. We must go much further afield than this if we were to understand the whole gamut of notes on which a really great architectural draughtsman can play. Generally the object of architectural drawing was the representation of architecture. It did not include for the purpose of this study the architectural background of pictures, but in this connexion he called the attention of students in painting to the necessity of the serious study of architecture as an essential part of their training for decorative painting.

A difference presented itself in architectural drawings according to the intention with which they were made. This intention might be either objective or subjective; that was, the intention of the draughtsman might be either to make drawings which could be carried out in building by other hands exactly as drawn, or he might wish to produce in somebody else's mind the impression of the building as a whole as he conceives it, or he might employ architectural forms as the symbols and embodiments of some abstract idea, the imagery of a world which never has existed in fact and never can. In the first case he would proceed by geometrical drawings; in the second and third by perspective representation with such accessories as skiography, etc., as might be necessary to drive home his ideas. There

were two essential conditions of geometrical drawings: they should be perfectly accurate and they should be perfectly clear. The ultimate intention of these geometrical drawings is their translation into stone, bricks, and mortar by a builder who, except for the drawings and the specification, was ignorant of what was in the designer's mind. One could not help wondering what must be the inner thoughts of experienced builders when they came face to face with some of the drawings with which they had to deal.

As to drawings being perfectly clear, he regretted to say that certain vicious tendencies in architectural drawings had appeared in recent years, notably the use of a very thick line and the use of a very thick line in connexion with a much thinner line. The use of the thick line was due, he believed, to the mediæval proclivities of William Burges, a fine draughtsman spoilt by his fondness for mummery and posing. Burges deliberately copied the methods of mediæval draughtsmen, with the result that what should have been studies of fact became mere exercises in style.

The second, and possibly even more injurious, use of the thick line and the thin line had originated in competitions. In a room full of drawings by different designers competitors had feared that their drawings would be overlooked unless some strong insistent line shouted its existence at the spectator. With variations of line not only were all the refinements and subtleties of architecture lost, but the breadth of effect goes too. Nor did he believe that it made any but an unfavourable impression on an assessor who knew his business, and who, of course, read the elevation by the plan and section. As to the builder, the effect of such methods of drawing must be simply paralysing. Line should be finely drawn, uniform in thickness, sufficient to express neither more nor less than the architectural features intended. They should have thought out exactly what they wanted before they put their final line to paper, for line so drawn became a part of business of serious importance, as careless architects had found to their cost when the damning evidence of an ill-considered line stared them in the face in their contract drawings.

He warned them against a common abuse of skiography, which he noticed in the work of many students, and that was the habit of projecting violent shadows over every part of the plan. The result was that the drawings were illegible. Besides making the plan unreadable, it also made it very ugly. In their geometrical drawings they would do well to eschew all such tricks and devices and be content to do a plain thing in a plain way.

The situation was almost reversed when we came to the second function of architectural drawing, that of producing in the mind of another the impression of an architectural idea. We were not concerned here with a bare and literal statement of facts. The impression aimed at was a complex one; that was, the draughtsman aimed at producing the impression not only of certain abstract forms of architecture, but of those forms as a whole, and as a whole considered in relation to its placing on the site, its environment of sky and landscape, even the intention of the building, all subjective matters, incapable of literal translation into fact, but scarcely less important than data given by the working drawings in the building up of the total impression to be conveyed to another mind. The line that in the geometrical drawing had to be hard and precise, now became sensitive, even tentative, feeling its way and clinging on to the idea, as it were, in order to suggest it in all its multifarious complexity. Absolute accuracy of detail was less important here than accuracy in the statement as a whole.

As to the third class of subjects, *i.e.*, the use of architectural forms for the expression of abstract ideas, the draughtsman was to all intents the free artist, with no limits to hamper him but those of his knowledge and imagination.

Having referred to the subject of isometrical projection, the lecturer proceeded to trace the development of architectural drawing and illustration. He referred to the scarcity of working drawings in the Middle Ages, and gave reasons for thinking that no system of preparing such drawings existed, at any rate, in the earlier part of that period. After referring to one or two rare examples, the lecturer went on to describe the work of Villard de Honnecourt, pointing out their value on the one hand and their limitations on the other, and calling attention to the wide difference of conditions under which buildings were carried out in the Middle Ages and the Renaissance as the real reason why architectural draughtsmanship, which had little or no place in mediæval times, became and remains an absolute necessity in neo-Classic architecture.

SOME DRAUGHTSMEN OF THE XVITH CENTURY.

In his second lecture Professor Blomfield said that architectural drawing as we understand it really dates from the earlier days of the Italian Renaissance. He did not know if there were any drawings of Alberti in existence, but there were drawings by Bramante and a considerable number of drawings by Giuliano da San Gallo, his brother Antonio, his son Antonio, Peruzzi, and others. There were also the painters Mantegna, Carlo Crivelli, Pintoricchio, Ghirlandajo, and others, who used architecture very freely in their compositions, and with obvious enjoyment in its design. The architecture in the background of their pictures was beautifully conceived, for these artists of the Renaissance were enthusiasts for the new architecture that scholars were discovering for them from the remains of ancient Rome, and their ingenuous minds were fascinated by experiments with the newly-formulated rules of perspective. These painters realised in a way that had been forgotten in modern times that the arts, though separate, were also related, and that the artist should be alive to beauty in every art and in other arts than his own. They simply would not have understood the point of view of the modern painter, who in his own heart did not believe that architecture was an art at all.

Villard de Honnecourt was an accomplished artist in his way, yet hardly, except in a summary and rudimentary manner, an architectural draughtsman. From internal evidence he (the lecturer) took it that Villard de Honnecourt was wandering about France with his sketch-book early in the XIVth century. After him we draw the Middle Ages blank, with unimportant German exceptions at the end of the XVth century. Indeed, one might say with the most complete probability that architectural draughtsmanship did not exist, the necessity for it not having as yet arisen in the practice of architecture. But meanwhile in Italy there had come about that astonishing outburst of intellectual activity which we call quite vaguely the Renaissance. The mere indications adequate in mediæval architecture were useless when designers wished to build in a manner unknown to the ordinary workman. More than that, the designer had to master that manner himself by unremitting study of the innumerable fragments of ancient architecture still left in Italy. It was owing to the emancipation of the individual and to the radical change in the aims and methods of architecture that architectural draughtsmanship came into existence. It was essentially a modern art, the complement of methods of architecture and archæology which were undreamt of in the Middle Ages.

The lecturer then referred to the album of drawings by San Gallo in the Barberini Library at Rome, the drawings, seventy-six in number, being made in pen and ink on sheepskin sheets. Some of the earlier drawings were crude, and San Gallo never drew the figure well, but in many of the drawings the profiles were firm and unfaltering and the details were drawn with clearness and precision. Here one got for the first time the method of drawing architectural details which became general in printed books of architecture of the following century, and in its directness of statement and scholarly selection of essential features this was in some respects a model for technical book illustration. But San Gallo was destitute of that imaginative insight which made some architects' sketches so delightfully suggestive and personal.

Bramante had nine characteristic drawings at the Uffizi, but the work that showed most clearly his power as an architectural draughtsman was the magnificent engraving in the British Museum representing the interior of a Temple Hall. It was a strange drawing, but it showed a rare faculty of chastened architectural design and a technique based on that of his master, Andrea Mantegna, and scarcely inferior to the work of that incomparable artist. San Gallo father and son, and Bramante and his pupil might be taken as the founders of architectural drawing, and their drawings as compared with the work of later draughtsmen had an almost archaic purity of line. Bramante's powers, both as designer and draughtsman, were beyond question, but Peruzzi, his pupil and assistant, and the greatest of the Renaissance architects, went more to the root of the matter in the drawings which he made for Bramante. Peruzzi and Antonio da San Gallo the younger possessed extraordinary freedom of drawing in pen and ink.

At the beginning of the XVIth century a fresh factor of vast possibilities appeared in the printed and illustrated books of architecture. The draughtsmanship here exhibited was at first and for many years a very humble affair, and it seemed surprising, after Bramante's magnificent engraving, that the early editions of Vitruvius should have been illustrated as crudely as they were. The first genuine advance in architectural illustration seemed to have been made by Serlio in his "Architettura." He was not a fine draughtsman in any sense, but he followed Giuliano da San Gallo in the critical spirit, and the anxiety to get at the facts with which he applied himself to the study and presentation of architecture.

Palladio was an accomplished draughtsman, and his design for the completion of St. Petronio at Bologna was beautifully drawn. Good man as he was, he was content, however, with rather cheap and easy attainments—stones instead of masonry in his architecture, conventions instead of searching study in his drawings.

As to De l'Orme, he was an artist of much ability and energy, but uncertain in taste and a somewhat unscrupulous poacher, and he referred to him more on account of the historical interest of his illustrations than for their value as drawings.

The next advance in architectural drawing was due to Du Cerceau, that indefatigable draughtsman who spent his life in turning out worthless architectural fancies and fragments that did more harm than good, and also in making views of the great houses of France, which were of inestimable value. He had little genuine sense of architecture, but the work he did in his "Plus Excellents Monuments" was quite admirable in its way and of the highest value to the historical student. He had at his command a line of unfaltering precision. He could, if he wished, draw almost anything. On the other hand, there was little trace of any imagination reaching beyond the subject such as we found in the thumb-nail sketches of Peruzzi and the younger San Gallo. His drawings were very clear and of scientific accuracy, but they left one cold. Du Cerceau seemed to be intensely honest in his drawings of buildings and the exact opposite in his fancy designs, and it was on the former that his enduring reputation rests. The other half of his work raised the whole question of the draughtsman-designer—that was of the man who sat at his drawing-board and turned out design after design without the least regard to materials and to the conditions of their realisation in fact. There was an unwholesome growth of such men at the end of the XVIth century.

These men were the forerunners of the much more considerable draughtsmen of the XVIIth century. They were all members of the same family, industrious builders of "Châteaux d'Espagne," indefatigable and unprofitable designers in the air. It was possible they might suggest ideas; personally, when looking through these books of design, from Du Cerceau to Oppenord, I had never found the thing he wanted. Others appeared not to have found it so, judging from the abundance of these books of design in the XVIIth and XVIIIth centuries. Yet it seemed almost impossible that

a design thought out from end to end, a sign that aimed at unity of effect, these bbets from another mind could be rightly similated; they could only result, not in hitecture, but in a compilation of archi- tural detail without meaning or cohesion. he draughtsman's line showed the expres- on of first-hand knowledge, its means of nveyance to other minds and other hands; d unless there is this knowledge behind awing, inspiring and controlling it, the sult would be disastrous. Because con- ruction is of essential importance in archi- ctural design, men had been tempted to say at draughtsmanship did not matter, and at, he believed, was a mistake, for the chitect's business was not merely to state e facts of construction in his building, but had to state them in a form that was autiful.

BOOKS.

he Story of Ford Abbey. By SIDNEY HEATH. (Francis Griffiths. 10s. 6d.)

ORD ABBEY, Dorset, has a history dating om the XIIth century, and the story is not ithout architectural interest. The details f ecclesiastical routine, with the duties of the arious officers connected with this and other onastic establishments, are outside our here, but there is much in this book other- ise which attracts attention. After the issolution the building passed through arious hands, and in 1649 belonged to Sir dmund Prideaux, who employed Inigo Jones improve it. This he did to some extent, nd would have done more but for his death 1652. Mr. Heath is satisfied that the death f the restorer was of benefit to the building.

It was Jones's intention to convert the whole f this fine Gothic house into a classical one, ut his death interfered with this project, and is probable that had not this event taken lace, there would be little to see to-day of he wonderful structure erected by its last bbot (Thomas Chard). It is only fair to dd that internally the house was much improved and highly embellished, making it one of the most magnificently appointed houses in the country."

The building seems to be in good hands at present, and with its tapestries and other works of art it is worthy of a pilgrimage. Mr. Heath's serviceable monograph includes a plan, with reproductions of photographs and pen drawings.

The Life of James McNeill Whistler. By E. R. and J. PENNELL. New and Revised Edition (the fifth). (London: William Heinemann. 1911. 12s. 6d. net.)

IN the new edition of this work Mrs. and Mr. Pennell have taken the opportunity of adding numerous little touches to their life portrait of Whistler, touches that have all been carefully studied with the single aim of adding vividness to the realisation of the artist as he lived. Few biographers have been so fortunately placed in regard to their relationship to their subject. An intimate knowledge of the circle in which Whistler's later years were spent and a keenly sympathetic attitude towards his art are but two of their many qualifications.

Some day we may hope to see this picture of the artist's personality supplemented by another work on the development of his art. Probably the time for this is not yet, and our authors in this case feel, in their admiration of the consummate quality in Whistler's work, that it would be an impertinence to attempt any such philosophic appreciation as that we have hinted at. What the painter himself would have thought of such an attempt one may guess fairly easily, but sooner or later it will be made, and when it is we trust it will be at the hand of one who can devote to it the same sympathetic and faithful study that the book before us gives to the events of Whistler's life and the development of his strikingly individual and brilliant personal characteristics. No book on Whistler could be dull; but this, which has reached its fifth edition within three years, is packed with bright things and entertaining anecdote. Perhaps it would have been difficult to mingle the story of his artistic development with these, and those works of his which are reproduced are therefore left to tell their own tale with merely an added date.

Costumes, Traditions, and Songs of Savoy. By ESTELLA CANZIANI. (London: Chatto & Windus. 1911. 4to. 1*l.* 1s. net.)

THIS work is a striking example of colour printing, and is, in other respects, remarkably well produced, reflecting in these respects great credit on all concerned. It is difficult to see how it can be issued at the low price of 1*l.* 1s.

It is the outcome of an intimate study of the life and scenery of the little-known mountain districts of Savoy, which must have occupied Miss Canziani's energies over an extended period. The drawings of national costume and characteristic personal ornaments are of quite exceptional interest to the artist, while the racy descriptions of peasant life and customs will hold the attention of the general reader. In landscape the method of handling does not lend itself quite so well to reproduction as in the figure studies. The best of these latter are the larger-scale drawings, showing head-dress and bodice, in some of which the heads are remarkably finely characterised.

No one who has not been over the ground covered by Miss Canziani could realise the extraordinary variety of very decorative costume to be found in this out-of-the-world province. At the present day, when all European dress is so rapidly conforming to uniformity, it is refreshing to find one district at least where the traditional garb is still in vogue. It is to be hoped that Savoy may continue to keep up its distinctive national traits, but, in any case, we must feel our indebtedness to this work for putting on record so much that is interesting in this somewhat neglected corner of Europe. It is obvious that few could have done such a service in the intimate fashion that Miss Canziani's gifts in draughtsmanship and linguistic attainments have enabled her to do, and congratulation is due to her in that she has employed her talents to such good purpose.

The Local Government Annual and Official Directory for 1912. (27A, Farringdon-street, London, E.C. Price 1s. 6d.)

THE twenty-first annual issue of this compact and useful compilation is just published. The main portion of the book is devoted to the directory, which gives the names and addresses of the chief officials of all corporations, London borough councils, county councils, boards of guardians, urban and rural district councils, county and borough asylums, etc., throughout the kingdom, as well as a list of the City companies of London. In addition will be found the names of the members and officials of the Port of London Authority.

Besides the directory, there is much information relating to baths and washhouses, and electric light undertakings in the boroughs of London, and an abstract of the local government legislation of 1908 will be found. The work contains a list of all the parks and open spaces of the metropolis, with the local authorities controlling them.



Ceiling, Ford Abbey.
(By permission of Mr. Francis Griffiths.)

THE INSTITUTE OF SANITARY ENGINEERS.

On Monday, February 12, at the Royal United Service Institution at eight o'clock, Mr. Edward White, Chairman of the London County Council, will take the chair at a meeting of the Institute of Sanitary Engineers, when the question of "Hospitals and Sanitoria and Their Relation to Tuberculosis" will be under discussion. Dr. F. C. Davies, Medical Officer of Battersea Tuberculosis Dispensary, will read a paper dealing with the history of the infectivity idea in relation to tuberculosis and its results in the modern attitude of public health authorities towards its treatment, and Mr. A. Alban H. Scott will deal with the question of the planning and designing of modern hospitals and sanitoria on the lines to meet the requirements of the medical profession at a cost suitable for both private and national sanitoria.

THE CARPENTERS' HALL LECTURES:

LONDON AS AN ARCHITECTURAL SYLLABUS.

THE second of the present series of Carpenters' Hall Lectures on the "Arts Connected with Building," was delivered in Carpenters' Hall, London-wall, on Wednesday last week, by Professor Beresford Pite, Mr. Percy Preston presiding.

Professor Pite, the subject of whose lecture was "London as an Architectural Syllabus," said he thought it would be useful if we attempted to classify our ideas of the buildings of London with which we have to live. Nearly everybody had opinions on the subject, but public opinion on London architecture was, to say the least, confused, and in order to offer an opinion on architecture one had to rely upon some sort of principles. In artistic matters principles were things which were very easy to invent to meet the particular needs of the moment, though there were a great many sane principles in common use which were only imperfectly understood and improperly applied, and there was the danger. As a general rule, architectural text-books which took the architecture of the whole human family from its earliest day down to the present, and codified the buildings of mankind, with styles and dates of buildings, were of little value in dealing with current criticism of London buildings. He did not pretend to attempt to deal with the whole problem, but his lecture had underlying it the idea that London had in itself the material for providing a useful architectural syllabus of opinion, of doctrine, and of criticism, so that it was not necessary to travel in Italy or Greece, or to absorb an encyclopædia, or to pass an examination conducted by the Royal Institute of British Architects in order to know the character and value of the buildings by which we are surrounded.

Architectural design could be described as a matter of detail. It was detail which mattered in architecture, and there was small scope in the practice of architecture and building for the novel application of old principles or the discovery of new. He ventured to suggest that the moment was somewhat opportune for seeking to elicit public interest in the architecture of London. In recent years there had been a considerable growth of public interest in architectural matters, and quite recently—in fact, the most recent event which had happened in the architectural world, and an event of the very greatest importance—was the publication by the Government of a new plan for the improvement of access by the great arterial roads to and around London. That very important plan, recently published by the Traffic Department of the Board of Trade, carried the development of London very much further than any similar event in the lifetime of anyone there. As we looked at this very important scheme and considered the effect of these great roads we got face to face at once with the important relation of roads to buildings—what should be the direction of approach, what should be the effect aimed at in an important public thoroughfare from the point of view of beauty? The link between the traffic plan, the road plan, to the architectural approach was very close.

He would suggest at once that we have a real architectural syllabus as architects and builders provided by law, and that there is a limit set which entirely governs our proceedings and designs, and which, in a sort of subconscious way, gave architectural results—*i.e.*, the London Building Act of 1895, which deals, amongst other things, with the formation of streets, open spaces about and height of buildings, an architectural implication underlying each of these matters. Then we came to the structure and the thickness of walls, to rules for recesses and openings, as to height, of roofs and angles, dormer windows and chimneys, staircases and projections; in fact, we could not create an architectural design without dealing with every one of these items, and in every case the law gave distinctive rules. With regard to projections, for instance, the law specified that:—

"Every coping, cornice, string-course, facia, window-dressing, portico, porch, balcony, verandah, balustrade, outside landing, outside stairs and outside steps, and architectural projection or decoration whatsoever, and also the eaves, barge-boards, and cornices to any overhanging roof except the cornices and dressings to the window fronts of shops and except the eaves, barge-boards, and cornices to detached and semi-detached houses, and to other dwelling-houses in which the party-walls are corbelled out so as to project 4 in. beyond such eaves, barge-boards, or cornices, shall be of brick, stone, tile, artificial stone, slate, cement, or other fireproof material.

Every balcony, cornice, or other projection shall be tailed into the wall of the building, and weighted or tied down to the satisfaction of the District Surveyor, and no cornice shall exceed in projection 2 ft. 6 in. over the public way."

It was this Act that every architect and every building designer came up against whenever he attempted to design buildings in London, and there was an effective syllabus in regard to all those particulars. In consequence of this Act it would be quite impossible to build in the London streets structures like the Strozzi or Farnese palaces because of their projections; we have our wings clipped and we were confined to somewhat narrow limits. The Act would prohibit any such delightful group as that which still stands in Holborn, in Staple Inn, and every architect inspired with brilliant ideas had, after surmounting the difficulties of cost and the client's instructions, to bring everything before that benevolent tyrant, the District Surveyor, who applies the law, and the unbenevolent adjoining owner's surveyor. Visions of beautiful windows, the freshness in city life gained by shadowed eaves, as at Ipswich, of quaint half-timber work like that at Middle-row, or of soaring majesty—such as the New York skyscrapers—were quite impossible, and that half-timber work, so fascinating to the artist, was entirely prohibited. The District Surveyor, whom we love for his conscientious faithfulness, "cut all the patter" and applied the law. But the fact was that this beneficent enemy of jerry-building became a very ogre when one dealt with beauty, and could only refer one to the dreadful syllabus and to the necessity of applying to the County Council for any exceptions to certain of its provisions. There was incessant friction and conflict. He was not drawing any imaginary picture, for modern architecture in London had been a process of incessant conflict and friction between the ambitions of the designers and the stipulations of the law, and it would be an interesting investigation in the future to discern and illustrate the underlying legal obligations and the incessant resistance to them of artistic sentiment—of an artistic sentiment extraordinarily manifest—in all XIXth-century work—which this Act had created. In fact, among the arts and crafts work of modern times had to be inserted, this new art and craft of evading the building law.

There was the conflict of other doctrines from which we might derive a syllabus—the syllabus of taste which reflects current culture, or the social conditions reflected in our buildings; but the constructional syllabus ruled. The social syllabus, portraying growth of luxury and wealth with amenity, began with the day when the merchant lived over his counting-house in the City, and progressed to the time when he migrated to the aristocratic districts of Bloomsbury-square and Lincoln's Inn. Another generation passed and the social centre shifted to the stucco mansions of Belgravia, the artistic brotherhood flits to the hilltops of Hampstead and flatland, and finally, in our own time, the advent of the motor-car is turning London into a garage and a restaurant. London is itself a museum of any number of different influences from which we could construct a social as well as a constructional syllabus.

There was a certain topsy-turveydom in applying an architectural syllabus to London in the ordinary way, because neither Byzantium, Greece, or Rome apply to us. Such a syllabus was only apparently historical; it was not really so; it was superficial in the sense of its being concerned with the æsthetic idea, not with the real architectural fact. He could find a Greek building in London in the British Museum, and he could find Roman and Italian buildings, but they were imitations, and they did not hold a proper architectural place in the syllabus; while he would suggest an architectural syllabus which was constructional as well as historical.

In order to give a rough idea of what he meant by the constructional syllabus he would rapidly run through, on the one hand, the constructional development of London, and if they put on the other hand the historical development of London, between the two he hoped they would find the guidance needed. Constructionally, the first London—the first element in the syllabus, was the London of wattle and mud. The first stage was soon passed, and we came to the second period—*i.e.* to rubble London, when walls were of rubble stone with a large amount of crude mortar. This rubble London was Gothic London. Mediæval London, the London of the Tower and cathedrals. Rubble London—rubbish-built London—was followed by wooden-framed London, which lasted all through the Middle Ages well into Queen Elizabeth's time. Henry VIII. had a great wooden palace, Nonsuch, on the south side of the river near Twickenham, and Queen Elizabeth had left behind, at Staple Inn, those well-known wooden fronts. Wooden-framed London was wiped out by the Great Fire of 1666, and we were brought to the fourth item in the syllabus—*i.e.*, brick London, post-1666, covering the Carolean period and Queen Anne. This London had to be associated with stone dressings, stone ornament, and the treatment of the stonework in connexion with the brickwork was different from the treatment of the stonework when it was in connexion with rubble masonry; it became finer and more interesting—it became, in fact, masonry of a fine order, so that we were shortly face to face with the next phase—*i.e.*, Portland-stone London, when it was felt that all architectural dignity lay in a finely-finished, smooth-faced stone wall. To this period belonged St. Paul's Cathedral, and at a later date Somerset House, and around and between them we could group all the fine buildings of the period, finding them universally faced with Portland stone. Stucco London followed—very large and in many ways interesting, but stucco for all that. It was the architecture of the Regency and the material of Carlton House-terrace. We were getting near our own time, and one felt a lingering sympathy with the stucco movement still. And finally we came to the last item of the syllabus—*i.e.*, Building Act London, or modern London. He must not omit as an important element in Building Act London what he ought to call *post*-cholera London—sanitary London, and he did not think he was far wrong in saying that the greatest interest of modern London to future ages would be the drainage system and the remarkably beautiful plumbing and drain-laying in lasting materials.

The lecturer then showed a large number of lantern slides of London buildings in illustration of his remarks, and of the different periods referred to, and, in conclusion, he said the constructional syllabus still held, but it was changing and altering with the advent of ferro-concrete, and we might be on the eve of new changes. He ventured to hope that our accidental inspirations might not come to an end, that our love for the study of antique architecture would still flourish, but that there would still remain among us those characteristics of the English school which had made the XIXth century so important in its freedom and originality in dealing with building. London had nothing at the present time to fear from a comparison with Continental capitals, although Berlin is making very rapid strides after us. The law of construction was all that could be defined, and let artistic liberty have as much freedom and as much money as could possibly be allowed it.

On the motion of the Chairman, a hearty vote of thanks was accorded to the lecturer

ALEXANDER THOMSON TRAVELLING STUDENTSHIP.

THIS Studentship, which is awarded triennially and is of the value of 60*l.*, has this year been awarded to Mr. Jas. Bennet. The subject on this occasion was a design for a bridge, and in addition studies of the Orders and from the antique were asked for in terms of the conditions governing the competition, of which the Glasgow Institute of Architects are the trustees. Only three competitors sent in drawings for the prize; but it is gratifying to know that the work of the winner is good enough to have won against a larger number. Mr. Bennet's design is the only one that at all conforms to the general conditions governing the competition, which requires work based on the principles so ably exploited by the late Alexander Thomson, and is a very well conceived design shown by admirable drawings. He has adopted a steel construction with

posed lattice girders, these latter, perhaps, ther lacking in depth for their span, sup- rted by quasi-Doric columns flanking piers, whole in five spans with quarter circle onnades and pylons at either end. The rspective view, though a river drawing, rely does justice to the design as it phasises the comparative lowness of the ns.

The other two competitors, while showing ne good studies, are lacking in a grasp the essentials of the problem. One of m has devoted much more time and ought to designing the buildings to which e bridge might form an approach than to e bridge itself, and the other has been led ay in an attempt to emphasise the piers the bridge, and has divided his bridge the ends by twin arches which might be ry convenient for controlling traffic, but is scarcely a monumental treatment of a adway. Both have adopted a free Renais- nce treatment, which, as mentioned, does t conform to the general conditions.

GENERAL NEWS.

Professional Announcement.

The partnership which has existed for ny years between Mr. Keith D. Young, R.I.B.A., and Mr. Henry Hall, F.R.I.B.A., s been dissolved as from December 31, 11, owing to the retirement from practice account of serious ill-health of Mr. Hall. s from January 1, 1912, Mr. Young has ken into partnership Mr. Alner Wilson all, A.R.I.B.A., the son of Mr. Henry all, who was articled to Mr. Young, and me time ago qualified himself by examina- on as an Associate of the Royal Institute British Architects. The name of the m, therefore, will not be changed.

New Australian Offices.

It is stated that Mr. A. Marshall Mac- enzie, A.R.S.A., architect of the new arischal College at Aberdeen, has been lected by the Australian Government to esign the new offices of the Commonwealth Kingsway.

nternational Archæological Congress, Rome.

The third meeting of the International ongress will be held in Rome, on October 9- 5. Amongst the sections are those for pre- storical, Oriental, Early Hellenic, and truscan, and Italian archæology; Greek and oman antiquities; the history of classical t; ancient topography; Christian archæ- ogy; and the organisation of archæological ork. Letters and inquiries will be received y the General Secretary of the Ordinary ommittee, Professor Lucio Mazini, Direzi- ne-Generale di Antichita e Belle Arti, iazza Venezia, 11, Rome.

Mr. Pierpont Morgan's Art Collection.

The Board of Education announce that the radual withdrawal by Mr. Pierpont Morgan f the collection exhibited by his kind per- ission on loan at the Victoria and Albert Iuseum began with the removal of ne enamels on Monday, February 5. No efinite arrangements for the withdrawal of ny other part of the collection have as yet een made, but it is anticipated that the ext portion to be removed will be the ollection of silversmiths' work.

The London Society.

A proposal has been made to establish a ociety under this title with the object of dvancing the practical improvement and rtistic development of London, and a pre- minary meeting will be held at the alleries of the Royal Society of British rtists, Suffolk-street, W., at 8 p.m., on the th inst., with a view to its inception. Sir aston Webb, C.B., C.V.O., R.A., has romised to preside.

Designs for Mural Painting.

The Committee, of which Mr. D. S. facColl is Chairman and Mr. Charles Aitken nd Mr. Wilfrid Walter as joint Hon. ecretaries, formed to promote the practice f mural painting in schools, churches, hos- itals, and other public institutions, more specially by young artists and students, will hold a competitive exhibition of designs at Crosby Hall, Chelsea, in the latter part of May.

R.'s Method of Perspectives.

Mr. Roberts, author of R.'s Method of Perspectives, is again showing and demonstrating his method to London architects. He has developed his original idea of perspective-squared paper, new points, etc., making the diagrams useful not only for making finished perspectives, but for rapidly roughing-out any details to scale in perspective. Mr. Roberts is willing to demonstrate his method during his year's stay in London, and appointments can be made through his home address, 51, London-road, Ipswich.

The Rougemont Estate, Exeter.

This estate has just been sold, and passes into private ownership again. Portions of the city and castle walls of Exeter are within the boundaries of the estate.

The Florentine Academy of Arts.

The Florentine Academy of Arts has conferred the distinction of Honorary Academician on Count Plunkett, Hon.A.R.I.B.A.

COMPETITION NEWS.

Stafford Public Library.

We are advised that the assessor, Mr. H. T. Hare, F.R.I.B.A., made his award yesterday (Thursday). We hope to announce the result in our issue of next week.

East Sussex Hospital, Hastings.

The premiums in this competition were 125*l*., 75*l*., and 50*l*. Mr. Edwin T. Hall, F.R.I.B.A., has now given his award, which is as follows:—First premiated design, Messrs. John Saxon Snell & Stanley M. Spoor, 37, Maida-vale, London, W.; second premiated design, Messrs. C. K. & T. C. Mayor, 41, John Dalton-street, Manchester; third premiated design, Messrs. Adams & Holden, 28, Woburn-place, Russell-square, W.C. The designs are to be exhibited at the Drill Hall, Middle-street, Hastings, from February 13 to 15.

The public exhibition of designs is, by request, to be extended to Saturday, the 17th (five days in all). The hours will be from ten to five, and on the last day (Saturday) from ten to seven. The change is made for those who may only be free at the end of the week.

Scottish National Memorial to His Late Majesty King Edward VII.

It has been decided that this memorial is to be placed in Edinburgh, and, subject to the approval of his Majesty King George V., it is to be associated with the Palace of Holyrood in the form of a suitable memorial erected in or near the Palace grounds, with appropriate public accesses. The Committee, some weeks ago, resolved that a number of architects in Scotland should be invited to send designs for the proposed memorial, and the following gentlemen have accepted the invitation, viz.:—Sir Robert S. Lorimer, A.R.S.A., F.R.I.B.A., Edinburgh; Mr. G. Washington Browne, R.S.A., Edinburgh; Mr. Hippolyte J. Blanc, R.S.A., F.R.I.B.A., Edinburgh; Mr. John J. Burnet, LL.D., F.R.I.B.A., Glasgow; Mr. Henry E. Clifford, F.R.I.B.A., Glasgow; and Mr. Robert J. Macbeth, F.R.I.B.A., Inverness. It is left to competitors to suggest a site in the neighbourhood of Holyrood, and also the form that the memorial may take, but it is desirable that it should include a statue or other personal representation of his late Majesty. The designs submitted are to be illustrated by a model and drawings, and these are to be lodged with the Town Clerk by March 30 next.

CORRESPONDENCE.

The Bonâ-Fides of the Competitors for the R.I.B.A. Studentship.

SIR,—Many will have read with interest and pleasure your remarks last week concerning the bona-fides of the competitors for the R.I.B.A. Studentships.

As regards the question raised at the meeting to which you refer I know nothing, but you are right in your conjecture that this is not a case of isolated discontent.

Some of the students at South Kensington are members of the architectural profession, taking a course of study at the Royal College of Art, and no exception can be taken to their entering as competitors so long as the designs, etc., sent in, are entirely their own. But it is common knowledge that the Owen Jones prize has, in the past, been awarded to men who were not in and had no intention of entering the profession.

Under such circumstances one is justified in saying that the matter is one that does concern the welfare of our art.

No one will grudge an artist any prize he may wrest from this philistinic world, but the Owen Jones was founded for the study of architecture, "more particularly in relation to ornament and colour decoration," and was to be open to members of the architectural profession.

Would it not be better for the welfare of architecture as an art, and even for the art students and artists whom I propose to exclude, if the competition were restricted entirely to architects or students intending to become such?

For not until architects in general have a much finer appreciation of colour and its possibilities in relation to architecture than they have at present will much progress be made, and not till then will mural painters, artists, and craftsmen receive at the hands of our profession the recognition they deserve.

An important prize such as is the Owen Jones, reserved strictly for competition among architectural students only, would do much to further the study of colour and ornament among many who now, perhaps, feel that it is hopeless to compete against craftsmen who have trained and specialised in their subject for years. Wider interest would be aroused and many more entries result. Also, whether the splendid scheme with regard to the greater coherence of the competitors outlined in your leading article, is adopted or not, should not, in the particular case of the Owen Jones prize, far more attention be directed to complete schemes of colour, decoration, and ornament, in relation to architecture, instead of the fragmentary contributions—copies of isolated pieces of wall-paintings, mosaics, and stained glass, that usually receive the award?

H. S. FLEMING, A.R.I.B.A.

The Crystal Palace and the National Folk Museum.

SIR,—Will you kindly correct a "slip" which has occurred among your "Notes" this week.

I am one of the promoters of the scheme for a Folk Museum at the Crystal Palace, and I am the present Director of the National Museum of Ireland. Colonel Plunkett, formerly Director of the Dublin Museum, wrote lately in the *Times* in support of the Folk Museum project, and the writer of your "Notes" has—perhaps with some excuse—substituted my name for Colonel Plunkett's.

G. N. COUNT PLUNKETT.

[We have received a letter *re* the "Policy of the R.I.B.A." from "A Reader," but with no name or address. We shall be pleased to print the letter if "A Reader" will communicate with us.]

INTERCOMMUNICATION COLUMN.

Damp Plaster Wall.

SIR,—Could any of your readers inform me of the best way of treating the inside face of a very bad, damp (plastered) wall so that it will stand paint well? Q. S.

"Rotting of Floors."

SIR,—To prevent floors rotting under lino, sprinkle a layer of fine sand on the floor before laying the linoleum. This forms a minute air space and also absorbs any moisture that penetrates through the lino. Your correspondent is quite correct—it is the washing of the floor and the soaking of the water through the linoleum which causes the injury.

KERNER-GREENWOOD & CO.

EDITORIAL SUMMARY.

The leading article is entitled "Skeleton-Frame Buildings," and in the course of our comments on the regulations made by the London County Council we refer to some proposals of the District Surveyors' Association.

Notes (p. 142) include comments on: "The R.A. Lectures on Sculpture"; "Hints to Students"; "Dry Rot in Church Buildings"; "The R.I.B.A. Meeting-Room"; "The Institute Gold Medallist"; "Over-Elaboration of Plans."

A meeting of the R.I.B.A. was held on Monday, when the President delivered an address to students and Mr. Gerald Horsley made some criticisms on the designs submitted for the prizes and studentships. See p. 144.

The second Spring Visit of the Architectural Association this session took place on January 27, to the Regent-street Polytechnic. Some particulars of the visit appear on p. 147.

Professor R. T. Blomfield, A.R.A., delivered the first of his Royal Academy lectures on "Architecture" on Monday, taking as his subject "Architectural Drawing and Illustration," and dealing in the subsequent part of his lecture with Villard de Honnecourt. The second lecture was delivered on Thursday on "Some Draughtsmen of the XVIth Century." See p. 147.

Book Reviews (p. 149) include: "The Story of Ford Abbey"; "The Life of James McNeill Whistler"; "Costumes, Traditions, and Songs of Savoy"; "The Local Government Annual and Official Directory."

The second of the series of Carpenters' Hall Lectures on the "Arts Connected with Building" was delivered by Professor Beresford Pite on the 31st ult., the subject being "London: an Architectural Syllabus." Our report appears on p. 150.

The Alexander Thomson Travelling Studentship has been awarded to Mr. James Bennet. Some notes on his designs and the designs of the two other competitors are given on p. 150.

In Correspondence column (p. 151) will be found letters on: "The Crystal Palace and the National Folk Museum"; "The *Bona Fides* of the Competitions for the R.I.B.A. Studentships."

The Monthly Illustrated Review of Construction (p. 153) contains: "New Buildings in Central Paris"; "Automatic Temperature Regulation"; "Heating, etc., McGill University"; "Testing of Materials of Construction"; and Notes.

The Building Trade Section (p. 157) contains: "National Federation of Building Trades Employers of Great Britain and Ireland"; "Bristol Master Builders' Association"; "Clay Excavating Plant, Warnham"; "Leicester Building Trades Employers' Association," etc.

An abstract of a paper on "Smoke Abatement," read by Mr. Lawrence W. Chubb, Secretary of the Coal Smoke Abatement Society, before a recent meeting of the Institute of Sanitary Engineers, is given on p. 161.

In our Law Reports (p. 165) will be found a report of the case of "Cable *v.* Lewis"—Muswell Hill Houses.

MEETINGS.

FRIDAY, FEBRUARY 9.

Royal Sanitary Institute.—Dr. Charles Porter on "The Duties of a Sanitary Inspector: Offensive Trades." 7 p.m.

Royal Institution of Great Britain.—Mr. J. Allen Harker on "Very High Temperatures." 9 p.m.

The Institution of Civil Engineers.—Lecture on "Steam-Turbines: Some Practical Applications of Theory," by Capt. H. Riall Sankey, R.E., M.Inst.C.E. 8 p.m.

Battersea Polytechnic (Lectures on Illuminating Engineering).—Mr. J. S. Dow, B.Sc., on "Colour of Artificial Illuminants." 7.30 p.m.

Leicester and Leicestershire Society of Architects.—Mr. Beckwith A. Spencer (Royal College of Art) on "Italian Mural Decoration in the XIVth and XVth Centuries." Lantern slides. 8 p.m.

SATURDAY, FEBRUARY 10.

Clerks of Works' Association.—Twenty-ninth annual dinner, King's Hall, Holborn Restaurant. 6 p.m.

Royal Sanitary Institute (Meeting in the Board Room, Poor Law Offices, Shakespeare-street, Nottingham).—Discussion on "Local Public Health Administration and the Insurance Act," to be opened by Alderman T. J. Dabell, M.R.S.S., J.P., Chairman, Health Committee, Nottingham. 11 a.m.

MONDAY, FEBRUARY 12.

Architectural Association.—Mr. Paul Waterhouse on "Bridges." 7.30 p.m.

Royal Academy of Arts.—Professor R. T. Blomfield, A.R.A., on "French Draughtsmen of the XVIIth Century." 4 p.m.

Royal Sanitary Institute.—7 p.m.

The Institute of Sanitary Engineers (at the Royal United Service Institution, Whitehall).—Discussion on "Hospitals and Sanatoria and their Relation to Tuberculosis," to be opened by Mr. A. Alban H. Scott and Dr. F. C. Davies. 8 p.m.

Junior Institution of Engineers (Combined Meeting with the Architectural Association, at 18, Tufton-street, Westminster).—Paper on "Bridges," by Mr. Paul Waterhouse, M.A., F.R.I.B.A. 7.30 p.m.

The Incorporated Clerks of Works' Association (Carpenters' Hall, London-wall). Paper by Mr. Arthur Robinson (Paripan Company) on "The Sanitary Decorative Finish of Buildings." 8 p.m.

TUESDAY, FEBRUARY 13.

Northampton Polytechnic Institute (Lectures on Illuminating Engineering).—Mr. S. Field on "The Chemistry of Gas Manufacture and Lighting." 7.30 p.m.

Institution of Civil Engineers.—Papers on "The Water Supply of the Witwatersrand," by Mr. D. Calder Leitch, M.Inst.C.E; and "Investigations Relatiting to the Yield of a Catchment-Area in Cape Colony," by Mr. E. C. Bartlett, M.Inst.C.E. 8 p.m.

WEDNESDAY, FEBRUARY 14.

Carpenters' Hall, London-wal (Lectures on Arts Connected with Building).—Mr. T. Stirling Lee on "The Sculptor's Craft" (demonstrated and illustrated). 7.45 p.m.

Royal Society of Arts.—Mr. Cecil Thomas on "Gem Engraving." 8 p.m.

Royal Sanitary Institute.—Dr. G. F. McCleary on "Methods of Disinfection." 7 p.m.

THURSDAY, FEBRUARY 15.

Carpenters' Hall, London-wall.—Sir R. Hanbury Brown, K.C.M.G., on "The Nile in English Harness." 8 p.m.

Royal Academy of Arts.—Professor R. T. Blomfield, A.R.A., on "Italian Draughtsmen of the XVIIIth Century, and Piranesi." 4 p.m.

Society of Antiquaries.—8.30 p.m.

FRIDAY, FEBRUARY 16.

Royal Sanitary Institute.—Dr. G. F. McCleary on "Elementary Statistics." 7 p.m.

The Royal Institution.—The Rt. Hon. Sir J. H. A. Macdonald, K.C.B., LL.D., on "The Road: Past, Present, and Future." 9 p.m.

Battersea Polytechnic (Illuminating Engineering).—Mr. J. S. Dow, B.Sc., on "Practical Lighting Problems." 7.30 p.m.

Edinburgh Architectural Association.—Associates' annual dinner. 7.30 p.m.

Glasgow Technical College Architectural Craftsmen's Society.—Mr. J. Muir on "The Management of Building Contracts." 7.15 p.m.

Institution of Mechanical Engineers.—Annual general meeting. 8 p.m.

Institution of Civil Engineers (Students' Meeting).—The Vernon-Harcourt Lectures on "Works for the Prevention of Coast-Erosion," by Mr. W. T. Douglass, M.Inst.C.E. 8. p.m.

SATURDAY, FEBRUARY 17.

Architectural Association.—Third spring visit, to the British Museum Extension. 2 p.m. at the building.

Aberdeen Architectural Association.—Mr. J. A. Ogg Allan on "The Educational Buildings of America." Illustrated. 7.30 p.m.

Junior Institution of Engineers.—Annual dinner, at the Hotel Cecil, London. Commendatore G. Marconi, D.Sc., President, in the chair. 7.30 p.m.

ENGINEERING SOCIETIES.

The Society of Engineers (Incorporated).

The first ordinary meeting of the present session was held on Monday at the Institution of Electrical Engineers, Victoria-embankment, W.C. The chair was first occupied by the retiring President, Mr. F. G. Bloyd, who presented the following premiums awarded for papers published in the *Journal* during 1911:—The President's Gold Medal to Mr. W. R. Baldwin-Wiseman for his paper on "The Administrative Aspect of Water Conservancy"; the Clarke Premium to Mr. T. J. Guerittе for his paper on "The Mechanical Installation and Upkeep of Permanent Way on Railways"; the Bessemer Premium to Mr. R. W. A. Brewer for his paper on "Two-Stroke Cycle Engines"; a Society's premium to Mr. E. Kilburn Scott for his paper on "Nitrogen Products made with the Aid of Electric Power"; a Society's premium to Mr. F. G. Woollard for his paper, entitled "Some Notes on Drawing Office Organisation." Mr. Bloyd then vacated the chair in favour of Mr. John Kennedy, the President for 1912, who was received with acclamation. A vote of thanks to the retiring President was proposed and heartily accorded.

The President then delivered his inaugural address, which dealt with shipbuilding and marine engineering.

A cordial vote of thanks was given to the President for his address, and the meeting terminated.

The Institution of Civil Engineers.

At the ordinary meeting on Tuesday the elections of new members, Associate members, and Associate, and admissions of students were reported. Mr. H. G. Williams, West Dulwich, S.E., was elected a member, and twenty-one Associate members were elected.

ILLUSTRATIONS.

The R.I.B.A. Tite Prize Drawings.

WE illustrate in this issue the Tite Prize design of Mr. Louis de Soissons and also the design by Mr. T. H. Chalkley, which received a certificate of Hon. Mention. We referred to these designs in our issue for January 26, and this week (p. 144) we give Mr. Gerald Horsley's criticisms made at the meeting of the Institute on Monday. Mr. De Soissons writes: –

"The dominant factors which have influenced my design for the Tite Prize are simplicity and dignity. Simplicity, because a Royal Exchange, a place where affairs of international importance are transacted, is in no way associated with a place of amusement. It must have repose and dignity. To obtain this effect it is essential the design should assume a monumental scale. From the monumental is but too easy a step to the error of the gigantic. The medium exists in the "grand manner" of tradition, and it is in this spirit I have endeavoured to render the design in so far as it is possible with the necessities of modern building. This medium is too often forgotten in contemporary work. Men, realising the incongruity of adapting the gigantic to modern conditions, are too apt to fall to the insignificant, and apparently forget the happy medium created by such forbears as Inigo Jones, Wren, and Vanbrugh in England, De L'Orme, Perrault, and Mansart in France. It is this tradition in design which has given its direction to my study of the problem."

Mr. Chalkley writes:—

"The dominant ideas which, it was considered, should govern a design for a Royal Exchange were that it should have dignity—representative of the city's political and civic importance—simplicity, because of its special use and purpose, yet so treated as to be a monument to the city's wealth and of the excellence of its craftsmen, artists, and sculptors.

The courtyard was planned circular in form, simple and appropriate, and producing, undoubtedly, the finest and grandest internal effect.

Dignity was given primarily by the plan—by the dome as a roof covering—the treatment of the vertical height in one Order; the unbroken entablature and by the studied gradation in the application of ornament that gives to the dome a rich appearance and treats the lower parts very simply.

A Royal Exchange is built for all ages and all classes of business men; it is an essential feature of a city which plays its part in the national and political life of the country, and it must contain within itself allusions to these things.

These thoughts were expressed by the various sculptured groups and panels in the courtyard, and the provision made for wall paintings in the arcade."

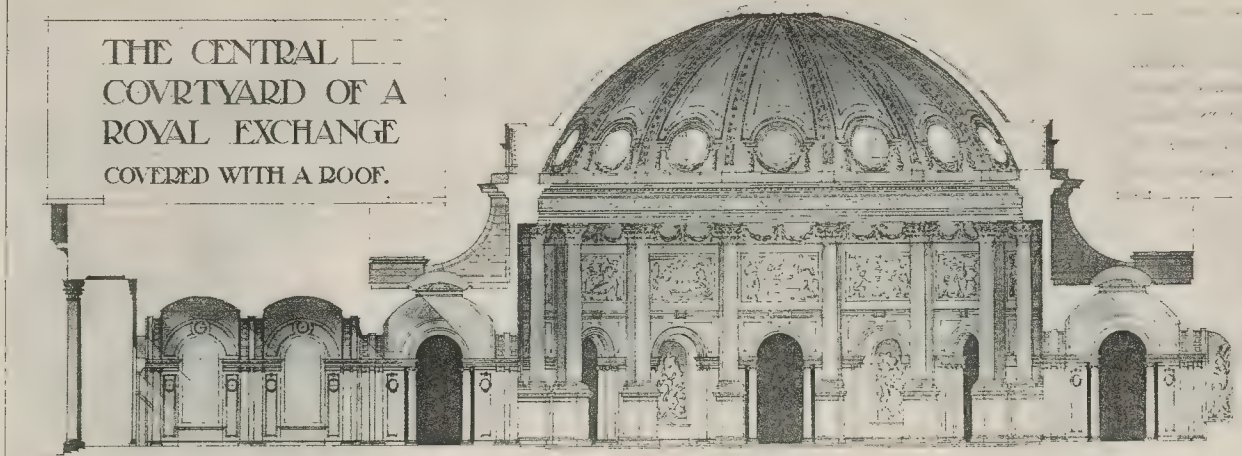
FIFTY YEARS AGO.

From the *Builder* of February 8, 1862.

Brussels "Palais de Justice" Competition.

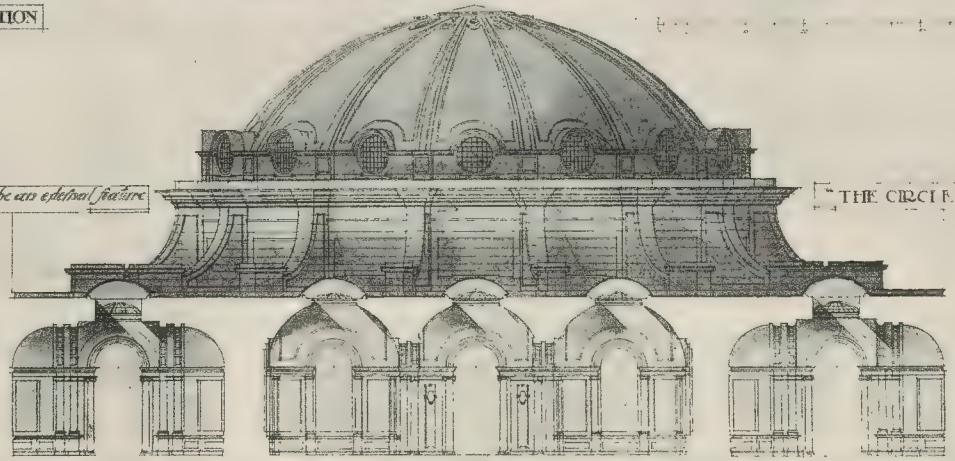
THE Belgian Government selected designs from those sent in competition, by a Brussels architect, an Antwerp architect, and an English firm, Messrs. Green & De Ville; but in lieu of presenting the premiums offered have awarded greatly reduced sums. Endeavours are being made, we believe, through the Royal Institute of British Architects, to induce the Belgian Government to reconsider this very shabby and unjust proceeding.

THE CENTRAL COURTYARD OF A ROYAL EXCHANGE COVERED WITH A ROOF.



LONGITUDINAL SECTION

The dome was not designed to be an ecclesiastical feature

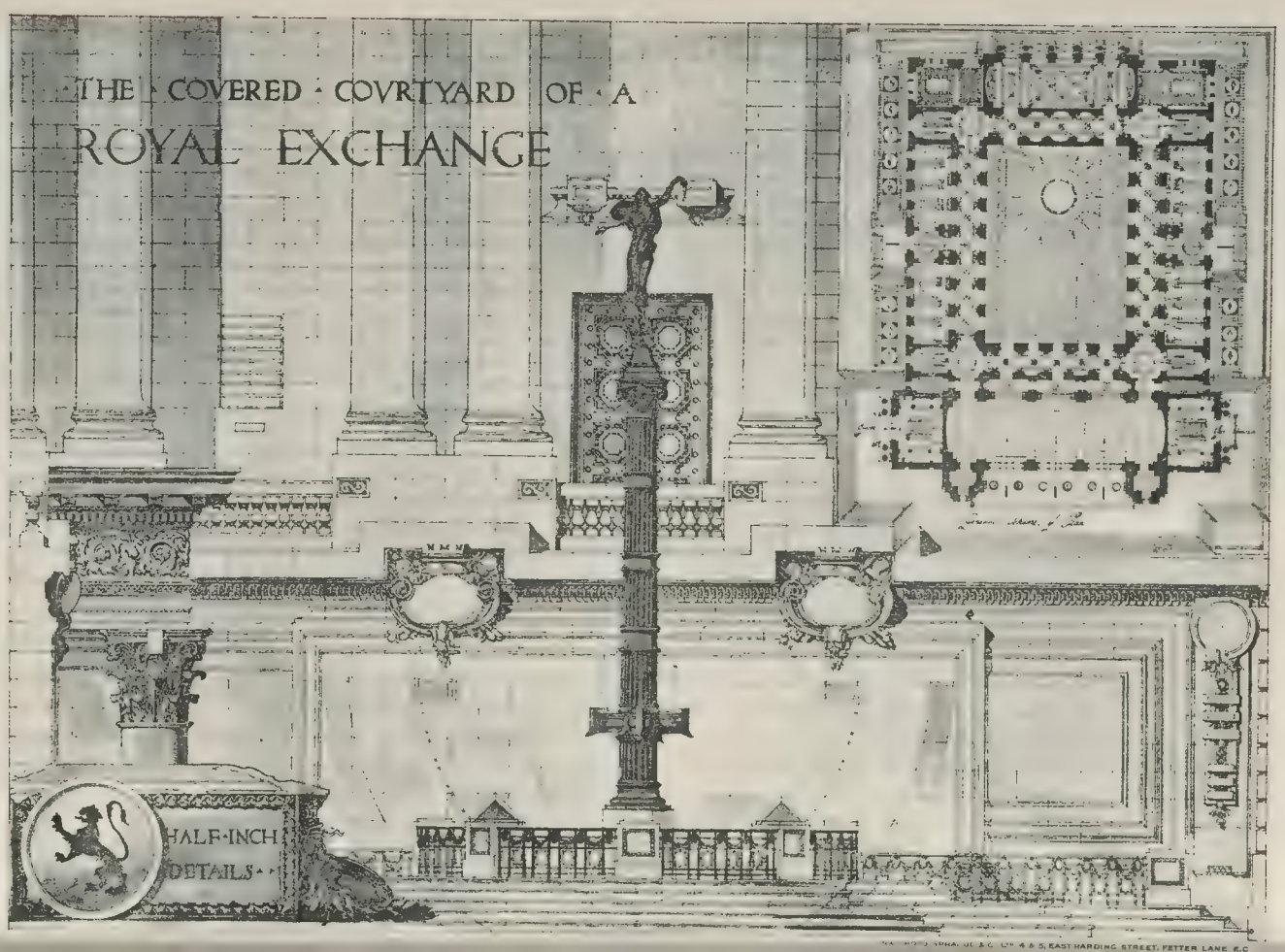


THE CIRCLE

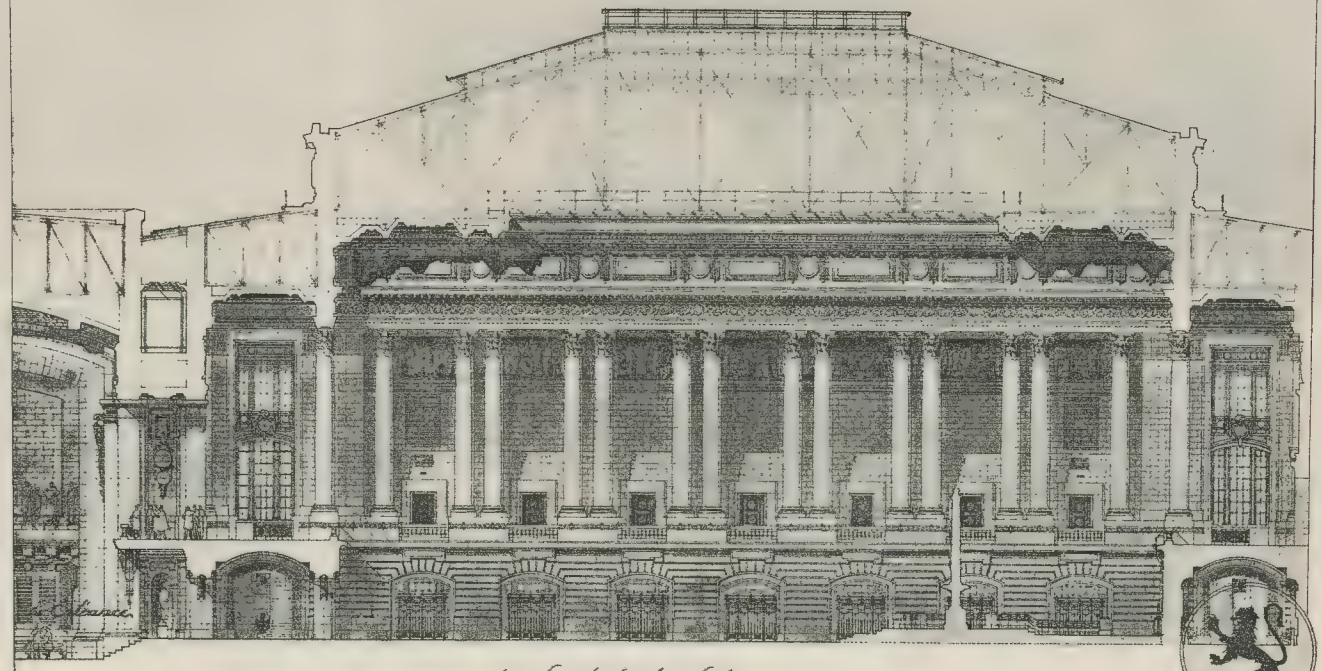
The surrounding Offices and Shops.

CROSS SECTION

INK PHOTO SPRAGUE & Co 1ST 4 & 5, EAST HARDING STREET FETTER LANE E.C.


THE COVERED COVRTYARD OF A
ROYAL EXCHANGE
HALF-INCH
DETAILS

THE COVERED COVRTYARD OF A ROYAL EXCHANGE



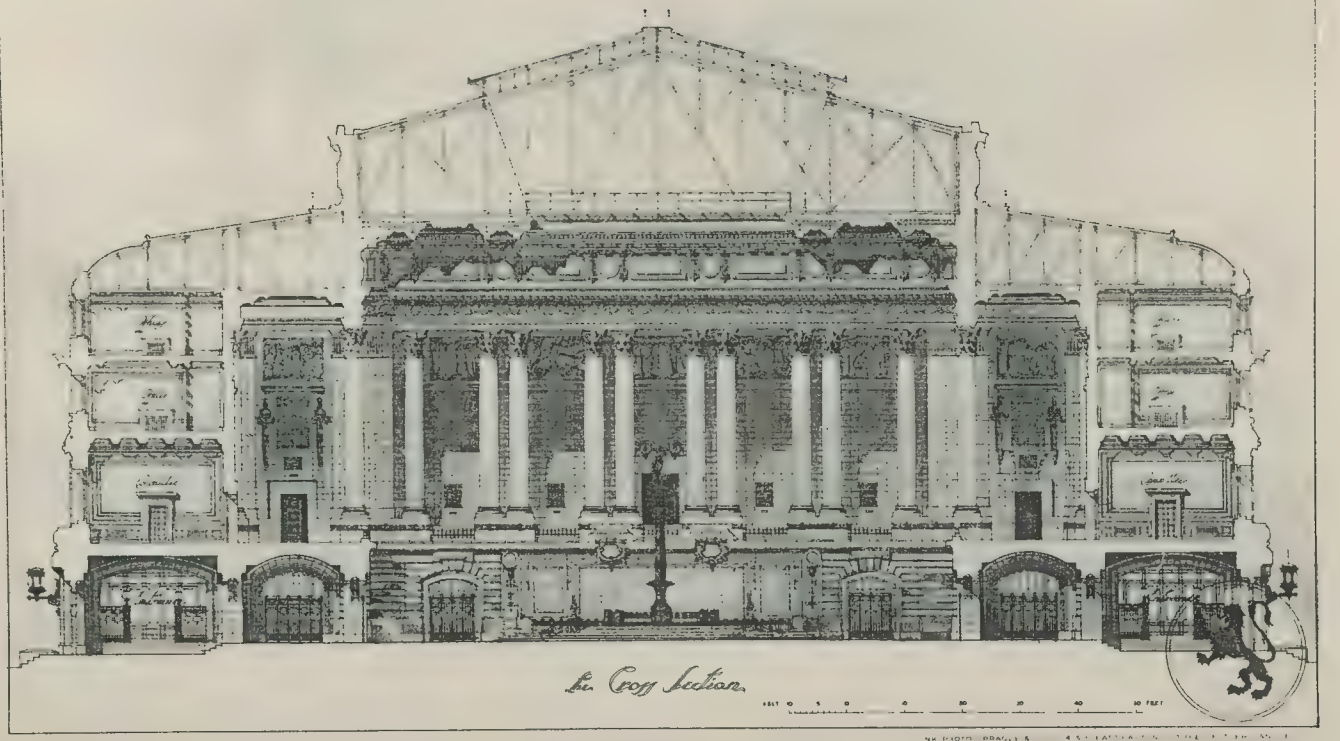
Sec. Longitudinal Section.

FEET 10 5 0 10 20 30 40 50 FEET

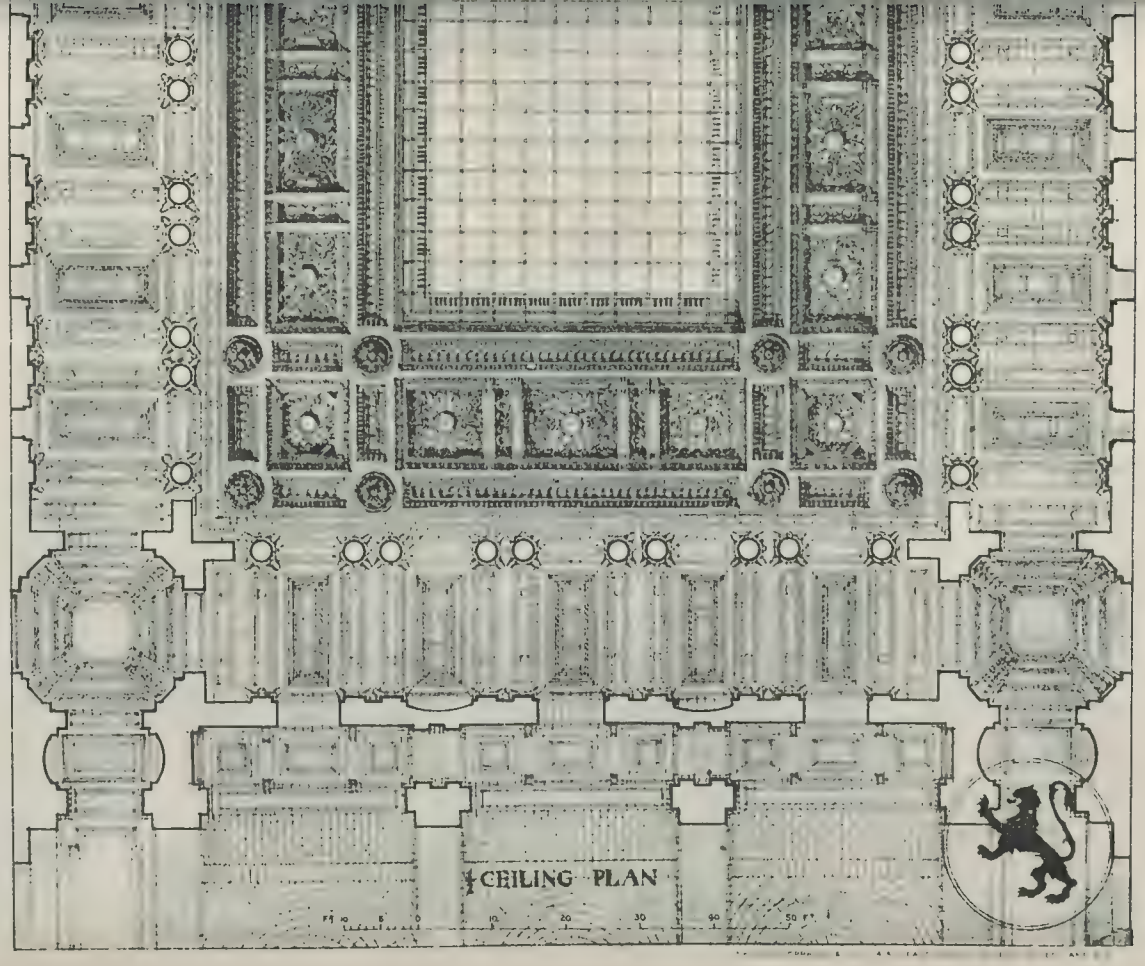
INK PHOTO SPRAGUE & C° L° 4 & 5, EASTHARDING STREET FLTER LANE E.C.

THE · COVERED · COVRTYARD · OF · A ··

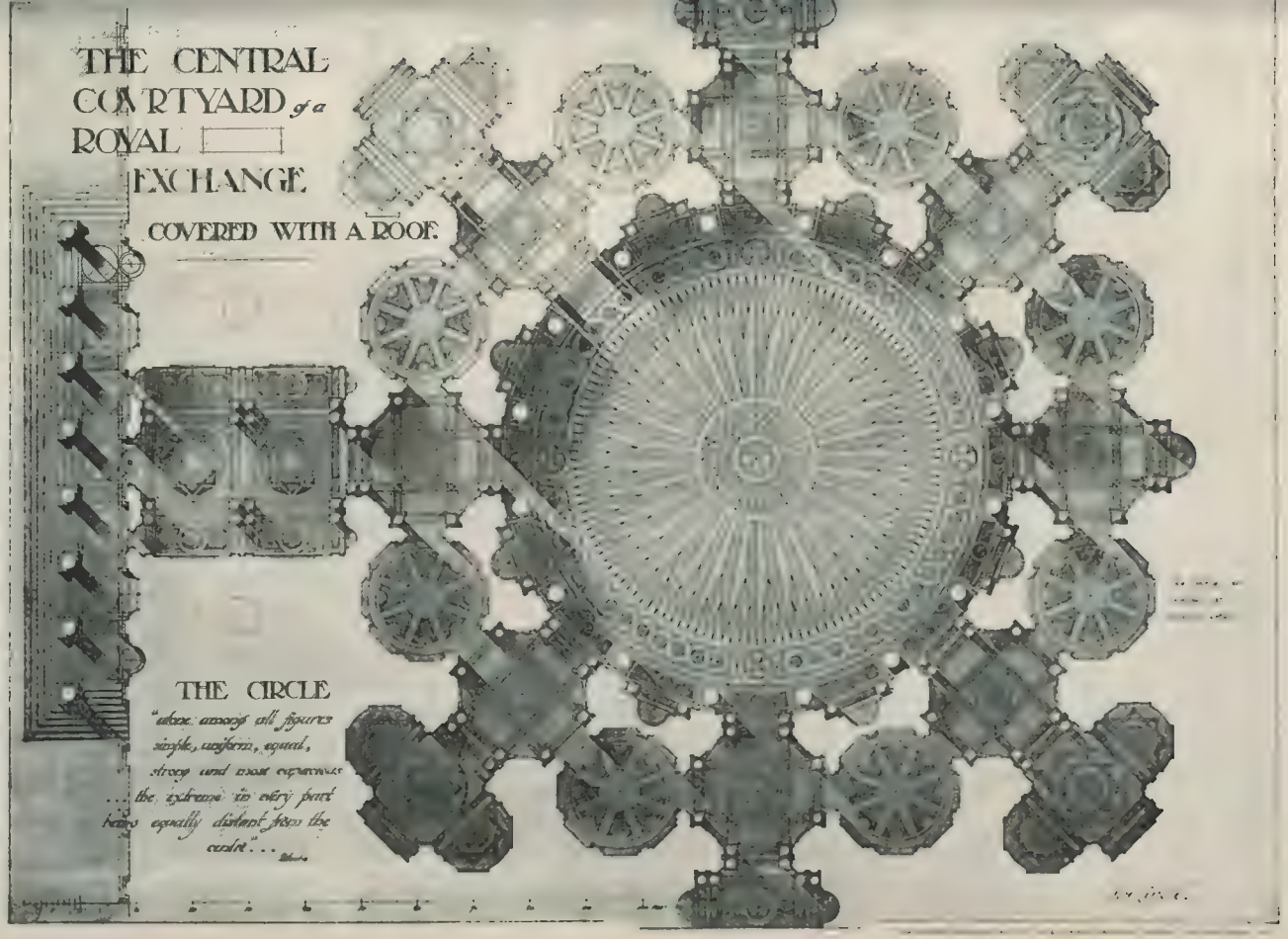
ROYAL EXCHANGE



R.I.B.A. TITE PRIZE DESIGN. By Mr Louis de Soissons



R.I.B.A. TITE PRIZE DESIGN.—By Mr. Louis de Soissons.



R.I.B.A. TITE PRIZE: CERTIFICATE OF HON. MENTION—Mr. Thomas H. Chalkley.

MONTHLY REVIEW · *of* · CONSTRUCTION.



Fig. 1. Front Elevation of New Buildings.

NEW BUILDINGS IN CENTRAL PARIS.

SINCE the days of the Restoration the Boulevard des Italiens—then named the Boulevard de Gand has remained he boulevard" of Paris, having lost hing of its former animation, notwithnding the disappearance of some famed ablishments which were popular resorts in time of Balzac. Nevertheless it may be nitted that the architecture of the buildings ves much to be desired, a point brought relief by the large office buildings conicted of late by sundry insurance corporas, prominent among them being those of New York Life and the Equitable comies. Further improvement of the boulevd from the artistic standpoint will result n the rebuilding operations now in gress between the Rue Taitbout and the e de Helder on the north side of the street. are indebted to our contemporary, *le ie Civil*, for the illustrations and particus given of these interesting works in the sent article.

General Features of the Project.

For some years past l'Urbaine-Vie Assure Company have been acquiring one by the buildings occupying the angle ned by the Boulevard des Italiens and the e Taitbout, with the intention of rebuilding property and opening a new street from boulevard to the *carrefour* at the end of Boulevard Haussmann.

But the land requisite for the complete lisation of this project could not be purssed, and the scheme has been modified as wn in Fig. 2. Part of the land has been d to *Le Temps* newspaper proprietors for erection of new offices, and the remainder the site, with frontages of 86·40 metres on Boulevard des Italiens and 78·80 metres on Rue Taitbout, will be occupied by new ldings and a private road, the Rue des liens, forming a thoroughfare for foot sengers and a cul-de-sac for vehicles. The nd site at the right hand has a frontage 47·50 metres on the boulevard, the new eet is 13·05 metres wide, and the site at the hand has a frontage of 29·00 metres on the levard, the other dimensions and general angement being shown by the plan. Fig. 1 strates the façades on the Boulevards des iens.

Although in the form of two blocks above eet level, the buildings are connected by a tinuous basement, with the average height 5·50 metres. and in this respect resemble new General Post Office buildings in ndon. In a situation where every square re of land represents a value of several nsands of francs it is very important to ise all available space. Consequently the Rue des Italiens is carried by two series reinforced concrete beams and a conous slab of the same material, forming a spacious addition to the basement which will be divided up and rented to the occupants of shops on each side of the street.

The right-hand block of buildings occupies a site of 2,275 square metres, and the left-hand block one of 1,635 square metres, while the connecting basement and roadway take up the area of 1,200 square metres.

As will be noticed by the elevations in Fig. 1, the architectural features of the two blocks are practically uniform, the only material variations being those entailed by the regulations of the city authorities with regard to the height of roofs. The ground floor in each case is entirely devoted to shops, with the exception of the space necessary for entrances and lodges for the concierges. The right-hand block has three entrances, two on the Rue Taitbout and one on the Rue des Italiens, each with a passenger and goods lift. The left-hand block has only two entrances, both on the Rue des Italiens.

Fig. 3 is a drawing which shows the architectural treatment of the upper part of the façades and roofs.

Main Structural Features.

Each block will be erected first in the form of a complete steel skeleton of seven or eight stories according to position, extending from the foundations to the roof. The skeleton will afterwards be clothed by masonry walls, floors, and roof covering, as well as by enclosures for entrances and stairways. Fig. 4 is a half-section of the right-hand block illustrating the general construction.

The façades proper only start at first-floor level, for practically the whole of the ground-floor frontages will be left free for the large windows demanded in the present day for the display of goods, the only breaks in the wide expanse of glass being the entrance doorways and the covered stanchions of the steel frame. Having in view this inexorable demand on the part of business people, the architect has deliberately regarded the façades as non-existent up to first-floor level, and has strengthened the main stanchions below that level so as to carry the loads transmitted from the upper part of the structure.

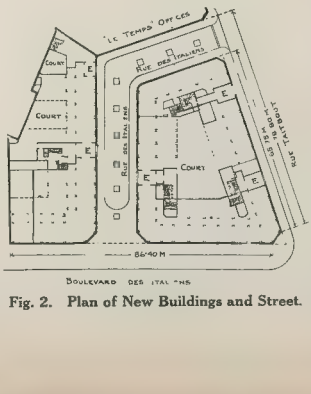


Fig. 2. Plan of New Buildings and Street.

Above the first floor the stanchions rise to the roof, their dimensions being decreased from point to point. Some of the stanchions are of H and others of J form, and between the flanges descend the rain-water pipes, and provision has been made for the accommodation of other pipes and conduits, also between the flanges. In addition to the main stanchions, there are others for the support of stairway and lift enclosures as well as for interior partitions to be built later in accordance with the requirements of occupiers. The roof frame and covering consist of steel principals with timber rafters, an insulating lining of pulverised cork, and lathing covered with slates. The crest of the roof is formed of timber framing covered with zinc.

It should be noted that neither of the buildings will be finally completed until tenants have been secured for the various floors. The first stage of the building programme simply involves the construction of a steel-framed masonry shell leaving each story in the form of one large apartment with no interior partitions but the walls of light wells and stairway and lift enclosures. The second stage will include the establishment of interior partition walls and fittings in accordance with the needs of private residents or business firms, and the floors have been designed so that they will be able to sustain the weight of partition walls wherever placed. Provision has been made for carrying away waste water from baths and sinks in any part of the building, and numerous ducts have been included to serve the purpose of chimneys or ventilation shafts as may hereafter be found requisite.

Bearing in mind the two successive phases of construction, the architect came to the conclusion that a steel skeleton would be more convenient than one of reinforced concrete, and consequently limited the employment of the latter material to the construction of retaining walls and the supports and decking for the roadway and footpaths of the Rue des Italiens.

The principal court of the right-hand block will be covered, as shown in Fig. 4, and windows above the covering will admit light and air to the ground floor of the surrounding building. The courts of the other block are similarly treated, and the light wells descending to the sub basement are protected with glazed roofs and louvres for ventilation purposes.

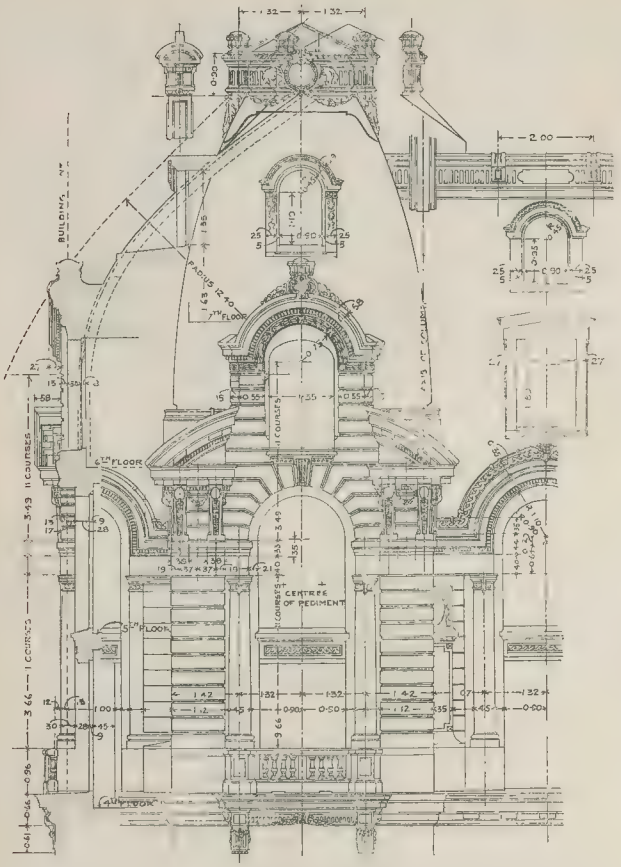


Fig. 3. Typical Details of Façade.

Construction of the Rue des Italiens.

This new street to which access can be gained by vehicles from the Rue Taitbout end only and by pedestrians from either end is formed by a decking of reinforced concrete carried by longitudinal and transverse beams supported on columns of the same material. The transverse beams are stiffened by brackets projecting from the columns, and providing support for an arched ceiling to the space beneath the roadway. Fig. 5 is a half-section showing the details of construction. The roadway proper consists of a foundation bed of concrete, a layer of asphalt, a bed of rough concrete, and asphalt paving. Along the centre line of the street a row of standards serve for the support of electric lamps, and at the same time provide outlets for the escape of air from the sub-basement. Between the reinforced concrete and steel columns on each side of the street there is a gallery for the reception of pipes and conduits. The galleries are to be used only by the employees of the proprietors, and in consequence the space beneath the roadway is only accessible from the sub-basement. The reinforced concrete framework and decking was calculated for the superimposed load of 4,000 kilogrammes per square metre on the roadway, and 800 kilogrammes per square metre on the foot pavement.

Progress of the Works.

Early last year the Rue des Italiens was opened up at the Rue Taitbout end, and the offices of *Le Temps* were built. During July the contractors were placed in possession of the entire site, but, owing to a strike, were unable to commence the work of demolishing the old buildings until the middle of September. Three months later 45,000 cubic metres of earth had been excavated, and the trench was cleared to sub-basement level. The foundation blocks for the columns were next executed in reinforced concrete, and before the end of the year the building contractors commenced the erection of a large

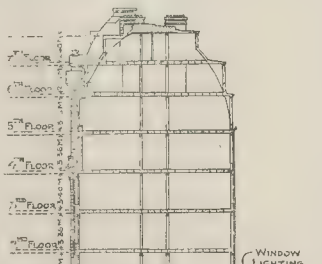


Fig. 4. Half Vertical Section of Right-hand Block.

double derrick commanding one-half of t site, the other half being equipped wi timber staging carrying a platform on whi was mounted a travelling crane. To the t derrick towers, 43 and 47 metres high, spectively, two pivoting masts were connecte at the top by horizontal rods, each m carrying a horizontal arm pivoting with and commanding a radius of 20 metres at a height up to 30 to 35 metres, as require above street level. Materials are brought the site and unloaded directly by the fi derrick, which delivers them to the site work in hand, or deposits them at a poi whence the second derrick can transfer the to staging built over the foot pavement of t boulevard. Ultimately the second derri will deliver materials direct to the workm in the Rue des Italiens, as soon as the n street is accessible by waggons.

Good progress has been made with reinforced concrete work generally, and at t present time concrete is being deposited the moulds erected along the entire course the new street.

It is hoped that the first stage in the co struction of the two blocks of buildings w be completed before the end of this year, a that the interior walls, partitions, and fittin will be added soon after, so that tenan

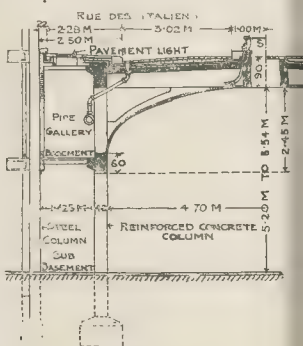


Fig. 5. Half Cross-Section of New Stree and Basement.

may take possession of premises arranged their individual liking during the early pa of 1913.

Architect and Contractors.

The whole of the works were designe for the Compagnie l'Urbaine-Vie, their execution is being superintended M. Edouard Arnaud, Architecte Diplôm M.Soc.Ing.Civ.(France) and Professor Architecture at l'Ecole Centrale, Paris. M Fossard & Lesieur were contractors for demolition of the buildings swept away, the work of excavation was entrusted MM. Laubeuf & Lécluse.

The steelwork for the right-hand block is the hands of MM. Moisant, Laurent, Savey, and the masonry contractor for same block is M. Gilardi.

MM. Baudet & Donon are the contracto for the steelwork in the left-hand block, masonry contractor being M. Devillette.

The construction of the roadway and oth reinforced concrete work was allotted to Pradeau, licensed contractor under the Henn bique system.

The magnitude of the works described m be gauged to some extent by the fact that purchase and demolition of the old building and the construction of the new blocks a street will involve an outlay of about twent eight million francs.

AUTOMATIC TEMPERATURE REGULATION.

At the annual general meeting of t Institution of Heating and Ventilati Engineers (Incorporated) on Tuesday a pap on "Automatic Temperature Regulation was read by Mr. Herbert A. Jones. In t course of his remarks he said :—

"In this country the question of automa temperature regulation has up till qu

ently failed to arouse interest on the part owners of buildings, their architects, or isulting engineers, although such systems in extensive use in the United States, nada, and other countries, and are there arded just as much a necessity in the ipment of a building as the heating system lf. This lack of interest is probably due the fact that as compared to America we not experience anything like the extremes variation in temperature which Americans and this has generally been the reply one received when seeking to interest people e in a means of automatically controlling peratures. With such a reply the expert consulting engineer considers that he has lly settled the matter. If, however, he ked carefully into the subject he would d that automatic control was just as much ecessity and as desirable here, in spite of fact that we do not get great variations outside temperature. Those of you who e been in the United States and Canada e probably been struck with the com- rative comfort with which you could with- nd the extreme cold of their winters; this due to the dryness of the air. On the er hand, you have all met the American o complains that he cannot keep warm e in winter. These experiences are proof t small extremes of temperature in a nate that has large extremes of humidity, variations in the amount of moisture in air, are possibly more uncomfortable to perience than great extremes of tempera- e where the humidity is more constant.

The subject of temperature regulation is quently confounded with ventilation. The ter deals with the supply of fresh air, ile the former controls the temperature d prevents the rooms of a building from oming too hot or too cold. The advan- es derived from temperature regulation twofold :—

First.—By keeping the temperature of a lding (say, a school) at, say, 60 deg., all ste of fuel is prevented, and consequently onsiderable saving of money is effected. ndreds of pounds have been wasted in a gle school by overheating it and securing ooler temperature by opening the windows. ery particle of excess heat which goes of the windows is an actual waste of blic money. If the outdoor temperature 30 deg., it will require 30 deg. of heat bring the schoolroom temperature up to deg. If, however, the outdoor tempera- e is 50 deg., only 10 deg. of heat are uired to ensure the comfort of the oolroom. A reliable system of tempera e control will furnish the exact amount heat required and avoid all excess con- mption of fuel, and consequently save ney.

Secondly.—By keeping the classrooms at even temperature the health and comfort teachers and pupils are promoted. A ssroom that is too cold causes physical comforts which may result in ill-health. classroom that is too hot is even worse. e average teacher will resort to an open dow for relief. The draughts from these dows are certain to bring on coughs and ds, which only too frequently end in oat and pulmonary troubles. The cause education is as much promoted by hygienic roundings and physical comfort of pupils by teachers and text-books. Hence auto- tic temperature regulation for schools is oming regarded by the highest experts in country as a necessity.

Temperature regulation of buildings was empted as far back as sixty years ago, , of course, means the controlling of the rce of heat by means of a thermostat ced on the wall of the room heated. The d "thermostat" literally means a heat ulator, and whatever it is and on what- principle it works it is a thermostat. e records show that thermostats have been le since the middle of the XVIIIth cen- y, and many of the most renowned ntific minds have attempted to solve the blem. The want of success in most tems has been due to their feeble power because they were not adaptable to all ditions.

n efficient system of automatic tempera- e regulation should be able to control ween close limits (1 deg. Fahr. is usually enough) the temperature of any room, hall, or corridor; it should open or close the valves of the heating system, whether that be by steam, hot water, or gas. The action of opening or closing should be definite and prompt, as particularly in the case of steam valves; sluggish movement of partial closing causes "wire drawing" and early destruction of the valve seats. In addition to this, it should be capable of operating ventilators and starting fans, and so perfecting the ventilating system. Beyond this, the system should by its cumulative effect exercise a direct control and economy in fuel at the source from which the heat is generated.

The apparatus, and more particularly the thermostat itself, should be of good design, thoroughly sound construction, and capable of continuously acting accurately and definitely under all conditions of temperature with practically no attention. A proper system should be capable of being applied to existing systems of heating without material alteration, and then to give the full advantage as regards control of temperature, although, to get the additional advantage of economy in fuel, modifications at the source of heat may require to be made.

Very little thought is necessary to arrive at the definite conclusion that it is not possible to devise a thermostat for the purposes above described which has sufficient inherent power to perform the operation of opening and closing valves, dampers, etc., and it will therefore be found that all systems consist of thermostats which are really combined instruments, which one can term relays, in that the thermostatic strip or control element, or the thermometer in an electric system, is made to control the operation of a compressed-air, vacuum, or electric system, by which means the valves are actually controlled.

In giving a brief description of various systems with which I am acquainted, or have particulars of, I shall only refer to those which can properly be described as attempting to give temperature regulation, and this I define as an apparatus which, fixed in the position where it gets an average temperature, is affected by the same, and controls some distantly-placed valve or other mechanism through which the source of heat passes. In passing, however, I would say that there are several ingenious stoves and water-heaters which combine a thermostat with the heating apparatus. It is obvious, however, that these are heat regulators, and cannot hope to regulate the consequent or surrounding temperatures.

The following are some of the systems of temperature regulation at present on the market :—

The "Johnson" system.
The "Powers" system.
The "Nuvacuumette" system of Messrs. Ashwell & Nesbit, Ltd.

The above use either compressed air or a vacuum for the main operation of valves, etc.

The "Fournier" system, working by the pressure of saturated vapours.
The "Grundy" system, this being an electric system."

The author then described the systems referred to. In dealing with economy he said :

"That a system of automatic temperature regulation in which, besides the room temperature being regulated, the boiler-furnace draft is regulated also in accordance with requirements, is economical can readily be seen from a simple calculation :—

The average outside winter temperature is about 40 deg. Fahr.; if 70 deg. Fahr. is the desired room temperature, then the apparatus for heating raises the temperature 30 deg. Now, it is well known that the expense of fuel is in direct ratio with the increase of the inside temperature. In other words, if the outside temperature be at 40 deg. Fahr. and a room is raised to 55 deg. Fahr., it will take a certain amount of heat. If the temperature be raised to 70 deg. Fahr., or another 15 deg., it will take twice as much heat, or fuel, to keep the room at 70 deg. Fahr. as it did at 55 deg. Fahr.

If 70 deg. is a comfortable temperature, let us suppose that the temperature be raised to 73 deg. unnecessarily. Seventy degrees is 30 deg. above 40 deg., and 3 deg. would be one-tenth added; consequently to keep a room at 73 deg. instead of 70 deg. requires an expenditure of 10 per cent. more fuel.

Let us suppose that a room be kept, unnecessarily, at 75 deg.; there is then a waste of 16·6 per cent. of fuel, which is a great extravagance, and yet many rooms in buildings here are kept at this figure or above. At 75 deg. Fahr. a person becomes uncomfortable, and the tendency is then to open windows, conducing to further waste.

Experience has shown that these calculations are verified in practice, and that in many cases the waste is greater than shown above."

HEATING, ETC., McGILL UNIVERSITY, MONTREAL.

THE following is an abstract of a paper read at the ordinary meeting of the Institution of Civil Engineers on January 30 by Mr. R. J. Durley, B.Sc., M.Inst.C.E., on "The Central Heating and Power Plant of McGill University, Montreal."

The paper describes the arrangement and equipment of a central heating plant, combined with an electric light and power station, designed to serve the various buildings of McGill University. Although only of moderate size, the installation is of interest on account of the somewhat severe climatic conditions and the unusual nature of the service. Attention is called to the fact that the economic possibilities of such a station depend very largely on the relation between the demand for heat and that for electric current. The University buildings were, up to 1908, heated individually by their own steam or hot-water equipment, and took current from the local electric supply company. The coal used for the heating service was necessarily of an expensive kind, and the cost of current was rather high. Economy and improvement in service, therefore, were sought by utilising cheaper coal in a central boiler plant and heating the various buildings from one source, employing for this purpose as far as possible the exhaust steam from electric generating sets. The buildings which will ultimately be served have a total volume of about 7,570,000 cubic ft.; they contain 81,000 sq. ft. of direct-radiation heating surface, need 185,000 cubic ft. of warmed air per minute for ventilation, and require as a maximum about 475 kilowatts for light and power. The greatest demand for steam for heating and ventilation for all the buildings in cold weather would be about 30,000 lb. per hour. The station as at present working supplies current to eleven buildings and heat to five, and the heating service will be extended to all the buildings as opportunity serves. A brief discussion of the systems of heating and ventilation in general use in Canada for large buildings, and a description of the nature of the demand for steam and current for the University purposes, is followed by notes as to some of the problems arising in the design and construction of underground piping systems for steam and hot water.

The McGill power-house itself is not of an unusual type, its equipment including four water-tube boilers, three steam-electric generating sets, the necessary heaters and auxiliary machinery, and the ordinary apparatus for the switchboard and electric accessories. The heat distribution to the buildings being largely by means of forced-circulation hot water, as well as by steam, the heaters and circulating pumps are installed in the engine-room, and are at present capable of supplying hot water to 60,000 sq. ft. of direct-radiation heating surface. Means are provided for obtaining a record of the heat delivered to the heating systems of the various buildings. The electric distribution is by underground cables throughout, the cables, as well as the heat-distributing pipes, being carried partly in tunnel and partly in conduit. Secondary heaters have been installed in two of the buildings in order to avoid the expense of renewing their existing heating pipes and radiators. The paper includes a description of the methods of operation adopted and the systems of temperature regulation employed, together with some notes as to working costs.

TESTING OF MATERIALS OF CONSTRUCTION.

THE Watt anniversary lecture of Greenock Philosophical Society was delivered recently in the Watt Museum Hall by Mr. James T. Milton, M.Inst.C.E., etc. The subject of Mr. Milton's lecture was "The Testing of Materials of Construction," with special reference to mechanical engineering. The importance of systematic testing of materials, he said, is now more than ever realised. An international association has been established in the hope of attaining international agreement in regard to methods of testing, and an engineering standards committee in this country has successfully standardised specifications and tests of many structural materials. Systematic testing resolves itself directly into two branches; the first may be called scientific, and consists in the determination of the various properties of different kinds of material; the other is devoted to what may be called commercial or acceptance tests. It is this latter system to which the labours of the Engineering Standards Committee have been directed with such excellent results, their specifications for the acceptance tests of nearly all structural material being universally accepted in this country. All the straining actions which come upon constructive material can be resolved into two kinds, acting either singly or in combinaton. These are direct stress, whether of tension or compression and stress of shear or distortion. When either of these stresses is applied to any material deformation takes place. If the stress is very low this deformation, called strain, is small, and it is found by experiment to be directly proportionate to the stress. With increasing stress, however, in ductile materials a point is reached at which the strain increases at a greater ratio than the stress, and in very ductile materials a further increase of stress produces an altogether disproportionate increase of deformation. The points at which the strain commences to increase at a greater ratio than the stress is called the limit of proportionality. Below the limit of proportionality the application of a stress produces the proportionate strain. If the stress is altogether relieved the strain disappears, the material returns to its original form and dimensions. If the stress is reduced, but not entirely taken off, the strain reduces itself also to the amount which would have been produced by the same stress being initially applied. In other words, the material is perfectly elastic. When a stress higher than the limit of elasticity is applied part of the deformation produced is permanent. It is certain that the limit of proportionality and the limit of elasticity, as above defined, do actually fall near together; many consider these points to be coincident. It is argued by many engineers that as the material stressed below the limit of elasticity returns to its original dimensions all its qualities must also be unaltered, and therefore, as one application of a stress within the limit does not affect any of its properties, it must be able to withstand an unlimited number of applications of such stress without injury. It is this view which leads to the importance which is attached by some engineers to the inclusion of the determination of the elastic limit in the acceptance tests of materials.

Mr. Milton proceeded to say that each kind of material possesses its own peculiar properties of strength, ductility, hardness, etc. All of these can be measured quantitively, and when the material is of good quality the various measurements will be found to fall within comparatively narrow maximum and minimum limits. It must be noted that the properties actually determined in acceptance tests of ductile materials not only may be different from those required in the structure, but may be qualities which serve no useful purpose. Notable examples may be taken in the case of mild steel. This, when of good quality, subjected to a gradually increasing stress, will yield very considerably before finally giving way. A tensile test will give an extension of from 20 per cent. to 30 per cent., and a bend test will deform enormously without breaking. These properties of excessive deformation are of no use whatever in actual structures, yet if mild steel does not possess them it is rejected. That structural material can be reliable without excessive ductility is evident when we consider the satisfactory use of cast-iron for cylinders and other parts of steam engines. The reason why such excessive ductility is required in the acceptance tests of mild steel is not because it is useful *per se*, but because we know that good mild steel, while possessing properties which make it a useful constructive material, also possesses this ductility, and that if from any cause its ductility falls below its usual amount then doubts will immediately be raised as to its possessing, in due proportion, all the properties which made it useful and which are actually required. In conclusion, Mr. Milton confidently stated that not only has the systematic testing of the properties of constructional materials largely assisted in the developments of their manufacture, but without it such structures as the Forth Bridge on the land and the *Olympic* and *Titanic* on the sea would not have been possible.

CONSTRUCTION NOTES.

Cleaning Moulds for Concrete. A SIMPLE method of cleaning out moulds employed in reinforced concrete work is to blow steam on them from a hose-pipe. It is stated by an American engineer that steam is more efficient and more economical than any other medium for the purpose.

Standardisation of Vitrified Ware Pipes. THE draft specification prepared by the Standardisation Committee of the Institution of Municipal and County Engineers is now being considered by a Sectional Committee of the British Engineering Standards Committee, and objections have been raised in reference to certain of the proposals embodied in the draft specification. One of the proposals to which the Standardisation Committee attach considerable importance, and to which objection has been taken, is that dealing with the proposed form of socket.

After prolonged consideration and discussion the Standardisation Committee decided to suggest, for inclusion in the Standard Specification, a modified form of socket having, in their view, many advantages over the old form, including the following:—

(1) It is only necessary to push home the spigot to obtain a true invert and to ensure the pipes being concentric, whereas with the old form this result can only be attained by the exercise of the greatest care; in fact, it is comparatively rare to find drains and sewers, except those laid under the most constant and careful supervision, free from obstructive "lips" in the invert.

(2) The pushing home of the spigot also leaves a clear regular space all round for jointing material, whereas with the old fo the space is frequently very irregular, render it difficult to properly fill the joint.

(3) The new socket is stronger, and designed that the greatest strength is at point of greatest stress.

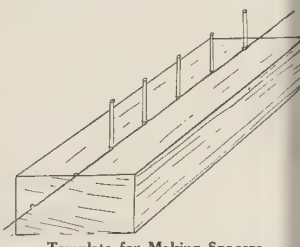
(4) There is less risk of jointing mater entering the pipe and forming an obstructio

(5) Less jointing material is required.

(6) There is less risk of the joint be disturbed after the pipes are laid and bef the cement has set.

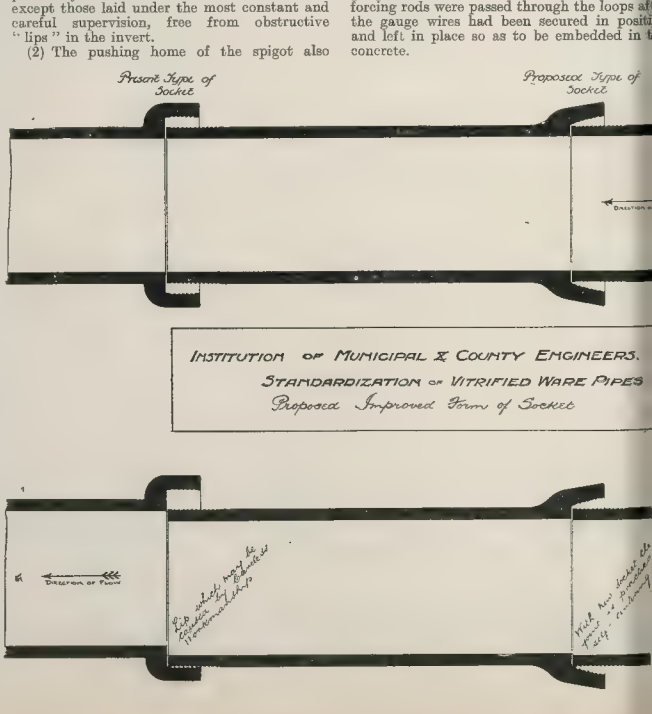
The Committee have asked the members the Institution for their opinions as to wh form of socket it is desirable should be includ in the Standard Specification.

Spacing Gauges for Floor-Slab Reinforcement. IN a building erected at M waukee the contractor e ployed an ingenious meth of forming gauges for spac the steel rods constituting reinforcement of the concrete floor slabs. gauges were made by means of a templa consisting of a wood block in which were pieces of steel rod of the same diameter those to be used for the reinforcement, the r



Template for Making Spacers.

projecting 2 in. and spaced the same distan apart as that specified for the rods of the fl slab. The accompanying illustration is from article by Mr. E. B. Murray in *Concrete*, long piece of stout wire was then looped ro each of the projecting rods in turn, starting one end of the wire, and the succession of loo was continued, as far as requisite, by lifting the wire and making other series of loops arou the same pegs. In this way numerous spac gauges were made for all the floors. The re forcing rods were passed through the loops af the gauge wires had been secured in positi and left in place so as to be embedded in concrete.



THE BUILDING TRADE.

E NATIONAL FEDERATION OF BUILDING TRADES EMPLOYERS OF GREAT BRITAIN AND IRELAND.

AST week we published a report of the annual general meeting of this Federation, held at the Trocadero taurant, W., on January 31, under Chairmanship of Mr. J. W. White nderland). The following is a continuaof the report.

Provisional Sums in Quantities.

was moved: "That it be an instructto the Council to inquire into the ctice of inserting provisional sums of large unts for quantities in school buildings, to take such steps as may be deemed ssary." The speaker said he considered would be a suitable time to inquire into matter, because education authorities ed anxious to ascertain if it was possible educe the cost of school buildings, and in district they thought that it would be uced if the practice of inserting large visional sums were given up. One archiin their district regularly inserted in quantities provisional sums which would n a third of the amount of the accepted der, and the sums so included were generexpended without any competition, and, considered, to the detriment of the der who was carrying out the work. The der had to wait an indefinite time before could get instructions about ordering ls, and when he did so order the firm who plied would take their own time as to n they delivered, and many cases of hard often arose in consequence. If this ter were ventilated, and the education norities could be shown that there was te in this way of doing the work, the ctice would soon be given up. The ter was connected with the question so en discussed amongst builders—that of cialists. If anything could be done by means to prevent the unnecessary emyment of specialists it would be a distinct antage.

he seconder of the motion said they eved the practice complained of was rimental to the building trade and opposed public policy. These provisional sums ht to be kept as low as possible. Special came in who had no interest in the ticular neighbourhood except to do the k, and they got as much out of it as sible. When the ordinary contractor ed to be allowed to compete he was told work was to be done by a particular cted firm. If selection rather than open petition was going to be the guiding nciple, then why should not a firm of lders who had given satisfaction in one be given another without having to pete?

The resolution was agreed to.

Standard Wages and Cost of Living.

Mr. Townsley, on behalf of the Yorkshire deration, brought up the question of ndard wages and the increased cost of ng with a view to asking whether the ncil could get any reliable figures which ld be utilised when the employers had to t the arguments of the men regarding increased cost of living. At present res were published, but they varied gely. He moved that the matter be rred to the Council.

Mr. Rushforth (Grimsby) seconded the ion, and it was carried.

Goods to the Public at Trade Prices.

Mr. E. J. Brown (London) read a resolun which had been passed by a sub-comtee of the London Federation pointing out t they considered the question of merants and manufacturers supplying the blic with goods on the same terms as the de ought to be dealt with by the National deration. The sub-committee had also roached the Federation of Master Decorrs on the subject.

Mr. S. Smethurst (Oldham) said there was a movement on foot in all parts of England for obtaining preferential terms for those in the building trade as against the general public, and he believed that the building trade was the only trade in connexion with which outsiders could get equal terms. He moved that the matter be referred to the Administrative Committee.

Mr. A. S. Smith (Birmingham) considered the question one of growing importance. Many factory owners and others were employing men to do their own repairs, and they could buy their bricks and timber and firebricks and everything they wanted at the same price as the builder. If any means could be suggested by which this could be stopped it would greatly benefit builders.

Mr. J. B. Johnson (Liverpool) said the slate merchants were considering if they could give such a preference.

The matter was referred to the Committee to report on.

Alliances with Kindred Trades.

The Secretary read a letter which had been received from the Yorkshire Federation suggesting the expediency of a closer alliance with kindred trades with a view to joint action being taken for the protection of trade interests.

Mr. Townsley (Hull) remarked that at present there was a Confederation composed of three, if not four, national organisations of those engaged in the building trades, which comprised about 2,500 firms and included the plasterers and plumbers and slaters, and he believed the painters were in full sympathy, if not really allied to that body. It seemed to him if that organisation could in some way be attached to their own Federation it would very greatly strengthen their hands in the case of certain eventualities.

Mr. Hopkins (York) said that there was a danger of sub-contractors breaking away from the national body of master builders, and that he considered would be a disaster. The fact was that a large number of sub-contractors felt very insecure with reference to the money which should be paid to them. They had done work for the contractor and had not received payment. If the sub-contractors could get an assurance that the client for whom the work was really being done would be responsible it would be all right.

Mr. Matthews remarked that in Manchester they were adopting a form which would put the sub-contractor in a better position than before.

Mr. Cooke suggested that the best way to bring about organisation in the building trades would be to form an association in each centre and have separate committees to deal with each separate trade, and then those committees could bring forward their recommendations to the general body to be confirmed.

Mr. Rhodes observed that there was a feeling amongst the smaller trades that they would be swamped in any general movement because of the smallness of their numbers, but he thought they might get over the difficulty.

The matter was referred to the Administrative Committee to go into.

National Insurance Act.

Mr. F. Woods (Bolton), in moving that the Committee should continue to consider what future action should be taken with regard to the National Insurance Act, said he knew there was a disposition on the part of some employers to cease their opposition now the Act was passed. They in Lancashire did not agree with this, but they believed that by a steady and active opposition they would be able to place their considered judgment before the Commissioners, so that in the framing of their regulations the Commissioners might ameliorate those conditions which would harass the trade. They wanted each Association to send up its suggestions to the Administrative Committee.

Mr. Matthews (Manchester) seconded the motion, which was carried.

It was also agreed, on the motion of Mr. Davidson, to place on record the appreciation of the action of the President and the Secretary in relation to the unemployment part of the Bill.

National Board of Conciliation.

Mr. J. Storrs (Stalybridge) proposed that the questions of admitting builders' labourers to the Board of Conciliation scheme and that of expediting procedure in relation to appeals be left to be dealt with by the National Conciliation Board.

This was carried.

Mr. Storrs next reported that at a meeting of the Council the previous day it was agreed that it was desirable that there should be an affirmation of policy with regard to the question of the employment of unionists and non-unionists. Difficulty had been experienced in regard to the matter, and it was considered that the principle of freedom of employment should be affirmed.

Mr. A. W. Sinclair (Scarborough) said that the workmen were insisting that Rule I. of the Building Trades Conciliation Board was the beginning and end of the Conciliation Board's duties. That rule read as follows:—"The object of the Conciliation Board shall be to adjust all questions or disputes relating to hours of labour, rates of wages, working rules, and demarcation of work that may from time to time arise and be referred to them either by employers or operatives with a view to an amicable settlement of the same without resorting to strikes or lock-outs." In certain towns in Yorkshire trouble had arisen on the non-union question. In Leeds there was the case of a man with a rather heavy contract which had to be completed in a given time, and the men took advantage of that to say they would have certain men in their union or they would stop the job. In Leeds they had a local rule agreed to by the men and employers that there should be no stoppage of work until the dispute had been considered by a trade committee. But the men would not have the matter of union and non-union men referred to any committee, as they said it was their own business, and if they did not want to work with non-union men they would simply leave the job. The operative masons had now given notice of their intention to move at the Conciliation Board that questions of union and non-union workmen shall be excluded from the purview of the Board, and on that the employers and the men must come into direct conflict. In certain districts of the Midlands the men were now enforcing it, but in others they were not strong enough. Personally, he had always contended that high organisation by both the men and the employers was the best condition for carrying on business, but that where either one side or the other predominated they had the elements for oppression. If the resolution was carried by the men it would mean that they would make a stronger organised body for labour than the employers had attained to. If the matter had to come to a fight, now was not an unfavourable time, but if they waited until trade was better and the unions were more organised, then they would be in a worse position to deal with such an important question.

Mr. Smethurst (Oldham) said they were up against this question all over the country. If the resolution of the operative masons was rejected by the Board it meant a fight sooner or later, and he considered the Federation ought to be fortified with the considered opinion of the whole of the branches in England. It would be fatal to enter into a battle without knowing the forces behind them. Birmingham and Manchester and London would have to shut down, as did the cotton employers recently, and he would like it to be found out whether in the event of the matter being fought out the trade would stand together. The other side of the question was whether they would accept the resolution and say they would in

the future only employ trade unionists, and that was a very far-reaching issue. They had to look further than the mere temporary advantages it might bring them. He moved :-

"That the Administrative Committee be requested to circularise each branch Association through the Federation asking them to consider the question of the action of the trades union workmen in claiming the right to refuse to work with non-unionists, and to say if the settled opinion of their Association is that the right of the employer and the workman to employ whom they will or to work for whom they will shall, as far as possible, be maintained, and, if necessary, they will support the Federation if they desire to fight this issue. And it be an instruction to the Administrative Committee to issue a memorandum reviewing the position."

Mr. Moss remarked that one particular trade, which he would not name, had entered into an arrangement with the workmen by which the employers in the Association would only employ union men and the union men would only work for the associated employers.

Mr. Cooke said they tried that at Preston, and after a time they had a shoal of disputes. They had no assurance that the leaders of the men could enforce their decisions on the men whom they were supposed to control. He could give instances in Lancashire where plasterers had been ordered by their Executive to return to work and had absolutely refused to do so.

Mr. Sinclair asked if the unions could not stop the funds.

Mr. Cooke said he supposed they could, but the men seemed to find funds somewhere.

Mr. Matthews (Manchester) proposed :—"That this meeting is of opinion that the Board of Conciliation scheme comprises the consideration of all disputes involving the stoppage of work."

Mr. Shepherd (London), in seconding Mr. Matthews's motion, said that to be consistent they must uphold the principles of conciliation; but there was no doubt the position was becoming serious. What was the result of the intervention of Sir George Askwith in the cotton dispute? They could not avoid the conclusion that disputes of this kind were not to be settled by such methods. So far as his judgment guided him, intervention by the Board of Trade was not the best means of getting at settlements.

Mr. Storrs said the matter ought to have come before the meeting of the National Board called in December, but, feeling that they were out against a very serious difficulty, and one on which the whole country might eventually decide to take action, he thought he was taking a right course in getting a postponement, so that the matter might be brought before them. He accordingly arranged with Mr. Chandler and with the Secretary of the Operative Stonemasons' Society to postpone the matter until January. The operatives had decided that unless the masters agreed to discharge non-union labour they would enter into a strike, and they might take it that if this was entered into it would be a very bitter fight.

Mr. Moffat said he took it that the only reason the operatives had not already delivered the blow was in consequence of Rule 17 of the Conciliation Board, because if they entered on a struggle, Rule 1 combined with Rule 17 would rule them out of court. He thought that the alteration of which the masons had given notice ought not to be allowed to creep into the rules. Personally, he felt they were in for serious difficulty, and hoped the National Conciliation Board would take a strong line and resist anything like the suggested alteration.

Mr. Davidson (Leeds) said that this was a serious matter, and they in Yorkshire wanted the assurance that if drastic action was taken against individual members the National Federation would take action.

Mr. Long (Bath) remarked that the point arose in Bristol in September, where a builder's foreman objected to two men trying to coerce a non-unionist to join the union. The men left work, and the local Association wrote to the trades union, who replied that the matter was not a trade dispute within the rules. The unionists contended not only that it was not a conciliation matter, but also that it was not even a local Association matter, but simply a matter for the workmen amongst themselves. They would have to understand that this matter meant a fight.

Both the resolutions of Mr. Matthews and of Mr. Smethurst were carried.

Election of President.

The Chairman proposed that Mr. James Wright, of Nottingham, be elected President for the ensuing year, and this was unanimously agreed to.

The President-Elect, in reply, expressed the hope that the influence of the Federation would be extended in such a way as to enable employers to conduct their businesses in the way their intelligence and experience directed them, and he hoped they would never be afraid to maintain personal and individual liberty. Above all, he hoped their influence would be exerted to the preservation of initiative. The trend of modern legislation seemed of such a character that there was a danger of these great principles being subverted, but it was by such qualities that this country had been made great, and it was only by their exercise that progress and prosperity could be maintained.

A hearty vote of thanks was accorded the retiring President, and he was elected a Vice-President.

On the motion of Mr. Browne, seconded by Mr. Wright, a hearty vote of thanks was passed to the Secretary for his valuable services.

It was decided to hold the next meeting at Nottingham.

BUILDING PLANS *v.* BUILDING PROSPECTS.

THE latest returns for the last quarter of 1911, made by the local authorities as to building plans lodged for their approval, show some little improvement on the same quarter of the previous year. There was an increase of 339,241*l.*, or 11·1 per cent. (exclusive of the County of London, as to which figures are not given). This increase was confined to factories, workshops, shops, and other business premises or public buildings. Dwelling houses showed a large decrease of 227,966*l.*, or 14·8 per cent. The increase seems to be confined to Lancashire, Cheshire, the Midlands, and other districts in England exclusive of Outer London, the Northern Counties, and Yorkshire. Wales showed a decrease, but Scotland and Ireland increases.

CLAY EXCAVATING PLANT, WARNHAM.

THE Sussex Brick and Estates Company, Ltd., of Horsham, have installed a clay excavating plant at their Warnham Works. The plant consists of a steam navvy, automatic hopper and a clay conveyor. The 8-ton steam crane navvy has been built for them by Messrs. Ruston, Proctor, & Co., Ltd., of Lincoln. The machine carries a bucket of 1½ cubic yds. capacity, practically equivalent to a weight of 1½ tons of clay. The method of working is as follows :—

The bucket is first lowered to the bottom of the working face and to the level upon which the machine stands. It is then drawn up the face of the clay, taking a cut some 3 in. to 6 in. thick and 36 in. wide. By the time the top of the cut is reached the bucket is full. The machine is then slewed or swung round, so that the bucket is immediately over the hopper, which is in position alongside the machine. The driver then releases a catch upon the bucket by means of a rope, the bucket door swings open and the contents are discharged into the hopper, which in turn transfers it into wagons beneath. The machine swings back again opposite the next cut to be taken, and the bucket is lowered, which action automatically closes the door.

The above series of operations take longer to describe than to carry out, as the full cycle can be completed in thirty seconds, or in other words the machine can dig and discharge into wagons about 1½ tons of hard clay in half a minute, the speed and facility of working being a revelation.

The hopper has been built from special designs by Messrs. Fawcett, engineers, Leeds. It consists of a hopper 1½ cubic yds. capacity, under which is a revolving cylinder having two recesses, each of which will hold ½ cubic yd. of clay. Beneath the cylinder are the rails along which the clay wagons are conveyed continuously to the grinding mills by means of an endless chain. The cylinder driven by a separate engine and is speed to revolve so that the recesses filled with c empty into the trucks underneath three tir per minute.

As to the construction of the 8-ton cr navvy, there is a cutting pressure upon bucket teeth of 8 tons, hence the t "8-ton" crane navvy. The carriage is b of steel castings and girders, and carries eig travelling wheels for standing and travelli upon the temporary rails which are necessa The bedplate above the carriage is support upon the latter by six rollers, which revo upon a gear ring on the carriage, and ena the machine to revolve through a compl circle. The engines and gearing for hoistin slewing, and travelling are all arranged up this bedplate, the two first motions bei driven through friction clutches. The racki gear to the bucket consists of a large ste cylinder from which motion is transmitted racks upon the bucket arm for regulating depth of cut taken by the bucket, the cont being in the hands of the driver, who sta right at the front of the machine. The boi is of large size, and supplies steam to engines of the hopper as well as to the navv The water tanks are arranged under the boi in the rear of the machine, and have a capac of 300 gallons.

The total weight of the machine in worki order is about 34 tons.

A driver and a fireman upon the machi and two or three men around it, are all t is necessary for the output of 400 tons of c required by the brick company to make th output of 100,000 bricks per day.

BRISTOL MASTER BUILDER ASSOCIATION.

THE annual general meeting of this Assoc tion was held under the Presidency of M Frank Chown (President).

The annual report, from which the follo ing is an extract, was approved and adopt upon the motion of the President, seconded Mr. A. Perkins. The year 1911 has been period of continued depression, so far as building trade is concerned, notwithstandi the improvement which has taken place in general trade of the country. The labo unrest which has been apparent throughout country during the past year made princip very loath to put in hand any work other th that which was imperative; consequently co petition has been exceptionally keen and pri have ruled low, in spite of an upward te dency in the cost of materials. Few buildin of an important character have been put hand. The Association has spent considera time negotiating with the employés in t matter of notices received for advances wages and various alterations in the worki rules, and, in view of the large number meetings thus entailed, it is fortunate th matters of general business were less pressi than has perhaps been the case in previo years.

Notices were received from all trades January 1, 1911—carpenters and joiners, bric lays, plumbers, painters, plasterers, a labourers—asking for an increase of 1d. hour; whilst the masons desired a reducti in the hours of labour during the summ from fifty-three to forty-seven, to brought about by commencing work 7 instead of 6 a.m., their idea being secure employment for a greater number their men by spreading the work over a larg area. Local meetings were first held, follow by reference to the South-Western Cen Conciliation Board in the case of the c penters and joiners, bricklayers, and mase who were affiliated to the National Concil tion Board, but without any satisfactory setti ment being arrived at.

Eventually it was decided to refer the matt to the Board of Trade for arbitration, Mr. A. A. Hudson, K.C., attended at t offices on July 31 and August 1, when t case for the employers was conducted by M Frank N. Cowlin. Mr. Hudson's award w to the effect that there should be no advan of wages.

As to the demand on the part of the ope tives for a reduction of the working hours summer his award was as follows :—

"I award and determine that there sh be no reduction in the working hours unle the masons' labourers affected are willing th a reduction should be made, in which case t reduction shall be three hours per week summer for masons working on the bench in the shop, and a corresponding reduction the hours of labourers attending on su masons, such reduction in such case to effected by altering the starting time fro 6 a.m. to 6.30 a.m. in the summer months."

s was accepted by all trades with the tion of the plasterers, who took the r to their Central Conciliation Board, nom it was referred back for local settle-

After further discussion it was agreed for the expiration of their notice until nber 31, and the question is accordingly discussion at the present moment. In d to the question of hours of labour for s, the society decided to adhere to the hours as worked by other trades.

wing promised to give special considera- to the request of the labourers for an ase, their case was brought before special ngs of the Association, with the result t was decided, in view of the low average ngs of these men and the increased cost ring, to give them an advance of a half- per hour as and from January 1, 1912; only to refer to genuine builders' rers. Further notices have now been ved from all trades for alterations in many o working rules, as well as for advances ages, and it is hoped that an amicable ment will be arrived at.

the motion of Mr. F. Chown, seconded Mr. Cowlin, Mr. Audley Perkins was d President of the Association for the ng year.

ery hearty vote of thanks was accorded etiring President, Mr. F. Chown.

F. A. R. Woodward was unanimously d Vice-President.

E. I. Neale was re-elected Hon. urer.

on a ballot being taken, the following declared to constitute the Committee for coming year:—Messrs. A. Dowling, F. n, F. N. Cowlin, W. Foster, G. W. phreys, J. Lovell, F. H. Ridd, and E. W. ers.

CESTER BUILDING TRADES IPLOYERS' ASSOCIATION.

e annual dinner of the Leicester and ict Building Trades Employers' Associa- was held at the Grand Hotel on the st. Mr. F. Beck (President) was in the supported by Alderman A. Tollington or of Leicester), Mr. J. Wright (President e National Federation), Mr. J. B. White- (President of the Midland Centre), Mr. . Amphlet (Secretary Midland Centre), E. G. Mawbey, M.Inst.C.E. (Borough eyor), Mr. W. M. Cowdell, F.R.I.B.A., Mr. C. Stretton (Society of Architects), A. Chambers (Hon. Treasurer), Mr. S. A. (Secretary), and others.

W. Yates, in submitting the toast of e National Federation," observed that the ration admirably fulfilled the purposes for it existed in watching and promoting nterests of the trade. In proof of that it be mentioned that the Federation was lly recognised by the Government, and ently had communication with the Board rade and other official bodies. The In- ce Bill, for instance, gave them a great nt of trouble and anxiety. All the es of the Federation throughout the ry were circularised for the purpose of ning their views of the measure. The r was carefully considered, and the rations sent deputations to both the cellor of the Exchequer and the Board of e. Out of nineteen or twenty amendments asked for, they obtained no fewer than en. In coupling the toast with the name e President of the Federation, Mr. Yates ssed the pleasure they all felt at Mr. s Wright, of Nottingham, having been d to that office for the present year.

James Wright, in the course of his pointed out that the success of the nal Federation depended upon their g successful local associations. It was sary, too, to have strong local associa- if only for the purpose of dealing with own workmen. They all knew what a g, active, and aggressive force trade ism had become. Trade unionists were y looking after their own business. What ers had to do was to look after theirs, if they were going to meet the united of trade unionism and to regulate the ons between both parties they must be united. It was absolutely impossible to with them in units. Mr. Wright dealt the fixing up of national Conciliation ls in connexion with the trade. The e was based on such sound principles if both sides were faithful to those ples and loyal to the decisions arrived thing but good could come as the result e scheme. The Federation's only object o improve the conditions and raise the of the building industry. They knew he trend of modern industrial legislation ery much towards encouraging encroach- upon what he considered to be the absolute and unalienable rights of employers, and they were, he thought, fully justified in exerting the influence of the Federation in order to try and preserve personal freedom and individual liberty in every direction, and to preserve so far as they could the fullest opportunity for the full exercise and development of individual enterprise and personal initiative in business

Mr. Edwin Fox proposed "The Midland Centre," emphasising the important work of that body and the thoroughness with which the representatives from the various associations carried out that work.

Mr. J. B. Whitehouse (Birmingham) replied to the toast, and said he should like to offer a little criticism of builders who, while gripping each other's hands on an occasion of that sort, would be figuratively cutting each other's throats on the morrow in trying to get a bit of work. It was their own fault, he thought, that they did not get a fair remuneration for the work they took. He predicted there were stormy times ahead in regard to the Conciliation Boards, as he was inclined to think that now trade was reviving there would be a disposition on the part of the men to force, rather than to conciliate. In regard to the question of unionists working with non-unionists, and whether the matter came within the province of the Boards, he said their claim was that anything that tended to disturb the trade was a subject for the Conciliation Board. Sooner or later there would have to be a fight on that question, and it would be necessary for the whole of the associations to be prepared to meet it. It might be delayed somewhat, but he was certain they had got to fight unless the leaders of trade unionism exercised more common sense than they were showing at the present time.

Mr. F. W. Amphlet submitted "The Leicester and District Association." In urging the need for the masters to be united, he suggested that the effort on the part of trade unions to make it impossible to employ non-union men was not confined to the cotton industry. They were trying to make it a general thing, and they were already feeling the effects of it in the building trade.

The Chairman, with whose name the toast was coupled, referred to the significance of the success of that gathering, and referred with satisfaction to the inclusion of the sub-trades and other steps that had been taken in the interests of the trade during the past three years.

The toast of "The Mayor and Corporation of Leicester" was proposed by Mr. E. J. Underwood.

The Mayor, having replied,

Mr. E. G. Mawbey (Borough Surveyor), who also replied, referred to the growth of the town during his experience of it, mentioning that during twenty-two years over 20,000 houses had been built in the borough, apart from factories and warehouses. In that time the greatest number of new houses in any one year was 1,809 in 1898. The numbers dropped to 700 in 1905, 320 in 1910, and 367 in 1911. The number of "empties" reached a maximum in 1907, when they numbered 3,205. It was satisfactory to know they dropped last year to 1,403.

Mr. G. A. Hewitt proposed "The Leicester and Leicestershire Society of Architects," which was coupled with the names of Mr. W. M. Cowdell and Mr. C. Stretton

The toast of "The Visitors and Honorary Members" was submitted by Mr. A. Chambers, and acknowledged by Mr. J. H. Hawthorn and Mr. S. S. Redwood.

GENERAL BUILDING NEWS.

NEW SCHOOLS, POOLE.

The designs for these new schools were by Mr. S. J. Newman, the Borough Surveyor, and the contract was carried out by Mr. H. W. King, of Springbourne, at a cost of 6,780*l*. The exterior is of South-Western Pottery white-faced bricks with terra-cotta dressings by Messrs. Carter & Co., and the first floor is of fireproof construction by Messrs. Homan & Rodgers. The electric light was installed by Mr. A. G. Studwicke, of Branksome, and the heating apparatus by Mr. Haydon, of Trowbridge. The schools provide accommodation for 580 children.

NEW SCHOOL, LEISTON.

Mr. J. Webb is the architect for this school, which has been erected at a cost of about 3,000*l*., and which provides accommodation for 360 children. The new building includes seven classrooms, an assembly-hall 40 ft. by 20 ft., and storerooms, etc. The contractor for the building was Mr. A. J. Gibbons, Crowfield; the heating installation by Mr. E. Scott, Ipswich; and the gas-fitting by Messrs. Martin & Newby, Ipswich.

TRADE NEWS.

Under the direction of Mr. Wishart Galloway, architect, Brechin, the "Boyle" system of ventilation (natural), embracing Boyle's latest patent "air-pump" ventilators and air inlets, has been applied to the new Public Hall, St. Cyrus-by-Montrose.

An example has recently been afforded of the efficiency of the Grinnell sprinkler as a means of preventing serious fires. An outbreak occurred on November 10 at the flour and provender mills of Messrs. W. Primrose & Sons, Ltd., Glasgow. The mill was equipped with an installation of Grinnell sprinklers. In the Strut House eleven of the sprinklers operated in such a manner that the fire was soon extinguished. Messrs. W. Primrose & Sons, Ltd., have written to Messrs. Mather & Platt, Ltd., stating that owing to the timely action of the sprinklers the only damage done to the Strut House was that caused by water and a few pounds damage to wood.

Messrs. Mather & Platt, Ltd., have just been instructed to proceed with a large contract for the Accrington and Church Outfall Sewerage Board, which comprised twenty-four of their pipe arm type of revolving distributors, each 62 ft. diameter, complete with all appurtenances, as well as a sewage pump, screening mechanism, motors to drive the machines, and also the lighting work. Messrs. Mather & Platt, Ltd., are makers not only of spreaders, but also of pumps and electrical machinery, etc.

The Excellence Wood Block Flooring Company, of 11, Queen Victoria-street, London, E.C. (agent, Mr. F. S. Mayo), have recently laid wood-block flooring in their patent system at the Law Union Society Building, Chancery-lane, Austin Friars House, E.C., and Swiss Bank, Regent-street, all for Messrs. Colls & Sons. They have also laid the flooring in several London City and Midland Banks in various parts of the country under Mr. T. B. Whinney, architect; the Grammar School, St. Albans, and business premises, St. Albans, under Mr. Percival Blow; the drill hall, Taplow, under Mr. E. Wimperis, architect; the new School House, Folkestone, under Messrs. Jarvis & Richards; and doctor's house, Wimpole-street, under Messrs. Banister Fletcher & Sons, architects.

The Spot Cinema Theatre, Derby, is being ventilated by means of Shorland's patent exhaust roof ventilators and special inlet ventilators, supplied by Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester.

Messrs. Morris & Sons, Ltd., Kennington-road, S.E., have erected at St. Peter's Church, Wellesbourne, Warwick, a three-light figure window, "Christ Blessing Little Children," with angel, traceries, and base, to the memory of Bevil and Alice Granville, of Wellesbourne Hall.

APPLICATIONS UNDER LONDON BUILDING ACTS, 1894 to 1909.

AT Tuesday's meeting of the London County Council the following applications under the London Building Acts were dealt with. (The names of the applicants are given in parentheses):—

Lines of Frontage and Projections.

Kensington.†—Iron and glass porch in front of No. 21, South Lambeth road, Kensington (Messrs. J. A. J. Woodward & Sons for Messrs. E. & S. Hebert).—Refused.

Kensington, South.—Erection of a projecting clock in front of Nos. 78 and 80, Brompton-road, Kensington (Messrs. Bare, Leaning, & Bare for the Brompton Motor Company, Ltd.).—Consent.

Marylebone, East.†—Erection of Nos. 9 and 10, Market-place, St. Marylebone, with a projecting lower portion (Mr. F. M. Elgood for Mr. J. Michell).—Consent.

Marylebone, East.—Additions at No. 2, Wellington-road, St. John's Wood (Mr. S. J. Wright).—Consent.

Paddington, South.—Erection of pilasters in front of a projecting shop at No. 28, Queen's-road, Bayswater (Messrs. Still, Wheat, & Luker).—Consent.

Strand.—Alterations to a projecting sign in front of No. 40, Pall Mall (Messrs. Hill & Harrington, Ltd.).—Consent.

Strand.†—Erection of an additional projecting iron and glass sign in front of No. 27, Gerrard-street, Soho (Mr. G. K. Bird for Mr. J. Ucelli).—Refused.

Wandsworth.—Bay-windows, porches, and oriel windows to five houses on the southern side of Old Devonshire-road, Balham (Mr. A. G. Hastilow for Mr. F. E. Cain).—Consent.

Wandsworth.—Three buildings upon the site of Nos. 2 and 4, Christchurch-road, Streatham (Messrs. Barlow & Roberts).—Consent.

Wandsworth.—Gas meter-house at Earlsfield Station, Garratt-lane, Wandsworth (Mr. J. W. Jacomb Hood).—Consent.

Wandsworth.—Erection of porches and bay-windows to ten houses on the southern side of Heybridge-avenue, Streatham (Messrs. E. & A. Wates).—Consent.

Wandsworth.—Erection of wooden bay-windows and porches to eight houses on the north-western side of Heybridge-avenue, Streatham (Mr. F. Gadsdon for Mr. A. Soden).—Consent.

Wandsworth.—Erection of an external staircase at Immanuel Church, Streatham Common, next to the southern side of Braxton-road (Messrs. Murray, Delves, & Murray).—Consent.

Westminster.—Addition upon a bay-window in front of No. 124, Victoria-street, Westminster (The Westminster Trust, Ltd.).—Consent.

Width of Way and Projections.

Strand.—Re erection of Nos. 1 and 2, Clare-market, Strand (Messrs. Metcalf & Greig). Refused.

Lines of Frontage and Construction.

Brixton.†—Iron and glass shelter in front of a cinematograph hall at Nos. 101 and 103, Brixton-hill, Brixton (Messrs. Gardiner, Sons, & Co., Ltd.).—Refused.

Hackney, Central.†—Iron and glass shelter in front of a cinematograph theatre at Nos. 538 and 540, Kingsland-road, Hackney (Mr. F. N. Falkner).—Refused.

Hampstead.—Iron and glass shelter in front of the stable at No. 26, Ferncroft-avenue, Hampstead (Mr. C. J. Moss).—Consent.

Paddington, South.—Erection of an iron and glass shelter at Nos. 18 and 19, Leinster-gardens, Paddington (Mr. W. J. Purdy).—Refused.

Width of Way, Frontage, and Space at Rear.

Islington, North.—Erection of a building upon the site of No. 116A, Brecknock-road, Islington (Mr. A. D. Watson for Mr. H. C. Scott).—Consent.

Width of Way and Construction.

Deptford.—Raising of a boiler-house wall at premises, Gosterwood-street, Deptford, without providing a damp course to such wall (Messrs. W. A. Wayland & Co., Ltd.).—Consent.

Haggerston.—Wood and iron office building upon a site on the northern side of Mill-row, Kingsland-road (Messrs. H. Jeffries & Co., Ltd.).—Consent.

Islington, North.—Wood and iron motor-house at the rear of No. 150, Junction-road, next to Wyndham-crescent, Islington (Mr. H. Goodchild for Dr. Barragry).—Consent.

Width of Way, Lines of Frontage, and Construction.

Limehouse.—Wood and iron shed at the premises of Messrs. T. Goldschmidt, Ltd. (Messrs. Cooper & Goulding for Messrs. T. Goldschmidt, Ltd.).—Consent.

Whitechapel.—External iron and concrete gangway over the public way of Fulbourne-street, Whitechapel, to connect the premises of Messrs. Kearley & Tonge, Ltd. (Messrs. W. Eve & Sons for Messrs. Kearley & Tonge, Ltd.).—Consent.

Space at Rear.

St. George, Hanover-square.—Building upon the site of No. 19, Berkeley-street, Piccadilly, so far as relates to the erection of a summer-house and open wooden trelliswork on the roof (Mr. H. Tanner, jun.).—Consent.

Deviation from Certified Plans.

Marylebone, East.—Erection of a building upon the site of Nos. 1, 1A, and 2, Duchess-street, and Nos. 17 and 19, Hallam-street, St. Marylebone (Mr. F. T. Verity for Mr. C. E. Peczenik).—Consent.

Alteration of Buildings.

Hackney, North.—Construction of the floor of an entrance way leading from High-street, Stoke Newington, to the Four-per-cent. Industrial Dwellings (Messrs. Joseph & Smithem).—Consent.

Marylebone, West.—Erection of lifts and lift motor-rooms in Block L of the premises of Messrs. Selfridge & Co., Ltd., Oxford-street, Duke-street, and Somerset-street, St. Marylebone (Building Construction Company, Ltd.).—Consent.

Paddington, South.—Erection of a one-story shop in front of No. 28, Queen's-road, Bayswater (Messrs. Still, Wheat, & Luker).—Consent.

Wandsworth.—Formation of an additional story at the house known as "The Whim," Victoria-road, Wimbledon Park (Mr. W. G. James for Mr. W. H. Collbran).—Consent.

Formation of Streets.

Wandsworth.—Roadways of streets, sanctioned on April 11, 1911, on the Elmwood House Estate on the south eastern side of Upper Tooting-road, Upper Tooting (Messrs. Swain & Selley).—Consent.

Wandsworth.†—Adaptation as a street of a way or part of a way leading from Mitcham-lane to Eardley-road, Wandsworth (Mr. J. Harding).—Refused.

Woolwich.—Roadways of proposed streets on the north-eastern portion of the Eltham Park Estate, Eltham (Mr. R. Stewart).—Consent.

Uniting of Buildings.

City of London.—Uniting of No. 6, Edmund-place and No. 11, Hamsell-street, City (Mr. J. Farrer for Messrs. W. Wood & Son).—Consent.

City of London.—Uniting of Nos. 13 and 14, Blomfield-street, with No. 46, New Broad-street, City (Mr. A. R. Conder for Mr. W. T. Henley's Telegraph Works Company, Ltd.).—Consent.

Finsbury, East.—Uniting of No. 101, Finsbury pavement and Nos. 103-117, Finsbury-pavement, Finsbury (Messrs. Joseph & Smithem for Mr. W. Shepherd).—Consent.

Marylebone, West.—Formation of an opening of greater width and height than specified on the ground floor at No. 370, Edgware-road and No. 123, Church-street, St. Marylebone, and for permission to use armoured doors to such opening and to an opening on the first floor of the said premises (Mr. J. Hudson for Messrs. P. Keevil & Sons).—Consent.

Uniting of Buildings and Construction.

Strand.—Opening of larger size than specified in a division wall at Nos. 114-120, Regent-street; (ii.) the use of steel revolving shutters in lieu of iron doors to an opening in a division wall at the said premises; and (iii.) the omission to carry up a division wall above the roof level of the said premises, and the Council, in the exercise of its powers under sect. 82 of the London Building Act, 1894, do also approve the construction of gangways (Mr. H. Tanner, jun.).—Consent.

The recommendations marked † are contrary to the views of the Metropolitan Borough Councils concerned.

LONDON COUNCILS.

Acton.—The Health Committee have given instructions to the Surveyor to prepare working drawings and estimates for the erection of an administrative block at the Isolation Hospital. The estimated cost is put at 3,400*l.*

Barnet.—The Surveyor has been instructed to prepare specifications, estimates, etc., for making-up a portion of Normandy-avenue. Sanction has been received from the Local Government Board to the borrowing of 4,700*l.* for the erection of additional working-class dwellings.

Bethnal Green.—It has been decided to offer no objection to a proposal by Messrs. Allen & Hanbury, Ltd., to erect a factory on the west side of Coventry-street.

East Ham.—Plans and estimates prepared by the Borough Engineer for the erection of a fire-station with quarters for the officers and firemen's dwellings adjoining have been approved. The estimated cost is put at 8,628*l.* The Engineer has been instructed to submit estimates for the construction of an underground convenience at the corner of Barking-road and Green-street. The kerb on the eastern side of High-street North between Nos. 52 and 74 is to be set back, and application is to be made to the Board of Trade for consent to the duplication of the tramway track at this point. Instructions have been given the Town Clerk to take the necessary steps to obtain the approval of the Local Government Board to the following by-law:—"The by-laws with respect to the structure of walls shall not apply to any wall of a new public building, or of a new building of the warehouse class, which shall be constructed with steel or iron framework and in accordance with the following requirements:—(1) The framework shall be of sufficient strength to secure due stability and shall be properly put together (2) The framework shall be filled in with bricks, stone, or other hard and incombustible material, properly and solidly put together, and of such thickness as shall be necessary to secure due stability to such filling." Plans have been passed for Mr. J. Clark for eight houses in Bedford-road. Mr. J. Hartshorne has lodged plans for three houses in Park-avenue.

Finchley.—The tender of Mr. William Iles has been accepted, at 1,210*l.*, for carrying out private street works in Holly Park. Application is to be made to the Local Government Board for sanction to borrow 17,000*l.*, the estimated cost of building a school in G... North-road. The Surveyor has been direc... to prepare plans and estimates, with a v... to application being made to the Local Gov... ment Board to sanction a loan for the erect... of a public convenience at Tally Ho-corn... North Finchley. Plans have been passed ... Mr. F. G. Huggins for five houses in Squi... lane, also for Messrs. Hedges & Son for se... houses in Grove-road

Hammersmith.—Plans and specifications ... to be prepared by the Borough Surveyor ... relaying the wood-paving of Hammersm... road, from Addison-road Bridge to Row... road, at an estimated cost of 5,302*l.*, ... tenders are to be invited for carrying out ... work. The tender of Messrs. Burt, Boulton ... Haywood, Ltd., has been accepted for ... supply of 35,000 creosoted deal blocks, requi... in connexion with the paving of the north ... of the Broadway, at 6*d.* per 1,000. No ob... tion is to be offered to the proposal of ... J. T. Weatherburn to erect a building ... Galena-road, King-street, also to the prop... of Messrs. J. S. Quilter & Son to erec... building in King-street and Dimes-place.

Ilford.—Plans have been passed as follows ... Messrs. B. Bailey & Co., for Mr. F. B. Ha... son, sixteen houses, Perth-road; Mr. A. ... Hutchins, four houses, Tillotson-road; Mes... Rawlins, Culver, & Co., four houses, Burl... ton-terrace, Green-lane; Mr. A. T. Hai... four houses, Leeds-road.

Middlesex.—At a recent meeting of ... County Council it was decided to render ... proof the accommodation for records at ... new Guildhall at a cost not exceeding ... Mosaic steps are to be substituted for gr... lithic steps in the secondary staircases, a... estimated cost of 159*l.* Both the contra... mentioned are to extras on Mr. J. Carmicha... contract for the erection of the Guildhall. ... Education Committee has been authorised ... arrange for tenders to be obtained for ... posed alterations to the buildings of ... Uxbridge, Cowley-road, Boys' School.

West Ham.—The Education Committee h... accepted the tender of Mr. F. J. Coxhead ... Leytonstone, at 3,240*l.*, for alterations to ... Colegrave-road School; also the tender ... Mr. H. C. Horswill, Forest Gate, at 2,76... for alterations to the Water-lane School. ... following plans have been passed:—Mr. M... Hudson, offices, Northern-road, Plaisto... Messrs. Holbrook & Sons, additions to facto... Cullum-street, Stratford; Mr. A. Sing... offices, warehouses, and alterations at Aera... Candy Company's premises, Tramways-ave... Stratford.

Willesden.—The following plans have b... passed:—Messrs. Freeman & Barber, bu... ing line, Temple-road, Cricklewood; Mes... Nowell Parr & A. E. Kates, for Mes... Sich & Co., Ltd., alterations and additi... to White Hart public-house, Willesden; ... W. J. S. Lawton for the Crypto Electr... Company, factory, Acton lane. Plans h... been lodged as follows:—Mr. H. R. Hunt ... six shops, etc., All Souls'-avenue, Harlesd... Mr. Ernest Bates for Mr. H. R. Hun... eleven houses, All Souls'-avenue, Harlesd... Mr. Edward Cave, six houses, Barrs-ro... Stonebridge Park.

FOREIGN AND COLONIAL.

Hotel Construction, Spain.

Information has been received by the C... mercial Intelligence Branch of the Board ... Trade regarding a proposal to build a l... hotel in a city of Southern Spain. Furt... particulars may be obtained by British ... tractors and manufacturers on application ... the Commercial Intelligence Branch of ... Board of Trade, 73, Basinghall-street, Lon... E.C.

Building, etc., Works, Chile.

H.M. Legation at Santiago report the ... Government Bill has been submitted to ... Chilian Congress providing for the expendit... necessary for the execution, during the ... years 1912-21, of a scheme for the construct... of railways, hydraulic, and irrigation wo... and public buildings, at a total cost ... 211,790,455 pesos. The expenditure is divi... as follows:—Railways, 110,100,000 pesos, ... which 15,600,000 pesos are to be expended ... 1912, and 10,500,000 pesos in each of the ye... 1913-21; hydraulic works, 28,690,455 pesos, ... 1912, and between 2,500,000 and 3,000,000 pe... in each of the remaining years; public bu... ings, 63,000,000 pesos spread evenly over ... ten years; irrigation works in the provin... of Tacna, Atacama, Coquimbo, Santia... Curicó, Linares, Bio-Bio, and Cautin, 10,000, ... pesos spread evenly over the years 1912-16.

THE RVEYORS' INSTITUTION.

an ordinary meeting of this Institution onday Mr. Edwin Savill read a paper The Single Tax Movement," in the of which he said :—

ie result of putting all taxation upon te value of land must necessarily be nly those persons who own or use land pay taxes. Of course, the advocates e tax say that as everybody must, y or indirectly, use land, so everyone have to pay their share; but there are instances in which enormous profits de with very little use of land, and of with huge incomes owning no land ving in comparatively small houses. the case of the big trader who has a office in the City, who would pay very n rates compared with the benefits he s from the protection of his interests e Army, Navy, and Police, and from national services. For example, a ith, say, 30,000*l.* a year, derived from s interests, foreign and home direc-, etc., occupying a small office in the nd living in the country in a house 0 acres of land rated at 400*l.* a year; ld now pay in direct taxes and rates , while under the single tax system uld only have to pay about 250*l.* a On the other hand, a man who derives ncome of 30,000*l.* from an agricultural and who would now pay, say, 2,700*l.* in taxes and rates, would under the tax system be called upon to pay no an 50,000*l.* a year; but against this it e presumed that the rates now paid by nant, say, 6,000*l.* a year, could be on to them in additional rent.

question of how other industries would ected by the suggested change in the d of raising revenue is a difficult one. k the idea is that if all buildings and ements were exempt from rating ies would move out into the country, land is cheap, and where consequently x payable would be small in amount. g upon this point, however, we must rget that many industries own their premises, and would be heavily ed in having to pay crushing taxes valuable sites which they would be still to occupy, in that they would ly not be able to sell it. Undoubtedly ndustries which were in a position to would be inclined to do so. but, before , they would have to consider not only n, but means of transit, market, and other matters.

e would in all probability be great s in our industrial towns. A good deal epend upon how much land an industry s, and the value of that land, but, all, upon a point on which the land themselves do not at present seem ear, namely, whether a revaluation of d would be made at certain periods, or r the present valuation would remain sis of taxation for ever. If the land to be revalued, the valuations which w being made (of which the site value e used for assessing the new taxation) quickly become entirely false, all the ons under which they had been made hanged the moment the new Act was

In spite of this fact, the owner be compelled to go on as long as he ble paying taxes upon the original on, arrived at before the great changes ken place, and notwithstanding the at his land had depreciated in value, nts departed, and new ones unable to nd. When ruined and unable any to pay the taxes his land would ably pass to the State. Doubtless wners in districts which are now of alue would presumably score, because d purchasers from them would only o pay taxes on a low site value, h, owing to capital expended on roads, s, houses, etc., their land would be far higher sum.

he other hand, if the land is to be d at certain periods, there would be, , a large increase in the amount of the pound, owing to the depreciation ent valuable localities being more han the appreciation in the localities land is now of little value. As a ence the industries which had moved into the country would find that, on account of this increase in the amount of the tax on the increased site value of the land they occupied (and they are all supposed to be going to spread themselves out and use much more land than they do at present), they would not have benefited much by the change.

I think the position can be summarised in this way. If land is not to be revalued, some factories, small houses, and cottages will occupy larger areas of land, and, owing to the low original value of their sites, will pay comparatively low taxes, while in other cases the converse will obtain, certain sites being burdened with taxes so crushing as to make them almost incapable of economic use. If, on the other hand, land is to be revalued, industries will build their workshops and cottages on the smallest possible area of land, because they will fear the increase in the amount of taxes they will have to pay as values increase. This surely will be no improvement on the present state of affairs."

PRELIMINARY EXAMINATION, 1912.

The following candidates have satisfied the examiners :-

J. P. Addison, Colliery, near Durham
R. Addison, Appleby
F. H. H. Barber, West Ayton
A. G. Bates, Paddington
P. R. Bawden, Redruth
G. Berriman, Bournemouth
G. C. Biggs, Congleton
G. D. G. Bottomley, High Harrogate
C. L. Bulstrode, Bishop's Waltham
A. V. Cain, Milnthorpe
O. A. Chapman, Tramore
F. E. Clarke, Twickenham
G. J. Clarke, Slough
R. K. Crouch, Kenilworth
D. L. Davies, Carnarvon
S. Davies, Lye
J. H. Day, Maidstone
G. McT. Desprey, Kensington
W. R. H. Downes, London
W. E. Ellis, Newport, Mon.
E. R. Elwell, Leytonstone
E. H. Esbester, Bristol
A. Eversfield, Burton-on-Trent
C. W. S. Fifield, Chingford
H. G. S. Flower, Bath
F. O. Forrester, Purley
F. C. Gibaud, Bristol
A. Gilbert, Enfield Highway
A. Glasse, Loughton
E. E. W. Granger, Burnley
H. S. Graves, Ashford
S. L. T. Green, London
H. H. Haddelsey, Birmingham
W. Harwood, Keyworth
G. S. Hebden, Rawcliffe Bridge
M. T. Hedley, Cumberland
T. A. Heywood, Darwen
G. S. Jennings, Birmingham
R. G. Jukes, Tipton
M. D. Kilford, Ilkeston
H. C. Killender, Liverpool
Wm. S Knowles, Gloucester
D. Langlands, Dartford
R. C. Lewonski, Hove
H. C. Mason, Croydon
A. W. E. Medhurst, Wandsworth
*H. P. Mole, Redhill
C. Ody, Manchester
T. B. Owen, Stroud
F. L. Peacoe, Stroud Green
A. D. Paull, Wembley
R. R. B. Payne, Hitchin
G. B. Piggott, Merioneth
E. Purry, London
E. G. Richardson, Wood Green
H. H. Roberts, Carnarvon
R. G. Roberts, Abergele
J. T. Robinson, Atherstone
R. A. Samuel, Swansea
E. Seabrooke, Manda Vale
W. A Shimmin, Douglas
P. E. Simmons, Basingstoke
P. W. Soundy, Cherlwood
H. N. Surgey, Sesford
C. J. Thurgood, Ware
D. W. Turner, Mansfield
R. M. Vickery, Chard
S. Watts, Kensington
T. G. White, Pontardulais
C. I. Widcombe, Datchet
H. V. Willis, Southampton
C. H. F. Wollaston, St. Albans
H. C. Wolton, Suffolk
C. J. Woolley, Stoke-on-Trent
E. H. Wootten, Ealing
C. S. Wootton, Ealing

Scottish Candidates.

T. MacMillan, Glasgow
J. C. Platt, jun., Barnes

* Head of list.

SMOKE ABATEMENT.

At a meeting of the Institute of Sanitary Engineers held on January 22 (Surgeon-General Sir Lionel Spencer, K.C.B., in the chair) Mr. Lawrence W. Chubb, F.C.I.S., Secretary Coal Smoke Abatement Society, read a paper on "Smoke Abatement." In the course of his remarks he said :—

"The smoke abatement movement has suffered not so much from any general failure of engineers, chemists, and social reformers to recognise the disadvantage of a befouled atmosphere, or to the non-existence of a desire amongst manufacturers to avoid waste, as from the absence of unanimity as to the best remedial measures, and from the lack of systematic co-operation and united effort on the part of those who, broadly speaking, are in sympathy with the movement either as coal consumers or sanitary reformers. What is required is a definite programme, to which all interested in the subject may subscribe, calculated to appeal to the common sense of the community, as well as to manufacturers, as reasonable and practicable.

It is almost unnecessary, save for the purpose of explaining the urgent need of Government action, to remind you of the decay from which our buildings suffer as the result of the acids deposited by smoke. The case of Westminster Abbey at once occurs to the mind, and we have it on the authority of the Rev. Dr. Robinson, until lately Dean of Westminster, that as long ago as 1683 the stately edifice was described by Keepe as being "So shrivelled and parcht by the continual blasts of the northern winds to which she stands exposed, as also the continual smoaks of sea cole, which are of a corroding and fretting quality, which have added more furrows to her declining years so that little of her former beauty now remains." What took place two centuries ago is now going on at an ever-increasing rate, and it is stated that it is now sometimes necessary to renew portions of the fabric which have only been exposed to the London air for twenty years.

And what is true of the Abbey is equally true of every building in the metropolis. The rate of decay may be checked by the use of Portland stone or other building material, which suffers less from the deleterious action of sulphur acids than the susceptible fabric of the Abbey, but decay is slowly but surely taking place. The corrosive effect of smoke and its constituents is everywhere apparent. We see it in the case of modern buildings, such as the St. Pancras Railway-station, and already the new palatial piles of Government buildings in Whitehall are becoming discoloured.

Buildings are not the only sufferers. Works of art, according to Sir Arthur Church and other noted experts, equally suffer; so do our clothes, furniture, and, indeed, everything exposed to the decimating effect of the sulphur compounds given off into the air wherever coal is burned. The experiments of Dr. Rideal have proved that even plated and metal articles rapidly deteriorate upon exposure to our sulphurous atmosphere.

The waste of fuel is equally appalling. In the case of domestic fires the late Sir W. Roberts-Austen undertook the collection of data. His inquiries led him to estimate that the percentage loss of coal as soot was somewhat over 6 per cent. This estimate has recently been confirmed by Professor Cohen and Mr. Ruston, of the University of Leeds. If, as is computed, in this country we annually burn from thirty-two to thirty-five millions of tons of coal for domestic purposes, the direct waste of fuel is nearly 1,950,000 tons. In factories it is estimated that the waste of coal as soot is 0·5 per cent., or approximately 500,000 tons per annum. This is apart altogether from the loss in connexion with locomotives and gas-works.

The legal position is fairly simple. There is no power to interfere with the emission of smoke from the chimneys of private dwelling-houses, but factories, workshops, and commercial establishments generally are amenable to the London Public Health Act, 1891, if in the metropolis, or to the Public Health Act, 1875, if outside.

The provisions of the Public Health (London) Act relating to smoke nuisances are substantially the same as those in the earlier statute. But in 1910 the London County Council secured the insertion of a clause in its General Powers Act enabling it to take proceedings in regard to smoke nuisances, at the request of and in lieu of Borough Councils, the sanitary authorities for administering the Act of 1891. The County Council can also take proceedings in the case of nuisances emanating from the works of Borough Councils, and may spend 500*l.* per annum "in investigating and advancing measures with respect to smoke consumption and the abatement of nuisance arising from the smoke." Dwellers in London owe much to the County Council for its whole-hearted support of the smoke abatement crusade.

It might be thought that the general statute law was sufficiently drastic to ensure the cessation of smoke nuisances. Unfor-

tunately, this is by no means the case. In the first place, it is often found that among members of the local authorities, upon whom is imposed the duty of securing the observance of the law, are some of the worst offenders. They are not likely to desire to prosecute themselves. Sanitary officers, obviously, are unfairly handicapped in such cases, for it requires an unusual degree of courage for an officer to press that the law should be enforced against his employer.

In the second place, proceedings are, as a rule, heard by a bench of magistrates, and not by a stipendiary. Medical officers of health and sanitary inspectors generally complain that in such circumstances it is either impossible to secure a conviction, or that the fine imposed is so trivial as to fail to act as a deterrent.

In the third place, the notorious case in regard to the Lots-road generating-station has shown the uselessness of relying upon any colour standard. In that case the magistrate declined to admit that the smoke emitted was "black," preferring the evidence of scientific experts to that of trained sanitary inspectors.

In the fourth place, there still exists amongst the uninformed an impression that the smoke abatement movement is designed to harass trade.

The Coal Smoke Abatement Society was formed in 1899 mainly as the outcome of the efforts of Sir William Richmond, its President, in consequence of the great prevalence of factory smoke in London, owing to the failure of the local authorities to enforce the observance of the law. It is, of course, a voluntary body, and by the employment of an inspector to report upon smoke nuisances, by stirring up local authorities to a sense of their obligations to the community, and by showing the public that smoke abatement is no idle dream, but a practical scheme of social reform, the Society has done much to improve the conditions of affairs in the metropolis.

The result is seen in the gradual but remarkable diminution of smoke fogs, as well as in the increase of winter sunshine which the metropolis now enjoys. The average number of cases of metropolitan smoke nuisance reported upon by the Society is 1,350, but there can be no doubt that the emission of smoke from factories has undergone a remarkable decrease since the Society came into existence. By way of illustration it may be of interest to point out that the Society's observations have shown that during the last twelve months no nuisances have been detected in respect of 913 factories which in past years were persistent offenders. This fact shows that smoke can be abated where the desire to do so exists.

Industrial smoke which pollutes the London air at the present time is mainly due to factories outside the area administered by the County Council.

In cases where a wilful disregard is shown of statutory obligations to administer the Smoke Clauses of the Public Health Act, it is competent for the Local Government Board to intervene. Unfortunately, the Department has hitherto manifested a disinclination to take the initiative in this direction. The result is that every fog from which London suffers is charged with soot from outlying towns.

In organising the movement the Society has not overlooked the importance of dealing with the domestic smoke nuisance. It cannot be gainsaid that a large proportion of London's smoke is now contributed by our kitchen fires and household grates. In this connexion, several elaborate series of tests of grates, gas fires and fuels have been conducted under the Society's direction, and with the concurrence and support of H.M. Office of Works. These tests have established that while it is almost impossible to hope that an open grate will ever be devised in which bituminous coal may be burnt smokelessly, yet many types of grates are now being manufactured which at least diminish the waste of fuel and give much more satisfactory results from the point of view of heating than their old-fashioned predecessors.

It is believed, too, that the tests of gas fires have tended to remove the prejudice which previously existed against this method of heating, for they have shown that if inserted and used under hygienic conditions, properly constructed gas fires are satisfactory and economical. To the gas and electricity supply companies we owe a great deal, for the employment of their heating and cooking appliances must have effected an immense reduction in domestic smoke, and the cheap and smokeless power they supply has greatly simplified the facts of dealing with factories where deficient boiler room has been the main cause of smoke nuisances. The extent to which gas is alone assisting to clear the air may be gauged from the fact that in the metropolis no fewer than 1,300,000 cooking and heating appliances are now served by the gas companies.

The greatest difficulty has been the latent suspicion, or open hostility, with which the Society has been met by manufacturers. But signs are not wanting that this, perhaps natural feeling, is slowly but surely giving place to a desire for co-operation. It is now becoming widely recognised that the emission of quantities of smoke, especially in the case of large installations, is a sign of waste of fuel, a proof of inadequate supervision, and an ocular demonstration of boiler inefficiency.

The present position of the movement is by no means satisfactory. It is true that striking advances have been made towards the goal we are reaching for, a pure and unpolluted air. But we now seem to be marking time owing to the indisposition of Parliament to give the further powers sought by the great Local Authorities without conclusive proof that these would not unduly harass trade.

Prosecutions for the infringement of the law are decreasing, not because of the non-existence of nuisances, but because of the difficulties of meeting the numerous technical pitfalls created by modern decisions. I therefore suggest that the time has arrived when all interested in the movement should sink their individual desires that some particular form of remedy should be universally adopted, or that efforts should be made to secure the passage of some Private Member's Bill to amend the law in some particular direction.

My proposal is that the Government should be urged to appoint a Royal Commission. The last Parliamentary Committee to consider Smoke Abatement met sixty-seven years ago. Power production, heating and lighting have made marvellous strides since then, and there are numerous points upon which official inquiry could well be made. May I be permitted to summarise a few of the most important of them?

The Royal Commission might be directed to inquire :—

1. What standard, if any, is desirable as to the colour or density of the smoke which should be deemed a nuisance?
2. How the colour or density of smoke can best be identified. (At present a variety of methods are employed, none of which is altogether satisfactory, and some uniform rule is urgently required.)
3. Are the fines at present inflicted upon offenders sufficiently adequate to act as deterrents?
4. Who should be punished, the owner of the works, the engineer-in-charge, or the stoker, when smoke nuisances result from careless manipulation of well equipped installations?
5. Should any industries receive special treatment
6. Should Government Inspectors be appointed to act in regard to the emission of smoke as is done in the case of the Alkali Acts?
7. Should Government premises be placed under the obligation to prevent smoke nuisances? (At present they are immune from prosecution.)
8. Ought any hourly or other time limit to be fixed during which the emission of black or other smoke may fairly be permitted to issue from factory shafts? (At present the time limits fixed by various municipalities vary between three minutes and fifteen minutes in the hour.)
9. Should all cases be heard by Stipendiaries?
10. Can the issue of an unreasonable quantity of smoke be prevented except in the case of breakdown or accident?
11. Can it be shown that the installat of proper appliances generally resu in economy, as is contended "Smoke Abaters."
12. The incidence, intensity, and durat of fogs and their effect on health.
13. The influence of smoke on health.
14. The damage of smoke to buildi works of art, and property genera
15. Foreign efforts to cope with the sm nuisance.
16. How far it is possible by Smoke Ab ment to conserve our coal supplies.
17. How far it is practicable to deal w smoke from private dwelling-house

I entertain no doubt whatever that if inquiry is granted, the result of its inve gations will be to create an overwhelm body of public opinion sufficient to force Government to initiate legislation to prese from unnecessary pollution the air breathe."

TROPHY FOR "THE BUFFS

THIS regimental trophy has been desig and modelled by Miss Florence Steele Mr. H. H. Plante, silversmith. At side of the base are two groups represent Kent training her children in knowle and arms, surrounded by swags of l Above are the badge, a dragon (at each si and a label with the motto of the Bu "Veteri Frondescit Honore," then come f figures in relief, Courage, Endurance, Loya and Mercy, leading up to a figure of Vict Around the base are the battle honours, under each group a label with this insc tion :—"Presented to the 2nd Battalion, Buffs, by those officers who served during South African War." 1899 to 1902.

THE LONDON COUNTY COUNCIL.

THE usual weekly meeting of the Lon County Council was held on Tuesday in County Hall, Spring-gardens, S.W., Mr White, Chairman, presiding.

LOANS.—A loan of 10,000*l.* is to be m to the Greenwich Borough Council for st improvements, and a loan of 2,500*l.* to Stepney Borough Council for electri meters.

CROSSNESS PUMPING STATION. It is p posed to erect penstocks, hydaulic pipe etc., required in connexion with the enla ment of this pumping station, and tend are to be invited for that purpose.

SOUTHWARK PARK.—Various repairs alterations are to be carried out at the su intendent's lodge and cricket pavilion at park, at an estimated cost of 250*l.* for lodge and 55*l.* for the pavilion.

KENNINGTON PARK.—Public convenien are to be erected on the triangular detac portion of Kennington Park, at the junct of Kennington Park-road with Brixton-ro

THEATRES, ETC.—It is proposed to ere cinematograph theatre on a site in De place, King-street, Hammersmith, various alterations are to be carried ou the Little Theatre, John-street, Adelp including the provision of a balcony. following drawings have also been proved : Adelphi Theatre—scheme of he ing and ventilation and provision of doors from the exit staircase from the up balcony; Lyric Theatre, Shaftesbury-ave alterations to electrical installation; Prince's Theatre, Shaftesbury-avenu provision of electrical resistances; George's Hall, Langham-place—alterati to cinematograph enclosure, provision platform for seating in balcony, and alte tions to ventilating arrangements; 2 Tottenham Court-road—provision of draug screen, raising of orchestra floor, and alte tion to orchestra rail.

HOMELAND CHURCHES.

A new edition of Mr. Sidney Heat "Our Homeland Churches and How to St Them," will be published by The Homel Association during next month. The t has been remodelled and lengthened; illustrations have been revised and now clude a series of architectural drawings Mr. J. R. Leathart. The new edition will issued at 2s. 6d. net.



Regimental Trophy. By Miss Florence Steele.

List of Competitions, Contracts, etc.

For some Contracts still open, but not included in this List, see previous issues. Those with an asterisk (*) are advertised in this number: Competitions, iv.; Contracts, iv. vi. viii. x.; Public Appointment, —. Auction Sales, xxii.

Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Competitions.

FEBRUARY 14.—**Shanklin.**—Liberal Club, to cost about 1,000*l*. Particulars from Mr. E. G. Medley, 1, Victoria-villas, Clarendon-road, Shanklin.

FEBRUARY 17.—**London, E.C.**—NEW OFFICES.—The Port of London Authority invite preliminary sketch designs for new head offices in Trinity-square, and for laying out remainder of land as a building site. See advertisement in issue of November 24 for further particulars.

FEBRUARY 17. — **York.** — SCHOOL. — The York Education Committee invite competitive designs for a public elementary school. See advertisement in issue of January 12 for further particulars.

MARCH 15. — **Drammen, Norway.**—RAILWAY-STATION.—Particulars from the Norges Statsbaner, Christiania.

MARCH 15. — **Prestatyn, North Wales.** — LAYING-OUT ESTATE.—Lord Aberconway and the Trustees of the Prestatyn Estate invite designs for laying-out of the estate. Three premiums are offered. Particulars from 33, Henrietta-street, W.C. See advertisement in issue of January 5 for further particulars.

MARCH 16. — **Harrow.** — PUBLIC OFFICES.—The Harrow-on-the-Hill U.D.C. invite tenders for the enlargement of and alterations to their Public Offices. See advertisement in issue of January 5 for further particulars.

MARCH 30.—**Edinburgh.**—MEMORIAL TO KING EDWARD.—Limited. See Competition News, p. 151.

* MARCH 31.—**Manitoba, Canada.**—PARLIAMENT BUILDINGS.—The Government of Manitoba invite designs for the new Parliament buildings to be erected in the City of Winnipeg. See advertisement in this issue for further particulars.

APRIL 20.—**Birmingham.**—BLUE COAT SCHOOL.—Limited to local architects. Assessor, Mr. G. H. Hunt, F.R.I.B.A. Particulars from the Secretary, the Blue Coat School, Birmingham.

MAY 1.—Society of Architects' Travelling Studentship. Design for a Town Hall. 25*l*. and medal.

JUNE 28. — **Hale, Cheshire.**—TOWN PLANNING SCHEME.—Premiums 50*l*. and 25*l*. Particulars from the Council Offices, Hale.

JULY 1. — **Dusseldorf.** — A plan for the extension of the City of Dusseldorf. Premiums of 1,000*l*. to 375*l*. Conditions on application to the Chief Burgomaster, Dusseldorf. A translation appeared on page 366, September 29.

AUGUST 30. — SAXON SNELL PRIZE. — Fifty guineas; with medal, is offered for essay on a hospital subject. Particulars from the Sanitary Institute, 90, Buckingham Palace-road, S.W

NO DATE.—**Jordanhill, Glasgow.**—PROPOSED TRAINING COLLEGE.—Limited to six firms, named in Competition News, December 1, 1911, page 635.

* NO DATE. — **Warrington.** — SCHOOL. — The Warrington Education Committee invite competitive plans for the erection of a public elementary school. See advertisement in this issue for further particulars.

Contracts.

BUILDING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

FEBRUARY 9. — **Dewsbury.**—ALTERATIONS.—For alteration of houses, Wakefield-road. Plans and specifications with Mr. E. Vincent King, A.R.I.B.A., architect, 24, Westgate, Dewsbury.

FEBRUARY 9. — **Harwich.** — ALTERATIONS.—For alterations to the Esplanade Infants' School. Specification from Mr. G. D. Hugh-Jones, Secretary, Harwich.

FEBRUARY 10. — **Edinburgh.** — BANK.—Formation of proposed manure loading bank at the railway sidings, Cattle Market, Gorgie. Plans and specification by Mr. James A. Williamson, A.R.I.B.A., Public Works Office, City Chambers.

FEBRUARY 10. — **Edinburgh.**—BUILDING.—For erection of a building for store cattle at the new Cattle Market, Gorgie. Plans and specification by Mr. James A. Williamson, A.R.I.B.A., Public Works Office, City Chambers.

FEBRUARY 10.—**Machynlleth.**—IMPROVEMENTS. Erection of new organ chamber and other improvements to Maengwyn C.M. Chapel. Plans, etc., at Glasgow House. Mr. Rowland Lloyd Jones, M.S.A., architect, 14, Market-street, Carnarvon, and 36, High-street, Pwllheli.

FEBRUARY 10. — **Penryn.** — CENTRE. For forming a handicraft centre at the Penryn Council School. Plan and specification with Mr. Sampson Hill, Architect to the Committee, Greenlane, Redruth.

FEBRUARY 10. — **Portrush.** — SHOP, ETC.—For erection of a café and shop on the site known as the "Rock Shop," and construction of a concrete breakwater. Plans and specifications from Mr. Albert J. Clarke, C.E., architect and surveyor, 2, Craigvara, Portrush.

FEBRUARY 12 **Colebrook.** VICARAGE.—Erection of a new vicarage. Plans and specification seen, and quantities, on deposit of 3*l*., from Messrs. E. H. Harbottle & Son, architects, County chambers, Exeter.

* FEBRUARY 12. — **Great Burstead.** — SEVEN COTTAGES. The Billericay R.D.C. invite tenders for the erection of seven cottages in Church-lane, Great Burstead. See advertisement in this issue for further particulars.

FEBRUARY 12.—**London.**—REPAIRS.—For repairing works to floors and roofs, etc., at Workhouse, Northumberland-street, Marylebone, W. A specification and form of tender from the architect, Mr. A. Saxon Snell, F.R.I.B.A., of 22, Southampton-buildings, Chancery-lane, W.C. Deposit of 5*l*.

FEBRUARY 12. — **Pontymister.**—HOUSES.—For erection of fifteen houses in Clyde-street. Plans seen, and specifications from the Surveyor, Mr. A. J. Dardis, Council Offices, Risca. Deposit of 2*l*. 2s.

FEBRUARY 12 **Port Talbot.** — CHAPEL.—For erection of Independent Congregational Chapel at Aberavon, Cymmer, Port Talbot Plans and specifications with Messrs. T. E. Richards & Kave, architects, Pontypridd.

FEBRUARY 12 **Rosehearty.** HALL. Erection of new Masonic Hall. Plans and specifications with Mr. W. S. F. Wilson, architect, Fraserburgh.

FEBRUARY 13. — **Maidstone.**—ENGINE-HOUSE Erection of a small engine-house at the Corporation Sewage Works at Aylesford. Specification, plans, and form of tender from the Borough Surveyor, Fair Meadow.

FEBRUARY 14 **Cockermouth.**—HOUSES. For converting No. 1, Derwent-place into two dwelling-houses. Plans and specifications with Messrs J. S. Moffat & Bentley, Lic.R.I.B.A., architects, 33, Church-street, Whitehaven.

FEBRUARY 14.—**Woodford.**—SCHOOL.—For erection of a school for special instruction at Madeira-grove. Plans and specification seen, and information from the architects, Messrs. Tooley & Foster, Council Offices, Queen's-road, Buckhurst Hill, Essex. Quantities on deposit of 2*l*.

FEBRUARY 15. — **Morley.**—VILLA.—For erection of villa residence, St. Andrew's-avenue. Plans and specifications seen, and quantities from Mr. T. A. Buttery, Lic.R.I.B.A., architect, Queen-street, Morley.

FEBRUARY 15. **Porthtowan.** RESIDENCE.—For erection of a residence. Plans and specifications with Mr. S. Hill, architect, Green-lane, Redruth.

FEBRUARY 15.—**Reading.**—HEADQUARTERS.—For the erection of new headquarters for Scattered Homes, Russell-street. Architect, Mr. W. Roland Howell, F.R.I.B.A., 17, Blagrave-street, Reading. Deposit of 1*l*.

FEBRUARY 15.—**Redcar.**—TOWER. For erection of the memorial clock tower in Central-square. Plans and specifications with Mr. J. Howcroft, Surveyor, U.D.C Offices, Redcar.

FEBRUARY 15. — **Welshpool.** — GALLERY.—For construction of a gallery at the Wesleyan Church. Plans and specification with Mr. John Potter, No. 4, Pentreifelin-terrace, Welshpool.

FEBRUARY 16. **Barrow.**—LAUNDRY.—For erection of a new laundry at the North Lonsdale Hospital. Quantities from Mr. H. T. Fowler, A.R.I.B.A., architect and surveyor, 6, Cornwallis-street, Barrow-in-Furness.

FEBRUARY 17.—**Skipton.**—CHIMNEY, ETC.—Erection of a brick chimney and an engine-house at Moor View Baths. Mr. A. E W. Aldridge, Surveyor, Town Hall, Skipton.

FEBRUARY 17. — **Thornley.**—ALTERATIONS.—For alterations to the Workmen's Club at Wheatley-hill, Thornley, S.O. Plans and specification at 22, Market-place, Durham. Mr. H. T. Gradon, architect.

FEBRUARY 19. — **Belfast.** — SHED.—For taking down existing buildings and clearing site for new goods shed for the Great Northern Railway Company (Ireland). Drawings and specification at the Engineer's Offices at Dublin and Belfast, and quantities from Mr. T. Morrison, Secretary, Amiens-street Terminus, Dublin. Deposit of 1*l*. 1s.

FEBRUARY 19. — **Cardiff.** — EXTENSION. — For extensions of works and sidings at Lower Penarth. Plans seen, and specification, quantities, and form of tender on deposit of 5*l*. from Mr. John W. Rodger, architect and surveyor, High-street, Cardiff.

FEBRUARY 19. **Coventry.** FOUNDATIONS.—For construction of concrete foundations for purifiers, etc., at Foleshill Gasworks. Drawings seen, specification, with form of tender and quantities from Mr. F. W. Stevenson, Engineer and General Manager, Gasworks, Coventry. Deposit of 1*l*.

* FEBRUARY 19. — **Hunstanton.** — ADDITIONS, ETC., TO HOME.—The Committee of the Hunstanton Convalescent Home invite tenders for alterations and additions. See advertisement in this issue for further particulars.

FEBRUARY 19. **Lydiate.**—CHANCEL.—For rechancel to the church. Plans and specification with Messrs. Austin & Paley, architects, Lancaster; quantities from Messrs. Wright & Son, surveyors, Lancaster

FEBRUARY 19. — **Sheffield.**—SCHOOL.—For erection of new department for infants and open centre, at Whitby-road Council School, Darnall. Drawings and conditions of contract seen, quantities and forms of tender from the City Architect, Town Hall, Sheffield.

FEBRUARY 19. — **Whitby.** — ROOMS.—For erection of new guild rooms. Plans and specifications with Mr. E. W. Smales, architect, 64, Baxtergate, Whitby.

FEBRUARY 20.—**Bilston.**—FIRE-STATION, ETC. For erection of a new fire-station in Market-street, and new sanitary depôt and foreman's cottage in Ann-lane. Plans seen and specifications, quantities, and form of tender from Mr. Vincent Turner, A.M.Inst.C.E., Surveyor's Office, Town Hall, Bilston; deposit of 2*l*. 2s

FEBRUARY 20.—**Doneraile.**—HOUSE.—For erection of a dwelling-house at Oldcourt, Doneraile. Plans and specifications with Mr. Wm. F. Mac, C.E., architect, Fermoy, and 51, Grand-parade, Cork.

FEBRUARY 20. **Durham.** SCHOOL.—For erection of new Council school at Easington Colliery. Plans, specification, and general conditions of contract seen, and quantities from J. Morson, architect, 77, Westgate-road, Newcastle-on-Tyne.

FEBRUARY 20. — **Winchester.** — WARDS, ETC. Erection of new nurses' quarters and maternity wards, to be built in the grounds of the Winchester Union Workhouse. Quantities on deposit of 2*l*. 2s. from Mr. Frank Faithfull, Clerk to the Guardians, 105, High-street, Winchester. Drawings and specifications seen at the offices of the architect, Mr. B. D. Cancellor, Jewry-street, Winchester.

FEBRUARY 21. **Foyers.** — HOUSE.—Erection of house for cookery and woodwork classes for Public School. Plans and specifications from Mr. W. W. Mack, Fort-Augustus.

FEBRUARY 21.—**Idmiston.** SCHOOL. For erection of a Council scoool. Plans and specification with Mr. J. G. Powell, County Surveyor, Trowbridge Quantities and form of tender on deposit of 5*l*

FEBRUARY 22. — **Alton.** —SCHOOL.—For erection of Council school and alterations to existing school Plans seen, and quantities, specification and conditions of contract from Mr. A. Roberts, Architect to the Education Committee, The Castle, Winchester. Deposit of 2*l*. 2s. for quantities.

FEBRUARY 22.—**Blaina.**—HOUSES.—Erection of seventy-four houses at Cwm Celyn. Plans and specifications, quantities, and forms of tender from the Council's Engineer and Surveyor, Mr. W. J. Davies, on deposit of 5*l*.

* FEBRUARY 22 - **Bradford.** - ALTERATIONS LABOUR EXCHANGE.—The Commissioners of H.M. Works, etc., invite tenders for alterations to Bradford Labour Exchange. See advertisement in this issue for further particulars.

* FEBRUARY 22. — **Mile End.** — LAVATORIES BATHROOM.—The Guardians of the Poor of the Hamlet of Mile End Old Town invite tenders for building lavatories and bathroom. See advertisement in this issue for further particulars.

* FEBRUARY 23. — **Darlington.** — ENLARGEMENT OF POST-OFFICE. — The Commissioners of H.M. Works and Public Buildings invite tenders for enlargement of post-office. See advertisement in this issue for further particulars.

FEBRUARY 24. — **Carnarvon.** — ADDITIONS. — For additions and alterations to the landing-stage. Plans and specification with Mr. W. Bezer Jones, A.M.Inst.C.E., 4, Church-street, Carnarvon

* FEBRUARY 26.—**Bury.**—COUNTY COURT, ETC. The Commissioners of H.M. Works and Public Buildings invite tenders for County Court, Inland Revenue, and Customs and Excise Offices. See advertisement in this issue for further particulars.

* FEBRUARY 26 **Swansea.** HOUSES.—The Corporation of Swansea invite tenders for five houses in Cwm road. See advertisement in this issue for further particulars.

BUILDING—*continued.*

late given at the commencement of each ph is the latest date when the tender, or ies of those willing to submit tenders, sent in.

BRUARY 26. — **Swansea.** — HOUSES.—The ation of Swansea invite tenders for fifty houses at Trewyddfa Common. See advert it in this issue for further particulars.

BRUARY 26. — **Wakefield.** — EXTENSION OF HALL.—The West Riding General Pur Committee invite whole or separate ten r the work in connexion with the exten the County Hall. See advertisement in ue for further particulars.

UARY 27. — **Lingdale.**—ALTERATIONS.—For ons and improvements at Lingdale l School. Plans and specifications at the Mr. J. G. Wrigley, Secretary, County Northallerton.

UARY 27. — **London.**—CONVENIENCES.—For ction of sanitary conveniences in Black oad, Tooting, and on Clapham Common. lapham Cross. Specifications, drawings, of contract seen, and forms of tender and ies at the Borough Engineer and Sur Office, No. 215, Balham High-road, S.W ft of 1*l.* 1s.

UARY 27.—**Neath.**—INFIRMARY.—For erec f an administrative block, pavilions for id infirm, children's home, porter's lodge natics' ward, laundry, engine-house and nurses' home, boundary walls, roads and and electric lighting in connexion with Graded Infirmary at Penrhiewtyn, Neath. and specification with the architect, Mr. tees, Parade-chambers, Neath. Quantities posit of 5*l.* 5s.

BRUARY 28.—**Enfield.**—TRAINING WORK —The Edmonton Guardians invite tenders rection of three training workshops at t. See advertisement in this issue for r particulars.

UARY 28. **London.**—SHOPS. Erection of training workshops at the Chase Farm s, Enfield. Specification and conditions tract from the architect, Mr. J. C. S. ery, at his office, 13, Fitzroy-square, W

UARY 28.—**Wellow.**—SCHOOL.—For erection ouncil school and teacher's residence at own St. John, Wellow, near Bath. Plans pecification with the architect, Mr. W. F. Midsomer Norton.

CH 4.—**Macclesfield.**—ADDITIONS. Altera and additions to the St. George's School, treet. Plans and specifications and form tract with Messrs. Whittaker & Bradburn, pots, King Edward-street, Macclesfield. t of 2*l.* 2s. for quantities.

RCH 4. — **Salford.**—SCHOOL.—The Salford tion Committee invite tenders for new pal secondary school for boys. See adver nt in this issue for further particulars.

RCH 4. — **Stepney.** — STRUCTURAL ALTERA — The Stepney B.C. invite tenders for ral alterations at the Libraries, Mile End. vertisement in this issue for further par s.

CH 5. **Douglas.** — ALTERATIONS. — For ions to the court-house. Plans and speci ns from Messrs. Cowle & Son, Government pets, St. George's-street, Douglas, Isle of

DATE. **Belfast.** — BOATHOUSE, ETC.—For n of a boathouse and hall. Plans and cation from the architects, Messrs. Con & M'Avoy, M.R.I.A.I., Oxford House, 35, l-street, Belfast.

DATE. **Belfast.**—RESIDENCE. For erection sidence, Cyprus-avenue. Plans and speci n from the architects, Messrs. Connolly & y, M.R.I.A.I., Oxford House, Oxford- Belfast.

NO DATE. — **Bradford.** — SHOP. For erecting shop on the land of the Phœnix Dynamo Manufacturing Company, Ltd., Thornbury Works. Plans and specifications at the Company's Works.

NO DATE. — **Chandlersford.** — HOSPITAL.—For the erection of a hospital for infectious diseases at Fryern Hill. Deposit of 5*l.* to Mr. W. Wallace Gandy, Engineer and Surveyor to the Council, Offices of the Council, Eastleigh.

NO DATE. — **Gateshead.**—HALL, ETC.—Erection of new lecture hall and Sunday schools, High West-street Wesleyan Chapel. Architect, Mr. J. Walton Taylor, St. John-street, Newcastle.

NO DATE. — **Long Whatton.** — CHAPEL, ETC.— Erection of new Wesleyan Chapel and Schools at Long Whatton, near Loughborough. Mr. A. E. Lambert, architect, 28, Park-row, Nottingham.

ENGINEERING, IRON, AND STEEL.

FEBRUARY 10.—**Swineshead.** — BRIDGES.—For the repair of West Bridge, over the South Forty-Foot Drain, near Swineshead Station, and High Bridge, over the Old Hammond Beck, Swineshead. Specifications from Mr Henry Moody, Surveyor, Horncastle-road, Boston.

FEBRUARY 12.—**Wallasey.** ENGINE, ETC.—For erection of a 500-kw. alternator and Diesel oil engine. Specification from Mr. J. A. Crowther, Engineer and Manager, Electricity Supply Station, Seaview-road, Liscard, Wallasey.

FEBRUARY 14. — **Manchester.** — BRIDGE.—The Lancashire and Yorkshire Railway invite tenders for the widening of a bridge over Hulme Hall-lane, Ardwick Branch. Plans seen, and quantities and specification at the Engineer's Office, Hunts Bank, Manchester.

FEBRUARY 14.—**Pontefract.**—BRIDGE.—For the widening of the bridge over Ferry Bridge-road. Plans seen, and quantities and specification at the Engineer's Office, Hunts Bank, Manchester.

FEBRUARY 17. — **Cardiff.** — CHAMBERS. — For supply of drying chambers for new laundry at Ely Workhouse. Architect, Mr. E. Seward, F.R.I.B.A., Queen's-chambers, Cardiff. Deposit of 1*l.* 1s.

FEBRUARY 26. — **Norwich.** — CISTERNS.—For supply of lead-lined flushing cisterns and water-closet pans. Specification and plan with Mr. A. E. Collins, M.Inst.C.E., City Engineer, Guildhall, Norwich.

FURNITURE, PAINTING, MATERIALS, etc.

FEBRUARY 14. — **London.** — PAINTING. — The Metropolitan Asylums Board invite tenders for cleaning and painting works and repairs at the Park Hospital for Children, Hither Green-lane, Hither Green, S.E. Specification, by Mr. W. T. Hatch, M.Inst.C.E., M.I.Mech.E., Engineer-in-Chief, may be seen at the Office of the Board, Embankment, E.C.; deposit of 1*l.*

FEBRUARY 15. — **Welshpool.** — PAINTING.—For cleaning and renovating of the Wesleyan Church. Specification with Mr. John Potter, No. 4, Pentrefelin-terrace, Welshpool

* FEBRUARY 20.—**Various.** ROAD MATERIALS. —The Commissioners of H.M. Works, etc., invite tenders for supply of road materials for one year from April 1 next. See advertisement in this issue for further particulars.

FEBRUARY 21. — **Leeds.** PAINTING.—For cleaning down, painting, etc., at various police-stations. Specifications seen, and forms of tender from Mr. W. T. Lancashire, City Engineer, Municipal Buildings, Leeds.

FEBRUARY 29. — **Ashford.** — PAINTING. — For painting various buildings, for the Ashford U.D.C. Mr. W. Terrill, Surveyor, 5, North-street, Ashford.

* MARCH 4.—**Stepney.**—PAINTING AND FITTINGS —The Stepney B.C. invite tenders for supply of fittings at the Libraries, Mile End-road, and also for redecoration. See advertisement in this issue for further particulars.

ROADS, SANITARY AND WATER WORKS.

FEBRUARY 10. **Burnley.**—MAINS.—For laying and jointing of about 3,390 yds. of 3-in. cast-iron water mains. Form of tender from Mr. H. Pritchard, Engineer.

FEBRUARY 12. **Blackburn.**—STREETS. For excavating, forming, and paving streets. Plans and specifications with Mr. W. Stubbs, A.M.Inst.C.E., Borough Engineer, Municipal Offices, Blackburn.

FEBRUARY 12. **Hull.**—STREET.—For the widening of Saner-street. Forms of tender and particulars from Mr. A. E. White, M.Inst.C.E., City Engineer, Town Hall, Hull.

FEBRUARY 12. — **Reigate.** — GRANITE.—For supply of granite, flints, Kentish ragstone, tar macadam, gravel, chalk, kerbing, etc. Surveyor, Mr. Arthur J. Head, 48, High-street, Reigate, Surrey

FEBRUARY 12. — **Southam.** — GRANITE. — For supply of granite for repair of highways. Forms of tender from the Surveyor, Mr. H. Pickering, of Southam, Rugby.

FEBRUARY 12. — **South Shields.** SHAFTS.—For erection of nine sewer ventilating shafts. Plans and specification seen, and particulars from the Surveyor, Council Offices, 1, The Terrace, East Boldon, R.S.O.

FEBRUARY 13.—**Caerphilly.**—SEWER.—For construction of stoneware sewer. Plans and specification seen, and form of tender, on deposit of 1*l.* 1s., from Mr. Alfred O. Harpur, Engineer and Surveyor, Caerphilly.

FEBRUARY 13.—**Galway.**—ROAD.—For improving about 22 miles of public road from Galway to Costello. Mr. W. G. Seymour, Secretary, Courthouse, Galway.

FEBRUARY 13.—**Woodbridge.**—MATERIALS.—For road materials. Mr. George Cook, District Surveyor, Ipswich-road, Woodbridge.

FEBRUARY 14. **London.**—ROADS.—The Metropolitan Asylums Board invite tenders for repairs to roads at the Brook Fever Hospital, Shooter's Hill-road, Woolwich, S.E. Drawing and specification, by Mr. W. T. Hatch, M.Inst.C.E., M.I.Mech.E., Engineer-in-Chief, seen at the Office of the Board, Embankment, E.C.; deposit of 1*l.*

FEBRUARY 21.—**Goole.**—STORES, ETC.—For the supply of stores and materials. Forms of tender and specifications from Mr. C. G. Bradley, Engineer and Surveyor, Council Offices, Goole.

FEBRUARY 24. — **South Shields.** — CONCRETE — For providing and laying *in situ* concrete for footways and back sirgets. Specification, forms of tender from Mr. L. Roseveare, A.M.Inst.C.E., Borough Engineer and Surveyor, Municipal Buildings, South Shields.

FEBRUARY 27 **Ashton-on-Mersey.**—ROADS. For making-up four private streets. Plans seen, and specifications and quantities, on deposit of 1*l.* 1s., from Mr. F. Hutton, Surveyor, Council Offices, Ashton-lane, Ashton-on-Mersey.

* FEBRUARY 27. — **Wandsworth.** — SANITARY CONVENIENCES. — The Wandsworth B.C. invite tenders for construction of sanitary conveniences at Tooting and on Clapham Common. See advertisement in this issue for further particulars.

MARCH 5.—**Sounthorpe.** — SEWAGE.—For construction of sewage disposal works. Plans and specification with the Engineer, Mr. Herbert Walker, M.Inst.C.E., King-street, Nottingham. Quantities and form of tender on deposit of 5*l.*

NO DATE. — **Plymouth.** ROAD. — For the making-up of Sconner-road, on the Antony Building Estate, Torpoint. Mr. W. J. Carder (of Messrs. Carder & Carder), surveyor to the above estate, 24, Lockyer-street, Plymouth.

Auction Sales.

Nature and Place of Sale.	By whom Offered.	Date of Sale.
DING MATERIALS On the Site	Veryard & Yates	Feb. 14
HOLD SITE, SPITALFIELDS—At the Mart	Debenham, Tewson, Richardson, & Co.	Feb. 20
DER AND CONTRACTOR'S PLANT—Upon the Premises	Wheatley Kirk, Price, & Co.	Feb. 27, 28, 29
DING SITE, LONG ACRE, W.C. -At the Mart	Robins, Gore, & Mercer	Mar. 5
DING SITE, WESTMINSTER—At 20, Hanover-square, W.	Knight, Frank, & Rutley	Mar. 20
DING SITE, HATTON-GARDEN, E.C. t the Mart	Farebrother, Ellis, Egerton, Breach, Galsworthy, & Co.	Mar. 21
DING SITE, ANGEL-COURT, E.C.—At the Mart	Farebrother, Ellis, Egerton, Breach, Galsworthy, & Co. ...	Mar. 21

LAW REPORT.

Muswell Hill Houses: Appeal Case in Divisional Court.

Cable *v.* Lewis.

Tuesday, January 30, a Divisional Court King's Bench Division, composed of es Hamilton and Lush, had before them se of Cable *v.* Lewis, which came before Court in the form of a motion by the iff to set aside a judgment of Master onnell.

David White, appearing with Mr. ams for Mr. Cable, stated that in this Mr. Cable was claiming 38*l.* 19s. 1d., the of some wrought-iron patent window nts, which, he alleged, were ordered by Mr. Lewis for the purpose of being used in buildings the defendant was erecting at Muswell Hill, N. The defendant, Mr. Lewis (said Counsel), was an architect and surveyor, and he had in his employ a man named Curzon, who was a friend of Mr. Cable's. Certain conversations passed between Mr. Curzon and Mr. Cable, and on account of these Mr. Cable called at the premises of Mr. Lewis's firm and saw Mr. Lewis, and pointed out to him the advantages of these window casements. Mr. Lewis said he would use them in these particular buildings, and subsequently Mr. Lewis, in communication to a Mr. Flowerdew, the builder, made references to the casements. In the specifications (Counsel continued) these particular casements were mentioned, and the builder was instructed to use Mr. Cable's patent articles.

Mr. David White went on to say that the man Flowerdew was a man of straw A large amount of property was accumulating upon these works, and in February, 1906, upon the builder failing, Mr. Lewis, who was architect and owner of the property, came and took the property, and his client (Mr. Cable) was unable to recover anything.

He would submit that under the case of Hobbs *v.* Turner—which was on "all fours" with the present action—Mr. Cable was entitled to recover from Mr. Lewis

Replying to Mr. Justice Hamilton, Counsel stated that he submitted the goods were delivered to Flowerdew after an order had been given by the defendant. The Master, it was true, had found that in fact Mr. Lewis did not give the order and was not liable, but plaintiff appealed on the point of law. The order was given (he contended) by Mr. Lewis by word of mouth.

Mr. Justice Hamilton: The Master believed Mr. Lewis.

Counsel: Yes, but the correspondence shows that he is wrong.

Mr. Justice Hamilton said he noticed from the documents before him that the Master had said he found as a fact that the order for the casements was not given by the defendant.

Mr. White proceeded to further argue that in this case the building owner, Mr. Lewis, was the architect, and clearly he had taken possession. He added that none of the people who had supplied goods for the seven houses had been paid a penny.

Mr. Justice Lush remarked that whether Mr. Lewis did give the order or not was purely a question of fact.

Counsel said that he asked the Court to give Mr. Cable judgment or leave for a new trial. He mentioned that originally there was application for judgment under Order 14, and the matter was referred to the Master. It ought never to have been referred to the Master.

Mr. J. R. Macoun (for the respondent) stated that the reference was by consent.

Mr. White further argued his case, and handed in the specifications, from which, he said, their Lordships would see that the name of Mr. Cable appeared and a reference to his patent casements. Concluding, he submitted that Mr. Lewis, as the builder, gave the order to himself as architect, and as architect he gave the order to Mr. Cable.

Mr. Justice Lush remarked that Master Macdonnell had found against Mr. Cable on the facts, and it seemed to him that the cases that Counsel had cited had nothing to do with it.

Mr. White replied that in the event of the Court deciding against Mr. Cable he would ask for leave to appeal from their decision, as this was a most important matter so far as builders' merchants were concerned with regard to the supplying of goods in these circumstances.

Without hearing any argument by Mr. Macoun, Mr. Justice Hamilton delivered judgment. His Lordship remarked that the price of the goods was under 40*l.*, and, an issue having been raised that appeared to be one of fact, it was referred to Master Macdonnell, who on hearing the evidence decided in favour of the defendant.

The plaintiff had moved to set the judgment aside, and for judgment to be entered for the plaintiff on two grounds:—(1) That the Master misdirected himself on the facts in holding that the plaintiff had not made out his case; and (2) that he was wrong in law in not holding that the order for the goods was given by the defendant as the real principal. Mr. White had argued that the Master should have found that the plaintiff could recover against the defendant because there was somebody—a man named Flowerdew—who had pledged the defendant's credit for the plaintiff, and established privity of contract between the parties to the action. That, however, did not appear to accord with the evidence actually given before the Master, because, although the plaintiff said he had had an order for the goods given direct by Mr. Lewis, the defendant had sworn that no such order was given, and the Master believed the defendant and not the plaintiff. The case that had been quoted for the appellant did not apply, and the conclusion that the Court had arrived at was, that they could not interfere with the discretion of the Master, and the appeal must therefore be dismissed with costs.

Mr. White raised the question of leave to appeal against this decision, and Mr. Justice Hamilton said: "We do not give leave—you must take your own course."

PATENTS.

APPLICATIONS PUBLISHED.*

269 of 1911.—Joe William Grinshaw and Ralph Thomas Mallalieu: Ventilator terminals and chimney-cowls.

348 of 1911.—Leonard Milne: Electric wiring of buildings.

679 of 1911.—Frederick William Campbell: Concrete piles and the like.

1,053 of 1911.—Edward Le Bas and Herbert Thompson Garvie: Apparatus for pitching and driving piles.

6,151 of 1911.—William Russell: Construction of incombustible and fire-resisting floors, partitions, and the like.

6,791 of 1911.—Charles Bourdon: Radiators for heating buildings, and the like.

7,815 of 1911.—Carron Company, Thomas Bamforth, and George Pate: Stoves, ranges, and the like.

8,161 of 1911.—Willi Herdt and Albert Frauss: Artificial stone and process for making the same.

8,780 of 1911.—Henry Harrison: Reinforced concrete and the like.

10,352 of 1911.—Reginald Wilcox Lone: Bricks.

11,707 of 1911.—John Blair-Mason, John Loudon, and George Allen Lee: Sliding doors.

13,485 of 1911.—Lionel Charles Raymond: Simple traversing-instrument for use in measuring and plotting land areas.

15,656 of 1911.—George Edward Heyl: Manufacture of sheets or blocks for paving and other purposes.

18,521 of 1911.—Johannes Hermanus Hubertus Goossens: Domestic fireplaces.

19,037 of 1911.—James Henry Dunavon: Grate bars.

20,241 of 1911.—Hermann Frank: Radiators for heating buildings and the like.

* All these applications are in the stage in which opposition to the grant of Patents upon them can be made.

SOME RECENT SALES OF PROPERTY:

ESTATE EXCHANGE REPORT.

January 12.—By C. J. Hughes & Sons.

Lach Dennis, Cheshire.—Hulse House Farm, four cottages, smithy, and 117 acres, f. £6,185

January 17.—By Ernest R. Oxborow.

Ipswich, Suffolk.—Westerfield-rd., Carisbrooke, f., p. 1,260
Westerfield-rd., plot of land, f. 250
128 to 134 (even), Kemball-st., f., w.r. 44*l.* 4*s.* 365

January 18.—By Fred. Taylor & Co.

Chelmsford, Essex.—Anchor Works, f., p. 1,000

January 25.—By Watson, Temple, & Waymouth.

Great Wakering, etc., Essex. Trotters and Smithscroft Farms, 165 a. 2 r. 36 p., f. 10,400

By T. Lavington.

Potterne, Wilts.—Whistley Farm, 145 a. 2 r. 23 p., f. 6,850

January 29.—By Geoffrey F. Lockwood.

Langthorpe, Yorks.—The Grange Farm and Red Lion p.h., 110 acres, f. 6,025

January 30.—By S. Walker & Son.

Tottenham.—Portland, Houghton, and Pelham roads, f.g. rents 303*l.* 10*s.*, reversion in 64 yrs 6,231

By Knight & Co.

Battersea.—18 and 20, Radstock-st., f., w.r. 19*l.* 8*s.* 310

By G. W. & H. G. Potter.

Hampstead.—Branch-hill, Lower Lodge, f., w.r. 18*l.* 4*s.* 515

January 30.—By Lee & Farr.

Slough, Bucks.—1, 2, and 4, Chesterfield pl., f., y. and w.r. 62*l.* 790

By Barber & Son.

Hodnet, Salop.—Wood Lane Farm, 141 acres, f. 6,581
Three cottages and 1 a. 0 r. 26 p., f. 780

January 31.—By Baker & Co.

Kingston-on-Thames.—Cromwell-rd., picture theatre, f. 3,500

By Beard & Son.

Enfield.—2*b*, Church-st. (s.), u.t. 83 yrs., g.r. 11*l.*, y.r. 110*l.* 1,425

Fulham.—154, Wandsworth Bridge-rd. (s.), f., y.r. 50*l.* 700

Bayswater, 6 and 8, Richmond-rd (s.), f., y.r. 195*l.* 2,700

Victoria-pl., f.g.r. 7*l.*, reversion in 34 yrs. 180

Harlesden, 62, Craven Park-rd. s., u.t. 52 yrs., g.r. 6*l.*, y.r. 90*l.* 775

Bayswater, 116, Talbot-rd. (s.), u.t. 55 yrs., g.r. 12*l.* 12*s.*, y.r. 60*l.* 380

Paddington.—5*a*, Harrow-rd. (s.), u.t. 69 yrs., g.r. 12*l.*, y.r. 100*l.* 1,170

By Lethaby & Lethaby.

Leigh-on-Sea.—Oakley Park-drive, etc., six plots, f. 170

By St. Quintin, Son, & Stanley.

Notting Hill.—Clarendon-rd., f.g. rents 56*l.*, reversion in 29 yrs. 1,880
Clarendon-rd., plot of land, f. 145
Silchester-rd., f.g. rents 29*l.* 14*s.*, reversion in 31 yrs. 855
Walmer-rd., f.g. rents 26*l.*, reversion in 29 yrs. 600
Walmer-rd., f.g. rents 27*l.*, reversion in 31 yrs. 750
Walmer-rd., f.g. rents 17*l.* 16*s.* 3*d.*, reversion in 32 yrs. 470
Walmer-rd., f.g. rents 82*l.*, reversion in 29 yrs. 1,630
Walmer rd., l.g. rents 65*l.* 5*s.*, u.t. 30 yrs., g.r. 32*l.* 16*s.* 3*d.* 442

Contractions used in these lists.—F.g.r. for freehold ground-rent; l.g.r. for leasehold ground-rent; i.g.r. for improved ground-rent; g.r. for ground-rent; r. for rent; f. for freehold; c. for copyhold; l. for leasehold; p. for possession; e.r. for estimated rental; w.r. for weekly rental; q.r. for quarterly rental; y.r. for yearly rental; u.t. for unexpired term; p.a. for per annum; yrs. for years; la. for lane; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; cres. for crescent, av. for avenue; gdns. for gardens; yd. for yard; gr. for grove; b.h. for beerhouse; p.h. for public-house; o. for offices; s. for shops; ct. for court.

PRICES CURRENT OF MATERIAL

*** Our aim in this list is to give, as far as possible, *average* prices of materials, not necessarily the lo
Quality and quantity obviously affect prices—a
which should be remembered by those who make us
this information.

BRICKS, &c.

Per 1000 Alongside, in River. £

	£
Best Stocks	1
Picked Stocks for Facings	2

Per 1000, Delivered at Railway Depôt.

	£ s. d.		£
Flettons	1 12 0	Best Blue Pressed	
Best Fareham Red	3 12 0	Staffordshire...	3
		Do. Bullnose	4
Best Red Pressed Ruabon Facing	5 0 0	Best Stourbridge Fire Bricks ...	4

Glazed Bricks—

Best White, Ivory, and Salt Glzd. Str'tch'rs	11 7 6	Double Headers	13
		One Side and two Ends	17
Headers	10 17 6	Two Sides and one End	18
Quoins, Bullnose, and 4½ in. Flats	14 17 6	Splays & Squints	16
D'bie Stretchers	16 17 6		

Second Quality £1 10*s.* per 1000 less than best.

	s. d.	
Thames and Pit Sand	6	9 per yard, delive
Thames Ballast	5	6 "
Best Portland Cement	31	0 per ton,
Best Ground Blue Lias Lime	19	0 "

Note—The cement or lime is exclusive of ordinary charge for sacks.

Grey Stone Lime ..... 13*s.* 0*d.* per yard delive
Stourbridge Fireclay in sacks 27*s.* 0*d.* per ton at rly

STONE.

Per Ft. Cube.

Bath Stone—delivered on road waggons, Paddington Depôt	
Do. do. delivered on road waggons, Nine Elms Depôt	

Portland Stone (20 ft. average)—

Brown Whitbed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	
White Basebed, delivered on road waggons Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	

Per Ft. Cube, delivered at Railway Depôt.

	s. d.		
Ancaster in blocks..	1 10	Closeburn Red Freestone	
Beer in blocks	1 6		
Greenshill in blocks	1 10	Red Mansfield Freestone	
Darley Dale in blocks	2 4	Talacre & Gwespyr Stone	
Red Corsehill in blocks	2 3		

York Stone—*Robin Hood Quality.*

Per Ft. Cube, Delivered at Railway Depôt.	
Scappled random blocks	
Per Ft. Super., Delivered at Railway Depôt.	
6 in. sawn two sides landings to sizes (under 40 ft. super.)	
6 in. rubbed two sides ditto, ditto	
3 in. sawn two sides slabs (random sizes)	
2 in. to 3 in. sawn one side slabs (random sizes)	
1¼ in. to 2 in. ditto, ditto	

Hard York—

Per Ft. Cube, Delivered at Railway Depôt.	
Scappled random blocks	
Per Ft. Super., Delivered at Railway Depôt.	
6 in. sawn two sides landing to sizes (under 40 ft. super.)	
6 in. rubbed two sides ditto	
3 in. sawn two sides slabs (random sizes)	
2 in. self-faced random flags	

SLATES.

Per 1000 of 1200 at Railway Depôt.

In. In.	£ s. d.	In. In.	£
20×10 best blue Bangor	13 2 6	20×10 best Eur'ka unfading green	15
20×12 ditto	13 17 6	20×12 ditto	18
20×10 1st quality ditto	13 0 0	18×10 ditto	13
		16×8 ditto	10
20×12 ditto	13 15 0	20×10 permanent green	11
16×8 ditto	7 5 0		
22×10 best blue Portmadoc	12 12 6	18×10 ditto	9
16×8 ditto	6 12 6	16×8 ditto	6

TILES.

At Railway Depôt.

	s. d.		s.
Best plain red roofing (per 1000)	42 0	Best "Hartshill" brand, plain sand-faced (per 1000)	58
Hip and Valley (per doz.)	3 7	Do. pressed (per 1000)	47
Best Broseley (per 1000)	50 0	Do. Ornamental (per 1000)	50
Do. Ornamental (per 1000)	52 6	Hip (per doz.)	4
Hip and Valley (per doz.)	4 0	Valley (per doz.)	4
Best Ruabon red, brown, or brindled (Edw'ds) (per 1000)	57 6	Staffords. (Hanley) Reds or Brindled (per 1000)	43
Do. Ornamental (per 1000)	60 0	Hand-made sand-faced (per 1000)	45
Hip (per doz.)	4 0	Hip (per doz.)	3
Valley (per doz.)	3 0	Valley (per doz.)	3

WOOD.

Building Wood.	At per standard.	
	£ s. d.	£ s.
Deals: best 3 in. by 11 in. and 4 in. by 9 in. and 11 in.	14 0 0 ...	15 10
Deals: best 3 by 9	13 10 0 ...	14 10

WOOD (*Continued*).

	At per standard.
DING WOOD (*Continued*).	£ s. d. £ s. d.
s: best 2½ in. by 7 in. and	
., and 3 in. by 7 in. and 8 in.	11 10 0 ... 12 10 0
s: best 2½ by 6 and 3 by 6...	0 10 0 less than 7 in. and 8 in.
seconds	1 0 0 less thn best.
s: seconds	0 10 0 „ „
by in. and 2 in. by 6 in. ...	9 10 0 ... 10 10 0
by 4½ in. and 2 in. by 5 in.	9 0 0 ... 10 0 0
n Sawn Boards—	
and 1¼ in. by 7 in.	0 10 0 more than battens.
	1 0 0 „
ber: best middling Danzig	At per load of 50 ft.
mel(average specification)	5 0 0 ... 5 10 0
ads	4 10 0 ... 5 0 0
l timber (6 in. to 10 in.) ...	3 17 6 ... 4 0 0
l timber (6 in. to 8 in.).....	3 5 0 ... 3 10 0
lish balks	2 12 6 ... 3 0 0
ine timber (30 ft. average)	5 5 0 ... 6 0 0

JOINERS' WOOD.

	At per standard.
Sea: first yellow deals,	
n. by 11 in.	24 10 0 ... 25 10 0
n. by 9 in.	22 10 0 ... 23 10 0
ttens, 2½ in. and 3 in. by 7 in.	17 0 0 ... 18 0 0
nd yellow deals, 3in. by 11in.	19 0 0 ... 20 0 0
„ 3 in. by 9 in.	18 0 0 ... 19 10 0
ttens, 2½ in. and 3in. by 7 in.	14 0 0 ... 15 0 0
d yellow deals, 3 in. by	
in. and 9 in.	14 0 0 ... 15 0 0
ttens, 2½ in. and 3 in. by 7 in.	11 10 0 ... 12 10 0
burg: first yellow deals,	
n. by 11 in.	21 10 0 ... 22 10 0
„ 3 in. by 9 in.	18 10 0 ... 19 10 0
ttens	14 0 0 ... 15 0 0
nd yellow deals, 3 in. by	
n	16 10 0 ... 17 10 0
, 3 in. by 9 in.	15 0 0 ... 16 0 0
ttens	11 10 0 ... 12 10 0
d yellow deals, 3in. by 11 in.	13 10 0 ... 14 10 0
, 3 in. by 9 in.	13 0 0 ... 14 0 0
ttens	10 10 0 ... 11 0 0
Sea and Petersburg—	
e white deals, 3 in. by 11 in.	15 0 0 ... 16 0 0
„ 3 in. by 9 in.	14 0 0 ... 14 10 0
ttens	11 10 0 ... 12 10 0
nd white deals, 3in. by 11in.	14 0 0 ... 15 0 0
„ 3 in. by 9 in.	13 0 0 ... 14 0 0
ttens	10 10 0 ... 11 0 0
pine: deals	19 0 0 ... 21 0 0
er 2 in. thick extra	0 10 0 ... 1 0 0
Pine—First, regular sizes	48 0 0 upwards.
ments	32 0 0 „
nds, regular sizes	33 0 0 „
ments	28 0 0 „
Pine—Planks per ft. cube.	0 4 6 ... 0 6 0
r and Stettin Oak Logs—	
e, per ft. cube	0 3 0 ... 0 3 9
ll „ „	0 2 6 ... 0 2 6
got Oak Logs, per ft. cube	0 6 6 ... 0 8 0
Jainsoot Oak, per ft. sup. as	
nch	0 0 10 ... 0 1 0
do. do.	0 0 8½ ... —
Mahogany—Honduras, Tab-	
asco, per ft. super. as inch..	0 0 10 ... 0 1 1
ated, Figury, per ft. super.	
inch	0 1 6 ... 0 2 6
Walnut, American, per ft.	
per. as inch	0 0 10 ... 0 1 0
per load	18 0 0 ... 22 0 0
can Whitewood planks,	
r ft. cube	0 5 0 ... 0 6 0

	Per square.
ed Flooring, etc.—	
by 7 in. yellow, planed and	
ed	0 13 6 ... 0 17 0
by 7 in. yellow, planed and	
atched	0 14 0 ... 0 18 0
by 7 in. yellow, planed and	
atched	0 16 0 ... 1 0 0
by 7 in. white, planed and	
ed	0 13 0 ... 0 14 6
by 7 in. white, planed and	
atched	0 12 6 ... 0 15 0
by 7 in. white, planed and	
atched	0 15 0 ... 0 16 6
by 7 in. yellow, matched	
d beaded or V-jointed brds.	0 11 0 ... 0 13 6
by 7 in. „ „	0 14 0 ... 0 18 6
by 7 in. white „ „	0 10 0 ... 0 11 0
by 7 in. „ „	0 12 9 ... 0 15 0

6 in. at 6d. to 9d. per square less than 7 in.

JOISTS, GIRDERS, &c.

	In London, or delivered Railway Vans, per ton.
Steel Joists, ordinary	£ s. d. £ s. d.
ons	7 10 0 ... 8 0 0
ound Girders, ordinary	
ons	9 10 0 ... 10 0 0
Compound Stanchions	11 0 0 ... 12 0 0
, Tees, and Channels, ordi-	
sections	9 10 0 ... 10 0 0
Plates	9 10 0 ... 9 10 0
on Columns & Stanchions,	
ding ordinary patterns	7 10 0 ... 8 10 0

METALS.

	Per ton, in London.
	£ s. d. £ s. d.
mon Bars	9 0 0 ... 9 10 0
ordshire Crown Bars, good	
rchant quality	9 5 0 ... 9 15 0
ordshire "Marked Bars"	11 0 0 ... —
Steel Bars	9 5 0 ... 9 15 0
p Iron, basis price	10 0 0 ... —
„ Galvanised	17 10 0 ... —

(*And upwards, according to size and gauge.*)

Iron Black—	
nary sizes to 20 g.	10 5 0 ... —
„ 24 g.	11 5 0 ... —
„ 26 g.	12 15 0 ... —
Iron, Galvanised, flat, ordinary quality—	
nary sizes, 6 ft. by 2 ft. to	
t. to 20 g.	15 10 0 ... —
nary sizes to 22 g. and 24 g.	16 0 0 ... —
„ 26 g.	17 0 0 ... —
Iron, Galvanised, flat, best quality—	
nary sizes to 20 g.	18 10 0 ... —
„ 22 g. and 24 g.	19 0 0 ... —
„ 26 g.	21 10 0 ... —

METALS (*Continued*).

IRON (*Continued*)—	Per ton, in London. £ s. d. £ s. d.
Galvanised Corrugated Sheets—	
Ordinary sizes, 6ft. to 8ft. 20 g.	15 0 0 ... —
„ „ 22 g. and 24 g.	15 5 0 ... —
„ „ 26 g.	16 15 0 ... —
Best Soft Steel Sheets, 8 ft. by 2 ft. to 3 ft. to 20 g. and thicker	12 10 0 ... —
Best Soft Steel Sheets, 2 g. & 2½ g.	13 10 0 ... —
„ „ 26 g.	15 10 0 ... —
Cut Nails, 3 in. to 6 in.	11 0 0 ... 11 17 0

(Under 3 in., usual trade extras.)

LEAD, &c.

	£ s. d.
LEAD—Sheet, English, 4lb. and up	19 10 0 ... —
Pipe in coils	20 0 0 ... —
Soil pipe	23 0 0 ... —
Compo pipe	23 0 0 ... —
ZINC—Sheet—	In casks of 10 cwt.
Vielle Montagne	33 10 0 ... —
Silesian	33 5 0 ... —
Zinc, in bundles, 1s. per cwt. extra.	
COPPER—	
Strong Sheet per lb.	0 1 0 ... —
Thin „	0 1 1 ... —
Copper nails „	0 0 10 ... —
Copper wire „	0 0 10 ... —
BRASS—	
Strong Sheet „	0 0 11 ... —
Thin „	0 1 0 ... —
TIN—English Ingots „	0 1 11 ... —
SOLDER—Plumbers' „	0 0 8½ ... —
Tinmen's „	0 0 11 ... —
Blowpipe „	0 1 2 ... —

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

15 oz. thirds	2½d.	26 oz. fourths	3½d.
„ fourths	1½d.	32 oz. thirds	5d.
21 oz. thirds	3d.	„ fourths	4½d.
„ fourths	2½d.	Fluted Sheet, 15 oz.	3½d.
26 oz. thirds	4d.	„ 21 oz.	4½d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

⅛ Hartley's	2d.	Figured Rolled, Ox-	
3/16 „	2½d.	ford Rolled, Ocea-	
¼ „	2½d.	nic, Arctic, Muffled,	
		and Rolled Cathe-	
		dral, white	3½d.
		Ditto, tinted	5d.

* Not less than three crates.

OILS, &c.

	£ s. d.
Raw Linseed Oil in pipes per gallon	0 3 4
„ „ „ in barrels „	0 3 5
„ „ „ in drums „	0 3 7
Boiled „ „ in barrels „	0 3 7
„ „ „ in drums „	0 3 10
Turpentine in barrels „	0 2 11
„ „ in drums „	0 3 1
Genuine Ground English White Lead, per ton	26 10 0
Red Lead, Dry „	23 5 0
Best Linseed Oil Putty per cwt.	0 10 0
Stockholm Tar per barrel	1 12 0

VARNISHES, &c.

	Per gallon. £ s. d.
Fine Pale Oak Varnish	0 8 0
Pale Copal Oak	0 10 6
Superfine Pale Elastic Oak	0 12 6
Fine Extra Hard Church Oak	0 10 0
Superfine Hard-drying Oak, for seats of Churches	0 14 6
Fine Elastic Carriage	0 12 0
Superfine Pale Elastic Carriage	0 16 0
Fine Pale Maple	0 10 0
Finest Pale Durable Copal	0 18 0
Extra Pale French Oil	1 1 0
Eggshell Plating Varnish	0 18 0
White Pale Enamel	1 4 0
Extra Pale Paper	0 12 0
Best Japan Gold Size	0 10 6
Best Black Japan	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Knotting	0 10 9
French and Brush Polish	0 10 6

TO CORRESPONDENTS.

NOTE.—All communications with respect to literary and artistic matters should be addressed to "THE EDITOR" (and not to any person by name); those relating to advertisements and other exclusively business matters should be addressed to "THE PUBLISHER," and not to the Editor.

All communications must be authenticated by the name and address of the sender, whether for publication or not. No notice can be taken of anonymous communications.

The responsibility of signed articles, letters, and papers read at meetings rests, of course, with the authors.

We cannot undertake to return rejected communications; and the Editor cannot be responsible for drawings, photographs, manuscripts, or other documents, or for models or samples, sent to or left at this office, unless he has specially asked for them.

All drawings sent to or left at this office for consideration should bear the owner's name and address on either the face or back of the drawing. Delay and inconvenience may result from inattention to this.

Any commission to a contributor to write an article, or to execute or lend a drawing for publication, is given subject to the approval of the article or drawing, when received, by the Editor, who retains the right to reject it if unsatisfactory. The receipt by the author of a proof of an article in type does not necessarily imply its acceptance.

N.B.—Illustrations of the First Premiated Design in any important architectural competition will always be accepted for publication by the Editor, whether they have been formally asked for or not.

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than* 10 *a.m. on Thursday.* [N.B.—We cannot publish Tenders unless authenticated either by the architect or the building owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is stated, nor any list in which the lowest Tender is under 100*l.* unless in some exceptional cases and for special reasons.]

* Denotes *accepted.* † Denotes *provisionally accepted.*

BELTURBET.—For alterations and additions to shop and dwelling-house, for Messrs. Quinn Bros., drapers. Mr. P. J. Brady, C.E., architect, Ballyhaise :—

J. McMahon, jun, Clones ..... £275‡

‡ Exclusive of shopfitting.

COVENTRY. For new machine shops, Foleshill, for Messrs. Webster & Bennett, Ltd. Messrs. Tait & Herbert, architects, Leicester and Coventry. Quantities by architects :—

Steelwork.

Redpath, Brown, & Co., Manhester* £1,630

Builders' Work.

Messrs. Bentley & Co., Leicester.* 1,560

GUILDFORD.—For erection of eight cottages in Cline-road, for the Town Council. Mr. C. G. Mason, Borough Surveyor, Guildford :—

Wakeham Bros.	£2,377 0 0	W. Bullen	1,699 0 0
Williams & Co.	2,143 13 4	W. Sanderson	1,655 0 0
C. & F. Allwork	2,067 0 0	Turner & Playfair & Kersley	1,597 0 0
Toole	1,975 10 8	J. L. Aldridge	1,402 0 0
R. Smith	1,839 0 0	Greenwood & Sons	1,392 0 0
F. A. Renn	1,805 0 0	Drowley & Co.,	
Sandell & Sons	1,726 0 0	Woking*	1,368 0 0
T. Carn	1,719 0 0		

GUILDFORD.—For erection of twelve cottages in Cline-road, for the Town Council of the Borough of Guildford, Mr. T. J. Capp, architect, Guildford :—

Wakeham Bros.	£3,488 0	T. Carn	£2,385 0
Williams & Co	3,320 0	E. Ricks	2,345 0
Playfair & Toole	2,979 0	Drowley & Co	2,290 0
Hellyer & Cripps	2,940 0	C. & F. Allwork	2,133 0
R. Smith	2,784 0	Greenwood & Sons	2,040 0
F. A. Renn	2,732 0	W. Bullen, Guildford*	2,032 0
W. Sanderson	2,600 0	J. L. Aldridge	1,917 17
Sandell & Sons	2,578 0		
Turner & Kersley	2,395 0		

HALE.—For construction of a stoneware pipe sewer. Mr. T. Blagburn, Council Surveyor, Hale :—

H. A. Jones	£706 0 0	W. Watson, jun.	£600 13 0
J. Hamilton & Son	670 0 0	S. Johnson & Son	597 10 0
J. Randall	657 18 0	W. Snape & Sons	584 17 6
W. P. Meikle	649 3 2	Whittaker Bros., Flixton*	493 15 6
G. Bozson	614 0 0		
W. H. Worthington, Ltd.	605 3 6		

LONDON. For renewal of roofs of the refreshment-buildings and Foxburrows cottages at Hainault Forest, for the London County Council :—

Hall & Co. (Croydon), Ltd.	£408 17 5
Roberts, Adlard, & Co.	399 17 6
Bingley, Son, & Follit, Ltd.	359 4 5
J. Williams & Co.	304 0 0
J. J. Etridge, jun., Ltd., Bethnal Green*	300 0 0

LONDON. For erection of oak boundary fencing along the Spring-hill boundary of Springfield Park, for the London County Council :—

W. Bowen	£102 0 0
B. Horton & Son	101 4 0
J. Stenning & Son, Ltd.	100 10 0
W. Stenning & Son	99 0 0
J. & S. Agate, Ltd.	88 14 9

[The estimate of the Chief Officer of the Parks Department, comparable with the tenders, is £101.]

LONDON. For erection of conveniences at the Victoria Embankment-gardens, for the London County Council :—

F. & H. F. Higgs	£1,460 0
Charles Wall, Ltd.	1,420 0
Rowley Bros.	1,381 0
Holloway Bros. (London), Ltd.	1,370 0
J. & C. Bowyer, Ltd.	1,348 0
Gathercole Bros.	1,325 15
W. L. Holloway	1,320 0
E. Lawrance & Sons, Ltd	1,288 0
W. Johnson & Co., Ltd., Wandsworth-common, S.W.*	1,215 0

LONDON.—For the supply of fifty sets of truss plates, for the London County Council :—

	Prices for Fifty Sets.
S. H. Heywood & Co., Ltd.	£1,150 0
East Ferry road Engineering Works Co., Ltd	750 0
Brush Electrical Engineering Co., Ltd.	700 0
United Electric Car Co., Ltd.	650 0
Hurst, Nelson, & Co., Ltd., Motherwell, N.B.*	487 10

[The estimate of the Chief Officer of Tramways, comparable with the tenders, is £500.]

LONDON. For proposed shop fronts, etc., at 134, Uxbridge-road, West Ealing, for Messrs. Jones & Knights. Mr. T. Jay Evans, architect and surveyor, 61, Munster-road, Fulham, S.W.

James Glover	£495	Stanley Jones & Co	£427
S. Haskins & Bros	492	Arnold & Sansum	398
F. Saxe & Co.	468	E. Pollard & Co.	395

LONDON.—For the manufacture, supply, and delivery of (i) about 3,550 tons of track rails and fastenings, and (ii) about 1,050 tons of slot rails and 400 tons of conductor rails, required in connexion with the construction or reconstruction of portions of the Council's tramways, for the London County Council:—

(i) Track Rails and Fastenings.

	Rails of Carbon Steel.	Rails of Sandberg High-Silicon Steel.
C. Laird & Co., Ltd.	£34,848 15 0	£36,623 15 0
Barrow Hæmatite Steel Co., Ltd	28,051 17 6	
Bolckow, Vaughan, & Co., Ltd	26,165 12 6	27,940 12 6
W. Scott, Ltd	24,867 10 0	26,592 10 0
P. & W. MacLellan, Ltd. (manufactured by the North-Eastern Steel Co., Ltd., Middlesbrough)‡	27,260 4 2	29,035 4 2
P. & W. MacLellan, Ltd. (manufactured at Phœnix Works, Ruhrort, Germany)	22,189 16 3	22,915 1 8
Scholey & Co., Ltd. (manufactured at Phœnix Works, Ruhrort, Germany)	21,848 15 0	22,563 15 0
Bolling & Lowe (manufactured at Phœnix Works, Ruhrort, Germany)	21,818 15 0	22,563 15 0

[The Chief Engineer's estimates, comparable with the tenders, are £24,612 10s. for rails of carbon steel and £25,760 15s. for rails of high-silicon steel.]

(ii) Slot Rails and Conductor Ties.

Bolling & Lowe, Ltd. (manufactured at Phœnix Works, Ruhrort, Germany)	£13,992 10
Steel, Peech, & Tozer, Ltd	13,925 0
P. & W. MacLellan, Ltd. (manufactured by North-Eastern Steel Co., Ltd. (Middlesbrough)	13,405 0
W. Scott, Ltd.	12,848 15
Frodingham Iron and Steel Co., Ltd	12,607 10

[The Chief Engineer's estimate, comparable with the tenders, is £12,345.]

‡ Alternative tender.

LONDON.—For structural improvements at the Morden-terrace School, Greenwich, for the London County Council:

Stevens & Sons	£980 0 0
Palowkar & Sons	960 0 0
Hayward Bros. & Eckstein, Ltd	865 1 6
J. Yeoton & Co., Ltd.	835 0 0
Ashwell & Nesbit, Ltd.	832 0 0
Cannon & Hefford	798 0 0
Brightside Foundry and Engineering Co., Ltd.	797 0 0
G. & E. Bradley	797 0 0
W. G. Cannon & Sons, Ltd.	795 0 0

[The Architect's estimate, comparable with the tenders, is £850.]

NUNEATON.—For supplying a 500-kw mixed-pressure turbo-generator with condensing plant, etc. Mr. S. C. Gibson, Borough Electrical Engineer:—

Section I.

Dick, Kerr, & Co., Ltd.	£3,150 0
British Westinghouse Co., Ltd.	2,942 0
C. A. Parsons & Co	2,793 0
Richardsons, Westgarth, & Co.	2,720 0
J. Howden & Co., Ltd.	2,550 0
British Thompson Houston Co.	2,515 0
Belliss & Morcom, Ltd.	2,528 0
Willans & Robinson, Ltd., Rugby*	2,369 0
Brush Electrical Engineering Co.	2,307 10

Sections II.a and III.

Mirrlees, Watson, & Co., Ltd.	£1,158
Richardsons, Westgarth, & Co., Ltd.	1,138
J. Howden & Co., Ltd.	1,115
Cole, Marchant, & Morley, Ltd.	1,046
Belliss & Morcom, Ltd.	1,034
C. A. Parsons & Co., Ltd.	1,016
Brush Electrical Engineering Co., Ltd	{ 940 / 910‡
British Westinghouse Co., Ltd.	855
Worthington Pump Co	{ 952 / 784‡
Willans & Robinson, Ltd., Rugby*	{ 840 / 1,040‡

Alternative Scheme—Sections II.b and III.

Mirrlees, Watson, & Co.	£675
Brush Electrical Engineering Co	628
Richardsons, Westgarth, & Co.	600
Ledward & Beckett	576
Korting Bros., Ltd.	565
C. A. Parsons & Co	554
Willans & Robinson, Ltd	547
British Westinghouse Co., Ltd.	526
Rees Roturbo Manufacturing Co., Ltd.	520
Worthington Pump Co.	515
E. Deane & Beal, Ltd.	505

‡ Alternative scheme.

TEWKESBURY.—For filter tank and filter house at Tewkesbury:—

—	Filter Tank. £ s. d.	Filter House. £ s. d.	Total. £ s. d.
C. Moss & Co.	1,279 19 0	1,047 12 0	1,327 11 0
Hobrough & Co.	1,252 0 6	1,017 14 8	2,279 15 2
J. Wilson & Sons	1,177 18 4	1,044 0 0	2,221 18 4
T. Smart	1,152 7 10	950 16 8	2,103 4 6
Childs & Withers	1,112 9 2	958 10 5	2,070 19 7
J. Riley	1,031 9 7	950 10 5	1,982 6 0
A. Braithwaite & Co	1,080 6 7	892 19 9	1,973 6 4
Collins & Godfrey	1,061 10 1	904 7 7	1,965 17 8
R. Pittard & Son	1,020 18 10	934 18 4	1,955 17 2
W.T. Nicholls	1,015 2 2	913 19 8	1,929 1 10
W. Bowers & Co.	1,034 7 11	890 16 6	1,923 4 5
W. Williams & Co.	1,016 7 9	900 8 4	1,916 16 1
A. Hyslop	943 9 7	949 3 7	1,892 13 2
T. J. Mason, Stourbridge*	903 8 9	881 13 5	1,785 2 2

SHEPHERD'S BUSH.—For the proposed extension of premises at 178, 180, 182, 184, Uxbridge-road, Shepherd's Bush. Mr. Thos Jay Evans, M.S.A., architect and surveyor, 31, Munster-road, Fulham, S.W.:—

G. W. Clarke	£1,794	Lyne & Sons	£1,730
T. H. Kingerlee & Sons	1,775	Jones Bros.	1,642

SOUTHWOLD.—For erection of a mortuary, for the Corporation. Mr. B. King, Borough Surveyor:

F. Bennett	£110 0	W. B. Miller, Southwold*	£54 0
J. Thompson	60 10		
B. H. Carter	59 10		

SOUTHWOLD.—For 600 cubic yds. broken K flints delivered Southwold Harbour. Mr. B. K Borough Surveyor:—

	Per Cubic Yd. s. d.
W. R. Cunis, Ltd.	6 6
C. W. Parker	5 6
L. West, Ltd.	5 5
Smeed, Dean, & Co.	5 3

SUNNINGDALE.—For alterations and addition the Dormy House Club. Messrs. Roberts & Sm architects and surveyors, Sunningdale:

Trollope & Colls	£7,700	Norris & Co.	£6
Howard & Co.	6,500	E. C. Hughes	6
J. H. Wakelin	6,425	W. Watson	6
H. Charman	6,300		

WAKEFIELD.—For private street works in Cem street. Mr. J. P. Wakeford, A.M.Inst.C.E., Surveyor:—

Wilson Bros., Park-lane, Wakefield	£525 13 3

J. J. ETRIDGE, Jr.
SLATE MERCHANTS. LTD.

EXPERTS IN
SLATING, TILING.
BEST WORK ONLY.

Telephone 2685 Wall, or write—
BETHNAL GREEN SLATE WORKS,
BETHNAL GREEN, LONDON, E.

Ham Hill Stone.
Doulting Stone.
Portland Stone.
The Ham Hill and Doulting Stone Co., Limited
(incorporating the Ham Hill Stone Co. and C. Trask & Son, The Doulting Stone Co.).
Norton, Stoke-under-Ham, Somerset.
London Agent:—Mr. E. A. Williams, 16, Craven-street, Strand.

Asphalte.—The Seyssel and Metallic Lava Asphalte Co. (Mr. H. Glenn), Office, 42, Poultry, E.C.—The best and cheapest materials for dam courses, railway arches, warehouse floors, fl roofs, stables, cow-sheds and milk-rooms, gra aries, tun-rooms, and terraces. Asphalte Co tractors to Forth Bridge Co. T.N. 2644 Central.

SPRAGUE & CO., Ltd.,
PHOTOLITHOGRAPHERS,
4 & 5, East Harding-street,
Fetter-lane, E.C

JOINERY.
Of every description and in any kind of Wood.
CHAS. E. ORFEUR, LTD.
ESTIMATES ON APPLICATION.
COLNE BANK WORKS,
COLCHESTER
Telephone: 0195. Telegrams: "Orfeur, Colchester."

PILKINGTON & CO
(ESTABLISHED 1838),
DEPTFORD WHARF,
190 & 192, CREEK ROAD, DEPTFORD, S.E.
Telephone No.: New Cross 1102 (two lines).

Registered Trade Mark.
Polonceau Asphalte.

PATENT ASPHALTE AND FELT ROOFING.
ACID-RESISTING ASPHALTE.
WHITE SILICA PAVING
SEYSSEL ASPHALTE (*Direct from the Mines*).



ALSO AT DEPTFORD, LIVERPOOL, BRISTOL,
GLASGOW, FALKIRK, BELFAST, & DUBLIN.

Chief Offices: 352 to 364, EUSTON ROAD, LONDON, N.W.

THE BUILDER

VOL. CII.—No. 3802. FEBRUARY 16, 1912.

CONTENTS.

PAGE

TECTS, CLIENTS, AND SPECIALISTS 169
TECTURAL ASSISTANTS AND THE OFFICE OF ES 170
..... 171
ARCHITECTURAL ASSOCIATION (WITH ILLUSTIONS) 172
N FOR A DECORATIVE PANEL IN A MUNICIPAL DING 172
OYAL ACADEMY LECTURES 175
RCTURAL SOCIETIES 175
OCIETY OF ARCHITECTS 176
ED PUBLIC LIBRARY COMPETITION 178
ONDON COUNTY COUNCIL 178
TITION NEWS 178
AL NEWS 179
PONDENCE (WITH ILLUSTRATIONS) 179
OMMUNICATION COLUMN 180
AL SUMMARY 181
GS 181

PAGE

MAGAZINES AND REVIEWS 181
ENGINEERING SOCIETIES 182
NOTES TO ILLUSTRATIONS 182
FIFTY YEARS AGO 182
MONTHLY HISTORICAL REVIEW:—
ARCHITECTURAL DETAILS IN MONUMENTAL BRASSES. II. (WITH ILLUSTRATIONS) 183
STONES USED FOR ANCIENT BRASSES AND INCISED SLABS 185
SOCIETY FOR THE PROMOTION OF ROMAN STUDIES 186
NOTES 186
THE BUILDING TRADE:—
THE INSTITUTE OF BUILDERS 187
BRISTOL MASTER BUILDERS' ASSOCIATION 187
BELFAST BUILDERS' ASSOCIATION 188
GENERAL BUILDING NEWS 188
APPLICATIONS UNDER LONDON BUILDING ACTS, 1894 TO 1909 188
PROJECTED NEW BUILDINGS IN THE PROVINCES 189

PAGE

CARPENTERS' HALL LECTURES (WITH ILLUSTRATIONS) 190
THE IMPROVEMENT OF LONDON: THE LONDON SOCIETY 191
INCORPORATED CLERKS OF WORKS' ASSOCIATION... 192
LAW REPORTS 193
LONDON COUNCILS 194
OBITUARY 194
TRADE CATALOGUES 194
LIST OF COMPETITIONS, CONTRACTS, ETC., OPEN .. 195
PATENTS 196
PRICES CURRENT 196
TENDERS 197

Illustrations.

THE R.I.B.A. PUGIN STUDENTSHIP. AWARDED TO MR. JAMES MACGREGOR.

EAST SUSSEX HOSPITAL, HASTINGS · FIRST PREMIATED DESIGN, BY MESSRS. JOHN SAXON SNELL AND STANLEY M. SPOOR.



Puente del Diablo, near Barcelona.

From a Sketch by the late Alfred Waterhouse R.A.

(Referred to in the lecture by Mr. Paul Waterhouse on "Bridges," delivered before the Architectural Association on Monday. See page 172.)

ARCHITECTS, CLIENTS, AND SPECIALISTS.

cases where a building and its equipment are designed entirely by the architect, and completed his direct superintendence, the ns between the latter and his rest upon a perfectly satisfactory It happens, however, in the t day that the work of engineering ists enters so largely into the n of building construction, using rm in its broadest sense, that the ct cannot always undertake the of the details unless he happens structural, mechanical, electrical, lic, and sanitary engineer as well architect.

Consequently there is need for expert engineering assistance, which is easily obtainable, but for which the architect's client is not always ready to pay, for the reason that he considers the architect's hardly-earned fees ought to cover everything in the nature of professional advice. When this exceedingly complimentary view is taken of the architect's competency only two alternatives are open in respect of highly-specialised branches of building construction and equipment. One is for the architect to enlist the aid of professional specialists and pay their fees out of his own pocket, a course he cannot reasonably be expected to adopt, and the other is for him to invite competitive specifications and estimates from commercial specialists, who are always ready, and usually advertise their readiness, to furnish projects and drawings "free of charge."

The architect cannot be blamed if he is driven to accept the second alternative, choosing the scheme or schemes best suited to his requirements, making such modifications in his detail drawings as may be necessary, and undertaking the supervision of, and responsibility for, the works executed. Thus, still acting as the *ἀρχι-τέκτων*, he earns and is fully entitled to the customary

fees, and the client fondly believes that he has saved money.

As a matter of fact, however, the system of providing expert advice "free of charge" is far more illusive than the equivalent practice of giving away free various articles with a pound of tea. The enterprising tea merchant merely gives up a percentage of profit on goods actually sold and recoups this by increased sales, being thereby enabled to keep down his price to the current market rate. On the other hand, the structural or engineering specialist gives away specifications and drawings to any person who may ask for them without the certainty of selling anything in return. So universal has this pernicious system become that the commercial specialist is fully aware of the fact that all his competitors are engaged in it, and that he must count himself fortunate even if comparatively few of his projects result in profitable business.

Now let us see how this works out in practice. The steel contractor, reinforced concrete specialist, heating engineer, or electrical engineer has to maintain a costly drawing office and estimating department for the preparation of technical projects. If every one of these were accepted the cost would be equivalent to a very small percentage of the estimate price, and the architect's client would suffer no loss. But owing to the competition of rival firms the specialist can only hope to be successful occasionally, and it is found even by firms in an exceptionally favourable position that the net cost of producing schemes and drawings to be given "free of charge" amounts to from 5 to 10 per cent. on the resulting annual turnover.

The net upshot is that for work which could otherwise be executed for 10,000*l.* the specialist is obliged to charge from 10,500*l.* to 11,000*l.* in order to get back the money wasted on unproductive projects. The figures here used for the purposes of illustration may not be of universal accuracy, but there is no escape from the inexorable conclusion that enormous sums of money are being paid every year by architects' clients, quite unconsciously, for the wasted work done in the drawing offices of commercial specialists, a state of things for which architects are in no way responsible.

Perhaps it may be thought by some of our readers that the same could be said of building contractors and their estimates. We are quite aware that builders have to face a certain proportion of unremunerated work as the result of competitive tendering, but their position is more favourable than that of engineering and structural specialists for the reasons that they are never asked to prepare designs, and that the quantities issued by architects reduce the work of estimating to a minimum. Moreover, builders only tender for work that has been definitely authorised, and each competitor knows that his tender has a fair chance of being accepted.

The specialist is not by any means on so good a footing, having to prepare designs, work out details, and get out quantities, in addition to the preparation of estimates, and, further, he is willing to do all these things for the convenience of architects and others who merely wish to consider whether or not the kind of construction or work involved shall be adopted, or to aid the architect in preparing designs to be submitted in competition with those of other architects.

The position is not an easy one to deal with, for it has arisen largely from the anxiety of specialist firms to secure the favourable consideration of architects. The same kind of thing prevails in engineering practice, as shown by the presidential address of Mr. Michael Longridge to the Manchester Association of Engineers only a few weeks back. Consequently the waste of money in speculative estimates and designs would not be absolutely stopped if consulting engineers were associated with architects in all necessary cases. Nevertheless, the more general adoption of such co-operation would be a move in the right direction, and there is no doubt that if clients would pay directly for all necessary professional aid there would be an important reduction in the indirect payment now levied in the form of enhanced prices for work done by commercial specialists professing, but really unable, to furnish plans and specifications free of charge. In the case of many important buildings completed during recent years co-operation of the kind mentioned has been adopted on the recommendation of the architects, and we feel sure that the practice would be generally followed by the profession, where advisable, if clients would be more ready to recognise its advantages.

ARCHITECTURAL ASSISTANTS AND THE OFFICE OF WORKS.

ACCORDING to letters which have appeared in our "Correspondence" columns since November last, on the subject of Architectural Assistants and the Office of Works, a class of professional men, termed "Architectural Assistants," have been engaged for a number of years in H.M. Office of Works (from five years (eight) to twenty-four years (four), or an average ten years' service for the whole class of forty) upon daily duties requiring the skill of a practising architect, and who are permitted to hold only subordinate and temporary positions, and at a rate of remuneration in most cases less than they might reasonably expect to receive in outside offices upon mechanical work. It appears they have specifically stated their grievances on four separate occasions by memorials to the Secretary (the first in 1896 and the last in 1907), but without any tangible result, except upon the last occasion, when their original designation, "Draughtsman" — always a misnomer—was changed to "Architectural Assistant," and each received a technical certificate of professional efficiency, the value of which should equal those of a similar nature issued by the Civil Service Commissioners. These memorials delivered to the Secretary of the Board have always tersely and categorically stated the duties performed by them to be:—"(*a*) The sketch plans; (*b*) the surveys; (*c*) the working designs; (*d*) details; (*e*) specifications; (*f*) preliminary estimates; (*g*) superintendence of buildings in some cases," which comprised the departmental work supposed to have been done by established officers, and, as far as we know, not one of these statements has been questioned or denied. The claim is for departmental status by establishment and adequate pay, and it is asserted that neither have been accorded them up to the present. Instead the Board arranged a number of Civil Service Examinations, with Junior Draughtsmen as candidates, to perform the above duties, previously satisfactorily performed by the class under review, and about thirty of these Draughtsmen since 1907 have obtained established positions. The Architectural Assistants, who are ineligible by age to enter for these examinations, even if, from other points of view it were equitable that they should be asked to do so, naturally object to taking instructions from those who may have been their former pupils, and as a condition of friction and dissatisfaction has been caused, adversely affecting, we should think, the value and quantity of the work.

While there may be difficulty in placing the ordinary clerical Civil Servant upon the established list without examination, no difficulty appears to exist in this case. They are wholly a professional class (nineteen of the forty being Associates or Licentiates, we are informed, of the R.I.B.A.), and by a proper representation addressed to the Treasury they can be established without any examination. This is provided for by an "Order in Council," dated June 4, 1870.

In the House of Commons, on November 24 last, Mr. Dudley Ward on behalf of the First Commissioner replied to Mr. Philip Snowden that "he would consider establishment for the professional class, numbering forty holding the technical certificate of the Board," and added, he was "not sure that those gentlemen who might be considered eligible would submit to the necessary reduction of their income according to Regulations." And again on December 7 last, Mr. Dudley Ward replied "that the desires of every member of the class would be ascertained with a view to their establishment." In spite of that we are informed that the members of the Architectural Assistant class have received no official intimation whatsoever, though the statement of their case embodying their desires for amelioration was placed in the hands of Mr. Dudley Ward early in December last. It should be emphasised that a reduction of salary is not necessarily demanded by the Treasury if the Office of Works Board represent not unsympathetically the case to them; the cost of their unusual or professional education cannot have been less than from 450*l.* to 600*l.* over and above the usual education of the clerical staff of the department, who receive a larger salary; and, for precedent, one Architectural Assistant was, in May last, established, it is understood, with an increase not a reduction of his income. We cannot help thinking that a case is made out for granting the claims of a deserving though small body of men. Their case appears to demand at the least equivalent conditions of service with the Assistant Architect class, their work being similar in character, and their experience greater.

NOTES.

ofessor mfield's Lectures.

Professor Blomfield was happily inspired when he determined to devote his course of lectures at Royal Academy to architectural ng and draughtsmanship. We ob- however, that his historic survey not include some of our earlier sh draughtsmen. They cannot, of e, vie either in numbers or (with the tion of Inigo Jones) in quality with Continental brethren; but they have saic interest which is not without in the consideration of architectural htsmanship as a whole. The part of Professor Blomfield's first e was devoted to the considera- of the work of that delightful c artist, Villard de Honnecourt; in dismissing the sketch-book of am Burges, now in the possession Institute, as a mere imitation, or called it "an exercise in style" he manner of De Honnecourt, as surely less than just to the dual quality of Burges's serene nd-ink work. Professor Blomfield yed on the screen one of Piranesi's ngs as a supreme type of graphic In discussing the tendencies of rn drawing the lecturer suggested the French convention (which is ring important influence on this of the Channel) is not without its ts. In advising the students not tempt the delineation of their ideas e they had evolved clearly in their he was, we fancy, touching upon ods of creative work for which it little difficult to establish a wholly actory working principle. In such ers what one calls temperament ts for a good deal.

London ociety.

The important and influential meeting held on Friday last week at the ies of the Royal Society of British ts, "to approve of the formation of iety with the object of fostering an est in London in the minds of its ns and of those in the kingdom who d it with affection," was the first e expression, we believe, of opinions n have been held for some time— and there somewhat vaguely, it ue, but with growing strength and ction by many thoughtful art ers and leaders of public opinion in great city—as to the need for the ition of a body concerned with the y and amenities of London. And that the London Society has been erly started we venture to think it has a career of great usefulness e it. Though perhaps its way be beset with some difficulties at it should, if guided by patience and ght, gradually become recognised as thority on all matters affecting the y of London which no individual, dy of individuals, would even wish ppose. In all matters affecting the vements of a town or city sooner ter the question of cost has to be with, and this no doubt will be one e difficulties which the Society will to face; but, as it will exist for the se of "fostering an interest in the minds of the citizens of London," there will be many opportunities for the exercise of that powerful influence which will inevitably follow the formation of a Society supported by so many able and enlightened men.

Edinburgh and London.

A good many interesting remarks were made at the meeting, as will be seen from our report on another page, but we should like to refer specially to what Captain Swinton said in reference to the Cockburn Society, which has existed in Edinburgh for some seventy or eighty years. Edinburgh is generally acknowledged to be one of the most beautiful cities of the British Islands, if not the most beautiful, and though much of its charm is undoubtedly due to its situation, affording another illustration of the adventitious help which Nature can give to art and design, still, the city has been made more beautiful and kept beautiful—in spite of some lapses about which there may be differences of opinion—by an enlightened public opinion created or strengthened by the work of the Cockburn Society. London is not Edinburgh, but the possibilities are great, and our city is the largest and richest city in the world. We already possess some fine thoroughfares, many historical and beautiful buildings, and under wise guidance and control a standard can be set which, without destroying individuality, will do much to make the city what all her citizens must desire her to be—*i.e.*, the most beautiful as well as the largest and richest capital of the world.

The Corporate Life of London.

It certainly is about time that something was done to create an interest in London. For a variety of reasons, such as size and method of government, London as a whole appears to lack the corporate unity and civic patriotism which is so noticeable in other great cities. The corporate life of London seems to sleep, or never to have attained self-consciousness. The first and most important work of the London Society will be to awaken it. Here is a work in which the artist, the scientist, the sociologist, the humanitarian—everyone, in short—can join, and we hope that the Society will be so constituted as to include intellectual workers and reformers of every description. In this connexion the question of the amount of the subscription is not altogether unimportant, and we hope the promoters will bear it in mind.

The President's Address to Students.

The annual address to the students by the President of the R.I.B.A. had this year an unusual touch of human interest which, no doubt, appealed more forcibly to the students than the most high-sounding and eloquent of official harangues. From his own mistakes the President sought to draw a moral for the benefit of those still young enough to profit by it. To be content to climb the ladder step by step and not to rush into practice too soon is surely sound advice, even though some may feel that, however soon they may start, life is never long enough to obtain the practice which makes the perfect artist. No doubt it has been contended that, from the artistic or structural point of view, the sooner an architect begins to handle real bricks and mortar, and obtain experience in the actual effect of his designs when executed, the better it is for him. But, even if this be so, present-day conditions are such that the practice of architecture involves certain professional responsibilities which should not be undertaken by those who are not yet qualified to discharge them. Although mistakes which eventually lead to the Presidential chair may not necessarily appear to the aspirant to similar honours as things to be avoided, yet the students no doubt will have sufficient common sense to realise that everyone is not sufficiently gifted to do good work and succeed in spite of them. In advising the students never to play up or down to their judges, but to do justice to themselves and not to bother about anyone else, the President uttered a warning which might be borne in mind by those students of a larger growth who take part in public competitions. The tendency to play up or down to the assessor is, perhaps, accentuated by the present system of appointing a single assessor. It is a tendency which hampers the free expression of original ideas, and so impedes the advancement of architecture. Although the Institute cannot be held responsible for the weakness of human nature, it is in a position to mitigate this evil by the adoption of the jury system for public competitions. This system has always been employed by the Institute in judging its own students' competitions. What is sauce for the gosling should be sauce for the grown-up goose.

The Pugin Studentship, 1880.

In his address Mr. Stokes alluded to the only prize he ever won—the Pugin. It was "more by good luck than anything else, for there were two other men better than I was, but they were so equal that the judges could not make up their minds which was the best, so they gave it to me." The present generation may like to be reminded of the competitors for the Pugin in 1880, and to be given the opportunity to guess the two men who were better than the present President of the R.I.B.A. The nine candidates were J. Bradshaw Gass, F. Hemmings, A. Hemingway, jun., Mark J. Lansdell, B. P. Shires, John W. Simpson, Leonard Stokes, R. S. Topham, and S. H. Townsend.

PROVIDENT INSTITUTION OF BUILDERS' FOREMEN AND CLERKS OF WORKS.

Sir Aston Webb, C.V.O., C.B., R.A., will preside at the next annual dinner of this Institution at the Holborn Restaurant, on Saturday, February 24 next. This is the seventieth year this Institution has been assisting members who are engaged in two of the most important and responsible positions in the building industry. The Institution was founded for the purpose of granting pensions to aged and infirm members, their widows and children, and for making grants of temporary relief to necessitous members. Total amount paid in pensions, 17,309*l.* 7s. 6d. Paid in pensions, 1911, 772*l.* 17s.

COMBINED MEETING WITH THE JUNIOR INSTITUTION OF ENGINEERS.

A MEETING of the Architectural Association combined with the Junior Institution of Engineers, was held on Monday at No. 18, Tufton street, Westminster, S.W., Mr. Gerald C. Horsley, President, in the chair.

Mr. Hall, Hon. Secretary, made the following announcements :—

The third Spring visit on Saturday, February 17, to the British Museum Extension. Architect, Mr. J. J. Burnet. F.R.I.B.A. Members to meet at the building at two o'clock.

The Annual Smoking Concert and Revel of the A.A. Athletic Club to be held on March 26, at the Pillar Hall, Victoria Station Restaurant.

On the motion of the President, Mr. F. Jackman and Mr. H. V. Simpson were elected members of the Association.

The President then proposed a vote of condolence to the relatives of the late Mr. T. M. Rickman, who died on Saturday last, the 10th inst. Mr. Rickman was president of the Association in 1854-5, and he outlived ten or twelve presidents who succeeded him. He was always interested in the work of the Association, and he really was one of the founders. The motion was agreed to in silence, the members standing in their places.

The President, in calling upon Mr. Paul Waterhouse to read a paper entitled "Bridges," explained that this was a combined meeting of the Association with the members of the Junior Institution of Engineers. Such meetings were held each year, and the members of the Association welcomed their engineering friends very cordially.

BRIDGES.

Mr. Waterhouse then read a paper on "Bridges." He said :

"Familiarity," said my friend, "breeds contempt." He is a man of such rare thought and of such carefully chosen language, that the utterance by him of this trite proverb struck me dumb. To my astonishment he repeated it, and I suggested—for we are old friends—that I had heard something to that effect before. "Quite so," said he, "that is the point of my remark." "What mark?" I rejoined, and the battle of wo for which he was obviously eager was fa set going.

The friend I speak of was John Pargit of whom some of my architectural hear and readers have known me to speak befo He is not an architect in that he neith makes money by architecture, nor is he any degree a draughtsman, but in all oth senses he is more of an architect than m of those who profess our craft. Whether inclination or by intuition, or, m probably, by some strain of mental inhe tance, he has in him to an unusual deg the power of understanding the inner mea ings of our ancient and historic art.

Harper, an architect friend of mine w often joins in our conversations, says that Pargiter the imagination outruns the reas but Harper is rather too much the slave of fa and logic, and I sometimes think that the re explanation of Pargiter's apparently fanci ramblings is that since knowledge does n only come to us through our five senses often has in him, and brings out, ideas whi are none the less true for not being proval by rule and line.

For the third time, said Pargiter, "Fam arity breeds contempt." "The proverb he went on, "is so full of truth that it true even of itself. You are so famili with the saying that its very meaning brought into contempt. Have you ever co sidered what a miracle is? You wou probably define it as a suspension or infra tion of one of the laws of nature." "Qui so," said Harper. "Quite wrong," said o friend, "for if it were that it could nev have happened, and so would not have be a miracle or marvel at all. A miracle, is true, is a contradiction of man's formu of nature's law up to the date of its occ rence which formula is thereafter—if miracle be properly attested and accepted revised to meet the new knowledge Harper broke in at once, "Forgive me," said, "if I suggest that we do not want talk about miracles at all, but have com here to have one of our architectural conve sations." Pargiter smiled. "Yours is a unfortunate distinction," he said, "for archi tecture would have died in infancy if ma had denied it from the start the right to pe form miracles.

I understand your meaning, however, a may tell you that when I saw you coming was preparing to ask your opinion on a architectural subject, which, as a matter fact, gave rise to my stale but true quota tion. In this connexion, I was going to remark, that one of the reasons why famil arity breeds contempt is that even miracle cease to be miracles when they are familia We adjust, as I said before, our notions the law of nature to include them, and on included in the normal scheme of nature the retire from the realms of the marvellous.

I think that all the same we are rathe ungrateful to the world's miracles when w too readily accept their retirement from th miraculous."

Harper and I looked at one another, fe ing that John Pargiter was after all never coming to his subject. He intercepted th look, understood it, and said, "I am really working round to architecture, but there is one more thing I must say about this subject the degradation of miracles, or, rather, about a similar subject. Our lives are surrounded and made the pleasanter by an immense number of things—products of art, products of ingenuity which, without being miracles in the large sense of the word, are marvels to a degree which we daily fail to recognise. We can easily test the depth of this con tempt by imagining the consequence either of the new appearing of these things or of their total disappearance. Conceive for a moment the effect on mankind of a morning on which it should be suddenly discovered that buttons, matches, and glass (to take only three simple examples), had absolutely dis appeared from the reach of humanity.

Think of the consternation of the gentlemen in the second-class carriages and their excited conversation on the way up to London. Imagine the poor things, their clothing hung upon them with string and safety pins, shivering in the windowless compartments, borrowing a light from that the one popular man who had a petrol pipe-lighter,



Design for Decorative Panel in a Municipal Building.
By Mr. George H. Day, A.R.C.A.

The painting from which our illustration is taken is a sketch design to scale of a decorative panel for a town hall. The full-size panel would be executed in a wax medium. Mr. Day is the holder of the prize travelling studentship for Decorative Painting of the Royal College of Art, South Kensington.

all talking on the one great threefold
ect of the hour.
ithin a fortnight or less civilisation
ld have devised substitutes—the ungainly
and string would have given place in
r clothes to an adroit system of lacing
er after the Elizabethan fashion. Tinder
es would have come upon the market to
t the smokers' needs, and the railway
pany, after an interlude of oilskin cur-
s, would have fitted talc on the no longer
ighty windows. At last, when men had
e to think that after all they were not
g so badly, a blessed day would dawn on
ch the same fairy who had spirited away
buttons, matches, and glass, would bring
n all three back. Then, and not till
, would men realise once more that they
been all their lives ungrateful churls in
doing a more respectful homage to three
he little miracles that make the comfort
ife.
r, again, imagine if you can, a day on
ch the evening papers were full of the
overy of a manuscript in Egypt contain-
a piece of literature which we had
erto never known—no other, in fact, than
150 psalms of David. The dullest of
stians and the least literary of men would
airly on fire with their poetry and their
zing force. Familiarity alone is the
et of our unreasonable misappreciation.
l this, forgive my ramblings, is leading
o the subject of Bridges."

Are Not Bridges Architectural?

Harper's face fell, he showed outward
open disappointment, and Pargiter
ired the cause. "Well," said Harper,
thought you were going to let us
about some definitely architectural
ect." "And pray," said Pargiter,
e not bridges architectural?" "Hardly,"
the other. "It is true that bridges
sionally seem to demand and some-
s get a sort of architectural finish
off such as the Doric columns applied to
erloo Bridge*; but I regard a bridge
se as a mere constructional problem, the
ing of a special need by an orderly and
omic use of the particular material most
d to the special exigencies of the place
the age. Don't cut in for a moment,"
vent on, for Pargiter was preparing to
k, "I have something to add, for I
thought a good deal about this matter.
consideration of beauty in bridges leads
to the conclusion that beauty in their
is merely fitness, and that our notions
pplying architectural trappings to what
ally a mechanical—in other words, an
neering—device or expedient are gener-
a woeful waste of entirely misapplied
nuity."
arper ceased, and Pargiter looked at
with astonishment. "You are an archi-
Harper," he said, "and it amazes me to
you say such a thing. I am at one
you about architectural trappings, there
such thing as applied architecture, but
most excellent definition of a bridge is.
y mind, also the most complete defini
of architecture that I have ever heard.
meeting of a special need by an orderly
economic use of the particular material
suited to the special exigencies of the
e and age.'
closer expression of the nature of archi-
re could possibly be devised, and yet you
ly say that a process so described is by
nature of the case not architecture, but—
understand—engineering."

Architects, Engineers, and Bridges.

"Not quite that," said Harper, "but look
this way. You must admit that there
ch a craft as engineering, and that it
necessary craft. We know that an archi-
by himself could not be entrusted un-
l with such a problem as a bridge to span
Thames, and by admitting an architect's
ces as desirable for the finishing off of
structure which the engineer has de
ed, we simply insult both forms of art,
probably get a result in which the archi-
re, struggling with the engineering, pro-
s a complicated falsehood which by its
falsity fails to be worthy of the name
t." To which Pargiter answered, "My
Harper, your explanation of your posi-
only makes it the more untenable.
Engineers are useful people as you justly observe, their calling is an honourable one and their work is indispensable, but so for that matter is the work of a host of other persons who might legitimately find employment in connexion with a bridge, but who would, nevertheless, be quite unsuited to act as the supreme designers of it. All that you can say about the attachment of so-called 'architectural' trimmings or trappings to an engineer-designed bridge is perfectly fair, but the indecency of them is due to the fact that the so-called architect who applies them is, by his very act, proving himself no architect. Whether engineers approve of the fact or not, a fact it still is that an architect, if he be anything at all, is by virtue of his name an *over-workman*. A bridge in an important city is obviously and necessarily an important and conspicuous mass of building, as such it is, if I understand architecture at all, a thing to be committed to and produced by an architect. If the problem involved is such that it demands structural knowledge of which no living architect is capable, that is no sufficient reason why the promoters of the bridge should bar all architects from appointment. Appoint the architect say I, the best you can find, and let him as over craftsman have under him, among his many underlings, the best engineer he can get."

"O come," said Harper, "I'm all for giving architects their due, but I should never think of putting the engineer second in a case where the use and even the beauty of the structure depends upon that nice adjustment of material to function which only a highly trained engineer can calculate."

"Then, once more," said Pargiter, "I consider that your ideas on architecture and architects are at fault. Any architect who is worth his pay, by which I mean any architect who is an artist, would realise as fully as you do the very sentiment you have just expressed. Architects are expected to have an almost encyclopædic knowledge, but even the best equipped architect will, if he is wise, continually consult the chiefs of his little army of craftsmen on the methods which will produce the best results in the lines on which each is a specialist, and that is exactly what the wise architect would do with the engineer, and the wise engineer would fall in ungrudgingly with the architect's consultant but still supreme attitude. The relative positions of architect and engineer which I here suggest involve no possible degradation to the profession—the noble profession—of the constructional engineers.

The Primæval Bridge.

But somehow or other your questions and my answers have led us to the wrong end of our subject. I wanted to show you how strangely we have been led by familiarity to ignore the miracle of bridges, but we have become plunged into the final and crowning topic, the artistic construction of large bridges in important cities. May I lead the discussion back to the other end of the scale—the primæval bridge?"

"By all means," I said, and Harper said



Toledo.
From a Sketch by the late Alfred Waterhouse, R.A.

n unfair description of that noble design.—

"by all means" also, but he said it as it seemed to me with half a sigh of resignation. Our talk had so far been in Pargiter's little summer-house, built against an angle of his square-walled garden, but as he suggested that we should continue the conversation in the house we both rose to follow him, and Harper, motioning to me to hang back, began murmuring, "I can give you the heads of our friend's discourse beforehand. Aboriginal savage at bank of stream; food supplies or prospective wife viewed on opposite bank; tedium of travelling up stream to find shallows for fording; accidental discovery of fallen tree across stream; application of reasoning faculty; tree felled on purpose in favourable wind; tree too short; selection of rock in midstream; device of two trees resting on said rock; dawn of engineering; rudiment of pier; further advance by use of two trunks and transverse sleepers, development of lintel or beam bridge. Conqueror introduces arch; astonishment of savage; progress of arch construction: introduction of iron; arch superseded; return to lintel forms; invention of cantilever. Digression on trusses, and bearers again introduced to useful savage in order to trace development of suspension bridge from lowly origin as a mere throng of bullock's hide slung across the stream from tree to tree, up to the elegant structure at Clifton."

Low as Harper spoke, the conclusion of his



Monnow Bridge, Monmouth.

summary was greeted by a clapping of hands from Pargiter, who, apparently, had heard every word of it. "A very good analysis," he laughed, "of the history of bridges, but I fear I must disappoint you for I have no inclination to follow the subject on those lines. Historical development is all very well and very interesting, but I think we shall give ourselves more pleasure by studying the matter in another way.

What is a Bridge?

Suppose we begin by asking one another, "What is a bridge?" "That is easily settled," said Harper. "A bridge is an arched or other structure across a stream or river." "And what do you say," said Pargiter, turning to me. "Harper's definition," I answered, "is a little too narrow, for, to begin with, the bridge needn't be across a stream at all, but might be, and often is, across a road or across a dry chasm." "Yes," said our friend, "and there are also cases where, instead of carrying a road over water, the bridge carries water over a road. I expect that the best definition of a bridge that we can give is, 'a structural device for carrying a road over an obstacle, or an obstacle over a road.' For general purposes that will meet the case, though there would be exceptions even to this, as in the instance, for example, of an aqueduct carrying a canal or a water supply over a river.

The Miracle of the Bridge.

I said (he continued) that I did not want to start historically with the savage and the tree trunk, but I must ask you, for the interest of the thing, to imagine yourselves for five minutes to be men whose civilisation has never brought them within reach of the wonder of the arch. You live, let us suppose, by the shore of some mighty river, one of those terrific giants that cannot be bred in an island as small as ours, but need for their nurture long miles of wide continent. Your river comes from hills so remote that you have never seen them, and has rushed through plains so vast that other kings than yours reign over them. Indeed, so great is its force and its severance that the very folk you see lessened by distance on the other bank speak a tongue that you can scarcely understand.

One day a man comes among your townsmen and says, 'Give me of your money and I will make it easy for you to walk dryshod in ten minutes from shore to shore.' You laugh at him and suggest that the days of Moses and the Red Sea, of Joshua and Jordan are not your days. But the man persists, and you ask him how. "A bridge," says he. "A bridge," you answer, and laugh with greater scorn. You have seen to be sure the arrangement of planks and beams which crosses the stream in your own street, but you know that no such structure could possibly be made to cope with the vast width and the murderous floods of the cold grey monster of which you are so proud and so afraid.

Then the man speaks again and more madly as it seems. 'I shall do this thing, he says, 'not with the lightest and longest materials, but with the shortest and heaviest. Some of you have become used to the wonder of stones piled on stones to make a house, it is on stones that I will cross, and make you cross your river. Not stepping stones, nor a paved ford, but stones that leap from shore to shore, resting here and there on the solid bottom, but bounding from one resting-place to another, flying in curve after curve, but owing all their flight to that very weight which seems to make the deed impossible.'

Would you believe him? not you. The thing is a miracle, you say, and miracles do not happen. Your madman makes his bow and goes. You have your laugh out, and a merry laugh it is, for you have kept your money and got rid of your dreamer. And after all you say it is of no use to go against nature, and the river was placed where it is for good reasons.

Next year you see a man on the opposite bank. Those few who sometimes venture out upon your river in perilous boats have seen him nearer, and assure you that he is your old friend the madman. You laugh again, realising that the silly citizens of the further shore are likely to be wheedled out of their money in a fool's venture.

The weeks, the months go by, and at last you see that at the dry end of the summer the man is in very truth at work building a pile of masonry on the bit of shingle that crops up in the centre of the river-bed during August. This is followed by a clever diversion of the current from another part and the building of another heap of mortared stone. Bit by bit through two long seasons, hindered constantly by rising water, and stopped for whole months by the spring's deep floods from the melted snow, the work goes on, till a goodly row of stout mounds of masonry stem the water with their prow-like starlings. You laugh less; but next summer you laugh louder again, for you see timber, undoubted timber, stretching from one pier to the next. Our fool, you cry, has failed at last. His dream of leaping stones is over. He sees that he cannot span his spaces with boulders, and has gone back to the old tree trunk device, which is good enough for the little stream up street, but will, as we know, be carried away by the first rush of winter water. But your laugh is not long. The logs were carried away, sure enough, but not by storm and stream. They were neatly taken down and stored when they had borne for a while the weight of the first proud bow of hewn rock that was a summer's work of the man with the mad vision. And so, arch by arch, it came. A man like yourselves only, as you say, madder (as some say wiser)—took of the stones that sink, took of the very sand that the river makes by the boisterous pounding of rocks, took of that human skill which the hungry waters delight to drown, and made fr them the conquering, arching, all but livi thing on which one autumn day you ce brated, with fluttering flags and music, w wine and gay clothes, the triumph of hum wit over inhuman water."

"Anyway," said Harper, "we p savages let the people on the other side p for what was presumably a gain to ourselv as well as to them." "I am not so sure that," said Pargiter, "for the miracle of t bridge went a bit further. The clever fe on the other bank debated, it is true, whet they should charge you a bridge toll or pu small protective duty on the few things y would bring across for sale, but in the e they decided that your rather timid spir might be unduly thwarted by either of th impositions; they wanted your custom m than your taxes, so they let you come o free, and in a very few years the bridge the conjurer—had satisfied its builders t you were paying in your simple, blind w quite enough interest on their outlay. B we are getting into political economics; me bring you back to bridges by telling y why I suggested that our talk should finished indoors. I have here a portfolio water-colour sketches by one who possess what I may call the poetry of the brush. poetry in the pen-written sense he never, as know, wrote a single line; but poetry, distinct from prose, consists, as you aware, of the expression of things perceiv in such a way that they appeal to the high and simpler side of the intellect. Such pression can be wrought by any instrume of representation, and may therefore be product of paint and water no less than ink. I claim that these drawings—made the leisure hours of an exceptionally bu man—will help us towards that inner view the subject which we are attempting to ta I might, of course, bring the portfolio do into the garden, but for some reason wh I cannot explain pictures of this kind, thou made in the open air, never look their b out of doors. Here is the first of them, t bridge at Valencia, which might well se as illustrating our imaginary miracle that madman made."

The Artistic Character of Bridges.

"Before we get into too exalted a fra of mind on this subject," said Harper, "n I venture to point out that, interesting bridges are from a structural point of vie they are (even if I admit your claim t they are architectural) necessarily, and very clear reasons, lower down in the sc of sublimity than most other architectur projects. Their utility, their strenuo economy of material, their publicity—t they are generally for public or common and, in fine, their rather commonpla drudgery of service, all serve to mark th off from the monumental aspects of archite ture as belonging to a very useful and v necessary, but not in the highest se artistic, class. In fact, if you are going make much of bridges you must logically on to make architectural capital out of roa for, say what you will, bridges are for most part very little more than incidents road-making. And it would puzzle even yo Pargiter, to preach an art sermon on hi ways."

I realised that Harper, who began th remarks in all seriousness, had ended saying a good deal more than he mean probably for the direct purpose of getti our friend into warmer enthusiasm. He w quite successful; Pargiter was glowing, t with a sudden thought he pulled himself and said very calmly, as if changing subject, "Did I ever tell you the story the Sunday-school teacher from Norwood

"I had met the man," said Pargiter, Nimes. We travelled together for a f days, for I found that the little creature w very full of real interest in historical matte he had quite a poet's heart, and was capab of excitement when other people better bre but with blunter appetites, would only sh languid appreciation. So I arranged to with him to the Pont du Gard. He kn that he was to see a Roman aqueduct, a he knew what an aqueduct was, but I want him to come upon it by himself. So we h our out-of-door *déjeuner* at the little i which stands just out of sight of the gre arches, and when it was over, I told him

nder slowly up the valley, and I would low him.
udging the time, I set out, and go to point of view without discovering him. was nowhere in sight, but he was in nd. At least, that voice was surely his, the words seemed unnatural to his meek well-ordered mouth, for they were the ds of a swearer. 'Anything wrong?' I uted, supposing that a sprained ankle was cause. 'Wrong?' he answered. 'No, I 't think anything is wrong. Why?' h,' I said, 'you were using pretty strong guage when I came up!' He blushed. ou didn't think I was profane, I hope,' said. 'I really wasn't, but there is some- ng about this—this monster that made me out in the strongest and largest words I w. Of course, I know it is only a water- in, just like the pipes under the road at ne in South London, but somehow, coming it all of a sudden in this country valley ong all the flowers and butterflies, and ing it that size, filling the whole place up that—sort of drowning the landscape—l, I don't know but what the water-main a doesn't fairly make it worse. It upset Now, if it had been a triumphal arch, a bit of a basilica or something, I could e taken it quietly, but to find a lonely, -of-the-way valley simply absorbed by a ss of pure common sense, so huge and so ient, makes me feel that I must either ar at it as a work of the Devil or say prayers. Either way I get into the big ds.'

explained to him that his attitude was perfectly proper one, that it had an exact nterpart in the feelings of the Queen of ba, in whose case the crowning wonder, t made her feel that she had no spirit left her, was not the temple or the palace, but e way by which Solomon went up' from to the other—doubtless a bridge—and I ther assured him that the Romans them- es were so satisfied of the Divine potency bridges as to call their own high priest the simple title of chief bridgemaker, a e which to the present day a great part Christendom gives to its head bishop—ntifex or Pontiff. On the whole I recom- nded him, of the two alternatives, to say prayers, for, whatever moral failings the mans may have had, they certainly rose ve common humanity in the building of dges, and there is no reason for suggest- that this rising was in the direction of, even under the direction of, Satan.

Devil's Bridge, however, is a title which en alights upon a bridge, especially upon h a one as stands inhumanly supreme in lesolate place. Here is one—another of sketches—from the neighbourhood of rcelona. Puente del Diablo they call it, l it happens, though you would not think to be of Roman origin. The little struc- e at the far end is the relic of a Roman mphal arch, and the tall, pointed central h, from which all Roman character has appeared, is a later substitute for two er arches, the central pier having no doubt led.

The relation of the whole design to its man original seems to me analogous to the anish language—a half-Moorish graft upon tin. The change of the Latin *Pons* to ente is the same frivolous* transformation t the old bridge has undergone."

In consequence of the pressure upon our umns we are compelled to hold over the mainder of this paper and some notes of discussion which followed, until next ek. Ed.]

THE ROYAL ACADEMY LECTURES.

Professor R. T. Blomfield, A.R.A., vered the third of his Royal Academy ures on Monday, on "French Draughtsmen the XVIIth Century."

He said that the successors in France of Cerceau were rather more cautious, and, a rule, produced collections of designs for cial arts and handicrafts, such as the treatise ironwork issued by Mathurin Jousse of La Flèche, in 1625, a work prepared with some regard to the actual processes of the metal worker. Of Barbet and Collot, who both issued collections of architectural details a few years later very little was known. Barbet dedicated a book of altars and chimneypieces to Richelieu, engraved by Abraham Bosse in 1635. Collot's work belongs to the same period, and both men were contemporaries of De Muet, the well-known architect, and of Francini, the engraver and water engineer of Florence, whose designs of doorways, according to the Five Orders, were in the taste of the worst designs of the time of Louis XIII. Pierre de Muet was a very able architect, and his "manière de bien bastir" was the first serious attempt to deal with domestic architecture since the days of De l'Orme's colossal undertaking. The plates were well-drawn, and well engraved. From the point of view of the draughtsman and designer of architectural detail, far the most important figure in France in the third quarter of the XVIIth century was Jean Lepautre, brother of the well-known architect, Antoine Lepautre, an artist who shared with Daniel Marot the distinction of being the most prolific and brilliant draughtsman of the XVIIth century. Lepautre's first published work was issued in 1644, and for a time he devoted himself to the reproduction of pictures by various masters. His real interest as an artist began with his amazing series of designs for decorations, of which the earliest known example is dated 1657. The series was almost inexhaustible, designs for every conceivable decoration, chimney-pieces, ceilings, alcoves, cartouches, grottoes, fountains, vases, were turned out in series after series. Manette said that Lepautre hardly took the trouble to make any preliminary studies, but began straight away on the copper, improving, as he went. His mind must have worked with extraordinary rapidity, but there was little trace of profound study in his work, and no affectation whatever of archæological research. His industry was prodigious, and only equalled by his amazing facility of design and draughtsmanship, Destailleur estimates that he engraved at least 2,000 plates as against some thirteen to fourteen hundred by Du Cerceau, and in addition he must have made sketches innumerable for every sort of purpose. His record had been beaten by Hollar alone, who produced over 2,700 engraved plates in some fifty years, and even Piranesi falls short of him in quantity, though it must be borne in mind that many of Piranesi's plates were very elaborate, and very much larger. Lepautre was far too facile in conception and execution to be capable of striking out one of those great imaginative designs which hold the mind as something beyond the reach of other men. Where he was strong, and perhaps unsurpassed by anyone, was in his power of presentation. His imagination was essentially dramatic, as indeed was the age in which he lived. Le autre was quick to seize on features which would at once arrest attention, and he could combine his motives with a freshness of invention and brilliancy of draughtsmanship such as few men have ever possessed. Though he was continually drawing architecture his thought never shaped itself in architecture; he could only think and clothe his thought in terms of ornament. In this he was the exact opposite of Piranesi, but, on the other hand, his ornament was exceedingly fine in its way, large in scale, and conceived of on a great decorative plan. There was a notable difference between the work of Lepautre and the work of Du Cerceau; where the latter was trifling in scale and laboured with a fancy that never rose above the mesquineries of ornament, the imagination of Lepautre ranged far and wide, his schemes of decoration were organic in the sense that he aimed at a large unity of effect, in which each detail of his ornament was subordinated to the whole. It was here that he was so immensely superior not only to Du Cerceau but to Berain, who succeeded him. Berain was a skilful artist, dexterous with his needle, but his imagination never soared into the empyrean. From the historical point of view the work of Lepautre was important, because it gave full expression to that mature art which the labours of generations of Frenchmen had built up, and which reached its culminating point in the reign of Louis XIV.

Another very able draughtsman was Daniel Marot, the son of Jean Marot, the architect, and his work came to resemble so closely that of Lepautre that, except for the signatures, it would be difficult in certain cases to tell the work of one from the other. Marot made it his business to supply "pensées," as he called them, for architects, painters, sculptors, jewellers, gardeners, and others; in other words, his books were pattern books, naked and unashamed. If, as appears to be the case, there is no escaping those parasites of modern architecture, one could only wish they were up to the standard of Marot and Lepautre. Such was the brilliancy of Marot's drawings that many of his engravings were works of art in themselves, of great beauty, and some of his ceilings were finer than almost anything by Lepautre. Lepautre and Daniel Marot were perhaps the finest masters of decorative draughtsmanship that have ever existed, and in saying this he did not place them in competition with the Italian painters who had imagined and carried out great schemes of decorative painting.

Jean Berain was born about the middle of the XVIIth century. He acquired a considerable reputation for little quips and cranks of design, and he was at his best in his designs for the surface of walls and ceilings.

The lecturer then dealt with the other side of French architectural draughtsmanship in the record of existing buildings. It was a less ambitious aim than that of the artists he had been discussing, but the work done by such men as Du Cerceau in the XVIth century, and Jean Marot, Israel Sylvestre and the Perelles in the XVIIth, was of far greater value to the historical student. Jean Marot's engraved design for the completion of the Louvre was at least as good as Lemercier's. His really valuable work was his "Architecture Française," 195 plates, known as the "Grand Marot," and the little folio containing 112 geometrical drawings of notable buildings of the time, known as the "Petit Marot," one of the most perfect little books of its kind in existence. To Sylvestre and the Perelles we owe a new departure in architectural drawing, and that was the perspective with the sight line high up in the picture, the great birdseye view of houses and grounds stretching away for miles into the country.

There could be little doubt that in the second half of the XVIIth century, or in quite modern times, the French were the masters of the time in architectural draughtsmanship, and set the standard of that art and established its finest traditions in every civilised country. He would almost advise them to turn their back on the present and on the immediate past and endeavour to extend their intellectual and imaginative horizon by studying the work of those half-forgotten artists. That would do something to check one of the most crying faults in the practice of modern architecture, its ignorance of antiquity, its failure to realise the wider scholarship of art.

ARCHITECTURAL SOCIETIES.

Leeds and Yorkshire Architectural Society.

A general meeting of this Society was held last Thursday, February 8, the President, Mr. Sydney D. Kitson, in the chair. Mr. E. Caldwell Spruce read a paper on "The Present-day Sculpture in France." The lecture was illustrated by many slides of modern works from the schools in Paris, Rodin's work being chiefly in evidence. In speaking of the realistic and emotional types so popular at the present time, Mr. Spruce expressed the opinion that such works representing repulsive or disgusting subjects should not be encouraged, as it is violating in every way the mission of art.

Edinburgh Architectural Association.

The third ordinary meeting of the session of the Associate Section of the Edinburgh Architectural Association was held in the Association rooms, 117, George-street, on the 7th inst., Mr. W. J. Walker Todd presiding. Mr. Oscar Paterson, Glasgow, read a paper on "An Elementary Introduction to the Study of Taste in Stained Glass." He pointed out that the faculty of taste was a developed process of appreciation, and spoke of the development of an idea, of the character of the material and its capacity of eliciting certain emotions of taste. After dealing with the early associations of art with the Church, he proceeded to speak of form and colour and the identification of character by lines, the mixing of light, temperament, the selective force, and the mental process of appreciation.

It is not really frivolous of course; the dis- ery that a pointed arch might meet the needs he bridge was a very serious and able feat of hanics.—P. W.

THE SOCIETY OF ARCHITECTS: HOUSING OF THE WORKING CLASSES.

THE fourth ordinary meeting of the Society of Architects for the session 1911-12 was held at 28, Bedford-square, W.C., on February 8, Mr. Percy B. Tubbs, F.R.I.B.A. (Vice-President), presiding in the unavoidable absence of the President, Mr. Bond.

The ballot was taken, and the following candidates were declared to be duly elected :—

For Membership.

C. Chart, F.S.I., Croydon
W. G. Couldrey, Paignton
J. A. Dartnall, Leytonstone
J. P. Firth, Wakefield
W. H. G. Hubbard, Luton.
R. Medcalf, Liverpool
T. B. Medcalf, Liverpool
G. Newton, Bournemouth
J. Thompson, Alderley Edge
L. S. Youngman, Bournemouth

For Studentship.

J. S. Clutterbuck, Battersea Rise, S.W.
H. C. Low, Wimborne
H. Rhodes, Gorton
H. W. Sheffield, Earl's Barton
D. M. Wilson, Horsforth

Mr. E. C. P. Monson, F.R.I.B.A., F.S.I. (Vice-President), then read a paper on "The Housing of the Working Classes," illustrating his remarks by lantern slides and a number of contract drawings and sketches. In the course of his remarks he said :—

"In the XVIIIth and XIXth centuries great strides were made in building houses for the middle and poorer classes of the community, and in London itself many hundreds of streets were laid out and developed about that time. In fact, previous to then London was more or less a small place to what it so soon afterwards became, owing to all sorts of restraints, Acts of Parliament and the like which have been attempted and passed to keep down house building. Many of these areas, however, which were so hurriedly covered with speculating built houses soon came to grief and developed into slums, and, besides being insanitary, were badly designed, and numbers were built either on the old-fashioned back-to-back principle, or else provision was made for only a very small back yard, and only in the cases of the large and more important houses was there any more than a very limited air space provided, and anything was thought to do for the poor. These are now being or have had to be removed to make way for something else. Better houses, however, were built, fronting around a square, which, of course, was what we consider more up to date.

Around all the munificent gifts and charities and Garden City schemes rage several points which I propose to go into a little more in detail, and they are as follows :—

Which is it advisable to build?—

(1) Block dwellings; or (2) cottages; (3) the block *versus* the cottage; (4) if cottages, whether detached, semi-detached, or in rows; (5) number of houses to the acre; (6) the essentials of the best house built cheaply.

Block Dwellings.

These are divided into two kinds : (*a*) *The Associated.*—A type, however, which is quite out of date, and which nobody in his senses, and thinking of hygiene or of the ordinary care of life, would suggest; very many of these, however, have been built, and it is only more or less recently that they have been discarded.

(*b*) *The Self-Contained.*—This type is good, each flat being what it says, self-contained, that is, having everything which an ordinary cottage would have and combining all the comforts of a house without interference from anyone.

The cost of block dwellings, according to Alderman Thompson, altogether apart from the cost of the land, averages about 100*l.* per room, and the land cost about 75*l.* per room, making the total about 175*l.* per room. This is higher than the cost of the cottage per room, but it can be readily seen that where the site is in London, or other large cities, it is impossible or impracticable, even from a philanthropic standpoint, to build other than block dwellings. Block dwellings, however, should not be built higher than five stories, and only four if the cost of the land is such as will allow this, owing to the vital question of adequately lighting all the rooms.

In the case of the Trustees of the will of the late W. R. Sutton, the site at the corner of Old-street and City-road, London, E.C., comprised only 1¾ acres, and cost about 95,000*l.*, and the buildings just over 70,000*l.*, a total of 165,000*l.* for 284 tenements and fourteen shops—885 rooms and sculleries and shops, etc., which works out about 80*l.* per room for the buildings and about 107*l.* per room for the land, and on another site where buildings are now being erected at Chelsea the cost of the land was 76,000*l.* for about 3½ acres, and the building contract is 176,000*l.*, a total of 252,000*l.* for 675 tenements and thirty-four shops—2,175 rooms and sculleries and shops, etc., which works out about 80*l.* per room for the buildings and about 35*l.* per room for the land, and in both these schemes, after deducting 40 per cent. for repairs, rates, and taxes, and other outgoings, the rents are so arranged as to produce 2½ per cent. only on the total capital outlay.

The blocks here provide for one, two, three, or four roomed tenements, and in all these tenements accommodation is made for a scullery, bathroom, separate water closet, larder, coal cellar, etc., which is not counted when speaking of the number of rooms. The entrances to the flats are all from staircases. Every floor is of fire-resisting materials, as also are the staircases and roofs; the playgrounds and roadways are made with tar macadam; shrubberies are planted wherever possible, and care is taken to tend the trees and shrubs so that they shall have a fair chance of life. Staircase walls are in glazed bricks, and generally the whole of the work is carried out not so much with the idea of building cheaply as that of saving in the cost of upkeep and renewals.

In Liverpool, where the Corporation have been doing a great and praiseworthy work on the Bevington-street area and where they are proposing to spend a further considerable amount of money, the block dwellings are to comprise living-room, one or two bedrooms, scullery, water closet, but no bath. The entrances to tenements are from balconies placed outside the buildings, but personally I am not greatly in favour with this particular method of entrance. It, however, has something to be said for it. It saves space, because one staircase can be made to serve a larger number of tenements than if the entrances were direct from the staircase.

In Manchester very many dwellings of this latter character have been put up by the Corporation, and it is becoming quite a usual thing for large municipalities to go into the question of doing (as rightly they should do) something for the poor, but I am of opinion that in doing this the buildings should be kept of such a character and at such rents as should make them self-supporting with no charge on the rates.

Cottages.

The Sutton Trustees are purchasing a site at Birmingham, about 21½ acres in extent, at a cost of about 18,500*l.* including roads and sewers, and the proposition is to build 215 houses and cottages of varying sizes, from six rooms to one room two-storied maisonettes accommodating a total of 251 families in 1,050 rooms and sculleries, the whole scheme working out with roads and sewers at about 60,500*l.*, which gives an average cost per room of 40*l.* for the buildings and 18*l.* for the land and roads.

These figures from my own work prove conclusively that the cost per room in the cottage for buildings and site is less than the cost per room and site in the block. The cost of cottage building as given in "Housing Up to Date," by Alderman Thompson, averages roughly from 50*l.* to 70*l.* per room, and the average site cost about 7*l.* 10*s.* per room, but it is impossible to make any comparison, because, as I have said before, cottages can only be built to be productive where the cost of the ground is comparatively low.

The Block *versus* the Cottage.

The great question with regard to block dwellings is whether they are more or less healthy than the cottage, and it must be admitted that good health is dependent not on one condition but on many.

The primary command of creation was "Let there be light," and it is because the builders of block dwellings in some countries have neglected to obey this command that the block dwellings exercise such a mischievo influence in regard to the health of th people. In the New World as well as in th Old this primary command had not bee obeyed.

Another point against block dwellings that they are liable to be overcrowded; thi however, ought never to happen where th superintendent and his assistants keep sharp look out.

Although I am designing many bloc dwellings I am not greatly in love with them and if I were able I would build cottages the type which I consider a workman's hom should be; but with sites of the cost valu of those just referred to it is manifest impossible to consider the question of cottag thereon, even when the small return of 2½ p cent. is taken into account.

In discussing this housing question wit workmen I find that no point is more popul than that of the need for proper bedroo accommodation. Each normal dwelling f a workman's family should also have a goo living-room—spacious, well lighted, brigh and clean. It should be the brightest an most cheerful room in the house. It has t serve as the workroom for the wife, the play room for the children, and the dining-roo for the whole family.

Connected with this room there should be scullery in which the rougher domestic wor of the household can be performed. Eac dwelling should also be provided with a bat and the practice of placing this real necessit of modern healthy life in the scullery may b recommended where the cost of a separat bathroom cannot be afforded.

With regard to the provision of a best roo or parlour, there is much difference of opinio amongst housing reformers in Great Britai Personally, I am a strong advocate of th parlour or best room. I regard the quie but strong desire of the workman's wife t have one good room for pleasure as a health desire of great social value.

This, then, is the standard of a normal healthy home for a workman's family—thre bedrooms, large living-room, scullery an bath, and wherever possible a parlour There is one external feature of the goo home which should also be clearly stated viz., the need for garden space. No work man's home can be regarded as properl equipped unless it has a garden, howeve small.

On the broad question, taking all thing into consideration in connexion with thi clause, I think, all will agree with me tha the cottage comes out best and wins the case and should be built wherever possible, course every care being had and due accoun being taken of the situation of the buildin and the cost of the land.

The Cottage: Whether Detached, Semi-Detached, or in Rows.

Whether the cottage should be detached semi-detached, or in rows depends ver largely upon the number it is desired to plac upon any given plot of land, and makes considerable difference in the number to be s placed, because if they are in rows more lan is available for building—and the ove crowding of houses is to be deprecated—bu even if they are so placed it is far better in my opinion, to provide a small yard, ther the back way, and beyond that the garden and to, say, every four or six houses ru a passageway from back to front, with room over, to connect up the back way as much and as often as possible, and prevent becoming the nuisance it sometimes does but if the number of houses to be erected to the acre is, generally speaking, says Mr. Raymond Unwin, reduced to anything like fifteen, terrace houses with back passages will be found to be a more expensive method of development than with passages between the houses.

Is it better, however, to build houses semi-detached? Here, again, the question o money comes in, for it is impossible to build in this manner as cheaply as terrace houses; there are three main walls to be erected to start with, instead of two. The objectionable features, however, which may arise in connexion with the back way in the terrace house are done away with, and every house has its garden directly attached thereto. Detached houses are much better, but again the cost is still more.

ing at this matter dispassionately in lights, I consider that the best way of ng houses economically is semi-de- but the passage between the houses be not less than 4 ft. wide, and can d jointly by the occupiers on either this method does away with the ous back passage and is the easiest n of that very irritating by-law ng back ways which at one time ocal authority sought and fought for they found out the cost of upkeep, g, etc., and which they would now be be rid of.

r of Houses to be Built to the Acre.

is a very vexed question and one has already caused much heartburning esent in certain districts as many as o thirty-five and even more houses are an average upon every acre of ground. f course, means overcrowding and dis- t, terrace houses and practically no s; but thirteen to the acre is a very umber and is good. The Birmingham ation in their Town Planning Scheme st Birmingham have fixed the limit at r gross acre with a density rate of per gross acre; this has, however, not satisfaction, and the builders and ners are grumbling. Personally, I a good all-round average is thirteen to n per gross acre, and with this number ssible to give plenty of garden ground, be seen from my first scheme for the gham site above spoken of and the w suggested to be carried out.

rring again from a Report by Mr. nd Unwin of the effect of limiting the r of houses to the acre, he says, "For nent let us confine our attention to orth 300*l.* per acre, which will be found a fair average for undeveloped land sed in large quantities on the outskirts isting towns. Two diagrams give graphic form the main fact that the age of increasing the number of houses acre is very much smaller than would t be supposed even if measured solely money result per plot, while if anything wed for the size of the plot it becomes t that the crowding of large numbers uses upon the land is really a most omical proceeding. The additional f road required to provide the extra ge for the added number of houses es the total cost of development so that raising the number of houses 9·6 per acre gross to twenty-five per ross only reduces the cost of land ads per house from 68*l.* to 40*l.*, while e of the plot which each house enjoys ced from 423 yds. to 127 yds."

ut it in another way, with twenty-five to the acre, the tenant pays 7½*d.* per for 127 yds. With 9·6 houses to the f the tenant paid 1*s.* 0½*d.* per week, ld have 423 yds. for his plot, and the rd would make the same profit upon d, because while the effect of reducing umber of houses to the acre from y-five to 9·6 is to increase the cost per y 68 per cent., its effect also is to e the area of the plot by 333 per cent.

put it in still another way from the s' point of view, with 9·6 houses to re he pays at the rate of 778*l.* per acre he net area of his plot, which is d. per yard, while with twenty-five to the acre he pays 1,515*l.* per acre net area of his plot, or 6*s.* 3½*d.* per

How to Build Houses Cheaply.

der the Housing and Town Planning nd the various Small Holders and other great incentive will be given to people ld houses for themselves, either through of the approved societies or by borrow- he money in other ways with the aid e Acts.

o not propose to go into the many ds in which this can be done, but will say that I consider the best way to cheaply is for the client to employ a ghly practical and responsible archi- not a faddist or dreamer after the sible, but one who understands his ct and can give the best results for east money, due care being had to all onditions obtainable."

Mr. H. Freyberg (London),

in proposing a vote of thanks, said they not only had to erect new and sanitary buildings for people who could not help themselves, but they also had to do away with those insanitary spots in London that had grown up in past years, and the difficulty there was that as fast as slum areas were cleared away they blossomed out in all their fruitfulness in other parts of London. It was absolutely useless for individual effort to go on unaided, and it was of no great practical value for any municipal body to clear away slum areas in their own particular municipality if they were allowed to settle in others.

Mr. G. A. T. Middleton (Past-Vice-President) seconded the vote of thanks.

Mr. Henry R. Aldridge (Secretary, The National Housing and Town Planning Council)

supported the vote of thanks and said that Mr. Monson was doing what was absolutely essential at the present time in trying to work out from the architects' point of view some of the very difficult housing problems. It was comparatively easy when they had unlimited means to dispose of to design a middle class house which would readily meet the tastes of the client and provide for him a comfortable home, but when they had to deal with the problem of the maximum of room at the minimum of cost it became a very different task. The poorer type of workman in England, those breadwinners earning no more than 18*s.* or 1*l.* per week, were largely beyond the scope of housing authorities. Taking the standard set out by Mr. Monson of what a good home should be, with three bedrooms on the upper floor there must be a corresponding number of rooms below, fireplaces on the ground floor to correspond with those above, and so on; in fact, a well equipped home with bath really meant a five-room cottage which could not be built in any part of the country to let at an economic rent of less than 5*s.* to 7*s.* per week. Those engaged in estate development had declared that the cost of the roads again and again equalled the cost of the land, but it could be taken as a general rule that the cost of road-making at least equalled the cost of the land. It was quite unnecessary that those subsidiary roads which only had to carry a milk cart should have to be made strong enough to take a traction engine, and when this element of cost was taken into account it would, he thought, bridge over the difficulty in regard to the number of houses per acre. If there was any type of development which the ordinary medical officer of health had condemned it was the cul-de-sac, but he asked whether there was anything very wrong with a scheme which provided a cul-de-sac containing only twenty houses, with a 20 ft. road and the houses set back 30 ft., making a distance of 80 ft. from house to house. It was quite possible, he thought, to get Mr. Monson's ideas brought in with due economy, and, unless economy went hand in hand with development, they would never get town planning to help the people it was intended to help.

Mr. Noel D. Sheffield

said that the title of Mr. Monson's paper might have been 'The Housing of the Better Class and Better Paid Workman." The class of men and women who might be called casual labourers seemed quite beyond any scheme for promoting their welfare. In many cases it was the occupier who made the slum, and even if persons of that type were shifted to another district and healthy surroundings, they would very soon convert the whole neighbourhood into a slum area. Block dwellings were used to a great extent by poor women who were compelled to earn their own livelihood, and he put forward the suggestion that, if possible, in every block of dwellings a large and airy room, say, on the ground floor, should be provided and fitted up as a crèche.

Mr. Chas. F. Mitchell

said it was their duty to see whether it was not possible for those earning 18*s.* to 1*l.* per week to be made a real asset to the State by the improvement of their social conditions. It certainly did appear, at first sight, an insolvable problem, but he thought that experience would show that the difficulties to be met with were not insuperable. He was glad that it was in the cottage rather than the block dwellings system that the solution lay.

Mr. F. Endell Rosser

agreed with the lecturer in his advocacy of the parlour, which, he thought, gave to the working man and woman a certain amount of self-respect.

Alderman W. Thompson (Chairman, The National Housing and Town Planning Council)

said that if the State was justified in finding large sums of money to deal with the products of slum areas, then he thought it would be equally justified in subsidising schemes for the better housing of the working population, seeing the vast importance of the human element in the problem before them. He believed in the working man's parlour, as it increased the occupier's self-respect, and when they possessed that the solution of the other problems was not far off. He was not altogether sure that they could solve the problem of the country village without a subsidy of some kind. They all made up their minds some time ago that it was necessary, as a commercial undertaking, for a three bedroom cottage should be built for not more than 150*l.* Capable men had laughed at them, and expressed the view that it was impossible to reduce the cost to that figure, but they had been completely floored by the fact that it had since been done. It was only here and there that they were able to do this, and it must be borne in mind that they were as yet in the experimental stage. Architects had only recently, comparatively speaking, turned their attention to the cheap house. It had never paid them to give the matter serious thought; the design of a cottage and the superintendence of its erection required as much care and trouble as larger work, and when it was completed, the result of their efforts was often "lifted" by builders and others almost to the brick without any kind of fee. If architects could devise some reasonable means, without putting any unfair oppression upon the production of houses, which would protect a man who had given his life to the consideration of the subject, they would be justified in asking Parliament to accede to the demands. The present Act was not strong enough to get at the trouble. So far, every house erected on their estate had been designed by a proper architect; every house would have to be examined by an architect, and they would insist upon having a competent man for every house put up. The average number of houses there to the acre was not more than six. The maximum number was twelve to the acre, and the opinion throughout the country seemed to be hardening on the question. The zone system of streets radiating from the centre would have to be adopted when land was purchased which already had houses standing upon it. There could not be a slum anywhere within ten square miles of their estate, their neighbours benefitting by their scheme. On an estate 200 acres in extent, twenty acres were given up to open spaces. The problem before them would be very much simplified by getting through one or two practical schemes on well laid out pieces of land; 150*l.* seemed to be about the limit, but if it were possible to get below that figure with dignity and self-respect, it would be well to do so.

Mr. Ewart G. Culpin (Secretary, Garden Cities Association)

said that it was a glad sign for housing reformers that architects were taking up the subject. They had all suffered so much from the deadly monotony of streets of houses erected from builders' plans, the cost of building and establishment charges being out of all proportion to the result obtained. The lecturer had proved to housing reformers the world wide that the block must give way to the cottage, for from every point of view, health, morality, and society, the cottage must be the unit of town development. He had spent the last three months in South Wales examining the question, and it was a common thing to find houses built in a hill side with one and sometimes two stories backed by the earth itself, without any possibility of ventilation. It was bad enough

with one only, but often two could be seen; and the plans of those buildings had been passed by the Local Authorities within the last three to five years, in spite of the protests of their medical officer of health. The waste of life to which Alderman Thompson had referred could be seen in the figures of the comparative death rates of large towns and garden cities. The death rate of Birmingham was seventeen, that of Bournville only seven, and while the infantile mortality of the former was 170, the latter was as low as seventy. Without doubt it was evident that the cottage condition was going to be the salvation of the worker, and that the open spaces of the garden cities would do for their children what the private park and public playground did for the children of the wealthy.

The Chairman then made a few remarks and put the motion to the meeting, and a hearty vote of thanks was accorded to Mr. Monson for his lecture.

Mr. E. C. Monson,

in reply, said he concurred with the statement that the cost of the roads in many cases exceeded the cost of the land. With regard to the question of paper *versus* distemper for walls, a housing reformer, Mr. Lovegrove, of Hornsey, had recently advocated paper because with the class of tenant they were catering for distemper was apt to get very much rubbed, when it got into a horrid greasy condition which would never wash off, whereas with paper the walls could easily be stripped and repapered. Vermin, of course, was another question, but with care and proper attention would become, he thought, a thing of the past. With regard to the removal of dust and house refuse, that was quite a simple matter. Every tenement had its own dust pail which was perforated to prevent its misuse by the occupier, and it was one of the duties of the superintendent of the dwellings to see that the dust pail was emptied once every day into the dust bin provided for it. In Liverpool, they had a system of dust shoots with automatic flaps, one dust shoot to every two tenements, and the refuse fell directly into a large receptacle at the bottom of the shaft. It was quite possible to build a cottage for 150*l*. He had, a few days ago, obtained an estimate from a builder for a house in connexion with the Banbury Competition, and the builder could erect the house to his design for 135*l*. The accommodation provided was three bedrooms, living-room, and a scullery. There was hardly any passage room, and the whole thing was about as compact as it was possible to get it. The whole of the rooms were under one roof with no outbuildings.

The proceedings then terminated.

STAFFORD PUBLIC LIBRARY COMPETITION.

THERE is perhaps no simpler problem in the planning of public buildings than that which a small library presents to an architect, and in this present case the competition proved attractive enough to evoke no fewer than 210 sets of drawings. The cost of the building as stipulated by the conditions was not to exceed 4,000*l*., the assessor being Mr. Henry T. Hare, F.R.I.B.A., who, it may be remembered, was the architect of the offices of the Stafford County Council erected some years ago.

In reviewing a competition where so large a number of designs have been submitted, and especially where the successful competitor only secures a comparatively small commission, one feels impelled to deplore the waste of time and labour to the profession generally, unless the considerable number of evident tyros among the competitors reap some benefit from studying the winning design afterwards. Certainly an inspection of the Stafford plans shows that about two-thirds of the designs sent in did not merit even scant consideration on the part of the assessor.

The site of the proposed library occupies a very prominent position. It is triangular in shape, and situated at the junction of Lichfield-road and Bailey-street, the apex of the triangle facing the end of Bridge-street, the principal thoroughfare of the town.

The case is one in which a glance at the actual surroundings show at once that it was inadmissible to plan the public entrance elsewhere than at the angle, but this was not so obvious from the block plan sent out to competitors, many of whom went astray in this respect, and there are a few excellent designs with the entrance and principal façade to Lichfield-road.

Mr. Hare spent the greater part of three days in making his examination of the designs, and selected a short list of sixteen for final consideration, eventually placing those of Messrs. Briggs, Wolstenholme, & Thornely, of Liverpool, first; Messrs. Sutton & Gregory, of Nottingham, receiving the second place, with a premium of forty guineas; and Messrs. Castle & Warren, of Norfolk-street, Strand, London, third place, with a premium of twenty guineas.

A word should be said for the excellent conduct of this competition on the part of the Stafford Council. The conditions, which were placed in the hands of the assessor to draw up, were, as might have been expected, very clear and concise. The arrangements for viewing the drawings exhibited on Friday and Saturday last in the Borough Hall were quite satisfactory, and a notable feature was the grouping of the designs in the short list together with the premiated ones in the centre, and so placed as to be the first in evidence upon entering the room.

We do not think there can be a word of adverse criticism on the result, the selected design by Messrs. Briggs, Wolstenholme, & Thornely is most carefully and logically worked out, and does not show an inch of waste space.

The size of the rooms conform very fairly to the stipulated areas. The entrance is, of course, placed at the angle, and the inner hall gives access on the left-hand to the ladies' reading-room and the magazine-room. Directly in front is the lending library counter, and on the right the news-room and staircase to the upper floor. Upstairs one crosses a landing to the reference-room, which is lighted from above. Beyond the reference-room is the librarian's-room, immediately above the book store, and having private access by a stairway from the lending department the librarian is in close touch with the whole building.

The arrangement of the counter forming a borrowers' enclosure to the lending department makes up the 40 ft. asked for in an ingenious manner, but apparently the assessor has suggested straightening the sides to give a little more freedom of movement for the assistants. The caretaker's day-room would have been better placed on the ground floor had it been possible. The principal feature of plan which calls for criticism is the shape of the entrance lobby and hall, which appear to have come mainly by chance. The ladies' reading-room is also far from perfect in this respect.

The elevations are proposed to be carried out in red brick 2 in. thick (following Mr. Hare's County Council offices) and Hollington stone dressings. They are treated in a dignified manner, but will probably prove too expensive. We think there is too much work above the cornice, which is kept so low as to make the general proportion rather unhappy. The angle portico with its half-dome of stone is adequately dealt with, but one questions the effect produced by the dressed stone tablets flanking it, when it is seen that the authors propose eventually to cover these features with notice boards. The authors' estimated cost is 3,965*l*.

Messrs. Sutton & Gregory's plan is generally good, but it is not on such simple lines as the first. The caretaker's day-room should be situated to give control over the main entrance, as, with a small staff working the building, the assistants should be relieved of general supervision as much as practicable. As to the upper floor, the librarian's-room is separated from the reference-room by a so-called service corridor without much obvious purpose. The elevations are on safe lines, though inclined to tameness, but would probably look better in execution than on paper.

In the third premiated design, that of Messrs. Castle & Warren, the lending library takes up too much of the ground floor space, and is not pleasingly disposed. This necessitates placing the ladies' and magazine-room upstairs, and the apparent simplicity of the upper floor plan is produced at the expense of entering the ladies'-room through the last-named department. Both these rooms would be better placed on the ground floor. The librarian's-room is of indifferent shape but well placed. The elevations are severely treated, mainly in brickwork, and the angle portico, elliptical on plan, is handled on too insignificant a scale altogether.

Amongst the other designs included in the short list is an interesting treatment of the angle by Messrs. Bowden & Wallis, of Londo... The drawings are effectively got up, but ... design generally shows far too much stonew... for a brick district. This unsympathe... attitude towards local conditions is common... adopted by competitors. Mr. J. H. Wenyo... of Dudley, has a sound if not striking plan, ... far too elaborate and expensive elevations.

Mr. Vernon Hodge shows a proposal ... making the news-room, magazine-room, ... borrowers' space all in one, with no scre... division, which would certainly facilitate supe... vision, and follows a hint, if we mistake ri... given by Mr. Hare himself some time ago in ... paper which he read on the planning of publ... libraries.

On the whole, the promoters of the compe... tion may be congratulated in having obtained ... satisfactory design for the building on a s... which presented considerable difficulties ... evolving a practical working plan coupled wi... adequate architectural expression externally.

THE LONDON COUNTY COUNCIL.

THE usual weekly meeting of the Lond... County Council was held on Tuesday in ... County Hall, Spring-gardens, S.W., Mr. ... White, Chairman, presiding.

LOAN.—The Finance Committee recom... mended, and it was agreed, that a loan ... 6,174*l*. should be made to the Lambe... Borough Council for repaving.

NEW COUNTY HALL.—It was reported ... the General Purposes Committee that ... Majesty the King, who will be accompani... by her Majesty the Queen, has intimat... his intention to lay the foundation-stone ... the New County Hall. The ceremony ... take place at twelve o'clock on Saturd... March 9.

NEW SCHOOL.—It is proposed to erect ... new public elementary school on the Ocea... street site, Stepney, and the Randall pla... School, Greenwich, is also to be enlarged a... remodelled, at an estimated cost of 400*l*.

BARKING OUTFALL.—The river wall on la... adjoining the outfall works is to be repair... at a cost of about 250*l*.

COMPETITION NEWS.

Port of London Offices.

The preliminary designs for this import... building are to be sent in to-morrow ... twelve o'clock. Not more than six of ... competitors will be selected by Sir Aston ... Webb, R.A., to submit designs in the fi... competition, at an honorarium of 200 guine... each; and six other architects may be invi... to prepare schemes.

Public Library, Stafford.

In the competition for the Public Libra... Stafford, Messrs. Briggs, Wolstenholme ... Thornely, Pier Head, Liverpool, have been ... placed first; the second premiated desig... was by Messrs. Sutton & Gregory, Bromle... House, Nottingham; and the third, Messrs ... Castle & Warren, Amberley House, Norf... street, Strand.

Enlargements at Warrington Town Hall.

The Town Hall Committee of Warrington ... Town Council have decided to invite architect... to send in competitive designs and to o... three premiums of 20, 10, and 5 guineas ... the enlargement of the Council Chamber an... also the provision of additional office accom... modation at the Town Hall. They have als... given instructions to the surveyor to prepar... conditions for such competition and to submi... the same for their approval.

Birmingham Blue Coat School.

Local architects only are eligible to com... pete for the proposed new school at Oldbu... Three designs will be selected, and under ... certain conditions the authors will be paid ... 50*l*. each to develop their plans. Mr. G. H. ... Hunt, F.R.I.B.A., and Mr. E. Bateman, ... F.R.I.B.A., are the assessors.

Church of St. Luke, West Hartlepool.

The limited competition for this church, in ... which Mr. W. D. Caröe acted as assessor, has ... resulted in favour of the design submitted ... by Messrs. Lofting & Cooper, of 44, Bedford ... row, W.C.

Fire Station, Cardiff.

a meeting of the Cardiff City Council Monday, Mr. J. T. Richards explained in connexion with the new fire station, President of the Royal Institute of h Architects had been asked to nominate ssessor for the competitive designs sent id that a copy of the draft conditions e competition had been sent to that eman.

GENERAL NEWS.

Professional Announcements.

Phillips Fletcher, F.R.I.B.A., F.S.I., Inst.C.E., of Messrs. Banister Fletcher ns, 29, New Bridge-street, Ludgate s, E.C., has been elected by the Black- Bench of Magistrates as their advisory ect.

Harold I. Merriman, A.R.I.B.A., has ved from No. 4, Newman's-row, Lincoln's elds, W.C., to 4, Staple Inn, Holborn.

Royal Academy Exhibition, 1912.

e following are the days for receiving ibutions for the Royal Academy Exhibi- this year :—

day, March 29 : Water-colours, pastels, tures, black and white drawings, en- ngs, and architectural drawings.

urday. March 30, and Monday, April 1 : aintings.

esday, April 2 : Sculpture.

A Picture Gallery for Salisbury.

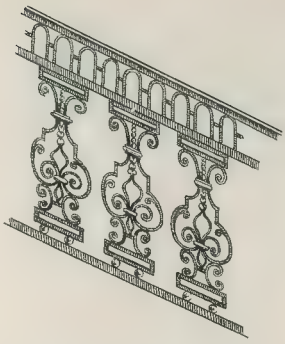
a meeting of the Salisbury Town cil it was announced that Mr. Edwin g, a painter of water-colours, has ed to build and endow a picture y for the city. Mr. Young, who is a e of the city, has offered a collection s own sketches of old Salisbury, and he onveyed by deed of gift property pro- g 80*l.* per annum, the income to be for the expenses of the gallery and to de additional works of art.

The Centenary of Waterloo.

e Brussels correspondent of the *Times*, ng on January 20, says that the com- e which has been formed under the lency of General Baron de Heusch to ge for the celebration, on June 18, 1915, e centenary of the Battle of Waterloo, ecided on the construction of a mauso- at Plancenoit or Braine l'Alleud. The rial, according to a design which is to bmitted for final decision to a council ritish, German, Dutch, French, and an artists, will consist of a mass of dark ery on which the principal group, d in white marble, will stand out in , with bronze figures round it repre- g the various nations. All the bones on the field of battle will be laid n this mausoleum, which will thus in a re become the tomb of all who fell at rloo.

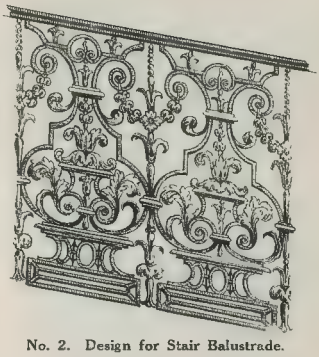
ons and Footpaths Preservation Society.

d Eversley presided over the monthly ng of the Commons and Footpaths rvation Society, held at 25, Victoria- , Westminster. The Solicitor, Mr. val Birkett, presented a report upon rovisions of private Bills to be intro- into Parliament during the coming n and which will affect commons, open s, and rights of way. It appeared that y-two gas, water, railway, tramway, age, and improvement schemes seek to take in the aggregate about res of common land or open space. Of Bills it was decided to oppose the politan Railway Bill, under which bury Park, Watford, is threatened with ion. It was also decided to oppose the ng Gas Bill, which proposes to authorise ppropriation of 4½ acres of Horsell ion. It was decided to institute ries in regard to a number of other including the Swansea Corporation under which Mumbles Hill will be ed, and eleven railway Bills which power to block up public footpaths. s reported that the total income of the y for the year 1911 had amounted to ., and the expenditure to 1,498*l.*, includ- Parliamentary and legal expenditure nting to 301*l.* The Secretary, Mr. L. W. Chubb, stated that Mr. E. N. Buxton and himself had been nominated to act on behalf of the Society as arbitrators in settling disputes in regard to eighty-three disputed footpaths in the Home Counties. The nominations had been made by the land-owners and Parish and District Councils.



No. 1. Design for Stair Balustrade.

By Hugues Brisville, published by N. Langlois about 1670 and engraved by Jean Berain.



No. 2. Design for Stair Balustrade.

By Jean Tijou, published in London in 1693.

CORRESPONDENCE.

The Over-Elaboration of Plans.

SIR,—I have read with much interest your "Note on "The Over-Elaboration of Plans," which coincided with my view of the matter when I read Mr. Mackenzie's paper. To my mind, the false sense engendered by the use of the title to an excess of thought (which can rarely, if ever, be too much indulged in if the house is made a success of) would be better and more easily explained, in default of another and a better one, by the little French word "*étude*," about which there can hardly be any doubt. The simpler the plan the better, but simple plan, if satisfactory, can only be brought about at all by much *étude*. "The House at Hampstead" on p. 142 forms a good explanatory example of simplicity, evidently brought about by the use of it. E. SWINFEN HARRIS. F.R.I.B.A.

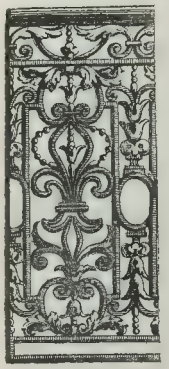
Ironwork by Tijou.

SIR, Your kindly review of my book, with its many shortcomings, induces me to send you two interesting examples of designs in Tijou's book, and of the source which, I believe, inspired them. A small folio book of designs, entitled "Diverses pièces de Serruriers inventées par Hugues Brisville, Maître Serrurier à Paris," was produced about 1670, and published by N. Langlois, "avec privilège du Roi." The designs are no doubt earlier, as the fine portrait of Brisville with flowing locks and deep lace or embroidered collar which forms the frontispiece, was engraved by G. Ladame in 1663. Fourteen of the sixteen plates are of finely-chased and *repoussé* escutcheons for locks, richly worked borders, etc., all of great elaboration. The publication in its entirety seems to have inspired, or at least been taken more or less as a model, for the costly book of designs published by Tijou in London in 1693; and for which some of the best known artists of the day made the engravings. The work also directly inspired many of Tijou's designs. The two balustrade or stair-rail designs, No. 1 and No. 4, reproduced from the last plate but one of Brisville's book, have, it appears, obviously suggested those marked No. 2 and No. 3 from Tijou's. The latter design, stripped of its floral enrichments, presents several elements in common. As a *motif* it has since been largely used both in France and in England by a succession of later designers, and it thus becomes of interest to trace it to its source. It was used by Tijou for the grand staircase at Chatsworth, but in a simplified form. A photo of one of the original balustrades made by Tijou, which has been sent to me for reproduction in consequence of alterations at Chatsworth, is appended, No. 5.

The second design, by Brisville, is seen in No. 4, the central figure, as in the former case, being the fleur-de-lis. Tijou's rendering is seen in No. 3 with additional floral embellishments, but otherwise practically identical. It was used as the *motif* for the balustrade at the head of the Long Water at Hampton Court, but in a much simpler form, as seen in the illustration No. 6.

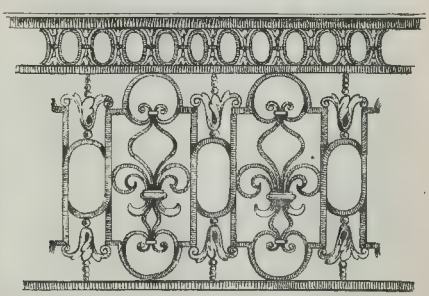
J. STARKIE GARDNER.

Star Works, Tradescant-road, S. Lambeth, S.W.



No. 3. Design for Balustrade.

By Jean Tijou (1693).

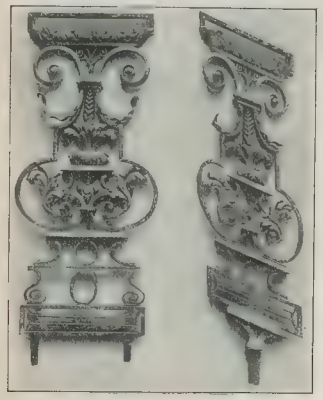


No. 4. Design for Balustrade.

By Hugues Brisville, published by N. Langlois about 1670, engraved by Jean Berain.

The London Building Requirements.

SIR,—I have read with interest in the current issue of your journal the leading article which deals with the requirements affecting the erection of skeleton-frame buildings in London. All who are concerned in the erection of such buildings will, I am sure, agree with your appreciation of the recent action of the District Surveyors' Association in endeavouring to obtain uniformity in the preparation of structural calculations for such buildings. But the writer of your leader has omitted to mention one very important point in connexion with the administration of the provisions of the London County Council (General Powers)



No. 5. Two Balusters of the Grand Staircase at Chatsworth as at present existing. (Presumably by Tijou.)

Act, 1909, in regard to skeleton-frame buildings. He says that, as regards the plans and particulars required to be submitted under such Act, "the architect is left entirely at the mercy of the particular District Surveyor with whom he may have to deal." This statement is directly at variance with sect. 22 (33) of the 1909 Act, which provides that any person dissatisfied with any requirement of the District Surveyor under such section (which section contains nearly all the general requirements in regard to skeleton-frame buildings), may, within fourteen days of the date of the service of a notice from the District Surveyor, appeal to a petty sessional court. Opinions may vary as to whether a police-court magistrate is the most suitable person to decide disputes of this nature, but the right of appeal exists, and it undoubtedly tends to obviate any high-handed action on the part of an administrative official.

The London building law is admittedly a most complicated subject, and criticisms of its provisions are of frequent occurrence. I suggest, however, that such criticisms would be much less prevalent if the existence of the very extensive rights of application to the County Council, or appeal to the Tribunal of Appeal, or some other body, were more fully appreciated. I note that in the same issue of your paper a report is given of a lecture by Professor Beresford Pite on "London as an Architectural Syllabus." Professor Pite quotes as an example of the tyranny of the London building law the provisions of sect. 73 of the London Building Act, 1894, in regard to projections, and he is reported as stating that in consequence of such, it would be "quite impossible" to build, in the London streets, structures like the Strozzi and Farnese palaces, because of their projections. Such a statement, although it has been made so often as almost to rank as a truism in the eyes of many people, is not borne out by facts. The opening words of sect. 73 are rarely quoted, but they are undoubtedly the most important in the section, viz.:—The following provisions shall (*except with the consent of the Council*) apply, etc. They clearly imply that it is the intention of the legislature that the Council shall allow departures from the ordinary requirements in special cases, and, as a perusal of other columns of your paper will show, "consents" under this section are given almost every week. Presumably, if the architectural treatment of a building in an important street required the provision of a cornice with a big projection, consent could be obtained from the Council without much difficulty.

Architects who find themselves in trouble with any undesirable requirement under the London building law, will be well advised to ask themselves two questions:—1. Does the requirement correctly apply to the case under consideration? 2. If it applies, is there any way of "getting out" of it, either by application to the County Council or by appeal to the Tribunal or some other body? In quite a number of cases it will be found that the legislature has considerately provided some means by which the case in question can be judged upon its merits, and in reference only to the spirit and not the letter of the law.

HORACE CUBITT, A.R.I.B.A.

INTERCOMMUNICATION COLUMN.

Rotting of Floors.

SIR,—My experience of twenty-seven years as a builder leads me to believe that the rotting of floors under lino is primarily due to the want of air circulation, and in many cases I have greatly improved matters by cutting through external walls and inserting air-bricks with a through draught, if possible, th obtaining a current of air in contact with t underside of the floorboards. It is also adv able to fix small flush gratings in the flo itself, cutting away the lino in small n squares. I may say that I have known absolutely new floor, laid with dry boar when covered with lino to rot away in t years. BINNING CANDLER.

12, *Mortimer-street, W.*

SIR,—It is quite incorrect to imagine th "the washing of the floor and the soaking the water through the linoleum caus the injury." The washing has nothing to with it. It would be a rare case in which washing would be so excessive and the linole so poor as to make access of water possibl The cause of the decay in a linoleum-cover ground floor is no accident or mystery. It simply sealing down woodwork to which dam has access (or which is itself damp), and preventing the surface evaporation. Remov of the linoleum will always lessen and mos arrest the decay. I should be interested know the result of the sand remedy.

T. R. HOOPER.

Architectural Assistants to the Office of Wor and the London County Council.

SIR,—I should be very much obliged if y will inform me as to the proper way to app for a post as Architectural Assistant to H.M. Office of Works, and also to the Architectur Department of the London County Council.

R. P.

[**** Applications cannot be made as "Architectural Assistant" at H.M. Office Works, but as a "Draughtsman." They shou be addressed to the Secretary, H.M. Office Works, Storey's-gate, S.W., stating brief qualifications, where previously engaged, a salary required. Age must be under thirt Applications for London County Coun should be addressed "Chief Architect." wi similar particulars.—ED.]

Gas Fittings.

SIR,—I would be greatly obliged if you w be so good as to give your opinion in t circumstances mentioned below. As it is matter affecting the trade, it may be general interest. A gasfitter undertook "take down several pendants, alter the servic to the required positions ready for new fitting refix one pendant, supply all necessar materials and labour for so much money. The work was completed satisfactorily. Th customer claimed the old fittings taken dow The gasfitter says—(1) The old materials we allowed for in the price agreed upon. (2) is the custom of the trade in a contract tha all old materials become the property of t contractor. A. G.

[**** We cannot advise you on this point wit any certainty; it is really a question for yo lawyers. As to (1), if it was clearly understoo that the value of the old material was considere in the price agreed upon for the work, th question of custom does not arise; but if a pity this was not expressed in the contrac and it is a question whether evidence wou be admitted to explain the written contrac The refixing of an old pendant would itself seem rather to indicate a contrary in tention, and in any case we doub whether the evidence would be admitte As to (2), we have no personal knowledge o any such custom. A custom must be certai and reasonable, and so universally acquiesce in that it may reasonably be presumed to ha been known to the parties, and tacitly im ported into the contract. You should tak legal advice before embarking on litigation.—ED.]

Damp Plaster Wall.

SIR,—In reply to "Q. S.," a firm in the Cit supply a solution which will keep back damp. had occasion to use some in a very bad case a Hampstead some years ago, with an excellen result. I found it necessary, after giving th damp wall two coats of solution, to give it a coat of knotting, then paint stood well.

W. WHITBREAD.
Clerk of Works.



No. 6. Balustrade as actually carried out at the head of the Long Water, Hampton Court. (Presumably by Tijou.)

METRIC EQUIVALENT TABLES.

A publication issued by the Central Trans lations Institute, of 18, Eastcheap, E.C., includes fifty useful tables of metric and British equivalents, the values being based upon figures supplied by the Board of Trade and guaranteed to be absolutely correct. The tables relate to measures of length, area, and volume, weights and money, and are published in convenient form at a nominal price.

DITORIAL SUMMARY.

e leading article deals with some questions ing Architects, Clients, and Specialists.

second article, entitled "Architectural ants and the Office of Works," refers to ecent correspondence in our pages on the ct (p. 170).

"Notes" Column (p. 171) will be found vations on: "Professor Blomfield's R.A. res"; "The London Society"; "Edin- and London"; "The Corporate Life ondon"; "The President's Address to nts"; "The Pugin Studentship, 1880."

combined meeting of the Architectural iation with the Junior Institution of neers was held on Monday, when Mr. Paul rhouse, M.A., read a paper on "Bridges," howed some water-colour sketches by his , the late Alfred Waterhouse, R.A. p. 172.)

fessor Blomfield's third Royal Academy e, entitled "French Draughtsmen of the th Century," was delivered on Monday. bstract appears on p. 175.

der "Architectural Societies" (p. 175) notices of the following societies appear: ds and Yorkshire Architectural Society"; nburgh Architectural Association."

nabstract of a paper by Mr. E. C. P. Monson The Housing of the Working Classes," before the Society of Architects, appears 176.

article on the "Stafford Library Com- on" appears on p. 178.

Correspondence columns (p. 179) will be letters on: "The Over-Elaboration of "; "Ironwork by Tijou"; "The London ing Requirements."

Monthly Illustrated Historical Review 3) includes: "Architectural Details in mental Brasses"; "Stones Used for nt Brasses"; "Society for the Promotion man Studies"; and Notes.

Building Trade Section (p. 187) con- : "The Institute of Builders"; "Bristol r Builders' Association"; "Belfast ers' Association"; "Projected New ings in the Provinces"; "Applications the Building Acts, 1894 to 1909," etc.

third of the present series of the Carpen- Hall Lectures on the "Arts Connected with ing" was delivered on Wednesday last by Mr. Herbert W. Wills. The title of ddress was "The Past and Present Con- s of Building." Our report appears on .

inaugural meeting of the London Society, d to foster an interest in London on the of its citizens, was held on Friday last Our report appears on p. 191.

report of the dinner of the Incorporated of Works' Association is given on p. 192.

Law Reports (p. 193) will be found brief s of the following cases: "Case under ondon Building Act"; "Builder and ng Owner's Dispute"; "London Drainage ws."

MEETINGS.

FRIDAY, FEBRUARY 16.

Sanitary Institute.—Dr. G. F. McCleary on entary Statistics." 7 p.m.
Royal Institution.—The Rt. Hon. Sir J. H. A. nald, K.C.B., LL.D., on "The Road: Past, t, and Future." 9 p.m.
rrea Polytechnic (Illuminating Engineering).— S. Dow, B.Sc., on "Practical Lighting Problems." n.
burgh Architectural Association. — Associates' dinner. 7.30 p.m.
ow Technical College Architectural Craftsmen's .—Mr. J. Muir on "The Management of Building cts." 7.45 p.m.
tution of Mechanical Engineers.—Annual general g. 8 p.m.
tution of Civil Engineers (Students' Meeting).— ernon-Harcourt Lectures on "Works for the tion of Coast-Erosion," by Mr. W. T. Douglass, .C.E. 8 p.m.
Institution of Civil Engineers. The Vernon- rt Lectures on "Works for the Prevention of Crosion," by Mr. W. T. Douglass, M.Inst.C.E.

SATURDAY, FEBRUARY 17.

itectural Association.—Third spring visit, to the Museum Extension. 2 p.m. at the building.
tern Architectural Association.—Mr. J. A. Ogg on "The Educational Buildings of America." ated. 7.30 p.m.

Junior Institution of Engineers.—Annual dinner, at the Hotel Cecil, London. Commendatore G. Marconi, D.Sc., President, in the chair. 7.30 p.m.

MONDAY, FEBRUARY 19.

Royal Institute of British Architects.—Mr. Edward Warren, F.S.A., on "Collegiate Architecture," with lantern slides. 8 p.m.
Royal Academy of Arts.—Mr. A. P. Laurie, M.A., D.Sc., on "Pigments, Old and New, and their Value in Detecting Forgeries." 8 p.m.
Royal Sanitary Institute.—Dr. G. F. McCleary, B.D., D.P.H., on "Water: Composition, Pollution, and Purification." 7 p.m.
Liverpool Architectural Society. Mr. T. E. Eccles on "A Holiday in Piedmont." Lantern slides.

TUESDAY, FEBRUARY 20.

Northampton Polytechnic (Illuminating Engineering).—Mr. S. D. Chalmers, M.A., on "The Use of Shades and Reflectors." 7.30 p.m.
The Institution of Civil Engineers.—Paper on "Some Features of the West African Government Railways," by Mr. Frederic Shelford, B.Sc., M.Inst.C.E. 8 p.m.

WEDNESDAY, FEBRUARY 21.

Carpenters' Hall, London-wall (Lecture on Arts Connected with Building).—Mr. W. H. Bidlake, M.A., on "Mediæval Sculpture." 7.45 p.m.
Royal Society of Arts.—Mr. Frank Warner on "Silk." 8 p.m.
Edinburgh Architectural Association (Associate Section).—Mr. Geo. P. Bankart on "Plasterwork." 8 p.m.
Royal Academy of Arts.—Mr. A. P. Laurie, M.A., D.Sc., on "The Chemistry of Pigments." 8 p.m.
Royal Sanitary Institute.—Mr. Alan E. Munby, M.A., on "Elementary Science: Physics, Chemistry" I. 7 p.m.
The Institution of Civil Engineers. Students' visit to the Great Western Railway Reinforced-Concrete Warehouse, near Battersea Park Station.

THURSDAY, FEBRUARY 22.

Carpenters' Hall (London-wall).—Mr. W. St. John Hope, M.A., on "The English House from the Normans to the Tudors." 8 p.m.
London Master Builders' Association. Annual dinner, Whitehall Rooms, Hotel Metropole, Charing Cross. 7 p.m.
Society of Antiquaries.—8.30 p.m.
Institution of Electrical Engineers.—Mr. J. C. Macfarlane and Mr. H. Burge on "The Supply and Transmission of Power in Self-contained Road Vehicles and Locomotives." 8 p.m.

FRIDAY, FEBRUARY 23.

The Royal Institution.—Mr. George K. B. Elphinstone on "The Gyrostatic Compass and Practical Applications of Gyrostats." 9 p.m.
Royal Academy of Arts.—Mr. A. P. Laurie, M.A., D.Sc., on "The Chemistry of Pigments." 8 p.m.
Leicester and Leicestershire Society of Architects.—Paper by Mr. H. L. Goddard, M.A., entitled "Rambles and Reminiscences." 8 p.m.
Institution of Civil Engineers (Students' Meeting).—The Vernon-Harcourt Lectures on "Works for the Prevention of Coast Erosion," by Mr. W. T. Douglass, M.Inst.C.E. 8 p.m.

MAGAZINES AND REVIEWS.

THE *Art Journal* contains some illustrations of furniture at Kedleston by Robert Adam, and the original designs in the Soane Museum are shown in some cases for comparison. The palm-tree forms of the bedposts and *torchères* in the State bedroom seem florid and inappropriate, and we prefer the more usual designs associated with Adam's decorative work, such as the fine basket-grate with fender. Another article on Drayton House is informative with its illustrations, and the same may be said for the note on some "Chimneypieces of the Early Georgian Period," including examples at Holkham, Temple Newsam, Eltham, Devonshire House, and elsewhere.

The *Burlington* is a particularly good issue, in both literary and artistic matter. Sir Charles Holroyd and Mr. Thomas Okey give some personal reminiscences of Alphonse Legros, which will be read with interest; and a second article by Mr. D. T. B. Wood appears on "Tapestries of the Seven Deadly Sins," with illustrations. An article on "Constable as a Portrait-Painter" is contributed by Mr. D. S. MacColl, and one on "Three Little-noticed Paintings in Rome," by Gustavo Frizzoni, reproductions of the paintings being given. Other illustrations are from "Some lost drawings by or near to Raphael." The magazine also includes another of Mr. Lionel Cust's articles on "Pictures in the Royal Academy Collections."

The *Connoisseur* for February gives the second part of Mr. Leonard Willoughby's article on "Sherborne House," with a good many interesting illustrations, the interior arrangements of the building and its contents being described. Mr. R. L. Mason has an illustrated article on "English Furniture of the XVIIIth Century"—a review of Mr. Herbert Cescinsky's second volume on the subject; and other articles are "The Historical Collection of British Water-colours at the Grafton Galleries," by Mr. Alexander J. Finberg, and "The History of English Silver Plate." The illustrations this month include two coloured plates—"Mrs. Anne Pitt, by George Romney, from an engraving by Will Henderson," and "Lady Douglas in the Garden, by Thomas Gainsborough, from the engraving by A. Jamas."

Mr. Montgomery Schuyler describes "the New Washington" in *Scribner* in an article of some importance, in the course of which he says that the city has been elaborated in the last ten years along the lines of a definitely-conceived plan for its beautification. Three new department buildings, to be seen together and in architectural harmony are soon to be undertaken. In the course of the article the author says:—

"He who visits Washington now after ten years, who has not seen it, say, since just after the war with Spain, finds so great a transformation that he is fain to take his bearings anew from the ancient landmarks, and is relieved to find the Capitol and the Monument still predominant. Even after five years one finds the new monuments, architectural and sculptural, vying in interest with the old. But the decade is a more eligible period than the lustrum, for the purpose of comparison, because it is ten years since the Senate authorised its District Committee to employ experts 'for the improvement of the park system of the district of Columbia,' and it is from that authorisation that we may date the beginning of the New Washington. A chief element of one's wonder is the costliness of the new erections. . . . The expenditure on all these new expanses of hewn granite or elaborated marble has been not only ungrudging, but lavish. The three new department buildings which form the immediate occasion of these remarks are estimated to cost eight millions. . . . Why should not the official guardians of the 'beauty and harmony' of the capital be clothed with the powers necessary to perform their function, with the powers, say, of a Roman ædile or of a French prefect, and thus enabled to protect the community from the ravages of individualism? It is certain that only by the lodgment of such a power somewhere can beautiful and harmonious cities be made. . . . Surely the beauty and harmony of their capital should be an object to the people of the United States! This view seems to be making its way into the minds of the representatives of the people in Congress assembled. It is noteworthy and encouraging that, after many years, an 'art commission' has been authorised and appointed for the Federal building of the capital, including the surviving architect-member of the Commission of 1901. Considering the Congressional, which is to say the popular, dread and distrust of 'expertise,' this is a signal victory for 'collectivism.' It is true that the powers of this body seem to be thus far limited to answering, and possibly to asking, questions. But the camel's nose is in the tent. If the Commission continues to commend itself to public confidence there is every reason to hope that its power will be enlarged to include a permanent and salutary check upon the public, if not also upon the private, building of the district of Columbia. With the enlarged powers which are also to be expected for the authorities of the district, it is not wildly unreasonable even to hope that the end of the XXth century may see what is already recognised as 'the handsomest city in America' recognised as the handsomest city in the world."

The article is illustrated from drawings by Mr. E. C. Peixotto and by photographs. Mr. Elmer Roberts continues his discussion of modern industrial conditions in Germany with "The Passing of the Unskilled in Germany." The processes at work in that country tend, he declares, to convert the whole population into users of tools and machinery. Mr. S. S. Howland, an American gentleman who has travelled a great deal, describes "Cuzco, the Sacred City of the Incas."

Harper's Magazine is an interesting number, but the February issue contains nothing of special interest to our readers.

The Countess of Stradbroke has an article in the *National Review* on "Trade Unionism and Character," in which will be found some obvious truths expressed in forcible language. In the course of the article the writer says:—

"The idea of the trade unionist that if a workman works eight hours instead of ten, and that if during the eight hours he only does the work of six hours, he is thereby

finding work for some of his unemployed mates, is a delusive and a destructive fallacy. Suppose a bricklayer can lay one thousand bricks in eight hours, and he chooses only to lay seven hundred and fifty—that is, he reduces his output of labour by one quarter. And suppose three other bricklayers do the same. They imagine that between them they are finding work for a fifth man. Well, imagine this fifth man to be engaged, what is the position? We have five men doing the work of four—in other words, the builder has to pay one man's wages for nothing. That fifth man's wages goes to increase the cost of building, and the effect of this is that people who meant to build will not do so now that the cost is greater, which means that hundreds of men who would have been employed in erecting these new houses have now no work to do. Thus the principle of the action of the four bricklayers, though finding work for the fifth man temporarily, is actually the means of depriving very large numbers of their daily labour and daily bread. This is exactly what has been going on all over the country, not merely in the building trade but in every other industry materially affected by trade unionism. The efficiency of the individual workman has been reduced in two ways, either by retaining inefficient workmen or by constraining efficient men to reduce their efficiency, in each case burdening industry with a heavy charge. This leads either to diminished production or to an increased labour bill for the same production, and in either case the price of the product is raised to the public. Consequently the public buys less, demand falls off, factories have to be closed, and the ranks of the unemployed are swelled by workmen who would have been kept on if the price of the commodity they produced had not been artificially raised by the mistaken action of the trade unions in tampering with the efficiency of the workman. . . The regulations and customs of trade unions are unfavourable to the development of habits of diligence and application; their very genius makes for the repression rather than for the stimulus of industry; they encourage the slowest man to set the pace and the mediocre man to set the standard of quality. Consequently they are unjust both to the employer and the workman, and to the general public besides, because they prevent the workman from making the most of his own faculties and the employer from receiving the best that his men can give, whilst by restricting production they raise the price of commodities to the people generally. Therefore they operate in restraint of trade and are inimical to the interests of the community. In plain English they foster idleness."

ENGINEERING SOCIETIES.

The Concrete Institute.

A meeting of the Concrete Institute took place at Denison House, 296, Vauxhall Bridge-road, Westminster, S.W., on February 8, Sir Henry Tanner, C.B., I.S.O., F.R.I.B.A., presiding. The following were elected members :—

Mr. Ewart S. Andrews, B.Sc., London.
Mr H. P. Boulnois, M.Inst.C.E., London.
Mr. David Donaldson, London.
Mr William E. J. Fett, Hull.
Mr. James A. Malcolm, London.
Mr L. R. Nicol, Padstow, Cornwall
Mr. George S. Roberts, London.
Mr J. Vaughan Stewart, jun., Lebu, Chile.

It was announced that the Council had admitted Mr. Wilfrid Lever, of Ashton-under Lyne, as a student.

A paper by Professor Beresford Pite, F.R.I.B.A., entitled "The Æsthetic Treatment of Concrete," was submitted, and the following took part in the discussion :—Mr. Arthur T. Bolton, F.R.I.B.A., Mr. E. Fiander Etchells, F.Phys.Soc., Mr. A. Alban H. Scott, M.S.A., Mr. L. Serraillier, Mr. Herbert Shepherd, A.R.I.B.A., Sir Henry Tanner, C.B., and Mr. E. P. Wells, J.P.

A report will appear in our next issue.

ILLUSTRATIONS.

R.I.B.A. Pugin Studentship.

THE illustrations of Beverley Minster and the Chapel, Vicar's Close, Wells, are part of the set awarded the Pugin Studentship, 1911-12. "Mr. James Macgregor," said Mr. Gerald C. Horsley in his criticism of the prize drawings, "has won the first place by the excellent quality of his workmanship and full set of drawings," an opinion in which we concur.

East Sussex Hospital, Hastings.

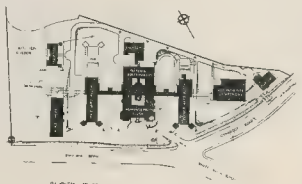
As announced in our last issue, Messrs. J. Saxon Snell & Stanley M. Spoor, of London, are the successful architects in the East Sussex Hospital, Hastings, competition (King Edward VII. Memorial).

The problem set in this competition was the provision of a general hospital on the pavilion system for 100 beds on a site of about 4 acres in an elevated position overlooking the sea, such site having a fall of over 50 ft. from west to east.

The instructions definitely demanded the provision of one lift only to serve all floors, and that the administrative block should occupy a central position. Advantage has been taken of the very great fall in the ground to place the women's and children's block on the lower portion to the east of the administration block, and build this pavilion three stories high, thereby providing, in accordance with the schedule of requirements, accommodation about one-third in excess of that of the male ward block, which is of two stories only, and is situate on the west side of the administration block. The area occupied by either pavilion is, therefore, practically identical.

The main ward blocks call for little comment, and are of the usual pavilion type. Diversity in units of each class of patients has presented some difficulty, and the design as now drawn shows a lack of symmetry which, in the smaller units especially, will no longer obtain when the hospital is completed by the addition of large ward units to the north side of the main corridor, in the manner indicated by dotted lines on the block plan.

The surgical wards are shown on the top floor in both pavilions for easy and level communication with the operating unit, which is central, opposite to the lift, and placed in this



BLOCK PLAN

East Sussex Hospital, Hastings.

position for the best conditions of light and ventilation. The sanitary annexes are placed at the end of the large wards and embrace large balconies for the use of patients, which face almost due south, and overlook the sea. The cubic contents of the wards allow each adult patient upwards of 1,400 ft., children receiving just over 1,000 ft.

The finishings to the ward blocks include teak floors and joinery, tiled dados in annexes, and provision is, of course, made for the usual rounded salient and internal angles. Ventilation is provided by natural method only, and consists of an ample provision of adjustable inlets and outlets. The wards are heated by low-pressure hot water; open fires, however, being provided to insure a cheerful aspect to the occupants.

The administration block, as to that portion placed to the south of the main corridor, comprises the following :—

On the lower ground floor—Casualty department and in-patients' entrance and hall, X-Ray-room, etc., and the main porters' office and telephone exchange.

On the ground floor—Entrance for officers, members of the committee, and public visitors, board and committee-rooms, secretary's office, waiting-room, etc., house surgeons' and matron's quarters.

On the top floor—Domestic servants' sleeping accommodation.

On the north side of the corridor the accommodation is :—

On the lower ground floor—Porters' apartments, boiler house, engineers' workshop, etc., steam and house coal cellars, wine cellar, box-room, and various stores.

On the ground floor—Nurses' dining-room, servants' dining-room, sewing-room, linen, mattress, and like stores, kitchen, sculleries, servery, pantries, and the usual food stores.

On the top floor is placed the operating unit consisting of: -Operating-room, anæsthet and after-recovery rooms, sterilising-roo surgeons' robing-room, and compartments splints and bandages, etc.

The main staircase with electric lift is plac centrally to serve the upper, lower, and midd corridors, it serves the operating-room dire and is also opposite to the service from kitch and in the basement the coal supply, it is sufficient size to carry a bed with lift attend and nurse. A hand lift is also shown for fo and medicine.

The laundry is shown at the rear of the kitch and offices, and is attached thereto by a cover way. A lower story comprises disinfect destructor, and a small steam engine for drivi the laundry plant.

The isolation block has been placed in t north-west angle of the site, and distant o 50 ft. from any building shown or boundary subsequent addition contemplated. The cu allowance to each patient in this building 2,000 ft., and the finishings are generally described to the main wards.

The nurses' home is placed as far from t hospital buildings as the restrictions of the s permit, and has a garden and tennis court the west side. The home provides bedroo accommodation for six sisters, ten staff nurse fourteen probationers, and two domest servants. Night nurses are accommodated the top floor and a sick bay is also provided h which can be entirely isolated from the rest the building if occasion demands. Separa sitting-rooms are provided for sisters, st nurses, probationers, and servants respective on the ground floor, and in addition to the fo going bed and sitting-rooms of more am proportion for the assistant or home matron

The mortuary, shown on that portion of site which is farthest from the hospital prop nearest to the town, and screened from t wards by the out-patients' block; it compris lockers for six bodies, shell store, viewing cha and waiting-room, and adjoining a postmorte room, pathological laboratory with dark ro and specimen museum, the latter rooms be served by a separate entrance.

The out-patients' department compris waiting-room for 200, consulting-rooms, dressi and recovery-rooms, dispensary drug store a dispensary waiting-room. The rather exc tional proportions of this building were dictat by the specific requirements set forth in "Conditions of Competition." Lighting will by electricity throughout all the buildings, w emergency gas jets at different points.

A dual system of fire hydrants is provid throughout of the main and establishme tanks respectively, and the usual fire-esca staircases, etc., are indicated.

The future extension contemplated in preparation of the design, and as indicated dotted lines on the block plan (after allow for the displacement of some of the ward u on the north side of the corridor necessitated such extension) includes thirty-two beds each sex, twelve additional bedrooms in nurses' home, five bedrooms for domes servants, and corresponding enlargement e where.

Externally the walls, which will be mai built hollow, are intended to be faced w pressed red facings relieved with brindled quo and string courses. Some stone has be introduced in the bays, entrances, etc., of administration block, and the roofs will b covered with green slates.

Some endeavour has been made to create domestic feeling in the elevation of the nurs home. The other buildings, if of unpretentiou design, may, it is believed, not prove unattra tive.

FIFTY YEARS AGO.

From the *Builder* of February 15, 1862.

The Proposed Abbatoir for Brighton.

THE Town Council of Brighton hav resolved to alter the proposed site of th abbatoir. Some of the members are fo abandoning the Bill now in Parliament altog gether; but by a majority of 16 to 15 i was resolved to amend the Bill as regard the site.

[*** Vested interests ultimately caused th abandonment of this Bill.—ED.]

BEVERLEY MINSTER
BAY OF SOUTH TRANSEPT

MEASURED AND DRAWN ON THE SPOT 1911
By Sat. three pupils AUGUST 1911

1225 - 1245.

EXTERIOR DETAILS

INTERIOR DETAILS

EIGHTH FULL SIZE
DETAILS REDUCED FROM
FULL SIZE DETAILS
MEASURED AND DRAWN
ON THE SPOT

DETAILS OF CLERESTORY

MOULD TO RAKE OF BUTTRESS

AISLE PARAPET

VAULTING RIB

ARCH MOULD TO CLERESTORY ARCADE

CAP AND BASE TO CLERESTORY SHAFT

CLERESTORY WINDOW MOULD

DETAILS OF TRIFORIUM

DETAIL AT VAULTING SHAFT

CAP

BASE

CLERESTORY ARCH MOULD TO WINDOW

ARCH MOULDS

DETAILS OF AISLE

WALL RIB

VAULTING RIBS

WINDOW MOULD

ARCH MOULD TO AISLE WINDOW

WINDOW ARCH

ARCH MOULD OF ARCADING

CAP AND BASE TO WINDOW SHAFT

DETAIL AT VAULTING SHAFT

CAP AND BASE TO WINDOW SHAFT

DETAILS OF MAIN ARCADE

BASE MOULD TO AISLE

PIER

ARCH

STRING TO AISLE WINDOW

DETAIL AT ANGLE OF BUTTRESS

CAP AND BASE TO MAIN PIER

Original tie beam

Plaster

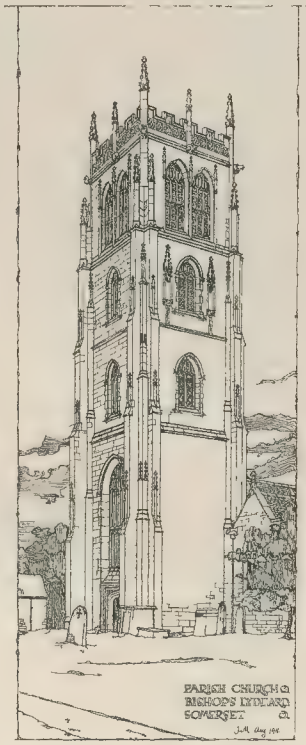
Plaster

Floor

Floor

Wall face

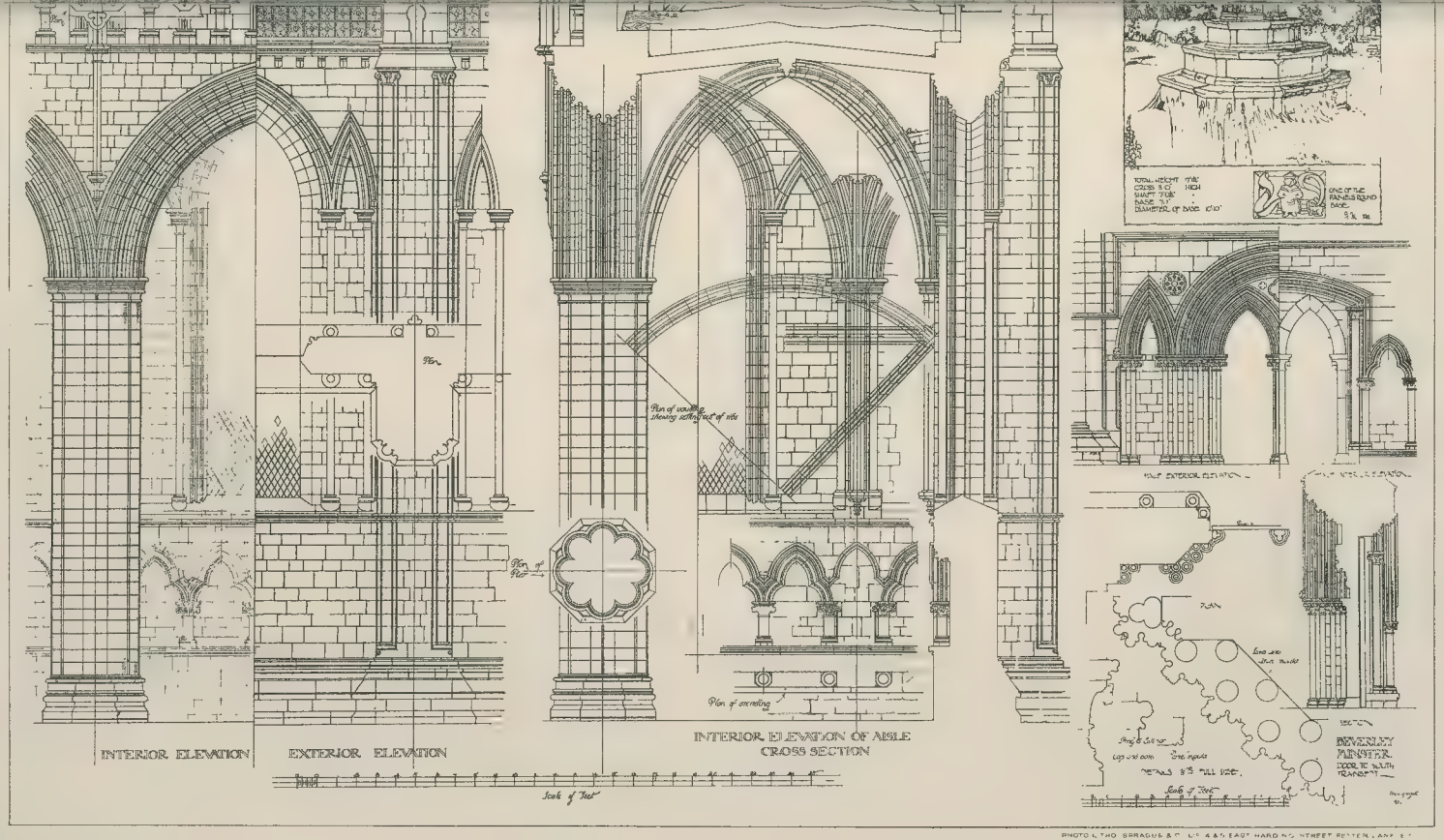
Floor



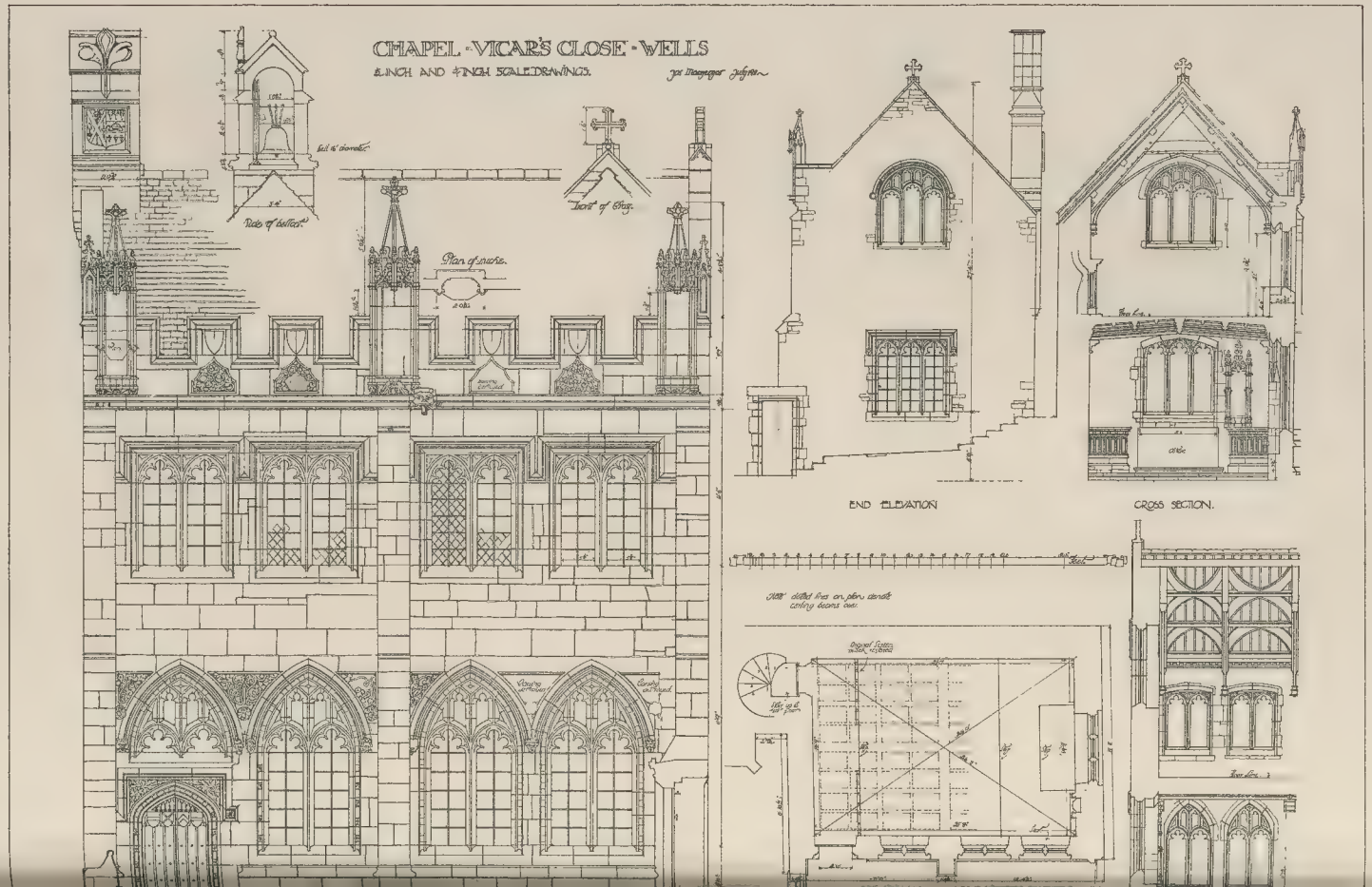
PARISH CHURCH
BISHOPS LYDEARD
SOMERSET

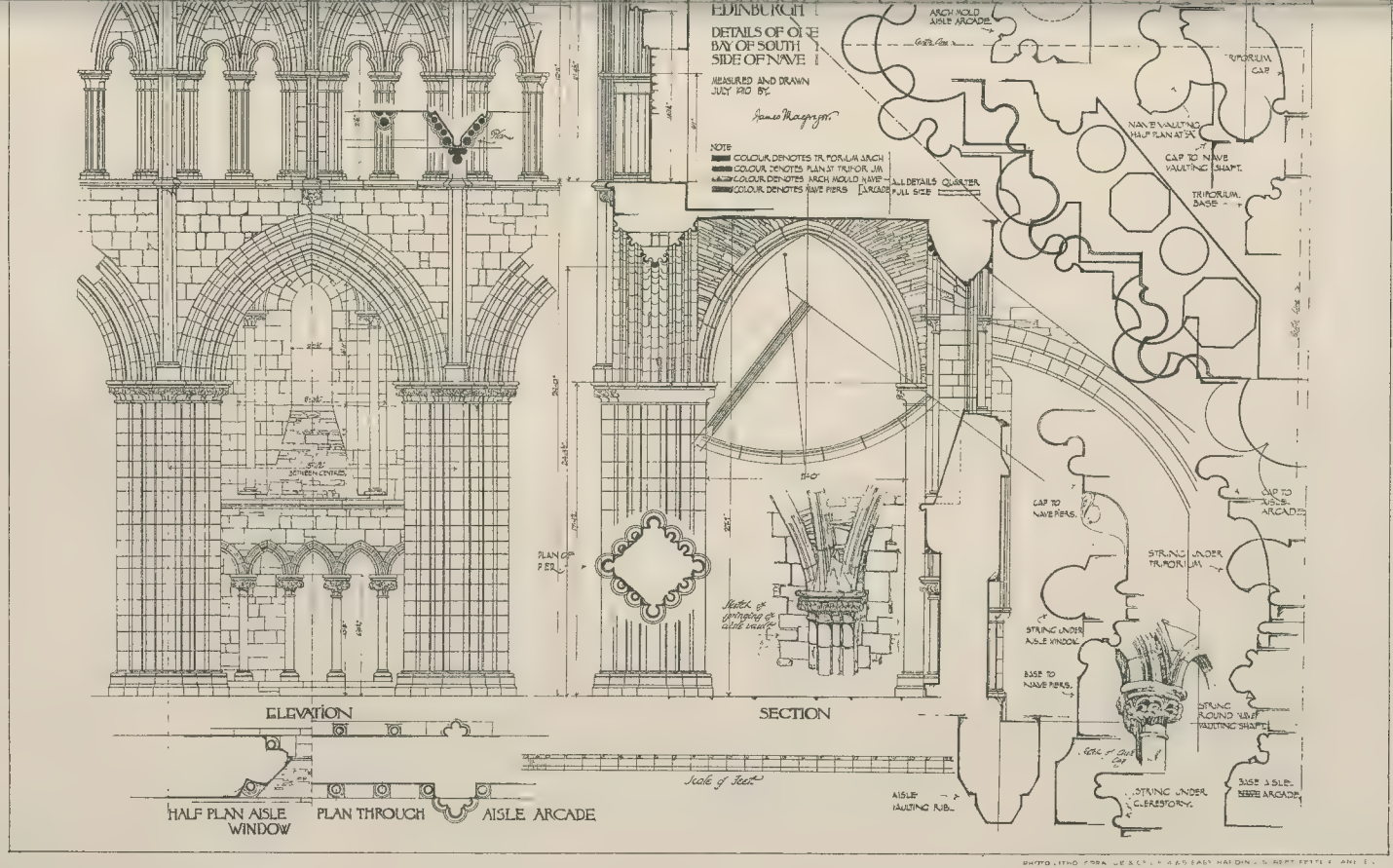


CROSS AT
BISHOPS LYDEARD
SOMERSET



R. I. B. A. PUGIN STUDENTSHIP.—Awarded to Mr. James Macgregor.


CHAPEL · VICAR'S CLOSE · WELLS
½INCH AND ¼INCH SCALE DRAWINGS.
Plan of Niche.
END ELEVATION
CROSS SECTION.



R I B A. PUGIN STUDENTSHIP.—Awarded to Mr. James Macgregor.

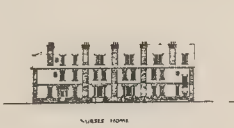
EAST SUSSEX



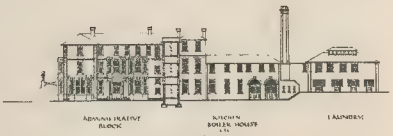
FRONT ELEVATION.



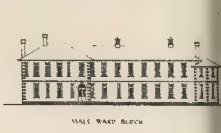
SECTION AA.



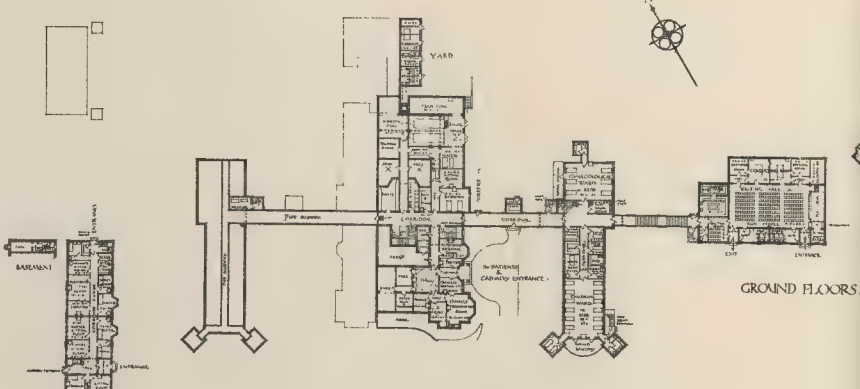
EAST ELEVATION.



EAST ELEVATION.



WEST ELEVATION.



GROUND FLOORS.

GROUND FLOOR.

LOWER GROUND FLOOR PLAN.

SCALE OF FEET

EAST SUS

FIRST PREMIATED DESIGN. BY

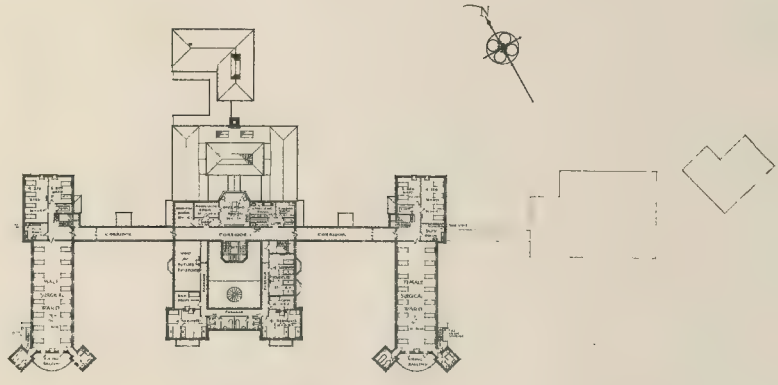
L HASTINGS

FIRST FLOOR PLAN

ND FLOOR LAN.

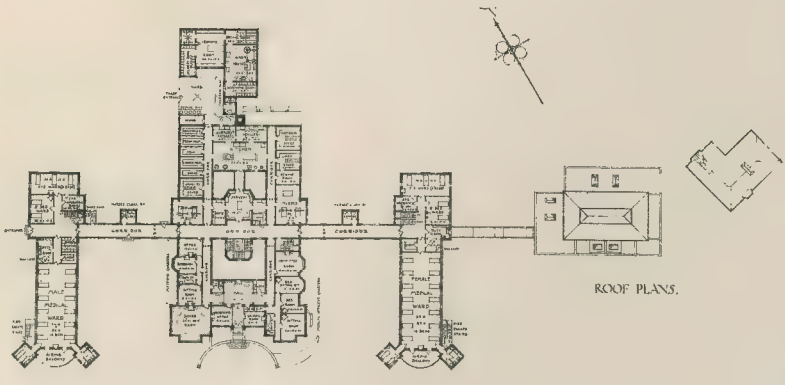
PLAN

OOR.



FIRST FLOOR PLAN.

SCALE OF FEET



GROUND FLOOR PLAN

SCALE OF FEET

ROOF PLANS.

PHOTO THO SPRAGUE & CO LTD 4 & 5 EAST HARDING STREET, FETTER LANE E.C.

STINGS.

NELL AND STANLEY M SPOOR.

MONTHLY HISTORICAL REVIEW.

CHITECTURAL DETAILS IN NUMENTAL BRASSES.—II.*

. S. M. WARD, B.A., F.R.Hist.Soc.

E referred in our previous article to the brasses with a double canopy for two persons, and will now deal with a few examples characteri tic type.

metimes the central shaft extends the length of the composition, but more it terminates in a bunch of foliage. illustrate this class we will take two .

first, Sir John Cassy and wife, 1400, Deerhurst, Glos. He was chief of the Exchequer. The minever of his mantle is very well shown, if is of two pieces, laced together over ad. His wife rests her feet on her pet 'erri, whose name is written underneath. once existed at Ingham, Norfolk, r named pet dog, Jakke, but this with many others, was sold for old in 1800.

Deerhurst brass has, since this rubbing aken, lost the figure of St. John the t; the other figure is of St. Anne and irgin.

marginal inscription is in raised letters foliage and a strange little dragon. osettes in the centre of the pediments be noticed. The length is 7 ft. 4 in., 3 ft. 1 in.

n Martyn (and wife), Graveney, Kent 8), was a judge of the King's Bench mmon Pleas, and died 1436. His measures 9 ft. 6 in. by 3 ft. Four out five shields in the upper part of the sition are missing, the fifth shows covered cups of typical mediæval . The shafts are very fine.

to this point we have not noticed gn of the gradual coarsening of work had already become noticeable in of the other brasses. This affected es in several ways. In common the rest of the brass the engraving o become shallow and too much detail vded in.

ew and unsatisfactory mark of the is the frequent introduction of g, which was not attempted in the brasses. The crockets, etc., become ely heavy. This process continues nopies practically disappear at the f the Renaissance. A good example h not illustrated here) is to Sir John and his wife and family, Cobham, ut Sir John is lost.

shafts, which are mutilated, are very and the representation of the Trinity, is good for its date, shows that the sition is based on the earlier Cobham hown. In the centre of each pediment eld with the instruments of the passion e five wounds respectively.

t this date the custom became of engraving the whole brass on a ke a picture. In a few of these what e considered canopies appear. The are late Tudor, such as that of Robert ode, Canon of Windsor, 1522.

the Renaissance the old type of disappears. At Hereford Cathedral s a fine triple canopy in the brass of Trowsetowre, 1529, in the style of the sance, but this is the only example.

e are several plates, however, of te which try to reproduce the canopy; t is at Little Wittenham, Berks, to n Dunche and wife and two sons, .

has what is practically a double in the classical style.

ilar one, which is less well known, is e Griffyn, Wexford, Warwickshire.

* See our issue for January 19, p. 69.

One would think from the engraving he was at least seven years old, but the inscription tells us he was "¾ of a year old." He died 1597.

It is a pity that the coat of arms is so large in comparison with the figure which kneels before a communion-table. Length 16½ in. by 9½ in.

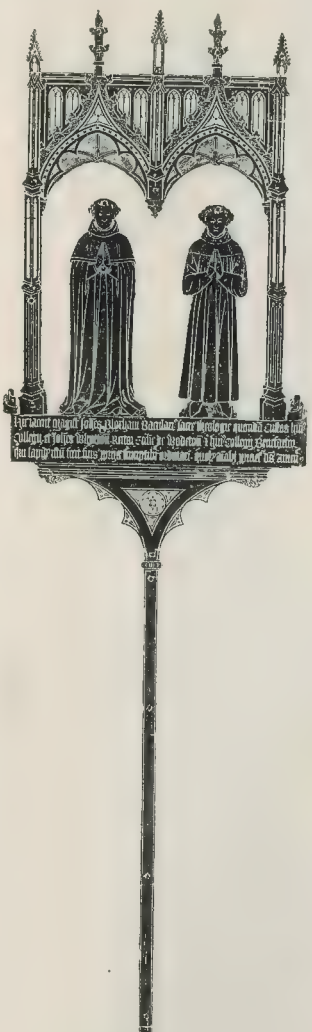


Fig. 6. John Bloxham and John Whytton c. 1420 (Merton College, Oxford).

So far as the author is aware, there are no later brasses with any attempt at a canopy.

After the canopies the bracket brasses are perhaps the most interesting class.

We should expect to find the dead person depicted as kneeling at the foot of a bracket on which stand saints.

However, only two examples survive—one at Burford, Oxford, 1437, much mutilated, the other at Upper Haldres, Kent, where John Strete, a priest, kneels at the foot of a bracket on which stand St. Peter and St. Paul. There is no canopy.

In the more usual type the persons themselves are depicted on the bracket. A very fine and perfect example is that at Merton College, Oxford, *c* 1420 (Fig. 6).

It commemorates two priests, John Bloxham and John Whytton. The stem rises from a small tabernacle containing the lamb and banner of St. John the Baptist.

Though laid down early in the XVth

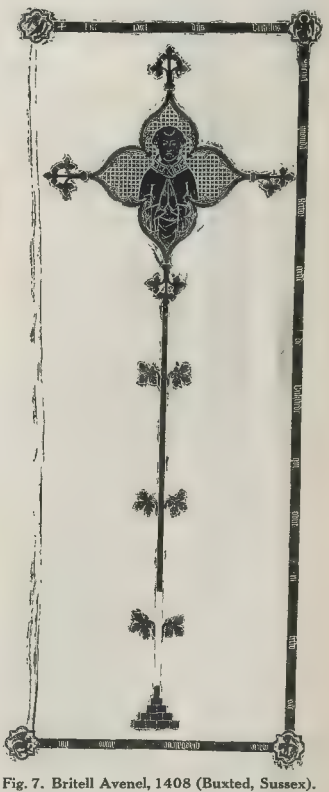


Fig. 7. Britell Avenel, 1408 (Buxted, Sussex).

century, it will be noticed that groining is shown.

Brackets naturally lead us on to cross brasses, which fall into three divisions:—(1) Plain; (2) with saints in the centre of the cross; (3) with the deceased person in the centre. No. 1 needs little description.

No. 2 includes several very fine examples. Of these the Hildersham brass, Cambridge, 1379, is probably the best. Robert de Paris and his wife kneel on either side of the stem which terminates in an octofoil cross enclosing the Holy Trinity.

No. 3 is represented in Fig. 7 as a quatre-



Fig. 8. John Martyn and Wife, 1436 (Graveney, Kent).

foil cross commemorating Britell Av
priest (Buxted, Sussex).

His demi-figure rests on a diap
background. The stem is finely floriat

Architectural features are in late br
often introduced as part of the ge
picture. Thus the whole of Ca
Cathedral and the front of Queen's Co
are depicted on the brass of Bishop Robi
(Queen's, Oxford).

Often, too, the deceased is shown stan
or kneeling in a room or church with furni
of the period around him.

There is a curious group of three br
which have already been referred to.
is at Windsor and the other two in Dub

The curious arch, partly Tudor, p

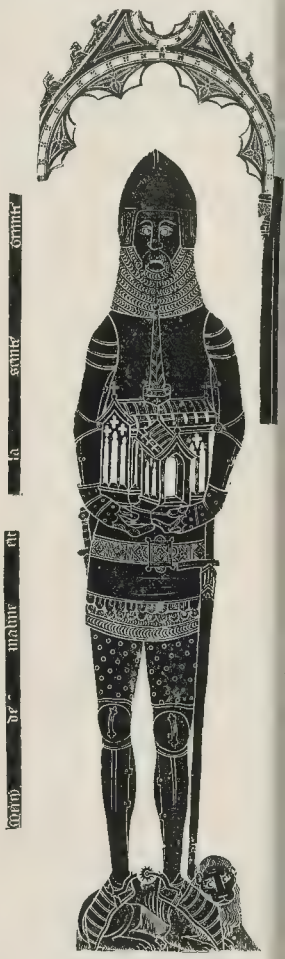


Fig. 9. Sir John de Cobham, 13
(Cobham, Kent).

Renaissance, is probably only part
scene, though it suggests a canopy.
(at St. Patrick's, Dublin) kneels in a
chapel at a desk, the chapel has linen
panelling, and there is an altar with a pi
of the descent from the Cross.

Finally, there are several cases in w
entire buildings are depicted for sp
reasons.

Thus, Robert Wyvil, Bishop of Salis
is represented at three-quarters length w
a large battlemented castle, with
champion at the portcullis beneath

as in memory of his recovery of
ne Castle for the See of Salisbury.
brass was illustrated in the *Builder's*
of Salisbury Cathedral.
ders are sometimes shown holding
model of the church in their hands.
n de Cobham, Cobham, Kent (1354),
od example (Fig. 9). He holds in
nds Cobham Church, which is, of
in the Decorated style. The porch
ll as the nave. That it is a porch,
transept, seems evident from there
no tracery in the great opening.
no clearstory, and the spire is of the
ommon in the south of England.
ght's hands and thighs are protected
ner, strengthened by iron plates.

IES USED FOR ANCIENT SES AND INCISED SLABS.

neeting on January 24 of the National
ion of Monumental Masons and
s Mr. Walter E. Gawthorp,
cot., read a paper, entitled "Some
s on Stones Used for Ancient Brasses
ised Slabs." In the course of his
ne author said :—
ne walks the floor of an ancient church,
rbed by the hands of the restorer or
relaid with reverent consideration
ashes that may still lie beneath or
proximity, one observes the old slabs
ing sizes, but usually of sufficient
o cover a vault perhaps as much as
10 ft. in length, which compose the
in chancel and aisles. In other
these are to be found carefully col-
nd laid together in some side chapel
d by surrounding rails, as in
all Church, hard by the famous
stle of Lord Cromwell. Yet, again,
ay be seen lying in the churchyard
d and outcast, their original purpose
n and ignored. But even a worse
befallen some of these memorials of
worthies, for such stones were fre-
removed when a new tile floor was
ed, to be broken up for rubble or
the authorities for the making of
s, as was the case at a Newcastle
In Mr. Creeny's valuable books on
slabs and monumental brasses he
at forty or fifty of these slabs were
up from the bottom of a canal at
which now clearly exhibit slots and
o which iron clamps were inserted
ey were utilised in the masonry of
and its locks.
eful examination of these stones,
much worn, reveals traces of indents
ions, proving that at some time they
cribed as memorials to the dead
n the church, probably before the
in the vaults below; or that they
formed the top or back of an altar

efore and during the era of brasses,
mbers of which have been torn up,
destroyed, stone or marble slabs
d to cover vaults and tombs, incised
ies, canopies, and inscriptions, some-
laid with white marble, lead, or
some sort. Slabs of this kind are
many of our English churches, but
ore frequently in the continental
, where they were brought to an
stage of perfection. To quote the
F. Creeny's reference to the Church
Dame, Chalons-sur-Marne, "hun-
slabs that had for centuries made
nents of their churches glorious with
ns of the life and style of the most
izens century after century were
nd chapters from the history of the
ed. When quieter times arrived a
er of local history was written with
nents with which the churches are
d." In this church there are over
ese stones dating from the XIIIth
ow completely paving the triforium.
arly brasses, whether of the large
r type from the continental work-
those composed of many separate
d mostly of English workmanship,
id in massive slabs of stone or
As already stated, numbers of these
abs still survive, in some instances
he clear cut incisions of the old
t in many cases so defaced by wear and tear as to be quite indecipherable. Careful research into the nature of these stones must prove both profitable and interesting to those who have sufficient knowledge of geology to identify the material, and the opportunity of visiting churches covering a wide area and usually situated at considerable distance from a railway-station. Such slabs have been indiscriminately referred to as marble or stone without any intention to define their composition. The task of identification is the more difficult because, owing to the lack of means of transport, the nearest local material was frequently used, which is now no longer quarried and consequently is almost unknown. Time and atmospheric action have also had the effect of disguising if not actually changing the nature of the surface now open to inspection. Fragments of a XVth-century slab were recently unearthed under the tower of Magdalen College, Oxford, and a mason who had fairly tested the surface gave his opinion in favour of "Headington hard," but on further expert examination, when a new face was worked, they proved to be Purbeck marble.

Evidence drawn from contemporary wills, documents, monumental inscriptions, and later records throws no light upon the subject. A few examples will suffice. The earliest matrix of a brass known in England, from which the metal has long since disappeared, lies in St. Paul's, Bedford, evidently placed there about 1208. Of this Leland writes that the brasses were "set in a flat stone." An inscription on brass from South Tidworth (*c.* 1514) commences with the words, "Under the harde stone of Marbyl." A similar expression occurs in the will of Thomas Salter, chantry priest of St. Nicholas Acon, London, 1558, who desired to have a "graye marble stone leyd upon" his grave with the image of a priest in copper. William Salmon, of Brentwood, willed on May 6, 1504, "to have a stone of marbyll to be leyde upon (his) grave of the valewe of iiij marks." In the "Rites of Durham," compiled in the XVIth century, the large casement in Durham Cathedral, from which has disappeared the fine brass to Bishop Beaumont, is described as a "most curious and sumptuous marble stonn." From many such references it is quite clear that the terms marble and stone were employed without any definite meaning other than that of a slab of hard natural and probably local substance.

In the earlier days of incised slabs, before inlaying of brass was introduced, black and white marbles were used. The greatest authority on the subject, the Rev. W. F. Creeny, reproduces many of these, and mentions the following among numerous other instances. In Laon Cathedral, a black marble slab with white marble border, all polished; an unknown bishop, *c.* 1450, at Siena, incised in white marble; and a considerable number of effigies in various places in which faces and hands were inlaid in white marble. Besides the use of marble for this purpose he frequently mentions stone of different qualities, such as a "blue tawny" stone, *c.* 1150, at Seclin, near Lille; a "very hard blue grey stone," 1459, at Louvain; "a tawny coloured stone of very fine hard texture and very smooth," 1248, in the Brussels Museum; a "tawny lias stone," 1260, on which is outlined in lead a falconer on horseback, at St. Memmie, Chalons-sur-Marne; a "blue stone of a slaty texture" to an abbot, *c.* 1300, at Ghent, the surface of which is flaking off; a "slaty, softish stone," 1391, to Bishop Nicholaus in Sweden; a "hard grey limestone," 1312, at Abee, in Belgium; a "red sandstone," *c.* 1250, at Rouen; and another containing "a few thin irregular streaks of hard white stone which neither feet nor weather could wear," 1262, at Niverlee; to which he adds whitish stones at Reims and elsewhere, about 1263, and many hard stones which now look grey. The Rev. Charles Boutell, an equally high authority on English incised slabs, states that in most parts of this country are to be found examples of Purbeck and Forest marble from the Kirkford Quarries in Sussex, and "any of the more durable kinds of marble in ordinary use, or sometimes common paving and even sandstone; in some examples also the alabaster of Derbyshire is found to have been employed." As instances he cites a cross-legged knight, 1260, cut in sandstone at Avenbury, Hereford; effigies of John Butler and two wives in a slab of alabaster at Walton, the lines being filled with black composition; alabaster altar top at North Mimms, with effigy of lady, 1584, also outlined with black composition; and he affirms that the fine brass to Abbot Delamere, *c.* 1396, at St. Albans, was formerly laid in Purbeck marble.

Much alabaster was, of course, utilised in the building of large tombs and monuments, especially in the XVIth century, the surfaces being highly decorated with colours and gold, which, no doubt, served to preserve the material until after ages of exposure it has become considerably hardened. In addition to these monuments we find in Staffordshire very many incised slabs of alabaster, the small cost of obtaining the material no doubt accounting for its frequent use locally, when from the point of view of resistance to wear and tear it might well have been deemed unsuitable.

The Rev. Herbert Haines, whose careful study of ancient brasses in England resulted in the production of a most useful manual on the subject, together with a fairly accurate catalogue of all the best brasses known in his time, also provides some information. At Boston there is a very fine incised slab of foreign workmanship, consisting of hard blue-grey marble whose origin he traces to the hills of Liége or the banks of the Meuse, which are composed of carboniferous limestone, such as is used on the continent for similar memorials. Others at Sudbury and Brading are probably of French source. Unfortunately, like other writers, Haines attaches no definite meaning to the word stone in regard to its nature and quality, and is content to call the slab a stone of very dark colour or blue stone. As examples he mentions a blue stone in the Notre Dame Church at St. Omer, 1462, incised and filled with white mastic, the ornaments of the vestments, the symbols, etc., being of yellow stone, incised and filled with a red composition; some blue slabs in Hereford Cathedral inlaid with white marble; and a blue marble slab, *c.* 1300, at Ashby Puerorum, Lincolnshire.

Randle Holmes, the historian of Old Chelsea Church, records the existence of a "slab of grey touch in the floor of the porch," and "a slab of touch" in the chancel, both bearing memorial inscriptions. According to Parker's "Glossary," touchstone is a name applied to dark compact stones such as Purbeck and Sussex marble. True touchstone was a hard black stone used by goldsmiths when testing gold by acid. Ordinary limestone blackened with the dirt of ages has been mistaken for this stone.

Quotations might be drawn from many antiquaries whose MSS. recording their visitations of churches in certain counties or districts have been preserved, taking, for instance, Rev. D. Powell, who, in 1805, visited Little Shefford, in Berkshire, where he sketched a canopied tomb, 1524, of "blue Sussex marble"; and at Marcham, in the same county, "a dark blue speckled marble" tomb, 1540. A chronicler of the county of Essex informs us that the altar tomb of Sir Anthony Browne, 1567, at South Weald, bears a top slab "of highly polished black marble" containing effigies and inscriptions in brass.

During a recent restoration at Islip, Northants, a slab of Ketton stone, a local material, was used, and at the same time the writer observed a memorial tablet to a lady of the Washington family said to be of stone from the neighbouring quarries at Raunds.

Chalk has also served the purpose where it was available, and at Sparsholt, in Berks, one or two Elizabethan monuments that are breaking up appear to be largely composed of this substance. Chalk was much used in the early Middle Ages for building purposes, as, for instance, the tower of Bisham Church on the Thames, and it is quite possible that more examples of its use for memorial purposes may exist.

From the foregoing it may be gathered that black and white marbles were frequently employed for the purpose, especially when the slab formed the top of an altar tomb, in which case the marble would be highly polished; probably more often still the material was a stone from the neighbourhood in which the workshop was situated, thus accounted for the fact that slabs of imported

foreign workmanship existing on our east coast, as at Boston, are of the same nature as those at Chalons, Liége, and other continental churches. For the same reason we find alabaster slabs in Staffordshire and parts of Yorkshire. Alabaster was also exported, for at least one English slab is known abroad, namely, at Rouen. In the southern counties Blue Sussex and Forest of Kirkford marble have already been noted, and Purbeck was very largely used both locally and all over the country. Perhaps, however, that most often used is stone known as lias in its numerous varieties. Its hardness and its bluish tone would account for the many references to blue stone or marble that so commonly occur. The word lias, supposed to be derived from the Somerset quarrymen, who thus pronounced the word layers, denotes a bed below the oolites, which extends right across England from Dorset to Yorkshire.

Between Purbeck and lias there appears to be but little to choose in the matter of durability. The former is well known for its hardness, and the latter has worn well, although some of it is rather inclined to flake, as may be observed in the crumbling away in layers of the surface of many of these slabs during centuries of exposure.

Granite has not found a place in these remarks, for I have not come across its use for this purpose, possibly on account of its great hardness, which made it impracticable, either for incised inscriptions or for inlaid brasses, in the days when tools were not brought to such a state of perfection as at the present time. The Egyptian use of granite was in those days a lost art, if not even now."

In the discussion that followed a member stated that some years ago he examined an incised granite slab from Egypt, the lettering on which was not V-cut, but flatted out in a manner not even equalled by the use of modern appliances. He stated that steel tools would not cut such granite, and suggested bronze tools hardened in a manner now unknown. The use of granite for this purpose in mediæval England appeared to be unnoticed by anyone.

SOCIETY FOR THE PROMOTION OF ROMAN STUDIES.

THIS Society has been formed to effect for Roman history and archæology what the Hellenic Society has for many years been doing with admirable results for Greek history and archæology.

The need of such a Society was first brought before the Council of the Hellenic Society two years ago. Inquiries were then made among the members of that Society and others as to the extent of the demand, and the replies showed the need to be real and the demand substantial. A full interchange of views has taken place between the representatives of the Hellenic Society, the British School at Rome, and the Classical Association, resulting in unanimous agreement in favour of founding the new Society which has now taken definite shape.

The scope of the Society embraces the history and archæology of Rome, Italy, and the Roman Empire down to about A.D. 700. Mediæval and Renaissance Italy have been left to other societies already engaged in carrying on excellent work. No society, however, exists for study of the ancient Roman world, and this is, therefore, the special province of the new Society.

The Society issues to its members a journal resembling the *Journal of Hellenic Studies*, and holds an annual meeting in May and occasional afternoon meetings for discussion. In connexion with the Hellenic Society it maintains at 19, Bloomsbury-square, a joint library of Greek and Roman archæology and history and a collection of lantern slides, both of which are now open to the members of each Society. By permission of the Society of Antiquaries the meetings of the Society will be held at Burlington House.

An arrangement has been effected between the Roman Society, the Hellenic Society, and the Classical Association by which the journals of the three bodies will be conducted in harmony, and will normally occupy distinct provinces of learning.

We have received a copy of Part 1, Vol. I., of the *Journal of Roman Studies*, which the Society issues, and we note that the Council have been able to include articles by Professor A. von Domaszewski, M. Salomon Reinach, and Professor H. Dragendorff. The longest article in the first number, by Mrs. Strong, Assistant-Director of the British School at Rome, describes in detail, with many illustrations, the exhibition of Roman antiquities held at Rome in 1911, which was an event of considerable interest in Roman archæology. The article also contains suggestions relating to the character of Roman art both in Rome and in the provinces. Professor von Domaszewski has contributed an article on a religious cult which is frequently mentioned in Roman inscriptions, and was obviously of great importance in some sections of the imperial world. Mr. Warde Fowler deals with the early Republic and its religious ideas in his inquiry into the true meaning of the important word "sacer." M. Salomon Reinach discusses a very interesting bronze statuette in the Saint-Germain Museum which he has admirably organised and studied. Dr. Reid, Professor of Ancient History in the University of Cambridge, treats of some technical but highly important questions of Roman public law. Miss E. R. Barker has contributed an exhaustive account of the Catacombes of St. Calixtus at Rome, which the Society has been permitted to illustrate by reproductions from the two monumental works on the subject. It is hoped that this article sums up all that is at present known of this extensive catacomb, and that it may be of particular use to the students of Roman Christianity in its earliest days. Among the reviews the Council specially note a study by Professor Dragendorff of Mr. Curle's recent account of the Roman fort at Newstead.

HISTORICAL NOTES.

Donibristle Mansion, near Aberdour.

THE "mansion house" of Donibristle, near Aberdour, in Fife, one of the seats of Lord Moray, which has stood a roofless building since the last fire in 1858—fifty-three years ago—is to be restored, says the *Scotsman*. Workmen are now engaged demolishing the blackened walls, which will take a matter of two months to level with the ground. Lord Moray, who is at present in residence, is taking a personal interest in the work, and fired the charge which brought down the tall gable of the old house. The ornamental gateway, close to the Forth, through which the approach is made, is of fine hammered ironwork, the present for Queen Anne of Denmark two centuries ago to the then Lady Moray.

Chinese Art.

AT the London Institution, Finsbury-circus, recently, Mr. Laurence Binyon gave a lecture on "Chinese Art," illustrated by examples from the collection in the British Museum, which has been on exhibition for the last year and a half, but is soon, the lecturer stated, to be removed. Mr. Binyon said we had been familiar for some two centuries with the decorative art of China, especially the porcelain, but hitherto the creative art of China, the painting and sculpture, had been almost unknown. The Chinese did not like exhibitions. The great treasures of Chinese painting, therefore, were in private collections. The lecturer traced the history of Chinese painting back to the VIth and VIIth centuries B.C., the earlier art being of an epic kind, devoted to representation of national heroes and the portraits of sages. The pictures of the IVth century A.D. represented a reaction from the social system of Confucius in favour of individual liberty. The influence of Buddha, he thought, had been exaggerated, although that influence had been nevertheless very great, and he showed some specimens of early Buddhist sculpture found in Turkestan and elsewhere. The VIIIth century was the time of the greatest painter of China, Wu-Taotze. Almost nothing was known for a long time of that period, but Dr. Stein's recent discoveries had added greatly to our knowledge. Then came the Tsung period, with its idealisation of Nature and its wonderful landscapes and pictures of flowers inspired by conceptions which might be compared to those of Wordsworth's poetry. From the XVth century there was a gradual decline, and modern painting in China seemed to be rather degenerate.

Kempley Church, Gloucestershire.

MR. ST. CLAIR BADDELEY, Castle Hale, Painswic Gloucestershire, ex-Presider of the Bristol and Gloucest Archæological Society, writ to ask for funds to rescue from ruin and resto to its use the little Norman church of St. Mar Kempley. It was built before A.D. 1121, an like the Chapel of St. John in the Tower, retai intact its original barrel vault, while its wa have preserved almost in their entirety t Norman paintings. The tower is in so perilo a state that it threatens to collapse, while t church throughout must also receive immedia attention. It is estimated that 1,600*l.* will required for this work, of which about 30 has already been procured. Donations w be received by the Hon. Treasurer, the Re C. L. Money-Kyrle, Much Markle, Herefor shire.

Paisley Abbey.

THE Kirk Session are now a position to proceed with t restoration of Paisley Abbe the plans for which will prepared by Mr. P. Macgregor Chalmers, Glasgow. In 1859 the place, it is said, w "like a charnel house," with the burial-grou outside reaching above the sill of the windov several of the beautiful windows being clos with stone, and the accumulation of soil wit the sacred building was in some places 4 deep. Most of these objectionable featu were removed and the surroundings of t church improved. About ten years ago t late Rev. Dr. Gentles carried out furth improvements. At a cost of 20,000*l.* he re vated the nave, restored the transepts, and l the foundations and built a portion of t tower, the original height of which was 300 All that now remains to be restored are t choir, the cloisters, and the tower.

The Egypt Exploration Fund.

REUTER'S Agency is inform that the chief work this y of the Egypt Exploration Fu will be the excavation of Osireion, the great subt ranean building in Abydos connected with Temple of Seti, which is regarded as one of important tasks which still have to be acco plished in Egypt. The excavation of Osireion was begun nine years ago under general supervision of Professor Petrie, but work was not continued, and it is now propo if possible, to prosecute it to its conclusi The building, at first thought to be the tc of the supposed Pharaoh of the Exodus, in reality a subterranean temple, proba intended for the performance of the mysteric Osiris. Its stone walls are covered v sculpture and hieroglyphs illustrating a por of the Egyptian scriptures dealing with adventures of the soul in the underworld a death, and contain charms and prayers protect Pharaoh against the assaults of de So far as at present excavated the Osir consists of a broad way descending to a great from which opens a large chamber and a sec hall leading towards the temple.—*The Times*

Antiquities in Rotherhithe.

THE members of the Lon and Middlesex Archæolo Society paid a visit recentl the Church of St. Mary, Rot hithe, when a paper on the building was rea Colonel M. B. Pearson, who said that the of St. Mary's Church was practically on river bank. It was likely that a Saxon ch once stood there, and was succeeded b mediæval church probably in the early pa the XIVth century. The present church built in 1714-15, and fitted with a three-de pulpit, high family pews of all shapes and s and a row of benches for the poorer congr tion. In 1876 the old pews and a large pa the galleries were removed, and also a l where bread was distributed. The church contained some specimens of early XV century work, a century when a great de plate was melted down. The earliest w silver cup dated 1619 and bearing the Lo hall-mark. The Rector, the Rev. J. C Durell, drew attention to the four p supporting the roof of the church. Each sisted of a single oak-tree, and he knew no to equal them except the oak-trees suppo the octagon of Ely Cathedral. After company had inspected the monuments an tombs in the churchyard a visit was paid t engineering premises of Messrs. Willmo Cobon, where the remains of a house o XVth or XVIth century was inspected.

THE BUILDING TRADE.

THE INSTITUTE OF BUILDERS: HOW TO CHEAPEN TRANSPORT.

MR. A. W. GATTIE recently read a paper on this subject before the Institute of Builders and the London Master Builders' Association, in the ...se of which he said :—" Millions of money ... been wasted, but nothing has been done to ...ify the uneconomic basis on which transport ...his country is conducted. Transport rates ...his country are the highest in the world. ...t means that, *pro rata* on capital expended, ... country benefits least of any country in ... world from the locomotive steam engine. ...paring freight rates in Germany and ...ght rates in this country, we find that, in ...y instances, and for parallel services, the ...s in this country are double the German ..., and Germany is our great trade rival! ...ion is, of course, still the greatest port in ... world, but I cannot but feel that its pre...nence cannot continue under existing con...ons. If we examine a railway goods station ...find that there is nothing about it which, ...n an engineering point of view, can be ...d design. It is usually a wilderness of ...ngs, sometimes nearly a mile in length and ... aps a quarter of a mile broad or more. It ...rnished with a loosely congregated jumble ...heds which are dotted over it higgledy-...tedy from one end to the other. It has ...olutely no design and it is too unwieldy and ...tered to admit of the rapid intercom...ication of parts which is essential to a ...ding intended for a place of exchange. Its ...pment often consists of no more than two ...three dozen wretched hand cranes and a few ...raulic capstans. The original shed, erected ... years or more ago, has been either added ...r enlarged, or both, but it has not been ...roved.

"Railway managers, by adhering to their ...ched way of doing their business, are ...ering it physically impossible for a work... to earn the very low wage that he is paid, ... in thus offending against a fundamental ...omic law, railway managers have brought ...sport conditions to the pass in which we ... find them. I repeat, it is absolutely ...ssary that the workman in any industry ...ld be able to create by his labour a capital ...e greater than the amount of the wage ... him.

"There are very serious objections to be raised ...e absence of design, lack of equipment, and ...equent inefficient operation of the existing ...is station. In London there are no fewer ...n seventy-four of these goods stations, and, ...rder that they may intercommunicate, ...e are a varying number of over 700 trains ...y running between them. I do not know ...t the cost of loading, unloading, and ...rating these trains may be, and I am quite ... that the railway managers will not tell you. ...mply mention the number because, if, in ...e of seventy-four stations, one central ...ling could be established as I propose ...re all, or nearly all, the work, with the exception of coal and cattle, could be done, there would be no need for any of these 700 trains. All parts of the proposed London Goods Clearing House are in immediate electric intercommunication with each other. Any parcel, bale, or load can be taken from any spot in the Clearing House and conveyed to any other desired spot in the building without any interruption or delay ; in some instances, in a few seconds, and in others in a few minutes.

We will say that a truck-load of 2,000 glazed bricks arrives from Yorkshire at a London goods station. Let us consider what happens to this truck-load. First of all the truck has to be detached from the rest of the train, which perhaps takes an hour. It is then put on to a lift and lowered to a level beneath the level on which it arrives. When the truck is too large for the lift upon which it is put, it is found that the buffers foul the sides of the well in which the lift works, and in those circumstances the bricks have to be unloaded where they are. I merely quote this as an instance of how work is carried on at a goods station. However, as a general rule, the truck is manœuvred on to the level below the rail, and after having been manipulated on turn tables and over points, *ad nauseam*, it eventually arrives after perhaps another hour's delay at the siding used by the brick-owner, and it there remains for about forty-eight hours as a rule. During that time a labourer will unload it, and stack the bricks on an adjacent bank. This work takes him nine hours. By Clearing House methods, and under Clearing House conditions, bricks would arrive as originally packed in specially designed skips, and on the train coming to a standstill in any of the thirty berths in the Clearing House these skips would be lifted four at a time by each crane available for use over that berth, or over any portion of it the length of the train might occupy. Assuming that eight out of our 288 cranes installed were brought into action over this particular train of bricks, thirty-two skips could be simultaneously lifted from the train and lowered into the crypt below in less than a minute. Other cranes and apparatus in the crypt would deposit them where required. If, however, these bricks, or any of them, were required for immediate dispatch, they could be hoisted by the same cranes and placed on the road level bridges intersecting the clearing house, where cars would be waiting to receive them, and they would be taken immediately to the job. It will be seen, therefore, that it would be quite easy to unload an entire train of bricks in five minutes, and there would be no necessity to detach and detain the waggons during unloading for forty-eight hours or *over five hundred times as long*. The train, relieved of its load of bricks, would be immediately available for the dispatch of goods of any kind whatever. As the Clearing House *ex hypothesi* is London's seventy-four goods stations in one, it is obvious that it would have within its walls all goods destined for the north, and the empty brick train would consequently take on its return journey all that there was available to take at that time. This loading operation would be done by the same, or some other cranes in the Clearing House, as might be convenient, in the same manner, and with equal rapidity. With regard to the return of empty skips, these would be collapsed, and packed in bundles as small as possible, as will be explained later on.

The advent of the Clearing House would not immediately *necessitate* any alteration in railway rolling stock other than a great reduction in the number of vehicles used. There would be no need for at least two-thirds of the waggons now used for general merchandise.

I imagine there is no group of men more interested in cheap transport than the building trade, and I am, therefore, now going to particularise in the direction of the transport of building material.

Let us say that a truck-load of glazed bricks has come from Yorkshire. The truck itself would probably have been waiting empty on a siding in the brick factory for some days. It would be loaded by two men in about half a day, and in due course taken away by an engine, frequently shunted, and eventually brought to London. The journey would take about seventy-two hours, and you see the speed would be, for 200 miles, less than three miles an hour. Its detention would be, say, forty-eight hours, and normally it would then go back, together with a multitude of other empty trucks, to the north of England.

The unladen mobility of a waggon is almost the same as its laden mobility. Perhaps I had better say here that it is absolutely necessary that there must be a moderate percentage of empty trucks leaving London, because London is an accumulation of innumerable things, particularly an accumulation of building materials, and it is also an enormous consumer of perishable things, consequently more must come into London by road, rail, and river than can go out of it by these means. Also it is no doubt necessary that a certain portion of the life of a railway waggon must be absorbed in detention, but that its laden mobility should be less than 2 per cent. of its time is preposterous, and I think that this very low efficiency explains why the working expenses of railways have risen so enormously in ratio to their gross receipts. An attempt has been made by railway apologists to ascribe this apparent shortage of 20,000,000*l.* a year (1) to the increase in demands of labour ; (2) increased cost of railway material ; and (3) increase in rates and taxes. With reference to the demands of labour, this statement is hardly justified, as has been amply proved by Mr. Richard Bell, M.P. In the matter, however, of the cost of material, it is the opposite of the truth, as steel manufacturers, for instance, during the period in question have dropped something over 64 per cent. in price, and, although there has been a slight rise in the price of coal, there has also been a relatively much greater concurrent improvement in the locomotive during the same period."

[For want of space we are compelled to hold over the remainder of our abstract of Mr. Gattie's paper until next week.]

BRISTOL MASTER BUILDERS' ASSOCIATION.

THE annual dinner of the Bristol Master Builders' Association has just been held at the Royal Hotel, College Green. The President, Mr. F. Chown, was in the chair, and amongst those present were the Lord Mayor of Bristol (Councillor Frank W. Wills), the Sheriff of Bristol (Mr. R. E. Bush), Mr. James Wright, Nottingham (President National Federation of Building Trade Employers), Mr. G. Palliser Martin (President Bristol Chamber of Commerce), Mr. R. W. Moon (President Newport Association), Mr. A. P. I. Cotterell, Mr. A. G. White (Secretary National Federation), Mr. F. Chancellor (Vice-President Bath Association), and others. The loyal toasts having been honoured, Mr. Louis Bamberger, C.C., proposed "The Lord Mayor, the Sheriff, and the Corporation of Bristol."

The Lord Mayor and the Sheriff replied.

Mr. W. E. Hicks proposed "The Trade and Commerce of Bristol," and in the course of his remarks said it must be a source of satisfaction to all patriotic citizens to see how the old city of Bristol was progressing, that new businesses were springing up, and in that way giving additional employment to their fellow citizens.

Mr. G. Palliser Martin, who responded, said it had been his duty to act as Chairman of the Conciliation Committee in the month of August last—a month they would always remember—and he hoped that the conclusion they then arrived at was such as would enable the trade of the city to be carried on for some time without any similar trouble.

Alderman Twiggs gave the toast of "The National Federation of Building Trade Employers of Great Britain and Ireland," and, referring to the work of that organisation, he spoke of the successful way in which labour disputes had been avoided in the trade. This, he thought, was due to the completeness of the organisation of the Federation, which, he said, did not exist to oppress the employees or keep down wages, but to improve the conditions of the trade generally. The greatest enemies they had were, without doubt, those builders who kept aloof, and he ventured to suggest that those employers were their own enemies. With the toast Alderman Twiggs

coupled the name of the President of the National Federation.

Mr. James Wright replied, and spoke of the improvement in trade. He was glad to hear from the Lord Mayor that Bristol seemed likely to share in that improvement; and, that being so, he would like to impress upon them the necessity of closing up their ranks and consolidating their local associations. Although the building trade had been bad for some years, the trade unionists had been strong, active, and aggressive, although, after all, they were only looking after their own interests, and it was the builders' business to look after theirs. And the best thing they could do was to take precautions to complete their own association, and make it as strong and united as possible. As to the work of the Federation, the national conciliation scheme, he said, although not perfect, had resulted in differences being arranged between employers and employed by reason and common-sense instead of by strikes or lock-outs. He thought in that respect the master builders might claim to have done much in the interest of the trade and industry of the country. He referred to the national agreed form of contract, and to other trade matters; and, with regard to the effect of the Insurance Act, he said that was hardly the time or place for him to give vent to his own personal opinion, but he should like to say that the unemployment contribution pressed hardly upon the trade; and if unemployment was such a great national evil, it should be made a national charge rather than that one or two trades should be put to such a severe strain. The Workmen's Compensation Act, he said, was also becoming a heavier burden, and the Federation hoped to bring about an improvement in the administration of that Act. They were suggesting that the Government should make it possible for medical referees to assist the judge in County Court cases, so that much of the expense involved in pettifogging cases should be avoided.

The other toasts were "Architects, Engineers, and Surveyors," proposed by Councillor A. Dowling and responded to by Mr. W. S. Skinner and Mr. A. P. I. Cotterell; "Kindred Associations and Visitors," given by Mr. F. N. Cowlin and replied to by Mr. A. C. May and Mr. R. W. Moon; and "The Bristol Master Builders' Association," submitted by Councillor W. M. Blackmore (Newport) and responded to by the President.

BELFAST BUILDERS' ASSOCIATION.

THE annual general meeting of the members of this Association was held on the 30th ult. at the offices, 14, Arthur-street, Belfast. The Vice-President (Mr. R. B. Henry, J.P.) presided.

Before entering on the business of the meeting the Vice President stated that since their last meeting the Association had experienced a great loss in the death of the President. Mr. John Martin, J.P. He begged to move:—"That the members of the Committee of the Belfast Builders' Association, in full meeting assembled, desire to place on record an evidence of appreciation of the eminent services ever cordially and devotedly rendered to the organisation by their late President, Mr. John Martin, J.P., and to express their deep sense of sympathy with the bereaved. They greatly deplore the circumstances that have deprived them of one who was an honoured colleague and sincere friend, whose kindness of heart and hand was generally known. In this expression of condolence with those whose affliction by his irreparable loss is distinctly acute, the members of the Committee sincerely trust that Providence in His mercy may graciously sustain them sorrowing."

Mr. W. H. M'Laughlin, J.P., seconded the motion, and, Mr. John Courtney and Mr. W. J. Stewart having also spoken, the resolution was passed unanimously.

The Secretary (Mr. J. Alfred M'Auley) submitted the Annual Report, which was unanimously adopted. It contained the following: "The prospects of our industry at the commencement of the year were of a bright character, in comparison with the depressed condition prevalent for the past few years, and it was fully anticipated that greatly improved conditions had set in; but regret is felt that the concluding portion of the year has not been up to general expectation. Trade on the whole has been exceptionally good in the country, and the briskness of our industries should afford a fair indication as to the state of affairs prevalent in our own industry, for when the building trade is in a depressed condition other industries as a natural sequence are not so active. The improvement in the demand for labour—in particular carpenters and joiners—has been a matter of gratification. It is gratifying to record that the year has been practically void of disputes, only one Court of Conciliation being called to settle a slight difference between one of your members and the Bricklayers' Society regarding the laying of tiles, but the matter was amicably settled. With regard to any contracts let out during the past year, they have undoubtedly been taken at unremunerative prices, and, with the upward tendency in the prices of all materials, it is apparent that contractors, in order to obtain better prices in future, will require to revise the pricing that has hitherto been prevalent. The National Federation have the Insurance Act under consideration at the present time, and their advice as to the general bearing and what course to adopt will be received in due course. It is important that the Association should continue members of the National Federation, especially when it is anticipated that the general effect the Insurance Act will have will be to saddle employers with a heavy expenditure that hitherto did not exist; and, in addition, there is no chance of the workmen's compensation rate being reduced—in fact, it is almost certain to be considerably increased. The unfair competition from which members suffer by reason of non-members not paying the standard rate of wages gave rise to considerable discussion during the year. The general opinion of members was against tendering under certain conditions in competition with non-members, but to ensure the amicable carrying out of this it is essential that the architects should give the builders their unanimous support."

The election of office-bearers resulted as follows:—President, Mr. R. B. Henry, J.P.; Vice-President, Mr. W. H. M'Laughlin, J.P.; Honorary Treasurer, Mr. J. O. Campbell, B.A., B.E.; Committee, Messrs. J. O. Campbell, John Courtney, James Lees, Henry Martin, Jas. Miskimmin, John Smith, W. J. Stewart, and S. B. Thompson; Ulster representative on the Council of National Federation of Builders, Mr. Robert B. Henry, J.P.

GENERAL BUILDING NEWS.

NEW CHURCH, DAWDON.

This church has been erected from the designs of the late Mr. C Hodgson Fowler, F.S.A., under the supervision of Mr. W. H. Wood, F.R.I.B.A., of Durham, at a cost of about 6,500*l*. The building has been constructed of red Lincolnshire bricks with red stone dressings, and the church is heated by hot water on the low-pressure system. Messrs. John Clark & Sons, of New Seaham, were the contractors, and Mr. A. Gordon was clerk of works.

RUSKIN COLLEGE, OXFORD.

The first section of the new buildings of Ruskin College, near Worcester College, will be erected by Messrs. T. H. Kingerlee & Sons, of Oxford, who tendered for 9,255*l*., from the plans and designs of Messrs. Joseph & Smithem. The college was originally founded as Ruskin Hall, in a house in St. Giles' some twelve years ago, mainly through the instrumentality of Mr. Walter Vrooman.

NEW PARISH-ROOM, CANNON PYON.

Mr. Herbert Skyrme, architect, of Hereford, designed this building, which has been erected at a cost of about 450*l*. The building includes a main room, 40 ft. by 23 ft.; a committee-room, 10 ft. by 10 ft.; and a kitchen, 12 ft. by 10 ft.; the whole being heated by Messrs. Musgraves' slow combustion stove. The work was carried out by Mr. C. Cooke, of Hereford.

HORNIMAN MUSEUM EXTENSION.

This new hall at Forest Hill has been erected by Messrs. Gathercole Brothers at a cost of about 5,000*l*. The lecture hall will accommodate 215 persons, while above that is a library and reading-room seating twenty-four, and a book-store with accommodation for about 7,500 volumes. The building was designed by Mr. C. H. Townsend, architect to the Horniman Museum, and erected under the supervision of Mr. W. E. Riley, architect to the London County Council.

NEW BUILDINGS IN LONDON.

Warehouse, Cephas-street, E., also extensions to Stollwerck's Factory, Nile-street, W.; Messrs. Hobden & Porri, architects, 39A, Finsbury-square, E.C. Offices, St. Helen's-place, E.C.: Mr. H. C. Clarke, architect, 102, Bishopsgate, E.C. Schools, St. Alphonsus-road, Clapham, S.W.; Mr. E. Doran Webb, architect, New-street, Salisbury. Proposed addition to hospital of Epilepsy and Paralysis, Maida Vale, W.; Mr. H. W. Burleigh, Secretary, 4, Maida Vale, W. Enlargement of Bying-road School, Barnet, N.; Mr. U Smith, Surveyor, Herts County Council, field. Building, Ladbroke-grove, Paddin W.; Mr. Percy Pitt, Prudential Assur buildings, Holborn, W.C. Banking pre for Messrs. Barclay & Co., with offices Vere-street, W.; Messrs. Elliott, Son, & ton, agents, 5, Vere-street, W. Building, Burlington-street, W.; Messrs. Dove Bro builders, Islington, N.

TRADE NEWS.

The Coignet system of reinforced co is being used for the construction of the bridge at King's Cross Station for the M politan Railway Company.

Under the direction of Messrs. Roo Boag, architects and surveyors, Belfast, B latest patent "air-pump" ventilators been applied to the school hall and l hall, McQuiston Memorial Church, Belfa

Mr. L. Serraillier, Manager, and Mr. Vawdrey, Chief Engineer, of the Indente and Concrete Engineering Company, have been appointed directors of that com

The Gateshead Guardians have, subj the Local Government Board app accepted the tender of the Brightside Fo and Engineering Company, Ltd., of Sh Birmingham, and London, for the he ventilation, and hot-water service instal at their new Homes for Aged and Infi the Whinney House Estate, Shotley B The scheme adopted is the centralise water system with accelerated circulati means of steam-driven pumps, the whole water being heated by three large s type calorifiers, which will be made company's Sheffield works. The insta is designed to work in conjunction wi electric generating plant, and the e steam from this will be utilised. The v to be carried out under the supervis Messrs. Tennant & Barrs, consulting eng Newcastle-on-Tyne.

The Salisbury and District Isolation H is being supplied with Shorland's fronted patent Manchester stoves, paten chester grates, and special extract an ventilators, by Messrs. E. H. Shorl Brother, Ltd., of Failsworth, Manchest

PROPOSED BRICK-MAKING COMBINATIO

The Birmingham correspondent of the states that a proposal is under consid for the federation of about seventy fi gaged in the manufacture of bricks Midlands. The object of the scheme regulate prices and production, a federation would control the manufact sale of something like ten millions o per week. The proposal has already the approval of some the principal m

The brick manufacturers of the Country" have decided to raise the common bricks by 2s. per thousand, a bricks by ten per cent., owing to the the cost of fuel.

APPLICATIONS UNDER LO BUILDING ACTS, 1894 to 1

AT Tuesday's meeting of the London Council the following applications u London Building Acts were dealt wit names of the applicants are given i theses):—

Lines of Frontage and Projectio

Dulwich.—Erection of two building north-western side of Henslowe-road, next to Upland-road (Mr. W. G. Sc Consent.

Dulwich.—Erection of a wooden front of No. 89, Camberwell-grove, Ca (Mr. J. F. Chiverall).—Consent.

Lewisham.—Erection of porch windows, and bargeboards to houses eastern side of Guibal-road, Lee (M Roberts & Co.).—Consent.

Lewisham.—Erection of a buildin northern side of Chudleigh-road, L with its eastern corner abutting western side of Francemary-street J. W. Heath & Sons).—Consent.

Lewisham.—Addition in front of Perry-vale, Lewisham (Mr. E. C. Chr Refused.

Marylebone, East.—Addition to a porch in front of Woodstock-lodge, V road, St. John's Wood (Mr. J. J. for Mrs. Caird).—Consent.

Marylebone, East.—Erection of a hood, balcony, and oriel windows i Nos 48 and 50, Mortimer-street, St bone (Mr. F. M. Elgood for Mr. S. Consent.

Paddington, North.—Erection of a iron balcony in front of Nos. 13, Blomfield-place, Paddington (Mr. W —Consent.

uddington, South.—Erection of a building n the site of Nos. 25 and 27, Hereford-road, swater (Mr. E. J. Stubbs for Messrs. dley & Sons). Consent.

otherhithe.—Retention of two showcases at 163, Southwark Park-road, Bermondsey ssrs. Hooper & Hawkins).—Consent.

rand.—Retention of an iron and glass ter at the entrance to Nos. 37, 38, and 39, ile-row, St. James (Messrs. H. Poole & . Consent.

oolwich. Erection of an iron balcony in t of Granville House, Green-lane, New am Messrs. Chudleigh Brothers).—Con-

Width of Way.

rixton.—Retention of Nos. 20 and 22, rhton-terrace, Brixton, with a forecourt e at less than the prescribed distance from centre of the roadway of the street (Mr. P. Wyatt for Messrs. J. H. Howard & .—Consent.

ammersmith.—Erection of a building at rear of Nos. 106-108, King-street, Hammer-h (Messrs. J. S. Quilter & Son for Mr. . Platt).—Consent.

ampstead.—Erection of a one-story build-at the rear of No. 3, Greville-road, Hamp-d (Mr. H. R. Luck for Mr. M. Ward).—sent.

Width of Way and Lines of Frontage.

imehouse.—Retention of a water-closet ding at Trafalgar Wharf, on the western of Church-row, Limehouse (Messrs. W. ner & Sons).—Consent.

th of Way, Frontage, and Deviation from Certified Plans.

George, Hanover-square.—Erection of 54, Upper Brook-street, St. George, over-square, abutting upon the eastern side Blackburn-mews, with a projecting porch, ney-breast, and oriel window, and with rear portion extending above the diagonal (Sir Ernest George, A.R.A., and Mr. B. Yeates for Sir Robert W. Burnet).—sent

Lines of Frontage and Construction.

rixton.†—Erection of a building upon the of Nos. 28, 30, and 32, Denmark-hill, berwell Green, and erection of an iron glass shelter in front of such building ssrs H. Langston & Co.).—Refused.

, George, Hanover-square.—Iron and glass er to the grill-room entrance of the andra Hotel, Knightsbridge (Mr. R. H. nan).—Refused.

andsworth.—Erection of an iron and glass ter in front of a cinematograph theatre at 134, Streatham High-road, Wandsworth ssrs. H. Langston & Co.). Refused.

Width of Way and Construction.

arylebone, East.—Temporary iron roof and l and iron building at Dean's-mews, ndish-square (Belsize London Agency,).—Consent.

arylebone, East.—Temporary building at t's-mews, Cavendish square (Belsize London ncy, Ltd).—Consent.

th of Way, Lines of Frontage, and Building for the Supply of Electricity.

rand.—External fresh-air inlet shaft at Mason's-yard electricity sub-station, on's-yard, St. James (St. James and Pall Electric Light Company, Ltd.).—Consent.

Construction of Buildings.

ckham.—Erection of a residential flat at rear of premises on the southern side of n-street, Peckham (Mr. G. F. Morgan).—ent.

estminster.—Omission of the brick footings e walls and piers of a proposed addition he Institution of Mechanical Engineers, cage walk, Princes-street, and Old Queen-t, Westminster (Mr. J Miller for the tution of Mechanical Engineers).—Consent.

Deviation from Certified Plans.

arylebone, East.—Erection of a building the site of Nos. 40 and 41, High-street, Marylebone (Mr. R. A. Hinds for Mr. H. ards).—Consent.

wington, West.—Erection of an addition he rear of No. 15, Rockingham-street, nwark (Mr. J. Codrington).—Consent.

Cubical Extent.

ammersmith.—Additional cubical extent in exion with the erection of addition stories sram Works, Brook Green, Hammersmith m Lamp Works, Ltd.).—Consent.

xton.—Proposed garage upon a site ap ched out of the western side of Shore-h High-street and the eastern side of t John's-court, Shoreditch (Mr. W. art for Messrs. McNamara & Co., Ltd.).—ent.

Uniting of Buildings.

City of London.—Uniting of No. 23, Cloth Fair, with Nos. 6 and 7, Kinghorn-street, City (Roborat Company, Ltd.).—Consent.

City of London.—Formation of openings fitted with doors of special construction in lieu of iron doors in the party wall between the basement, ground, and first floors of Nos. 38 and 39, Upper Thames-street, City (Checkfire Door Company for Messrs. Siemens Brothers). —Consent.

Islington, East.—Opening, uniting Nos. 131 and 133, Mildmay-road, Newington Green (Mr. F. Prater for Mr. A. C. Lamb).—Consent.

Islington, North.—Uniting of Nos. 11 and 11A, Highgate-hill, Islington, by means of an opening at the ground-floor level (Mr. G. Cox for Mr. A. C. Trout).—Consent.

Marylebone, East.—Uniting of the Polytechnic, No. 309, Regent-street, with premises at the rear, by means of openings at the basement, ground, first, and second floor levels (Mr. G. A. Mitchell for the Governors of the Polytechnic).—Consent.

St. George, Hanover-square.—Uniting of Nos. 17-21, Dering-street, St. George, Hanover-square, with Nos. 315-317, Oxford-street (Messrs. Withers & Meredith).—Consent.

The recommendation marked † is contrary to the views of the Metropolitan Borough Council concerned.

PROJECTED NEW BUILDINGS IN THE PROVINCES.*

ABERDEEN. Convent school, Queen's Cross (3,250*l.*); Mr. W. J. Devlin, 156, Union-street, Aberdeen. Box factory for Mr. John Bisset (2,000*l.*); Messrs. D. & J. R. Milburn, 104, Crown-street, Aberdeen.

Abergavenny.—Pavilion (14,000 places) for the Pavilion Committee of the National Eisteddfod of 1913.

Aldershot.—Theatre; Mr. B. Crewe, architect, 75, Shaftesbury-avenue, W.C.

Arbroath.—Extensions to St. Vigian's School (1,850*l.*); Messrs. Carver & Simon, architects, Brothock Bridge, Arbroath.

Batley.—Picture theatre (3,000*l.*); Messrs. W. Hanstock & Son, architects, Branch-road, Batley.

Battle.—Proposed cottages, Netherfield-hill: Mr. Oxley, architect, Hastings.

Bearpark.—Remodelling of school (3,165*l.*); Messrs. J. A. L. Robson and A. J. Dawson, Joint Secretaries, Education Committee, Durham County Council, Durham.

Birmingham.—Factory, Carr's-lane; Messrs Nicol & Nicol, architects, Colmore-row, Birmingham. Alterations and additions to Council House (3,000*l.*); Mr. H. E. Stilgoe, Surveyor, Town Hall, Birmingham.

Blyth.—Suite of offices, Blagden-street, for the Blyth Harbour Commissioners (5,500*l.*); Messrs. Goulding & Sons, builders, Simpson-street, Blyth.

Bolton.—Proposed electricity-station, Back o'-th'-Bank; Mr. A. A. Day, Electrical Engineer, Town Hall, Bolton.

Bournemouth.—Law courts; Messrs. J. & M. Patrick, builders, Wandsworth.

Cantley (near Norwich).—Proposed sugar factory; Mr. H. van Someren, Secretary, Anglo-Netherland Sugar Corporation, Ltd., 6, Throgmorton-avenue, E.C.

Cardiff.—Works, Burt-street, Bute Docks (2,000*l.*), for the South Wales Trinidad Lake Asphalt Paving Company, Ltd.

Chertsey.—School (150 places); Messrs Jarvis & Richards, architects, 10, Queen Anne's-gate, S.W.

Chester-le-Street.—Drill hall; Mr. Henry Chapman, Grainger-street, Newcastle Church (3,500*l.*); Mr. A. H. Fenneli, Chester le-Street.

Childrey.—School (2,290*l.*); Messrs. Bosher & Sons, builders, Cholsey.

Child's Wickham.—School; Mr. R. S Phillips, architect, The Cross, Gloucester.

Circencester.—Workmen's dwellings (3,840*l.*): Mr. Fleetwood, builder, South Cerney.

Clontarf.—Proposed garden suburb; Mr J. G. O'Sullivan, Surveyor, Town Hall, Dublin.

Clydebank.—School (8,000*l.*); Messrs. Bruce & Hay, architects, 261, West George-street, Glasgow.

Coseley.—Remodelling of Mount Pleasant Schools (2,000*l.*); Mr. W. Rowe, builder, Wolverhampton.

Dalmarnock.—Extensions to washhouse (2,100*l.*); Mr. A. B. MacDonald, City-chambers, Grange-square, Glasgow.

Darwen.—Mill, Highfield District (650 looms); Messrs. Robert Shorrock & Son, builders, Union-street, Darwen.

Dawdon Colliery. Hotel for Messrs. Nimmo & Son, brewers.

Doncaster.—Conversion of premises, High-street, into bank for the National Provincial Bank of England, Ltd.

Dorridge (Warwickshire).—Residence; Mr E. Reynolds, architect, Paradise-street, Birmingham.

Dumbarton.—Lodging-house (3,000*l.*); Mr. J. Bell, architect, 8, Merry-street, Motherwell.

Dundee.—Warehouse (5,500*l.*): Messrs. A. & J. Main & Co., builders, Glasgow.

Dunfermline.—Gas showrooms and workshop (2,000*l.*); Messrs. Muirhead & Rutherford, builders, Dunfermline.

Dysart.—Bakery (5,200*l.*) for the Co-operative Society.

Eastbourne.—Proposed additional accommodation at rear of Town Hall; Mr. A. E. Prescott, Surveyor, Town Hall, Eastbourne.

Eccles.—Baths (8,650*l.*); Messrs. Wooller & Sons, builders, Eccles.

Edinburgh. — Conversion of buildings, Chalmers-street, into nursing home; Mr. T. D. Rhind, architect, 26, Rutland-street, Edinburgh. Hall, Spitalfield-crescent, for the Nelson Hall Bequest Trustees.

Elderslie.—Extensions to works of Messrs. W. Forrest & Sons (2,000*l.*); Mr. Malcolm McFarlane, Whitehaugh-drive, Paisley.

Fatfield.—Enlargement of school (5,450*l.*); Messrs. J. A. L. Robson and A. J. Dawson, Joint Secretaries, Education Committee, Durham County Council, Durham.

Forfar.—Church and halls (7,500*l.*); Mr. D. Waterston, Glamis, Forfarshire.

Garreoch. — Extensions to public school (4,635*l.*); Messrs. Lennox & M'Math, architects, Glasgow.

Glasgow.—Proposed church, Newlands; Rev. Hugh Sutherland, Minister, Merrylea Church, Newlands, Glasgow. Extensions to factory, Kyle-street, for Messrs. Barr & Co., Ltd. (2,210*l.*); Mr. Charles Henry, 32, Minerva-street, Glasgow. Additions to works of Messrs. J. & R. Tennant; Mr. T. Young, 203, West George-street, Glasgow. Tinware factory (7,000*l.*) and extensions to boot warehouse (6,500*l.*) for Shieldhall Scottish Co-operative Society; Mr. James Davidson, 95, Morrison-street, Glasgow. Engine works for Messrs. David Rowan & Co.; Messrs. Walter Bridges & Co., consulting engineers, 3, Salters' Hall-court, E.C. Extensions to Strathbungo School (3,000*l.*); Mr. S. Preston, 151, Bath-street, Glasgow.

Greenbank (near Bristol).—Recreation hall; Messrs. W. S. Paul & R. C. James, architects, 31, Nicholas-street, Bristol.

Hamilton.—Municipal buildings (8,500*l.*); Messrs. Cullen, Lockhead, & Brown, Brandon-chambers, Motherwell.

Hermitage.—School (2,340*l.*): Mr. A. Cox builder, Abingdon.

Heybridge.—School (5,667*l.*). Messrs. J Parrew & Sons, builders, care of the Secretary, Education Committee, Essex County Council, Chelmsford.

Hull.—School, Saner-street (7,300*l.*); Mr. P. T. Kettlewell, builder, care of the Secretary, Education Committee, Hull Town Council.

Hyde.—Alexandra Picture and Billiard Halls, shops in Hamnett-street; Mr. William Allan Dew, Lic.R.I.B.A., architect, Market-chambers, Hyde.

Jarrow.—School (8,000*l.*); Mr. C. Walker Jesmond, High-terrace, Newcastle.

Johnstone.—Extensions to Mansion House (2,500*l.*); Mr. Charles Davidson, architect, Terrace-buildings, High-street, Paisley.

Kilmalcolm.—Church hall for Parish Church (2,200*l.*); Mr. J. J. Burnet, architect, 239, St. Vincent-street, Glasgow.

Lancaster.—Premises, Westbourne-road, for the Lancaster and Skelton Co-operative Society, Ltd.; Messrs. Austin & Paley, architects, 24, Castle Park, Lancaster.

Leagrove. — School; Messrs. Gotch & Saunders, architects, Market-place, Kettering.

Leigh on-Sea.—School (8,285*l.*); Messrs. J. S. Hammond & Son, builders, Romford, Essex.

Maldon.—School (2,825*l.*); Messrs. Dowsing & Davis, builders, Mawney's road, Romford, Essex.

Manchester.—Temporary premises for the special police reserve (2,000*l.*); Mr. Henry Price, architect, Town Hall, Manchester.

Margate.—Theatre; Mr. B. Crewe, architect, 75, Shaftesbury-avenue, W.C.

Middlesbrough. — School, South Bank (10,000*l.*); Messrs. Bottomley & Welburn, architects, 28, Albert-road, Middlesbrough.

Milnrow.—School (4,895*l.*); Mr. James Mann, builder, Huddersfield-road, New Hey, Rochdale.

Newcastle.—School (5,000*l.*); Messrs. Harrison & Ash, architects, Newcastle.

Oban.—Additions to Lorn Combination Poorhouse (2,000*l.*); Mr. James G. Falconer, architect, 22, Alexandra-road, Oban.

* See also our list of Competitions, Contracts, etc., on another page.

THE CARPENTERS' HALL LECTURES:

BUILDING CONDITIONS, PAST AND PRESENT.

THE third of the present course of lectures on "The Arts Connected with Building" was delivered at Carpenters' Hall, London-wall, on the 7th inst., when Mr. H. W. Wills lectured on "Building Conditions, Past and Present."

Mr. Pocock presided, and made some interesting remarks on the subject of craftsmanship.

Mr. Wills, who showed a large number of interesting lantern slides, said his thesis was briefly this, that in nearly all ages recorded in history, under varying conditions of life and varying stages of civilisation, great buildings were erected, that every preceding period had had causes which conduced to excellence, but also difficulties which had to be overcome, difficulties special to particular ages, and that the conditions under which we live had also their advantages which might be made use of, and difficulties which might be overcome or avoided, and that the recognition of these root facts might help those who were endeavouring to forward the interests of architecture, which Fergusson rightly described as "the history of civilisation written on stone."

The lecturer proceeded to refer to and illustrate some of the architectural works of Egypt, Greece, Rome, etc., after which he spoke of the Comacine Guild, Romanesque, Gothic, and Renaissance work, and other interesting matters. Proceeding, he said that no reading of the past could be of use which tried to establish an absolute standard of excellence without full regard for the conditions of thought and life at a given time, of which its architecture was the direct outcome. The charm of French planning, which had been consistently studied and carried out throughout the Renaissance epoch, was evident in the many buildings erected before the Revolution, and continued down to the present day, and the art of combining groups of buildings had been more thoroughly thought out in France and Italy than in this country, the more strongly-centralised Government in France and the great culture of many of the Italian rulers having given a great impulse to architecture and a great chance to architects and designers, which was often wanted here.

As to the conditions under which buildings had actually been erected, of the ancient conditions little actually was known with any degree of definition. Slave labour was largely employed by the great nations of antiquity, but the exact status of the designer or the expert, to which he was simply a higher handicraftsman, was a matter of conjecture. Of the Middle Ages we knew a little more, and could trace the guilds which, with their hierarchy of officials and workers, undertook many of the more important buildings of the time, with the results we were familiar with. We knew that the guilds contracted for the execution of the works, but in the absence of working drawings, as we now understand them, such contracts must have been general undertakings to carry out buildings, paying workmen a stated rate of wages, and paying for the materials necessary as supplied. At a later date we have clear records of the various architects who designed buildings after the commencement of the Renaissance epoch, and who probably stood in much the same position with regard to the actual execution of the works as the masters of the masonic lodges, but who gradually had to define their meaning more and more clearly in their drawings, and to rely less and less on the inherited knowledge possessed of the craftsmen and workers under them. The lesser buildings, small houses and the like, were, no doubt, still the work of the craftsmen, showing an inherited power of designing more or less in execution, but the divergence gradually grew until we reach more modern times, when the individual workman, having no inherited knowledge and education in design, depends entirely on the directions and drawings given him.

And with the growing complexity of modern life the architect has to accept responsibilities from which in more fortunate ages he was free. On one side, whether in town or country, he had to conform to complicated sets of by-laws intended to safeguard the health and public rights of the community.

Having mentioned the by-laws in operation in London, the lecturer said:—"We have, in addition, our old friend the law of ancient lights in England, which arbitrarily interferes with our making the best use of a site if a neighbour has enjoyed an unrestricted light over it for twenty years, despite the fact that under the provisions of some of the Acts I have alluded to the public authorities have prescribed the area and extent of the open space which it is necessary to leave in the rear of a building for purposes of public health. This law, so fruitful a source of income to many professional men, is the cause of many of the unsightly gaps and distortions we see in our public streets. Why we should ever have allowed such a custom to grow up, when our neighbours in Scotland allow each man to do what he likes with his own property, subject to conforming with local by-laws, is more than I can imagine. And, secondly, we have to struggle with the ancient system under which a building has to be described and shown at the outset sufficiently in detail to enable a definite estimate to be given for it, whether on the basis of a specification or that of guarantees, which were, I believe, for the first time used in the case of a public building for the Houses of Parliament. The contract system has been abused as an invention of the evil one. I regard it rather in the light of a practical convenience to the employer, which under ordinary conditions he cannot be expected to forego. . . .

The greatest disadvantages under which we now labour seem to me to be rather those which arise out of the greater breadth and diffusion of modern life and the vastly greatly difficulty of obtaining that thorough and careful educated consideration which are absolutely necessary if good work is to be produced. . . . I remember a Mayor of a provincial town, who was on several building committees and keenly interested in their work, who told me on one occasion he did not know whether his house was built of brick or stone; he said he had never noticed which it was. This is typical of to-day, and would, I imagine, have been impossible in the Middle Ages, when most men lived in a house built by themselves or by their ancestors. . . . I do not undervalue the effect or charm of texture of the slight irregularities and traces of individualism which we see in old work, but the enormous importance given by some to these details seem to me to be the mistaking the shadow for the substance. The essential, to my mind, is this, that our work shall be so designed and thought out that it shall take its place as good design and good building when carried out under the conditions which obtain to day.

I want to try to put a concrete case before you to show what these conditions are in our great towns, where the bulk of our building is carried out. A site is acquired for the erection of a block of offices, or a learned society's premises, or a warehouse. In any case a certain expenditure in building is permissible, while a greater expenditure would represent a loss on the investment, or perhaps, in the case of the learned society, a state of insolvency, as members' subscriptions might not cover the cost of interest on money spent on the building and on the site. Obviously, it is absolutely necessary in such a case to be able to contract for the erection of the building beforehand at a given sum. For this purpose, and in order to get the consent of the authorities, accurate drawings must be made, and these drawings must represent the chief designer's or architect's design. You could not employ a committee of craftsmen to draw up a design which would give them their individual opportunities, any more than a committee could settle and direct the operations of an army, nor could a contractor fulfil his work if he had to consult with many instead of one in authority. And the drawings having been made with the necessary minuteness to enable the contractor to estimate the cost accurately all involves settlement beforehand, and with that a limitation in the possibility of giving entire full play to the individual handi craftsmen afterwards. It is true that in the country in exceptional cases you can carry out cottages and houses with some appro to the older methods, but such experim are rather like the attempts made to g vines in northern lands; they involve infi trouble, and can be only applied with pa success. Then, too, our rapidity of l motion is a factor in the case. The sl keeper or merchant living over his plac business in Cheapside or Cornhill was n more interested in his surroundings than same merchant of to-day, who may liv Brighton or Bedford. In many cases result is that he becomes oblivious of surroundings anywhere. Instead of dep ing the want of love of beauty possessed the public, we should, I would rather as it is natural under changed conditions he should be other than he is.

The outcome of this is, to my mind, we must look for salvation, or, at any r for a remission from Hell to purgat firstly, to trained and consistent effor the part of architects and artists dire towards a well-defined goal, and, secon that we must try to influence public bo who have the expenditure of public mo to take large, comprehensive, and enlight views of great problems involving buil and the laying out of towns. Public be usually erect public building as the resu competitions, open or limited, adjudic



Over S. Aisle, St. Paul's Cathedral, Lo

(View showing impeachable construction, ref to by Mr. H. W. Wills in the Lecture report this page.)

on by architects themselves. If the is, as it is in many cases, vulgar and co place, the fault lies either in the qual the works submitted or in the judgm the assessor; in either case the much-a public are blameless. As a profession infinitely fond of blaming the general for faults which are all our own.

Then we have assets in our favour In the Middle Ages it was the exc rather than the rule for one generat see the outcome of any great bu scheme; now we usually know that building can be completed as conceiv is possible to construct as it was possible before, and to be able to ca out results which used to be matters jecture and rule-of-thumb where stab concerned. We have in iron and concrete materials which, rightly used, us to carry out structures hitherto imp and the laws of perspective show us can accurately foresee the appearance buildings from any given point. W think of what the old builders were do, when all these difficulties could solved by rule-of-thumb methods, w admit that we have considerable adv now.

One of the present faults is we wis original, which I believe to be one greatest curses of to-day. The m reverses the volutes of an Ionic ca puts swags in unexpected places mind filled with details utterly unim and petty, but which may, never divert him from considering how produce a good building. It seems t

utterly out of place to use Pentelic marble London streets while brick and native ne are still forthcoming. As permanent vertisement hoardings many modern build- gs are excellent, which otherwise have no rits.

The nearest approach to a right treatment building to-day is, I believe, made in nerica. There we have modern conditions ling, if anything, more strongly against production of good work than they do re. You are told it is the land of haste, materialism, and of the almighty dollar, t designers and architects have put their use in order, in spite of these dis- vantages.

Recognising the importance of system, ir men are, where possible, trained in the ole des Beaux-Arts in Paris, which has ined generations of architects in classical ditions. They have accepted the facts of dern life and faced its problems, with the ult that the best buildings of the United tes have a simplicity and largeness of nception and a reason and dignity in their anning and detail, which is rare here. e American architect has been thought to a fit and proper person to design great lway-stations and other buildings relegated the engineer here, to the detriment of the auty of our towns. The great staffs with ich they carry on their work are in reality sociations of well-paid and well-trained n, who are masters of the various ojects needed for designing great build- gs, engineering, decoration, planning, and like. . . . It is clear to me that the ans by which the arts and crafts con- cted with building can be advanced now st be very different from those which tained centuries ago."

A hearty vote of thanks was accorded to e lecturer.

THE IMPROVEMENT OF LONDON:

THE LONDON SOCIETY.

THE Society has been formed with the ject of fostering an interest in London in e minds of its citizens and of all those in e kingdom who regard it with affection, d an inauguaral public meeting was held Friday, February 9, in the Galleries of e Royal Society of British Artists, Suffolk- eet, Pall-mall East, Sir Aston Webb, R.A., siding.

In a circular issued by the Society it is ted that abundant care and attention ve been bestowed upon those of its insti- ions which concern health, education, and litarian services, but little consideration s been given to its present appearance, its mediate improvement, or its future de- opment. "This is a serious thing for any y, and when it is remembered that London behind all the great Continental and erican capitals in these respects it is felt at it is time something should be done to ganise public opinion and purpose, so that the proper time, by the concerted action this Society, the owners, and the authori- s, something definite may be achieved. . . . well-known author has said:—'Until tional feeling is awakened and we realise at art is not a thing to be taken in specified ses at specified times—the ideal of the city a thing of beauty in all the aspects of eet, square, and park will receive but or support from the general public. . . .' Mr. Daniel Burnham, Chairman of the Fine ts Commission, U.S.A., who has done a eat deal for American cities in this way, s established several commissions with veral hundred representative men on each, d, although all very busy men, they scrupu- sly attend all meetings which concern the ture of their cities, and in New York it gratifying to note that at last their work aking practical form.

It must not be thought that the Society ns at grandiose schemes which could only carried out at the expense of slum aboli- n or other urgent necessities. It is fully ognised that the clearance of slum areas uld stand in the forefront of any improve- nt scheme, but such clearances should be sidered in relation to a general plan of ich, in due course, they form a part.

The work of the Society will be carried t by a Council or Executive Committee, and debates, lectures, and exhibitions will be organised frequently, and an annual report will be issued to all members. . . .

As soon as the Society has had the opportunity of justifying its existence and proving its value it hopes to obtain donations from wealthy citizens for special purposes, as the cost of the initiatory work will be very great, and could never be met out of ordinary subscriptions. This preparatory work will be the most valuable function of the Society, and it will require courage and inspiration, and deserves the sympathy and support of every good Londoner.

London is the metropolis of the world, but, taken as a whole, in scale modern London hardly deserves to rank with cities of secondary worth. This can only be remedied by a new general conception of its future development. As Sir Aston Webb has well said: 'All must agree that we want some advising, directing, and guiding hand, and that we want it soon, or it will be too late; it needs the wisest and most public-spirited men in this great city of ours to lay their heads together and hammer out a scheme. Such a call can hardly be ignored, especially when it is remembered that the task becomes lighter according to the measure of active support given to those who are prepared to make the nesessary sacrifices for the achievement of the objects of this Society.

Subscriptions (which are fixed at a minimum of one guinea per annum) may be sent to the Hon. Treasurer, Dr. Stephen Miall, LL.D., B.Sc., 116, Fore-street, London, E.C.

The subscription for country members (including all residing more than forty miles out of London) will be half a guinea, and for colonial members, 5s. . . .

A number of letters expressing approval of the idea were read, from which we take the following:—

The Right Hon. the Earl of Plymouth:

"Although it may be difficult to accomplish much in the immediate future, I am sure that such a Society ought to be able to lay the foundations of a more consistent and artistic treatment of London improvements, and I wish the movement all success."

Lord Claud Hamilton, M.P.:

"The formation of such a Society on a fairly wide basis is much needed, and is capable of achieving, if ably conducted, an immense amount of practical good at a time when London is being so largely reconstructed."

Sir W. H. Lever, Bart.:

"The wisest economy of public money demands prompt and immediate action. The loss of time and money caused by congested traffic would be appalling if they could be recorded and tabulated. The beauty of London and its great possibilities are lost in a tangle of narrow mean streets.

Sir E. J. Poynter, Bart. (President of the Royal Academy):

"The Society ought to be able to give material help to the Government, or to any municipal body charged with the erection of public buildings or the laying-out of new streets."

Lord Alexander Thynne, M.P. (Chairman of the Improvements Committee of the London County Council):

"I hope that some attention will be directed to the serious disadvantage which London suffers owing to the failure of successive Chancellors of the Exchequer to recognise its Imperial character as the capital of the Empire. In both Paris and Berlin the National Governments have shown great liberality in carrying out extensive public works, and in giving financial assistance to the embellishment of their capitals. In London, however, these matters are mainly left to the municipal authority, whose resources are limited, with the consequence that they are not humanly able to do more than attend to the more urgent requirements of locomotion, which year by year is increasing in volume and rapidity. Owing to this neglect on the part of the Imperial Government, the artistic side is necessarily subordinated to the utilitarian, although in all its recent undertakings the London County Council has shown itself ever ready to welcome criticisms and suggestions from expert architectural and artistic opinion."

Mr. John Belcher, R.A.:

"The beauty of London and Westminster has been steadily increasing, but there are so many contributary features which go to make up a fine city, that special need of some combined effort is necessary, and this no doubt the Society will endeavour to secure.'

Sir William Richmond, R.A.:

"I believe that great strength will be given to your enterprise, and great confidence granted to the public, by a union of thoughtful men in various branches of life and enterprise upon a question which is, in my opinion, not only æsthetic but ethical. More than ever is it desirable to establish such an institution as you have in contemplation; for as the mass becomes more enlightened and becomes, as it must do, more democratic, we are bound to teach the democracy that we cannot live by bread alone, but that the spirit of beauty and good must take a foremost place as a guide in the higher relations of man to man, into citizenship and collective endeavour, so that we may be proud of our city, proud of the men that make it beautiful, and proud of a great commercial nation which helps to that high result."

Mr. Philip Norman, LL.D., F.S.A.:

"Certainly a united effort is wanted for the purpose of instilling into the mind of the average Londoner some feeling for the beauty of the vast metropolis in which he ought by all means to take a special pride and interest. One difficulty is its size, which tends to prevent the inhabitants from feeling as if they belonged to it as a whole. Another lies in the fact that the City and much of the central part further west is now given up to offices, and those who use them as a means of acquiring fortune, or a livelihood, bestow their affections on some place of residence outside the metropolitan area, but easily reached by the present rapid means of locomotion. Perhaps, however, the greatest difficulty is that there is nothing in our modern civilisation which tends to promote any feeling of joy in beautiful surroundings. The modern man, whether brought up at Eton or Oxford or at a board school may develop into a strenuous man of affairs, an able administrator, or man of science, but he cares nothing about art. The beauty or ugliness of life are things altogether outside his point of vision. It is the mission of such a Society as that now contemplated, not to talk about art as of something extraneous, but to do what they can to persuade their fellow citizens that to dwell among beautiful surroundings is an added joy, a great and refining influence for which we all with one accord should earnestly strive."

Sir George Birdwood, M.D.Edin., K.C.I.E., C.S.I.:

"In going about the world I have learned the very old lesson that architecture is, in very truth and deed, the first of all the arts. It has become a commonplace saying with me, when advising on such matters, 'get you first good architecture, and every other good getting shall be added unto you.' During the past forty years, under mine own eyes, numberless noble buildings and monuments have been added to London, but for the most part there has been a really remarkable failure in the co-ordination of them with their surroundings that is a failure 'in street planning,' to use the convenient current phrase. Far worse have been the instances of the disturbances of such correlations; as in the terrible and appalling marooning of the glorious Marble Arch, which, moreover, has been sunk. Two other daily outcrying evils in the street planning of London are:—(1) That in the rebuilding of old streets the rows of new houses are often raised to a far greater height than the breadth of the street they make—a sanitary error as well as soleciesm in street planning; and (2) that in cutting new streets through old streets the razor ends left of the latter are often actually rebuilt as razor ends, instead of being taken advantage of, as on the Continent, to secure the most picturesque architectural effects. I would fain hope it may be to these sins of ædilic omission and commission that the new London Society will give some of its earliest attentions."

It was also mentioned that the Society is receiving the support of the Right Rev. The Lord Bishop of Oxford, Sir Lawrence Alma Tadema, Sir Alfred East, A.R.A., Sir George Frampton, R.A., Mr. H. G. Wells, Mr. Harry Furniss, Mr. Phillip Morrell, M.P., and others

Among those present were:—Sir Thomas Brock, Professor Beresford Pite, Professor Lethaby, Sir John Benn, Captain Swinton, Mr. Harold Cox, Mr. Halsey Ricardo, Mr. T. Raffles Davison, Mr. Max Clarke, Mr. Francis Hooper, Mr. H. W. Wills, Mr. W. J. H. Leverton, Mr. G. E. Nield, Mr. H. H. Bartlett, Mr. Raymond Unwin, Mr. E. P. Warren, Mr. J. D. Crace, Mr. John Slater, Mr. H. H. Statham, Mr. A. R. Jemmett, Mr. H. J. Leaning (Hon. Secretary, *pro tem.*), and others.

The Chairman

briefly outlined, not what the Society ought to be, or would be, but the motives of those who thought that its formation would be useful or needful; and he said he would be content merely to indicate the course of procedure at what was specifically a preliminary meeting. The first object of the London Society was to interest Londoners in London; and they would first ask the meeting to approve the formation of such a society—a body which should inform public opinion, and should in so far as it represented public opinion—make it articulate. The promoters of the Society wanted to create a public opinion which would support public authorities in carrying out different schemes which might appear to be beneficial for London as a whole. The artistic side of the management of London had received comparatively little attention, and it had been thought that, if painters, sculptors, architects, engineers, surveyors, members of Parliament, and all men interested in art, should discuss these matters and inform the public from time to time, by degrees works of which London stood in urgent need might be carried out. The management of London was cut up into so many parts that it was difficult for anyone to think of London as a whole and see what it required. His work had brought him in contact with many Government Departments, and he was himself a member of a Borough Council, and he was perfectly convinced that the desire of those bodies was to do the best they could for London; and if they were backed up by public opinion they would do a great deal more than they could at present. They would want the counsel of the very best men in London, and the assistance of such bodies as the Royal Academy, the Royal Society, the Royal Institute of British Architects, the Institution of Civil Engineers, the Arts and Crafts Society, and all societies concerned with the development, and especially the artistic development, of London. The Royal Society of Arts had already promised to help. Town-planning schemes were springing up all round London, and if they were carried out without reference to the whole scheme confusion would arise, and the best results would not be secured. Then there was the park system. All American cities have a park system, and London, as it developed, would need open spaces round it. Vast sums were expended in removing slums from the centre, with the result that slum areas were formed a little further out only to be bought out at great cost by the next generation. London had a beauty of its own—a softer beauty than the beauty of the Continental cities; and they wanted to get people to realise what beautiful things there are in their city, and what terrible things also. If a body could be formed to set the driving power of public opinion in motion, then, though its aim and its undertaking might seem tremendous, great effects might come from small beginnings—if zeal, knowledge, and enthusiasm inspired them. So the second object with which they met was to give a mandate to the Committee which had called this meeting to draw up a possible constitution, and then to call another meeting. They wanted, besides, a President of acknowledged authority and wide outlook, and a Committee full of enthusiasm and taste, tempered with prudence and foresight.

Professor Beresford Pite

moved the following resolution:—"That this meeting heartily approves of the formation of the proposed Society, and recognises the need for united effort on the part of those interested in the welfare of the metropolis, in order to advance the practical improvement and artistic development of London." He said that the recognition of united effort was the subject-matter of the motion, and he thought that statement of the need of united action ought not to be necessary in the great metropolis of this highly-organised Empire. But London needed to recognise its need. There has been a quickening of the recognition of the artistic interest of London, and that was something to be thankful for. The architectural qualities of London might fairly be described as haphazard: they were many and varied and great. And the haphazard character was probably due to the haphazard line of the river. London was not a city which either in its past history or in its present condition laid itself out obviously as other great cities had. London remained still a riverside port, a city of valleys and hills, and vast and wonderful was its relation to the river. How great had been the improvements in London since the Thames Embankment was undertaken! The view along the Embankment, with St. Paul's at one end, Somerset House in the middle, and the Houses of Parliament at the other end, gave us a line of communication of great artistic quality, and weakened our timidity and fear of London as an artistic city. But there was the south side of the river, which lay fallow, though an important commencement had been made at one end with the County Hall scheme, and we must take care that due attention was given to the whole of the southern side, which really commenced with the Palace at Greenwich and extends up to Lambeth, and beyond, was the Palace of Lambeth. We should probably some day, with the assistance of the Board of Trade, extend London to Hampton Court, giving another splendid palace to complete the link. As to proposed improvements, he almost trembled when some amateur came upon the scene with a new scheme for a fresh rearrangement of London—some rounding off of a corner or other; and it must be part of the Society's work to subdue these unruly proposals and get them into harmony with others, and so, in the long run, attain to good results. London had suffered terribly from the uninstructed enthusiasm of its lovers and from want of foresight in public works. One of the needs of London was pertinacity, so that when a great ideal was set forth it should be carried out. London also stood in need of a great ideal. As to the want of an ideal, a more conspicuous want of it could not be found than the memorial in London to King Edward afforded, and when the question arose of opening up the view of St. Paul's or of Southwark Cathedral, London suffered from the want of well-formed opinion of what London might be, and what we could make it with a little help and perseverance.

Mr. Harold Cox,

in seconding, protested against the suggestion of Lord Alexander Thynne that the public exchequer should be made responsible for the improvement of London, which was rich enough to take care of itself, and did not need to be subsidised by poorer people in the rest of the kingdom. And he objected to the view that the public did not love beautiful things. He believed they did, but they loved them in an unorganised way. London was fascinating, in spite of her faults, but we want her to be more fascinating, and we want to be prouder of her. In India he had seen some of the most wonderful buildings the world contained, such as the Palace at Delhi, the Taj Mahal and the Fort at Agra; they were a joy, and our object ought to be to make our buildings rival those, so that people would come to see London, not because she is the greatest and richest capital in the world, but because she had the most beautiful buildings in the world. We had to think not of the present generation alone, but also of the fact that buildings outlive those who design and build them.

Sir John Benn,

in supporting, said he hoped financial considerations would not deter those who were pushing that movement.

Sir Thomas Brock

also supported, and said that there was lack of intelligence when great undertakings were initiated in London, but usually artistic side was not considered, because was suddenly sprung upon us. A Society such as that suggested would be able to meet difficulty with valuable advice to the authorities at the proper moment.

Mr. T. Raffles Davison

having spoken, remarking on the fact that there was no art committee connected with the London County Council, the resolution was carried unanimously.

Captain Swinton

moved a resolution authorising the existing Committee to draft a constitution and call a meeting to decide any further action. He said that in Edinburgh there was a Society much like the London Society, the Cockburn Society, which had existed for seventy or eighty years. Its object was to look after the beauty of Edinburgh and see that nothing horrible was done, and the value of that Society was great, for it was extraordinary how few bad buildings were put up in that city and how careful people were to conform to the artistic standard. to the London County Council, the Committee which did more for the good of London was the Committee which did the dullest and most laborious work, *i.e.*, the Building Act Committee, and if that Committee had been in existence before Council was established the Marylebone-road frontages would never have been brought forward. The Committee kept back frontages and saw that there was no trespass on the public rights. There was an idea that the Improvements Committee of the Council did not spend much money and did not much work, but during the last sixteen years the Council had spent 11,861,000*l.* on improvements. Someone had to pay for improvements, and when the Society got it working order it should proceed very quickly and in a conciliatory way, keeping its doings to itself, for when a public body talked about its proposals they set up the value of property and improvements became prohibitive.

Mr. Carõe seconded the motion. Mr. Raymond Unwin supported, and it was carried unanimously.

A vote of thanks to the Chairman presiding brought the proceedings to a close.

INCORPORATED CLERKS OF WORKS' ASSOCIATION:

ANNUAL DINNER.

On the evening of Saturday, the 10th inst., the twenty-ninth annual dinner of the Incorporated Clerks of Works' Association was held at the Holborn Restaurant, Mr. Gerald C. Horsley, F.R.I.B.A., presiding.

The loyal toast having been honoured, the

Mr. R. H. Henley proposed "The Architects and Surveyors." He said that when one considers that the architectural profession is one of the noblest, and calls for a large amount of study from those who aspire to be masters of their art; that a successful architect has to be an artist of a high order, a competent engineer, a good lay lawyer, and with the gentleman in all things, with great responsibilities, one realises that he is not appreciated by the public as he should be. The surveyor, too, is a gentleman of tried integrity, who has to show great tact and discretion, and whose adjusting and balancing powers are very prominently developed.

Mr. Edward Warren, F.S.A., F.R.I.B.A., who replied for the architects, said it was a particular pleasure to him to meet gentlemen of their profession in such circumstances because, like most architects, his relations with clerks of works, though friendly, were of a workaday order. About A.D. 1600, when the authorities of Trinity College, Cambridge, set out to build a new court, they appointed one, Wiggrell, master mason or master of works. He appeared to have been architect, contractor, and also clerk of works; but the venture resulted in disaster to him, for he lost one hand, was landed in a law suit. It was evident from this that at the start their professions were one and the same, but now, owing to the complication of affairs, it was necessary for their functions to be divided. The archi-

to rely upon a good clerk of works for proper execution of work, for no matter clever a drawing might be, without proper ution it would bring credit to nobody. success could not be had without con- nce, and if confidence was not given it ld not be received.

r. Guy Nicholson also responded, on behalf the surveyors, and said there was nobody nected with building with whom the sur- ors had more sympathy than with the k of works, for both had to please the nt, the architect, and, as far as possible, builder—it was impossible to please all e. The average person did not rightly reciate the surveyors and clerks of works. hey did their work rightly they had to luce a successful result without friction it was only when trouble arose that it was ised there could be any difficulty about r work.

The Worshipful Company of Carpenters" proposed by Mr. Joseph Davies, who said as an association they need to speak of the Carpenters' Company, who house splendidly and treat them royally. The age person had no idea of the work this pany did, but most of those present knew their work at the schools in Great hfield-street, and if there were any truth he wail we sometimes hear about the rioration of the British workman, it was he fault of the Carpenters' Company.

ie toast was acknowledged by Colonel ton, who said they were trying to do a , solid, honest work for the community at , and he knew it was appreciated by all es of society. In addition to the work he past, they had more to do in the re. The late Sir Henry Harben had left em a convalescent house at Littlehampton, re there were fifty beds, and if any mem- of the Association who were in need of benefits such an institution could bestow would receive favourable consideration ey would communicate with Mr. Freeman arpenters' Hall.

proposing "The Builders," Mr. John ams said it had been his good fortune to with builders who had always been y to meet him and do what was fair and nable, and

. Henry T. Holloway, jun., in reply, said, ugh he was one of the younger builders nt, he had now had nearly eighteen years' rience in the trade, and he could say that y all the clerks of works he had met had thoroughly good men—loyal to their and just to the builder. If the builder convince the clerk of works that he ded to carry out all he had undertaken , he would get much help from the clerk orks, who would act as mediator between tect and builder.

e Chairman proposed "The Incorporated s of Works' Association," and said he not going to sing its praises, as all who members were acquainted with the did work it had done, was doing, and going to do. He thought every clerk of s who was eligible for membership should and those who were not eligible should themselves so. They were all of opinion a clerk of works is a very exceptional n, but there was one side of him which very much like the rest of mankind. If rk of works lived alone and worked , and did not meet his colleagues and w-craftsmen, he was apt to get in a rc.

. C. W. Denny, in response, said it was ssible to lay down hard and fast rules what a clerk of works should do, and, be varied so much, he must adapt himself rcumstances so as to get the best job he for the class of work, and always nber he was the representative of the tect on the job.

he Visitors" was proposed by Mr. John ison, and Mr. W. Harvey Stringer, in owledging the toast, suggested that many ess firms associated with them would be to assist in their work, and might do so coming honorary members and subscrib- small sum annually.

e proceedings closed with the toast of Chairman," proposed by Mr. Lake, to Mr. Horsley briefly replied.

A NEW BUILDING IN PALL MALL.

extension of the United Service Club is in progress, the architects being Messrs. pson & Walford, of Leadenhall-buildings, The building was erected originally 1826 by John Nash, and Decimus Burton additions in 1858-9. The new structure over the land hitherto occupied by Nos. nd 119, Pall Mall.

LAW REPORTS.

COURT OF APPEAL.

(Before Lords Justices FARWELL and KENNEDY.)

Case under the London Building Act: Minturn *v.* Barry.

IN this case the plaintiff applied last week for leave to appeal from a decision of a Divisional Court refusing her leave to appeal, and also for an extension of time in which to appeal.

Mr. Hudson, K.C., in support of the application, said the plaintiff, Miss Minturn, was the freeholder of a house known as 14, Chelsea-embankment, which she had acquired some years ago. About the time that she acquired the house she discovered that a wall at the rear of the house was very damp, and she endeavoured to put that right, but without success. This dampness caused injury to the health of her servants, and she then served a party-wall notice upon the adjoining owner, the defendant, Sir John Wolfe-Barry. That was on June 22, 1910, and the notice was given under sect. 68 of the London Building Act. The notice expressed the wish to excavate on the side of the defendant, and try to remedy the defect by putting in some impervious material. It was found that the wet came into the wall from the defendant's side. The case then went in the ordinary course under the Act to two surveyors, and the two referred it to a third, and the plaintiff then appealed from the decision of the third surveyor, who said that the wall was not defective merely because it was damp. From that decision the plaintiff appealed to the County Court, there being a right of appeal under the London Building Act. In the County Court the defendant took the objection that the wall could not be held to be defective merely because of damp, and the County Court Judge so decided. From that decision the plaintiff appealed to the Divisional Court, where it was held that a party wall could be defective because of damp, within the meaning of the London Building Act. The County Court Judge then retried the case on the material facts. It appeared that the defendant had a creeper growing upon the wall, which the plaintiff complained of as causing dampness. The County Court Judge seemed to think that the creeper ought to be preserved, and that the plaintiff ought not to do anything to it.

Following some remarks made by the Judges in the Divisional Court upon the question whether the plaintiff ought to be allowed to execute work upon the adjoining owner's side, the County Court Judge held that the previous history of the wall might be gone into. He (the County Court Judge) then went into the history of the wall, when he found that originally the plaintiff's party wall was erected upon the top or embodied part of the old garden wall. He then said that if a building owner chose to make use of a wall such as a garden wall, which might have been quite sufficient for the purposes of a garden wall, he could not complain and say afterwards it was damp and defective, and that he could go on the building owner's side and remedy that defect. He made a certain order by which the plaintiff was precluded from going on the defendant's side of the wall and doing something which it was impossible to do on the plaintiff's side. He said that the plaintiff could have an independent wall inside her house. Another alternative was that the plaintiff could cut the wall in two vertically and put in between the two parts of the wall an impervious course.

Lord Justice Farwell asked what jurisdiction the learned County Court Judge had for making such an order.

Mr. Hudson said that his submission was that the County Court Judge had no jurisdiction to make any such order. He had made an order that the plaintiff was not to do any work upon the defendant's side. He contended that that was directly contrary to the Act. The object of the London Building Act was the protection of the public health and for protection from fire. Of course, the plaintiff did not want to inconvenience Sir John Wolfe-Barry.

Lord Justice Farwell: We have only to do with people's rights. He and Lord Justice Kennedy both thought there was a point which was arguable, and that the Divisional Court ought to have given leave to appeal. Leave to appeal would therefore be given.

Mr. Hudson then contended that the plaintiff's time for appealing ought to be extended. What the plaintiff did after the decision was to consult a surveyor as to its effect, and whether she could carry out the particular work, and it was through that that she had allowed the time for appealing to run out. It was the plaintiff herself who was responsible for the delay.

Lord Justice Farwell: How much out of time is she?

Mr. Bliss, for the defendant, said that the plaintiff's time for appealing expired on December 22, and he contended that in the circumstances her time for appealing should not be extended.

At the conclusion of the arguments, their Lordships granted the extension asked for.

Builder and Building Owner's Dispute.

IN a Divisional Court of King's Bench recently, before Mr. Justice Hamilton and Mr. Justice Lush, the case of Elms *v.* Hemsted was mentioned. Mr. Cecil Walsh appeared for the plaintiff and Mr. Bartley Dennis for the defendant.

Mr. Cecil Walsh said he appeared for the plaintiff in this case, and he asked for an extension of time for an appeal to set aside the award of an arbitrator, Mr. Salter, an architect. The action arose out of a contract by the plaintiff to build a house for Mr. Hemsted at Kentbury, Berks. There was a dispute as to certain extras, and a claim was made by the plaintiff for 169*l*. The matter was referred to an arbitrator, and last July an award was made, and the last day for moving to set aside the award was December 21. The award was contained in a letter dated July 18, and was in these terms:—"No further sum is due to Mr. Elms on the work. There is really a sum due to Mr. Hemsted." He submitted that such an award was bad on the face of it. Apart from that point, the plaintiff had delivered accounts showing 169*l*. due to him for work done under the contract and extras, and the defendant, it appeared, had made a counter-claim, on which the arbitrator had made an award, and on which the plaintiff had never been heard at all. In defendant's counter-claim there was a sum of 77*l*., of which plaintiff had never had any particulars. He admitted the plaintiff ought to have moved before, but there had been constant correspondence, and his client could not get a correct copy of the contract, nor yet the details of the award. It was admitted in the affidavit made by the arbitrator that extras were ordered, and also that there was a penalty clause if the work was not completed by a certain date.

Mr. Bartley Dennis, for the defendant, opposed the motion for an extension of time. The whole amount claimed did not come to much more than the contract price of the house.

Their Lordships held that there was some merit in the application, and extended the time for appealing to set aside the award of the arbitrator for eight days

London Drainage By-Laws.

AT Marylebone Police Court recently Mr. Edward White, Chairman of the London County Council, was summoned before Mr. Plowden, at the instance of the Marylebone Borough Council, for within the last three months constructing at 21, Upper Berkeley-street soil pipes of iron instead of drawn lead with proper wiped plumbers' joints, as required by the County Council drainage by-laws, made under the Metropolis Management Acts of 1855 and 1899; and also for carrying out the work without having previously deposited "plans, sections, and particulars" of it with the Borough Council.

Mr. Freke Palmer said that the by-laws required that plans of any sanitary work that was contemplated should be deposited fifteen days before it was carried out; but, as a matter of fact, proper plans had not even now been received. The by-laws permitted an outside soil pipe to be of iron or lead, but required that an inside soil pipe should be of lead and lead only. When written to on the subject, Mr. White submitted plans, but they were returned as they did not accurately represent the work, and were not in accordance with the by-laws. Mr. White thereupon wrote that he had not the slightest intention of altering the iron soil pipe. The Borough Council had, therefore, no alternative but to institute these proceedings.

Mr. White urged that an iron soil pipe was far better from a sanitary point of view than lead, and, since a very small portion of the pipe in question was inside the house, he claimed that it could fairly be described as a soil pipe outside the house, and could therefore be of iron. He admitted that, owing to the illness of his son, the plans were not submitted at the proper time.

Mr. Plowden said the Council were right in taking proceedings against Mr. White in respect of the plans, and inflicted a nominal fine of 10s. with 2s. costs. As to the soil pipe, as far as he could make out, it was half inside and half outside the house, and there

was nothing in the by-law which provided for a pipe so situated. The Council had not convinced him that the whole pipe was inside, and they could not succeed. It was really a drawn battle. Each side was right and each was wrong. He dismissed the summons, but was willing to grant a case.—*Times*.

LONDON COUNCILS.

Acton.—The following plans have been passed:—Mr. R. T. Butler, 10, Brougham-road, Acton, laying out three new streets, also twenty-eight houses, Westbourne-avenue; Mr. Edward Evans, 253, Lavender-hill, S.W., eight houses, Balfour-road; Messrs. Vendervell & Co., extensions to factory, Warple Way.

Bermondsey.—The following plans have been passed:—Mr. J. W. Atkins, builder, 57A, Weymouth-street, Portland-place, W., cinematograph theatre, Southwark Park-road, for Messrs. Nicholson & Wood, Ltd., 256, Southwark Park-road, S.E.; Mr. McLeod, Secretary, South Metropolitan Gas Company, 709, Old Kent-road, S.E., alteration of frontage line and erection of buildings, Rotherhithe street; Mr. H. D. Searles-Wood, architect, 157, Wool Exchange, E.C., alterations of frontage lines, Rotherhithe-street; Mr. W. Nash, builder, Crown Works, Childers-street, Deptford, S.E., additions to Electric Works, Storks-road, for Messrs. Young & Rochester; Mr. W. T. Walker, architect, 40, Finsbury-square, E.C., factory, Tidal-place, for Messrs. H. Grant & Co., Riley-street, S.E.

Croydon (County).—The tender of Messrs. James Smith & Son (Norwood), Ltd., at 2,235*l*., has been accepted for additions and alterations to buildings at the Surrey-street Waterworks. Plans have been passed for Mr. R. B. Manser, 6, Guy-road, for twenty houses in Woodside Court-road, also for Mr. G. Parris, 58, Shelsdon-road, for five houses in Cedar-road.

East Ham.—Plans and estimates prepared by the Engineer have been approved for making-up Sandford-road and Mitcham-road at a cost of 581*l*. and 737*l*. respectively. The foul sewer in High-street South is to be extended at an estimated cost of 194*l*. Plans have been lodged by Mr. H. C. Seymour for ten houses, Haldane-road, also by Messrs. Mitchell, Lucas, & Mitchell, for a public-house at the corner of Macaulay-road and Barking-road.

Hendon (Urban).—Application is to be made to the Local Government Board for sanction to borrow 1,033*l*., the estimated cost of kerbing, channelling, and paving works in part of Lawrence-street, Mill Hill. The following plans have been passed:—Mr. H. A. Champ, four houses, Hammers-lane, and seven houses, Shakespeare-road, Mill Hill. Second Hampstead Tenants, Ltd., six houses and eighteen flats, Addison-way; six flats, Hampstead-way; and six houses, Child's-way. Mr. Charles Phillips, six houses, Uphill road, Mill Hill; Mr. Edward Streather, sixty six houses, Finchley-road, Wentworth-road, and Marathon-avenue, Golder's Green. Mr. E. A. Cooper, garage, corner of Hodford and Woodstock roads.

Lambeth.—A plan has been lodged with the London County Council by Mr. C. G. Miller on behalf of the London and South Western Bank, Ltd., for the erection of a building on site of Nos. 335 and 337, Norwood-road.

Marylebone.—The tender of Messrs. F. & H. F. Higgs, of Station Works, Hinton-road, Herne Hill, at 1,870*l*., has been accepted for the execution of the work of constructing a new wharf wall at the Council's depôt.

Poplar.—The tenders of Messrs. Thomas & Edge, at 4,668*l*., and Messrs. Fairweather & Ranger, at 2,485*l*., as sub-contractors for steel-work, have been accepted for the erection and completion of the superstructure of the extension to the generating-station. Plans have been passed for Messrs. W. T. Bachelor & Sons, for the erection of Bethel Chapel, High-street; also for Messrs. C. & E. Morton for the erection of an additional block at Docksside Preserving Factory, West Ferry-road.

Southgate.—Application is to be made to the Local Government Board for sanction to borrow 6,764*l*. for the erection of thirty-six cottages in Chase-road and Chelmsford-road. Plans, sections, and estimates prepared by the Surveyor have been approved for the making-up, etc., of Chimes-avenue, Palmer's Green. The following plans have been passed:—Messrs. C. J. Newby & Brothers, warehouse, etc., rear of No. 39, Chase-side; Mr. J. Plumb, six houses, Avenue-road; The Garden City Laundry, Ltd., extensions to laundry, Farm-road.

Wandsworth.—The tender of Messrs. J. Mowlem & Co., Ltd., at 1 052*l*., and schedule prices for extras or omissions, has been accepted for paving with Aberdeen adamant (kerb with Cornish granite) part of Roehampton-lane, Putney. A plan has been passed for Mr. E. Worssell for alterations and additions to the Bungalow, Chartfield-avenue, Putney.

Watford.—The tender of Mr. H. Brown has been accepted by the Rural District Council, at 1,009*l*., for making-up a road on the Nascot Estate; as has also the tender of Mr. H. Williams, St. Albans, at 1,664*l*. 12s. 6d., for making-up certain Radlett roads.

OBITUARY.

Mr. T. M. Rickman.

It is with much regret we record the death, on February 10, at his residence, No. 64, Philbeach-gardens, S.W., of Mr. Thomas Miller Rickman, F.S.A., Assoc.Inst.C.E., F.S.I., and formerly of No 8 Montague-street, W.C., aged eighty four years. Mr. Rickman, the son of Thomas Rickman, F.S.A., was elected an Associate of the Royal Association, and was President in 1854-5; and he was President of the Surveyors' Institution, served as a member of the Council; in 1852 he became a member of the Architectural Association, and was President in 1854-5; and he was President of the Surveyors' Institution, 1899. He practised with Mr. E. J. Burr under the style of Messrs. Rickman & Burr, at No. 5, Queen-square, Bloomsbury, as architects and surveyors; in March of last year he retired from practice "without" (in his own words) "severing the friendship which has continued during our business connexion of the last forty years." The firm continued to carry on the business under the style of Messrs. E. J. Burr & Son, at No. 5, Queen-square. Mr Rickman was member of Council of the Architects' Benevolent Society, and Vice-President, 1909-12; a few years ago he gave a most liberal subscription to the New Premises Fund of the Architectural Association. Mr. Rickman was a well-known though somewhat retiring member of the profession, and he will be missed by the friends and acquaintances who knew him well.

Mr. Alexander Graham.

We regret to announce the death on February 9, at his residence, Carlton-chambers, No. 4, Regent-street, S.W., of Mr. Alexander Graham, F.S.A. Mr. Graham was a pupil of J. H. Stevens; he was elected a Fellow of the Royal Institute of British Architects in 1879; he was a Vice-President, 1893-7; Honorary Secretary, 1899 1909, and member of Council; and he served upon the Literature and Records Standing Committees from time to time within the past fifteen years or so. Mr. Graham prepared the plans and designs for the new buildings, Cancer Hospital, Fulham-road, S.W. (illustrated in the *Builder*, September 26, 1885), County Hotel, Newcastle-on-Tyne; Sandlebridge (Cheshire), "Lewis," Colony for Epileptics, 1900-4, erected at a cost of nearly 60,000*l*., and consisting of separate and, for a large number, single-floor houses, with hall, workshops, infirmary, theatre, chapel, etc., in the Elizabethan style; Montreal General Hospital, 1887; warehouses in Moor-lane, E.C., for Messrs. Welch, Margetson, & Co., 1898-1902; blocks in St. James' Court, Buckingham gate, for the Law Guarantee and Trust Society; premises in Elm-street, Gray's Inn-road, for Messrs. W. H. Wagstaffe & Sons; and, one of his most recent works, the new buildings in Copthall-court and Drapers'-gardens, E.C., for the Armourers' Company. He acted as consulting architect, with Messrs. Chorley, Connon, & Chorley, as the architects, of the Women's and Children's Hospital, Leeds, 1901-2; and as assessor in several important competitions, including those for the Weston-super-Mare Pavilion, Wandsworth Guardians' Offices, Bury Infectious Diseases Hospital, Leigh Infirmary, and Rochdale Infirmary. In 1904 Mr. Graham was elected a member of Council of the Building By-Laws Reform Association. He and Mr E. T. Hall were nominated to represent the Institute at the British Congress on Tuberculosis in London, July, 1901; he was a contributor to Dr. Russell Sturgis's "Dictionary of Architecture"; he was appointed (1904) British member of the Permanent Committee. International Congresses of Architects, and was member of the Executive Committee, Seventh Congress, in London, 1906; he was the author of "Roman Africa," his "Sketches in Tunis" we illustrated on January 10, 1885, and his drawings of Famagusta Citadel, the Temple at Dougga, Tunisia, and the Arch of Carscalla at Tebessa, on August 11, 1900. Mr. Graham was a liberal contributor to the Architectural Association's New Premises Fund. He was a Vice-President, 1906-7, of the London Topographical Society, and for a long period a member of the Council; and he was ho treasurer of the National Photographic Association.

Mr. C. Smith.

We regret to also announce that Mr. C Smith, J.P., and Senior Magistrate of ing, died suddenly of heart failure police court on February 6. Mr. Smith seventy-nine years, was one of the respected inhabitants of the town, wh practised as an architect during more fifty years; he was member of the Council in 1868-83, Mayor in 1874-6, ex-man of the Reading Brewster Session for many years Chairman of the R Municipal General Charities. Mr. Smit elected, in 1854, an Associate, and, in Fellow of the Royal Institute of British tects; he practised latterly with his so Charles Steward Smith, F.R.I.B.A., as Charles Smith & Son, of Friar-street, Re Of his chief architectural works we may tion the following:—Queen's Jubilee Farnborough (1898); Infectious D Hospital, Tilehurst, for Reading Bo Council; and the "Joseph Henry W Council School, East Reading, in three with a technical and domestic instructio for a total of 1,320 pupils (1903-5); alte and extensions, Reading School (1908) Wantage Hall, built four years ago, at of about 30,000*l*., for the principal, staf seventy-five resident students of Uni College, Reading; enlargement, at a mated cost of 20,000*l*., of the Royal Be Hospital (1909); Henley-on-Thames Infir Surrey Union Hunt Kennels, for Lorc combe, at Bookham; St. John's Hall a church buildings, Mortimer, Berks; new ing wards, mortuary, etc., and gene modelling of the Union Workhouse, (1909); extensive enlargements and im ments of the workhouse premises and bu for the Unions of Chipping Norton, Ware ford-on Avon, and Hatfield (with the w infirmaries), Easthampstead, Wallingfor the Children's Homes), King's Lynn (w infirmary and new wing), and many similar works in the county and else In 1901 the firm were nominated to c for the new workhouse, Wigan. Mr. leaves three sons and five daughters.

M. Moreau.

The *Times* records the death of M. M Moreau, the well-known sculptor and of the 19th *Arrondissement* of Paris. his works are the group known as Exiles" in the Tuileries Gardens, the statue on the fountain in front of the Français, and "La Fileuse" in the bourg Museum. Mathurin Morea awarded a gold medal at the Paris Ex of 1889. In his capacity as Mayor created an officer of the Legion of Ho

TRADE CATALOGUES.

Messrs. Paul Piketty & Co., of Pari forced concrete engineers ("Piketty" have recently opened London offices 18, Bloomsbury-street, W.C. The fir us a copy of their standard spec of materials to be employed and to be adopted in the construct reinforced concrete structures on the system. This specification is very si the corresponding documents publishe the leading firms making a specialt inforced concrete in this country. with the quality of cement, sand, ag and water for concrete, the quality steel recommended, and gives general tions for the preparation of concrete, struction of falseworks, and the execut testing of reinforced concrete work make a special feature of rendering to architects, engineers, and surveyo do not deal direct with owners.

The Fawcett Construction Compan Tunnel-avenue, East Greenwich, for an illustrated price-list and table of s of the well-known "Mon'lithcrete" Illustrations are given of the new de dock on the Humber side, at Imm near Grimsby, where the "Mon'li floor and roof constructions have b ployed for the general offices adjoin Great Lock, the Great Central Railw warehouse, Barnsley, the Peabody-bui Camberwell Green and Lillie-road, and Somerset House, London, where of 25 ft. clear span, designed for a load of 2½ cwt. per foot superficial, constructed on this system, without ca disuse of the room below or dama enrichments of its fine Adam ceili firm also send us a price-list "Edwardian" chimney-pot.

List of Competitions, Contracts, etc.

For some Contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) are advertised in this number**: Competitions, iv.; Contracts, iv. vi. viii. x.; Public Appointments, —. Auction Sales, xx.

Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Competitions.

EBRUARY 17.—**London, E.C.**—NEW OFFICES.—Port of London Authority invite preiary sketch designs for new head offices Trinity-square, and for laying out remainder nd as a building site. See advertisement in of November 24 for further particulars.

EBRUARY 17.—**York.**—SCHOOL.—The York cation Committee invite competitive designs a public elementary school. See advertise- in issue of January 12 for further iculars.

ARCH 15.—**Drammen, Norway.**—RAILWAYTION.—Particulars from the Norges Statsr, Christiania.

ARCH 15.—**Prestatyn, North Wales.**—NG-OUT ESTATE Lord Aberconway and the tees of the Prestatyn Estate invite designs laying-out of the estate Three premiums offered. Particulars from 33, Henriettat, W.C. See advertisement in issue of iary 5 for further particulars.

ARCH 16.—**Harrow.**—PUBLIC OFFICES.—The row-on-the-Hill U.D.C. invite tenders for the rgement of and alterations to their Public es. See advertisement in issue of January 5 further particulars.

ARCH 25.—**Colchester.** SCHOOL.—Limited to itects practising in the borough.

ARCH 30.—**Edinburgh.**—MEMORIAL TO KING ARD.—Limited. See Competition News, 51, February 9.

ARCH 31.—**Manitoba, Canada.** PARLIAMENT DINGS. The Government of Manitoba e designs for the new Parliament buildings e erected in the City of Winnipeg. See rtisement in issue of February 9 for further iculars.

PRIL 4.—**Portland.**—COUNCIL OFFICES.—Prems 50*l.* and 10*l.*

PRIL 20.—**Birmingham.**—BLUE COAT SCHOOL. mited to local architects. Assessor, Mr. H. Hunt, F.R.I.B.A. Particulars from the etary, the Blue Coat School, Birmingham.

AY 1.—**Society of Architects' Travelling** llentship. Design for a Town Hall. 25*l.* medal.

AY 1.—**Wombwell.** SWIMMING BATHS. Wombwell U.D.C. invite designs in comtion for public swimming baths, to be ted in Hough-lane, Wombwell, Yorkshire. e prizes of the value of 40*l.*, 30*l.*, and 20*l.* ectively are offered for the designs placed second and third respectively by the ssor. See advertisement in this issue for her particulars.

NE 28.—**Hale, Cheshire.**—TOWN PLANNING EME.—Premiums 50*l.* and 25*l.* Particulars n the Council Offices, Hale

LY 1.—**Dusseldorf.**—A plan for the nsion of the City of Dusseldorf. Premiums ,000*l.* to 375*l.* Conditions on application to Chief Burgomaster, Dusseldorf. A translaappeared on page 366, September 29.

GUST 30.—**SAXON SNELL PRIZE.**—Fifty neas; with medal, is offered for essay on a pital subject. Particulars from the Sanitary itute, 90, Buckingham Palace-road, S.W.

O DATE.—**Jordanhill, Glasgow.**—PROPOSED NING COLLEGE.—Limited to six firms, named Competition News, December 1, 1911, page 625

NO DATE.—**Warrington.**—SCHOOL.—The rrington Education Committee invite comtive plans for the erection of a public entary school. See advertisement in this e for further particulars.

Contracts.

BUILDING.

The date given at the commencement of each paragraph is the latest date when the tender, or names of those willing to submit tenders, t be sent in.

EBRUARY 17.—**Bandon.**—COTTAGES.—For erecof nineteen labourers' cottages. Plans, cifications, and tender forms from Mr. A. nes, Clerk, Council Offices, Bandon, Ireland. posit of 5*s*

EBRUARY 19.—**Hunstanton.**—ADDITIONS.—For itions and alterations to the Convalescent me. Forms of tender and quantities by the itects, Messrs. Macalister & Skipper, 20, Andrew's-street, Cambridge, on deposit of 2*s*.

EBRUARY 19.—**Stockton.** SCHOOL, ETC.—For ition of new deaf school, handicraft, and tery centres in Regent-street, Nelson-terrace, Ropery-street Quantities, on deposit of 2*s*., from the Architect, Mr. E. G. Fletcher, nce Regent-street, Stockton-on-Tees.

FEBRUARY 20.—**Banchory.**—ADDITIONS.—For additions to central hall, public school. Plans with Messrs. Wilsons & Walker, architects, Aberdeen.

FEBRUARY 20.—**Bilston.**—FIRE-STATION, ETC. For erection of a new fire-station in Market-street, also erection of a new sanitary depôt and foreman's cottage in Lunt-lane. Plans seen, and specifications, quantities, and form of tender from Mr. V. Turner, A.M.Inst.C.E., Surveyor's Office, Town Hall, Bilston, on deposit of 2*l.* 2*s*.

FEBRUARY 20.—**Burnley.**—RIVER WALL.—For construction of a concrete river wall at Altham sewage works. Specifications from the Borough Engineer and Surveyor, Town Hall, Burnley.

FEBRUARY 20.—**Bury.**—ALTERATIONS.—For alterations at the abattoirs. Drawings seen, and specifications, quantities, and forms of tender from the Borough Engineer, Municipal Offices, Bank-street.

FEBRUARY 20.—**Grangetown.**—CONVENIENCE.—Erection of a public convenience in Clive-lane. Drawings and specification seen, and quantities, with forms of tender, from the City Engineer, City Hall, Cardiff.

FEBRUARY 20.—**Lancaster.** HOUSE. For erection of a filter-house near Burrow Beck, Scotforth. Particulars at the Borough Surveyor and Water Engineer's Office, Town Hall, Lancaster.

FEBRUARY 21.—**Bangor.**—ADDITIONS, ETC.—For alterations and additions for converting into a theatre the Old Tabernacle, Dean-street. Plans and specification at the offices of Messrs. Carter, Vincent, & Co., Bangor. Quantities, on deposit of 1*l.* 1*s*. Mr. Francis Bergin, B.E., architect, 36, Westmoreland-street, Dublin.

FEBRUARY 21.—**Bradford.**—SCHOOL.—For erection of St. Chrysostom's Sunday-school and Parochial Institute. Plans, etc., seen, and quantities from Mr. H. E. Priestley, M.S.A., architect and surveyor, 4, Bertram-road, Manningham.

FEBRUARY 21.—**Hove.** GREENHOUSE.—For erecting a greenhouse in St. Ann's Well Gardens. Particulars at the Borough Surveyor's Office.

FEBRUARY 21.—**Manchester.**—ALTERATIONS.—For alterations to the relieving officers' rooms at the Poor Law Offices, New Bridge-street. Quantities from Mr. A. J. Murgatroyd, architect 23, Strutt-street, Manchester, on deposit of 10*s*. 6*d*.

FEBRUARY 21.—**Scotby.** VILLAS.—For erection of semi-detached villas. Plans, etc., with Mr. H. H. Hodgkinson, architect, 64, Lowther-street, Carlisle.

FEBRUARY 21.—**Shoreham.**—ADDITIONS.—For alterations and additions to the Toll-house, Norfolk Bridge. Specification and plans with Mr. H. W. Bowen, A.M.Inst.C.E., County Surveyor, North-street, Horsham.

FEBRUARY 22.—**Bradford.** ALTERATIONS For alterations to Bradford Labour Exchange Drawings, specification, and a copy of the conditions and form of contract at the Labour Exchange, 6, Eastbrook-lane, Bradford. Quantities and forms of tender, on deposit of 1*l.* 1*s*., from the Secretary, H.M. Office of Works, etc., Storey's-gate, London, S.W.

FEBRUARY 22.—**Bury.** CHAMBER.—For construction of an ejector chamber at the sewage works. Drawings seen, and specifications and quantities, with forms of tender, from the Borough Engineer, Municipal Offices, Bank-street.

FEBRUARY 22.—**East Elloe.**—COTTAGES.—Erection of cottages. Plans, specification, and tender forms with Mr. S. S. Mossop, jun., Clerk to the Council, Holbeach.

FEBRUARY 22.—**London.**—LAVATORIES, ETC.—For building lavatories and bathroom at the Workhouse, Bancroft-road, Mile End, E. Forms of tender, with specifications, from Mr. Benjamin Caimur, Clerk to the Guardians, Guardians' Offices, Bancroft-road, Mile End, E.

FEBRUARY 23.—**Bargoed.**—HOUSES.—For erection of fifty houses at Bargoed, for the Capel Building Club. Plans and specification with Mr. George Kenshole, M.S.A., Station-road, Bargoed.

FEBRUARY 23.—**Bargoed.**—HOUSES. For erection of twelve houses at Bargoed, for the Llancayo Building Club. Plans and specification with Mr. George Kenshole, M.S.A., Station-road, Bargoed.

★ FEBRUARY 23.—**Dagenham.**—NEW OFFICES.—Messrs. W. J. Fraser & Co., Ltd., invite tenders for new offices at their works. See advertisement in this issue for further particulars.

FEBRUARY 23.—**Darlington.**—ENLARGEMENT.—For the enlargement of Darlington Post Office Drawings, specification, and a copy of the conditions and form of contract with the Postmaster, Darlington Post Office Quantities and forms of tender at H.M. Office of Works, Storey's-gate, London, S.W. Deposit of 1*l.* 1*s*

★ FEBRUARY 23.—**London.** -NEW STORY, G.P.O. -The Commissioners of H.M. Works, etc., invite tenders for erection of an additional story to the G.P.O. South. See advertisement in this issue for further particulars.

FEBRUARY 23.—**Rythill.**—SCHOOL.—For erection of a new school. Plans seen, and specifications, with quantities, from the Education Architect, County Hall, Wakefield. Deposit of 1*l.*

FEBRUARY 24.—**Edinburgh.**—SEWAGE WORKS.—The Directors of Wellington Reformatory invite offers for constructing fireclay sewers, purification works, pump-house, etc. Drawings with the engineers, Messrs. Carter & Wilson, C.E., 51, Queen-street, Edinburgh. Specification and quantities on deposit of 1*l.* 1*s*.

FEBRUARY 25.—**Belmont.**—COTTAGES.—For erection of two cottages. Plans and specifications with Mr. W. T. Jones, architect, 7*a*, North Bailey, Durham.

FEBRUARY 25.—**Rathdowney.**—SCHOOL.—For erection of a new school. Plans and specification with Messrs. W. H. Byrne & Son, architects, 20, Suffolk street, Dublin.

FEBRUARY 26.—**Bury.** COURT, ETC.—Erection of Bury County Court, Inland Revenue, and Customs and Excise Offices. Drawings, specification, and a copy of the conditions and form of contract with the Registrar, County Court Offices, Bury, Lancashire. Quantities and forms of tender, on deposit of 1*l.* 1*s*., from the Secretary, H.M. Office of Works, etc., Storey's-gate, London, S.W.

FEBRUARY 26.—**Dewsbury.**—ADDITIONS, ETC.—For erection of the additions and alterations of the Chickeney-lane Council School. Plans and specifications seen, and quantities and forms of tender from the architects, Messrs. Holtom & Fox, Corporation-street, Dewsbury

FEBRUARY 26.—**Dublin.**—COTTAGES.—For erection of forty-five two-story cottages on the Cookstreet area. Plans, specifications, and conditions of contract with the City Architect, Municipal-buildings, Cork-hill, Dublin. Quantities and forms of tender on deposit of 2*l.* to the Treasurer, Municipal-buildings, Cork-hill, Dublin.

FEBRUARY 26.—**Dublin.**—EXTENSION.—For an extension of tea pavilion at Howth Summit Station, for the Great Northern Railway Company (Ireland). Drawing and specification at the Engineer's Offices at Dublin and Belfast, and form of tender from Mr. T. Monsson, Secretary, Amiens street Terminus, Dublin Deposit of 1*l.* 1*s*.

FEBRUARY 26.—**Halifax.**—SHELTER, ETC.—For erection of a shelter and underground conveniences at Albert Park, Skircoat-road. Plans seen, and specifications and forms of tender from Mr. James Lord, M.Inst.C.E., Borough Engineer, Town Hall. Deposit of 1*l.*

★ FEBRUARY 26.—**Swansea.**—HOUSES.—The Corporation of Swansea invite tenders for fifty houses in Cwm-road. See advertisement in this issue for further particulars

★ FEBRUARY 26.—**Swansea.**—HOUSES.—The Corporation of Swansea invite tenders for fifty-three houses at Trewyddfa Common. See advertisement in this issue for further particulars.

FEBRUARY 27.—**Lyminge.** INFIRMARY.—Erection of a new female infirmary and nurses' home at the Workhouse, near Lyminge, Kent. Plans and specification seen, and quantities and form of tender from the Architect, Mr. A. Robert Bowles, 130, Sandgate-road, Folkestone. Deposit of 1*l.* 1*s*.

★ FEBRUARY 27.—**Winchmore Hill, N.**—COTTAGES. The Enfield and Edmonton Joint Hospital Board invite tenders for four workmen's cottages on grounds adjoining Isolation Hospital, World's End. See advertisement in this issue for further particulars.

FEBRUARY 28.—**Londonderry.**—PREMISES.—For rebuilding business premises, Bishop-street. Plans and specification with Mr. J. P. M'Grath, C.E., M.R.I.A.I., architect, 6, Castle-street, Derry

FEBRUARY 29.—**Longwood.**—HOUSES.—For erection of ten dwelling-houses, Prospect-road. Plans seen, and quantities from Mr. S. M. Balmford, architect, Longwood.

FEBRUARY 29.—**Paisley.**—STORE.—For erection of a coal store at gasworks, Blackstoun-road. Specifications, quantities, with forms of tender from Mr. G. R. Hirlop, Engineer and Manager, Corporation Gasworks, Paisley.

★ MARCH 2.—**Croydon.**—SCHOOL.—The Croydon Education Committee invite tenders for the erection of a public secondary school for boys. See advertisement in this issue for further particulars.

MARCH 2.—**Sonning Common.**—SCHOOL.—For erection of school and schoolhouse at Eye and Dunsden. Plans and specification with the County Surveyor, 9, New-road, Oxford. Quantities on deposit of 1*l.* 1*s*.

BUILDING—*continued*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

✱ MARCH 6.—**Hayes.** HOUSES, ETC.—The Hayes U.D.C. invite tenders for laying-out of site, construction of roads, sewers, fences, etc., and the building of fifty one houses, at Elder's Field The tender may be for part of the work only. See advertisement in this issue for further particulars.

✱ MARCH 6. **Tidworth.**—VARIOUS BUILDINGS, ETC.—The Secretary of State for War invites tenders for erection of general works, sheds for mobilisation vehicles, etc., small arm ammunition store, oil and paint store, latrines and urinals, coal yard, weighbridge and office, warrant officer's quarter, and fittings for existing buildings at Tidworth. See advertisement in this issue for further particulars.

No DATE.—**Bowling.** ADDITIONS, ETC. For altering and enlarging St. John's Church Sunday-schools, Paley-road. Plans and specification seen, and quantities from Messrs. T. C. Hope & Geo. Roberts, architects, Whitaker-buildings, Brewery-street, Bradford.

No DATE.—**Gateshead.**—ADDITIONS, ETC.—For alterations and additions to the High West-street Girls' and Infants' Schools. Specifications seen, and quantities from Mr. F. W. Purser, architect, West-street, Gateshead. Deposit of 1*l.* 1s

No DATE.—**Grassington.** SHED.—For pulling down portion of Linton Mill, and erection of a new weaving shed. Mr. James Hartley, architect, Skipton.

No DATE.—**Great Burstead.** COTTAGES.—Erection of seven cottages in Church-lane. Plans and specifications by Mr Hugo R. Bird, architect and surveyor, Brentwood. Deposit of 2*l.* 2s. to Mr. C. Edgar Lewis, Clerk, New-road, Brentwood

No DATE.—**Huddersfield.**—PULLING DOWN. For the pulling down and excavating for proposed new premises, Westgate and Market-street, Huddersfield, for the Bradford District Bank, Ltd Deposit of 1*l.* 1s., to Mr. W. Carby Hall, F.R.I.B.A., architect and surveyor, Prudential-buildings, Park-row, Leeds.

No DATE.—**Ipswich.**—EXTENSION.—For extension of the nurses' wing at the East Suffolk and Ipswich Hospital. Deposite of 1*l.* 1s. to Messrs. Brown & Burgess, architects, 5, Arcade-street, Ipswich.

No DATE. **Leeds.**—ALTERATIONS.—For alterations to licensed premises, at Askham Richard, known as the New Inn. Messrs. Thomas Winn & Sons, architects, 54, Albion-street, Leeds.

No DATE.—**Loftus.**—ALTERATIONS.—For proposed alterations to premises, for the East Cleveland Co-operative Society. Messrs. Kitching & Lee architects, 21, Albert-road, Middlesbrough.

✱ No DATE. — **Lowestoft.** — SCHOOL. — The Lowestoft Education Committee invite tenders for a new school for about 500 boys. See advertisement in this issue for further particulars.

No DATE.—**Penistone.** LIBRARY. Erection of Carnegie Free Library. Mr. Henry R. Collins, architect and surveyor, 10, Regent-street, Barnsley.

No DATE. **Plymouth.**—HOUSES.—Erection of almshouses at Prince Rock. Plans and specification by Mr. F. A. Wiblin, M.S.A., architect and surveyor, 92, Old Town-street, Plymouth. Quantities and deposit of 2*l.* 2s.

No DATE.—**Salford.**—SCHOOL.—For erection of the new Municipal secondary school for boys. Quantities from Mr. Henry Lord, F.R.I.B.A., 42, Deansgate, Manchester, on deposit of 1*l.* 1s.

No DATE.—**Swansea.**—BUILDINGS.—For erection of the new Y.M.C.A. buildings, St. Helen's road. Names to Mr. Glendinning Moxham, F.R.I.B.A., architect, 18, Castle-street, Swansea. Deposit of 5*l.* 5s.

No DATE.—**Taunton.**—SCHOOL.—For erection of Priory Council School Quantities and form of tender from Mr. George H. Kite, Town Clerk and Clerk to the Taunton Borough Education Committee Municipal-buildings, Taunton. Deposit of 2*l.* 2s.

No DATE.—**Termonfeckin.**—SCHOOLS.—Erection of new national schools at Termonfeckin, Drogheda. Plans and specification at the Parochial House. Mr. T. F. McCulla, P.P., Termonfeckin, Drogheda.

No DATE.—**Winton.** ENLARGEMENT.—For the enlargement of the Congregational church. Names to Mr. J. Donkin, architect, 58, Portchester-road, Bournemouth.

ENGINEERING, IRON, AND STEEL.

FEBRUARY 16.—**Whitby.**—HEATING.—For the heating of certain wards, etc., at the Whitby Workhouse. Mr. Wm. Seaton Gray, Clerk, 38, Flowergate, Whitby.

FEBRUARY 28.—**Ipswich.** DISINFECTOR. For supply and fixing of a high-pressure steam disinfector at the St. John's Home, Freehold-road. Specifications from Mr. L. W. Greenhalgh, Clerk to the Guardians, Guardians' Offices, 19, Tower-street, Ipswich.

FURNITURE, PAINTING, MATERIALS, etc.

✱ FEBRUARY 21. **Croydon.**—WHITEWASHING. The Bermondsey Guardians invite tenders for whitewashing, distempering, and cleansing work at schools, West Wickham-road, Shirley, near Croydon. See advertisement in this issue for further particulars.

FEBRUARY 24.—**York.**—PAINTING.—For painting the outside of the Court-houses and police-stations at Beverley, Bridlington, Driffield, Escrick, Holme-on-Spalding Moor, Hornsea, Howden, Market Weighton, Patrington, Pocklington Specifications seen and forms of tender the County Surveyor, County Hall, Beverley

✱ FEBRUARY 27. — **Willesden.** — MATERIALS AND WORK.—The Willesden D.C. i tenders for execution of certain works, supply of materials for periods commen April 1 next. See advertisement in this issu further particulars.

✱ MARCH 7.—**Walworth.** PAINTING, ETC.—The Southwark Guardians invite te for repairs, painting, whitewashing, etc., a Newington Workhouse. See advertisemen this issue for further particulars.

No DATE.—**Middlesbrough.**—PAINTING.— painting outside of Christians' Meeting Ho Woodlands-road. Mr. R. Dyson, Newle road, Middlesbrough.

ROADS, SANITARY AND WATER WORKS.

FEBRUARY 19.—**Hale.**—ROAD.—For makin Park-drive, Hale. Plans and specifications and quantities and forms of tender, on depos 1*l.* 1s., to the Council's Surveyor, Mr. T. burn, Council Offices, Ashley-road, Cheshire.

FEBRUARY 21.—**Spalding.**—GRANITE, E Supply of granite and slag. Forms of te from Mr. H. Stanley Maples, Clerk to the Council, Spalding.

FEBRUARY 22.—**Bury.**—SEWER.—Constructio an ejector-chamber, the laying of a 12-in. pipe sewer under the River Irwell, and c contingent works at the Sewage Works. D ings seen, and specifications and quantities, forms of tender, from the Borough Engi Municipal Offices, Bank-street

FEBRUARY 23.—**Bacup.**—PAVING, ETC.—For ing, etc., of streets. Plans with Mr. W. H. A.M.Inst.C.E., Borough Engineer, Munic Offices, Bacup. Deposit of 1*l.*

FEBRUARY 23. **Emley.**—GRANITE.—For su of 200 tons of granite and 800 tons of d Mr F. C. Heath, Clerk, Emley U.D.C., Wakefield.

✱ FEBRUARY 28.—**London, S.W.**—BARG AWAY SLOP, DUST, AND REFUSE. The Me politan Borough of Chelsea invite tenders the carrying out of certain services for pen for one year or three years from April 1 r See advertisement in this issue for fur particulars.

MARCH 2.—**Driffield.**—MATERIAL.—For su of road material. Particulars and forms tender from Mr. T. Casson Beaumont, Surveyor, Driffield

MARCH 2 **York.**—STONE.—For supply of a 7,000 tons of stone. Conditions, forms of ten and particulars from the County Surve County Hall, Beverley.

Auction Sales

Nature and Place of Sale.	By whom Offered.	Date of Sale
*BUILDERS' & RD. CONTRACTORS' PLANT, ETC. At "The Elms," Enfield Highway, N.	H. W. Smith	Feb.
*STOCK OF BUILDERS' AND CONTRACTORS', BEXLEY HEATH—On the Premises	Relph & Sons	Feb.
*DEALS, BATTENS, BOARDS, TIMBER, ETC.—Great Hall, Winchester House, E.C.	Churchill & Sim	Feb.
*STOCK OF MARBLE, ETC., GOLDEN-LANE, E.C.—On the Premises	Fryett, White, & Co.	Feb.
*FREEHOLD PROPERTY, EUSTON-ROAD, N.W. -At the Mart	Rutley, Son, & Vine	Feb.
*BUILDER AND CONTRACTOR'S PLANT—Upon the Premises	Wheatley Kirk, Price, & Co.	Feb 27,
*FREEHOLD BUILDING LAND, HOLBORN—At the Mart	Ventom, Bull, & Cooper	Feb.
*BUILDING SITE, LONG-ACRE, W.C.—At the Mart	Robins, Gore, & Mercer	Mar.
*BUILDERS', CONTRS', ETC., STOCK & PLANT At the Maltings, Fishpool st., St. Albans	J. T. Skelding	Mar.
*BUILDING SITE, WESTMINSTER—At 20, Hanover-square, W.	Knight, Frank, & Rutley	Mar.
*BUILDING SITE, HATTON-GARDEN, E.C At the Mart	Farebrother, Ellis, Exerton, Breach, Galsworthy, & Co.	Mar.
*FREEHOLD PROPERTY, SOHO-SQUARE, W.—At the Mart.	Farebrother, Ellis, Exerton, Breach, Galsworthy, & Co.	Mar.

PATENTS.

APPLICATIONS PUBLISHED.*

3,622 of 1911 Percy Powley: Sectional fire-resisting or other partition slabs, bricks, and the like.

4,020 of 1911.—Thomas Bullock: Sliding windows and the like.

7,502 of 1911.—Allan Boardman Kingsland: Cooking stoves.

8,087 of 1911.—Herbert Sumner Owen: Manufacture of products of concrete, cement and the like.

8,786 of 1911.—John Teale and Ernest Teale: Windows.

10,387 of 1911.—Samuel Henry Adams: Man hole, hydrant, surface-box, gully, and other road covers and grates.

11,044 of 1911.—David Morgan Griffiths: Lifting-dogs.

11,926 of 1911.—Emil Prüss: Floor and ceiling structures.

12,932 of 1911.—Samuel Howard Bonsall: Block or slab for building partition and similar walls.

13,350 of 1911.—William Wales Morris: Riptile for roofing purposes.

16,510 of 1911.—Walter Raymond Ansell: Self-supporting ladders or steps.

23,474 of 1911.—Garnett Frederick Norton: Stay for casement windows and the like.

25,561 of 1911.—Anton Kolassa: Apparatus for drilling, punching, or stamping constructional metal members and the like.

*All these applications are in the stage in which opposition to the grant of Patents upon them can be made.

PRICES CURRENT OF MATERIALS.

**** Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

BRICKS, &c.

Per 1000 Alongside, in River.	£ s. d.
Best Stocks	1 14 0
Picked Stocks for Facings	2 7 0

Per 1000, Delivered at Railway Depôt.	£ s. d.		£ s. d.
Fletton	1 12 0	Best Blue Pressed Staffordshire	3 15 0
Best Fareham Red	3 12 0	Do. Bullnose	4 0 0
Best Red Pressed Ruabon Facing	5 0 0	Best Stourbridge Fire Bricks	4 0 0

Glazed Bricks—			
Best White, Ivory, and Salt Glzd. Str'tch'rs	11 7 6	Double Headers	13 17 6
Headers	10 17 6	One Side and two Ends	17 17 6
Quoins, Bullnose, and 4½ in. Flats	14 17 6	Two Sides and one End	18 17 6
D'ble Stretchers	16 17 6	Splays & Squints	16 7 6

Second Quality £1 10s. per 1000 less than best.

BRICKS, &c. (*Continued*).

	s. d.	
Thames and Pit Sand	6 9	per yard, delive
Thames Ballast	5 6	„
Best Portland Cement	31 0	per ton,
Best Ground Blue Lias Lime	19 0	„

NOTE—The cement or lime is exclusive of ordinary charge for sacks.

Grey Stone Lime	13s. 0d. per yard delive
Stourbridge Fireclay in sacks	27s. 0d. per ton at rly

STONE.

Per Ft. Cube.

BATH STONE—delivered on road waggons, Paddington Depôt	
Do. do. delivered on road waggons, Nine Elms Depôt	

PORTLAND STONE (20 ft. average)—

Brown Whitbed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	
White Basebed, delivered on road waggons Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	

Per Ft. Cube, delivered at Railway Depôt.

	s. d.		
Ancaster in blocks	1 10	Closeburn Red	
Beer in blocks	1 6	Freestone	
Greenahill in blocks	1 10	Red Mansfield Freestone	
Darley Dale in blocks	2 4	Talacre & Gwespyr Stone	
Red Corsehill in blocks	2 3		

STONE (*Continued*).

STONE—*Robin Hood Quality.*

Per Ft. Cube, Delivered at Railway Depôt.	s. d.
3d random blocks	2 10
Per Ft. Super., Delivered at Railway Depôt.	
awn two sides landings to sizes (under super.)	2 3
ubbed two sides ditto, ditto	2 6
wn two sides slabs (random sizes)	0 11½
2½ in. sawn one side slabs (random sizes)	0 7
o 2 in. ditto, ditto	0 6
YORK—	
Per Ft. Cube, Delivered at Railway Depôt.	
3d random blocks	3 0
Per Ft. Super., Delivered at Railway Depôt.	
wn two sides landing to sizes (under 40 ft.	2 8
ubbed two sides ditto	3 0
wn two sides slabs (random sizes)	1 2
lf-faced random flags	0 5

SLATES.

Per 1000 of 1200 at Railway Depôt.

	£ s. d.		£ s. d.
best blue		In. In. 20×10 best Eur'ka unfading green	15 17 6
or	13 2 6	20×12 ditto	18 7 6
ditto	13 17 6	18×10 ditto	13 5 0
lst quality		16×8 ditto	10 5 0
	13 0 0	20×10 permanent green	11 12 6
ditto	13 15 0	18×10 ditto	9 12 6
	7 5 0	16×8 ditto	6 12 6
best blue			
madoc	12 12 6		
itto	6 12 6		

TILES.

At Railway Depôt.

	s. d.		s. d.
lain red roof-		Best "Harshill"	
per 1000)	42 0	brand, plain sand-faced (per 1000)	50 0
p and Valley		Do. pressed (per	
per doz.)	3 7	1000)	47 6
Broseley (per		Do. Ornamental (per	
)	50 0	1000)	50 0
rnamental (per	52 6	Hip (per doz.)	4 0
p and Valley		Valley (per doz.)	3 6
per doz.)	4 0	Staffords. (Hanley)	
Ruabon red,	"	Reds or Brindled	
m, or brindled		(per 1000)	42 6
r da) (per 1000)	57 6	Hand-made sand-faced (per 1000)	45 0
rnamental (per	60 0	Hip (per doz.)	4 0
p (per doz.)	4 0	Valley (per doz.)	3 6
lley (per doz.)	3 0		

WOOD.

BUILDING WOOD.	At per standard. £ s. d.	£ s. d.
best 3 in. by 11 in. and 4 in.	14 0 0 ...	15 10 0
9 in. and 11 in.	13 10 0 ...	14 10 0
best 3 by 9		
s: best 2½ in. by 7 in. and		
., and 3 in. by 7 in. and 8 in.	11 10 0 ...	12 10 0
s: best 2½ by 6 and 3 by 6	0 10 0	less than 7 in. and 8 in.
seconds	1 0 0	less thn best.
s: seconds	0 10 0 "	"
by in. and 2 in. by 6 in.	9 10 0 ...	10 10 0
by 4½ in. and 2 in. by 5 in.	9 0 0 ...	10 0 0
n Sawn Boards—		
and 1½ in. by 7 in.	0 10 0	more than battens.
	1 0 0	"
ber: best middling Danzig	At per load of 50 ft.	
emel (average specification)	5 0 0 ...	5 10 0
uds	4 10 0 ...	5 0 0
ll timber (8 in. to 10 in.)	3 17 6 ...	4 0 0
ll timber (6 in. to 8 in.)	3 5 0 ...	3 10 0
lish balks	2 12 6 ...	3 0 0
pine timber (30 ft. average)	5 5 0 ...	6 0 0
JOINERS' WOOD.	At per standard.	
Sea: first yellow deals,		
n. by 11 in.	24 10 0 ...	25 10 0
n. by 9 in.	22 10 0 ...	23 10 0
ttens, 2½ in. and 3 in. by 7 in.	17 0 0 ...	18 0 0
nd yellow deals, 3 in. by 11 in.	19 0 0 ...	20 0 0
3 in. by 9 in.	18 0 0 ...	19 10 0
ttens, 2½ in. and 3 in. by 7 in.	14 0 0 ...	15 0 0
d yellow deals, 3 in. by in. and 9 in.	14 0 0 ...	15 0 0
ttens, 2½ in. and 3 in. by 7 in.	11 10 0 ...	12 10 0
burg first yellow deals,		
n. by 11 in.	21 10 0 ...	22 10 0
. 3 in. by 9 in.	18 10 0 ...	19 10 0
ttens	14 0 0 ...	15 0 0
nd yellow deals, 3 in. by in.	16 10 0 ...	17 10 0
. 3 in. by 9 in.	15 0 0 ...	16 0 0
ttens	11 10 0 ...	12 10 0
d yellow deals, 3in. by 11 in.	18 10 0 ...	14 10 0
. 3 in. by 9 in.	13 0 0 ...	14 0 0
ttens	10 10 0 ...	11 0 0
Sea and Petersburg —		
t white deals, 9 in. by 11 in.	15 0 0 ...	16 0 0
3 in. by 9 in.	14 0 0 ...	14 10 0
ttens	11 10 0 ...	12 10 0
nd white deals, 3in. by 11in.	14 0 0 ...	15 0 0
3 in. by 9 in.	13 0 0 ...	11 0 0
ttens	10 10 0 ...	11 0 0
pine: deals	19 0 0 ...	21 0 0
er 2 in. thick extra	0 10 0 ...	1 0 0
Pine—First, regular sizes	48 0 0	upwards.
ments	32 0 0	"
nds, regular sizes	33 0 0	"
ments	28 0 0	"
Pine—Planks per ft. cube.	0 4 6 ...	0 6 0
g and Stettin Oak Logs—		
e, per ft. cube	0 3 0 ...	0 3 9
" "	0 2 6 ...	0 2 6
cot Oak Logs, per ft. cube	0 6 6 ...	0 8 0
ainscot Oak, per ft. sup. as		
ch	0 0 10 ...	0 1 0
do. do.	0 0 8½ ...	—
Mahogany—Honduras, Ta-		
sco, per ft. super. as inch.	0 0 10 ...	0 1 1
cted, Figury, per ft. super. inch	0 1 6 ...	0 2 6

WOOD (*Continued*).

JOINERS' WOOD (*Continued*)	At per standard. £ s. d.	£ s. d.
Dry Walnut, American, per ft. super. as inch	0 0 10 ...	0 1 0
Teak, per load	18 0 0 ...	22 0 0
American Whitewood planks, per ft. cube	0 5 0 ..	0 6 0
Prepared Flooring, etc.—	Per square.	
1 in. by 7 in. yellow, planed and shot	0 13 6 ...	0 17 0
1 in. by 7 in. yellow, planed and matched	0 14 0 ...	0 18 0
1¼ in. by 7 in. yellow, planed and matched	0 16 0 ...	1 0 0
1 in. by 7 in. white, planed and shot	0 12 0 ...	0 14 6
1 in. by 7 in. white, planed and matched	0 12 6 ...	0 15 0
1¼ in. by 7 in. white, planed and matched	0 15 0 ...	0 16 6
⅞ in. by 7 in. yellow, matched and beaded or V-jointed brds.	0 11 0 ...	0 13 6
1 in. by 7 in. " "	0 14 0 ...	0 18 6
⅞ in. by 7 in. white " "	0 10 0 ...	0 11 0
1 in. by 7 in. " "	0 12 9 ...	0 15 0

6 in. at 6d. to 9d. per square less than 7 in.

JOISTS, GIRDERS, &c.

	In London, or delivered Railway Vans, per ton. £ s. d.	£ s. d.
Rolled Steel Joists, ordinary sections	7 10 0 ...	8 0 0
Compound Girders, ordinary sections	9 10 0 ...	10 0 0
Steel Compound Stanchions	11 0 0 ...	12 0 0
Angles, Tees, and Channels, ordinary sections	9 10 0 ...	10 0 0
Flitch Plates	9 10 0 ...	9 10 0
Cast Iron Columns & Stanchions, including ordinary patterns	7 10 0 ...	8 10 0

METALS.

IRON—	Per ton, in London. £ s. d.	£ s. d.
Common Bars	9 0 0 ...	9 10 0
Staffordshire Crown Bars, good merchant quality	9 5 0 ...	9 15 0
Staffordshire "Marked Bars"	11 0 0 ...	—
Mild Steel Bars	9 5 0 ...	9 15 0
Hoop Iron, basis price	10 0 0 ...	—
" " Galvanised	17 10 0 ...	—

(*And upwards, according to size and gauge.*)

Sheet Iron Black—		
Ordinary sizes to 20 g.	10 5 0 ...	—
" " 24 g.	11 5 0 ...	—
" " 26 g.	12 15 0 ...	—
Sheet Iron, Galvanised, flat, ordinary quality—		
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15 10 0 ...	—
Ordinary sizes to 22 g. and 24 g.	16 0 0 ...	—
" " 26 g.	17 0 0 ...	—
Sheet Iron, Galvanised, flat, best quality—		
Ordinary sizes to 20 g.	18 10 0 ...	—
" " 22 g. and 24 g.	19 0 0 ...	—
" " 26 g.	21 10 0 ...	—
Galvanised Corrugated Sheets—		
Ordinary sizes, 6ft. to 8ft. 20 g.	15 0 0 ..	—
" " 22 g. and 24 g.	15 5 0 ...	—
" " 26 g.	16 15 0 ...	—
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	12 10 0 ...	—
Best Soft Steel Sheets, 2 g. & 24 g.	13 10 0 ...	—
" " 26 g.	15 10 0 ...	—
Cut Nails, 3 in. to 6 in.	11 0 0 ...	11 10 0

(Under 3 in., usual trade extras.)

LEAD, &c.

LEAD—Sheet, English, 4lb. and up	£ s. d.	—
Pipe in coils	19 10 0 ..	—
Soil pipe	20 0 0 ...	—
Compo pipe	23 0 0 ...	—
	21 0 0 ..	
ZINC—Sheet—	In casks of 10 cwt.	
Vielle Montagne	33 10 0 ...	—
Silesian	33 5 0 ...	—

Zinc, in bundles, 1s. per cwt. extra.

COPPER—		
Strong Sheet per lb.	0 1 0 ...	—
Thin "	0 1 1 ..	—
Copper nails "	0 0 10 ...	—
Copper wire "	0 0 10 ...	—
BRASS -		
Strong Sheet "	0 0 11 ..	—
Thin "	0 1 0 ...	—
TIN—English Ingots "	0 1 11 ...	—
SOLDER—Plumbers' "	0 0 8½ ..	—
Tinmen's "	0 0 11 ...	—
Blowpipe "	0 1 2 ..	—

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

15 oz. thirds	2½d.	26 oz. fourths	3½d.
" fourths	1½d.	32 oz. thirds	5d.
21 oz. thirds	3d.	" fourths	4½d.
" fourths	2½d.	Fluted Sheet, 15 oz.	3d.
26 oz. thirds	4d.	" 21 oz.	4½d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

½ Hartley's	2d.	Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white	3½d.
⅝ "	2½d.	Ditto, tinted	5d.
¾ "	2½d.		

* Not less than three crates.

OILS, &c.

		£ s. d.
Raw Linseed Oil in pipes	per gallon	0 3 4
" " in barrels	"	0 3 5
" " in drums	"	0 3 7
Boiled " in barrels	"	0 3 7
" " in drums	"	0 3 10
Turpentine in barrels	"	0 2 11
" in drums	"	0 3 1
Genuine Ground English White Lead, per ton		26 10 0
Red Lead, Dry	"	23 5 0
Best Linseed Oil Putty	per cwt.	0 10 0
Stockholm Tar	per barrel	1 12 0

VARNISHES, &c.

	Per gallon. £ s. d.
Fine Pale Oak Varnish	0 8 0
Pale Copal Oak	0 10 6
Superfine Pale Elastic Oak	0 12 6
Fine Extra Hard Church Oak	0 10 0
Superfine Hard-drying Oak, for seats of Churches	0 14 6
Fine Elastic Carriage	0 12 0
Superfine Pale Elastic Carriage	0 16 0
Fine Pale Maple	0 10 0
Finest Pale Durable Copal	0 18 0
Extra Pale French Oil	1 1 0
Eggshell Flating Varnish	0 18 0
White Pale Enamel	1 4 0
Extra Pale Paper	0 12 0
Best Japan Gold Size	0 10 6
Best Black Japan	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Knotting	0 10 9
French and Brush Polish	0 10 6

TO CORRESPONDENTS.

NOTE.—All communications with respect to literary and artistic matters should be addressed to "THE EDITOR" (and not to any person by name); those relating to advertisements and other exclusively business matters should be addressed to "THE PUBLISHER," and not to the Editor.

All communications must be authenticated by the name and address of the sender, whether for publication or not. No notice can be taken of anonymous communications.

The responsibility of signed articles, letters, and papers read at meetings rests, of course, with the authors.

We cannot undertake to return rejected communications; and the Editor cannot be responsible for drawings, photographs, manuscripts, or other documents, or for models or samples sent to or left at this office, unless he has specially asked for them.

All drawings sent to or left at this office for consideration should bear the owner's name and address on either the face or back of the drawing. Delay and inconvenience may result from inattention to this.

Any commission to a contributor to write an article, or to execute or lend a drawing for publication, is given subject to the approval of the article or drawing, when received, by the Editor, who retains the right to reject it if unsatisfactory. The receipt by the author of a proof of an article in type does not necessarily imply its acceptance.

N.B.—Illustrations of the First Premiated Design in any important architectural competition will always be accepted for publication by the Editor, whether they have been formally asked for or not.

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than* 10 a.m. *on Tuesday.* [N.B.—We cannot publish Tenders unless authenticated either by the architect or the building owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is stated, nor any list in which the lowest Tender is under 100*l.* unless in some exceptional cases and for special reasons.]

* Denotes *accepted.* † Denotes *provisionally accepted.*

ABERYSTWYTH.—For repairs to Plasdeg House, for the Aberystwyth Corporation. Mr. Rees Jones, Borough Surveyor. Quantities by the Borough Surveyor —

T. Jenkins & Sons	£65 0	T. Evans, Contractor, 11, Vaenor street	£53 15
J. Jones & Co	57 0		
J. Jenkins & Sons	56 0		

[All of Aberystwyth.]

ASTON.—For three shops, Witton-road, Aston, for Messrs. J. P. Bridgwater and S. A. Porter. Messrs. Smith, Bradewater, & Porter, Lic.R.I.B.A., architects and surveyors, 3, Temple-row West, Birmingham —

T. Johnson	£937 0	J. E. Harper	£904 10
A. J. Teall & Son, Ltd.	920 0	Turpin & Moorcroft	840 0
H. Taylor	910 0	E. M. Squire*	820 0

CASTLEFORD. For erection of a picture palace in Aire-street. Mr. J. P. Padgett, architect, Carlton-chambers, Castleford:—

R Walker & Sons	£1,094 7 6	T. Thompson & Sons	£998 0 0
Powell Bros.	1,072 0 0	G. H. Wilson*	995 0 0

[All of Castleford.]

EXETER.—For erection of a factory and stabling in the Commercial-street, for Messrs S. Oppenheimer & Co., Ltd., 47-53, St. John-street, Smithfield, London. Mr. R. M. Challice, architect, Exeter. Quantities by architect.—

Lopes & Ayres	£831 0 0	Ham & Passmore	£715 0 0
W. G. Coles	797 15 0	Wescott, Austin, Bovey & Sons	797 0 0
W. Brealy	749 0 0	& White	699 0 0
Stephens	745 0 0	T. Sleeman	691 13 6
L. Smale	731 0 0	J. H. Luke, Mount Place	
G Setter & Son	730 0 0		
		sant, Exeter*	685 0 0

FAKENHAM. For new schools at Fakenham, Norfolk. Mr Herbert J. Green, Architect and Diocesan Surveyor, Norwich.

Neal Bros.	£10,338 0 0	G. E. Hawes & Sons	£9,971 0 0
F. & S Dickerson	9,598 0 0	T. Gill & Son	8 887 0 0
W. G. Porter	9,485 0 0	J. Youngs & Son	8,875 0 0
H. Rands & Son	9,338 0 0	W. J. Hannant	8,781 10 1
T. H. Blyth	9,256 5 6	J. Needs	8,746 0 0
R. Snanks	9,145 0 0		

FARNBOROUGH.—For painting and repairs to the Workhouse Chapel and Children's Home, for the Guardians of the Bromley Union. Mr. F. J. Smith, F.R.I.B.A., architect, Westminster

W. Owen & Sons	£525	Pearce Bros.	£485
Treasure Bros.	414	Fox, Sherwen, & Dart	354
Hill & Garr	397	J. L. Woodhams, Bromley*	347
G. Haywood	395		
W. Graty	389		

HAKIN (Milford Haven).—For erection of a new Council school, for the Pembrokeshire Education Authority. Mr. D. E. Thomas, architect, Haverfordwest. Quantities by Mr. Geo. A. Webster, 12, Gray's Inn-square, W.C. :—

W. G. Owen	£4,683 0	Cole & Sons	£3,375 0
John, Griffiths, Phillips, & Thomas	3,860 0	Davies & Griffiths	3,357 0
Hayward & Wooster	3,593 0	D. John	3,325 0
F. Lloyd & Co.	3,500 0	Watts & Thomas, Haverfordwest*	3,134 18

HALE (Cheshire).—For conversion of the Girls' Home into public offices, for the Hale Urban District Council. Mr. F. H. Brazier, A.R.I.B.A., architect, Bank Chambers, Hale. Quantities by the architect :—
J. Pennington, Stamford-road, Bowdon... £2,480
Accepted subject to certain deductions and the approval of the Local Government Board.]

LETCHWORTH. — For proposed County Council school, Paxmore, for Hertfordshire County Council. Mr. Urban A. Smith, M.Inst.C.E., County Surveyor, Hatfield, Herts:

B. Jewell	£6,446 0 0	Brown & Son	£5,395 0 0
Beckley & Turpie	5,958 3 4	Henson & Son	5,211 17 4
Salisbury & Son	5,639 10 7	Willmott & Son	5,189 0 0
Hackaley Bros., Wellingboro'‡	5,595 1 3	Jacklin & Co.	5,058 0 0
Bailey & Co.	5,462 0 0	G. W. Souster	5,043 0 0
Palmer & Ray	5,448 3 5	Redhouse & Son	5,036 0 0
		E. Clark	5,030 18 4

‡ Amended tender for revised scheme.

LONDON.—For the enlargement of the Faunce-street School, Newington, for the London County Council :—

H H Hollingworth	£2,778 0 0
F. W. Fletcher	2,280 0 0
Rice & Son	2,229 0 0
W. Downs	2,220 0 0
H. Groves	2,218 0 0
J. & M. Patrick	2,201 0 0
Galbraith Bros., Ltd.	2,120 9 11
Triggs & Co.	2,098 0 0
W. Smith & Son	2,098 0 0
Holliday & Greenwood, Ltd	2,096 0 0
W. King & Son	2,072 0 0
E. Lawrance & Sons, Ltd.	2,068 0 0
J. Marsland & Sons	2,063 0 0
McLaughlin & Harvey, Ltd.	1,990 0 0
J. & C. Bowyer, Ltd.	1,918 0 0
T. D. Leng	1,913 0 0

[The Architect's estimate, comparable with the tenders, is £1,900.]

LONDON.—For the rebuilding of the Mantua-street School, Battersea, for the London County Council :—

W. Smith & Son	£20,527 0 0
W. Downs	19,878 0 0
J. Longley & Co	19,511 0 0
Patman & Fotheringham, Ltd.	19,247 0 0
J. & M. Patrick	19,164 0 0
D. W. Davies	18,996 6 11
G. E. Wallis & Sons, Ltd.	18,840 0 0
W. Johnson & Co., Ltd.	18,800 0 0
Rowley Bros.	18,298 0 0
J. & C. Bowyer, Ltd.	17,881 0 0
T. D. Leng*	17,329 0 0
C. F. Kenley‡	16,700 0 0

[The Architect's estimate, comparable with the tenders, is £18,540.]
‡ Withdrawn.

LONDON.—For proposed alterations and additions to Messrs. Handysides', Ltd., wholesale and export manufacturing confectioners, premises, Nos. 166, 164, and 170, Holloway-road, being the first section of a scheme of rearrangement of their factories. Factory A., according to the drawings and specification of Mr. George Carter, architect, 513, Holloway road, N. :—

	Building.	Steel Bridges.
Chessum	£1,195	£195
Patman & Fotheringham	1,143	195
Weibking, Ltd., Southgate-road*	1,095	195
McCormick, Ltd.	1,087	195

[Architect's estimate, £1,100.]

LONDON.—For proposed further extension of Messrs. Woolley's buildings, grain stores, 541, Holloway road, N., according to the plans and specification of Mr. George Carter, architect, 513, Holloway-road, N. :
McCormick, Ltd., Essex-road*..... £200
[Architect's estimate, £210.]

LONDON.—For alterations to Nos. 101, 103, and 105, Clerkenwell-road, for the London County Council :—

S. Hs kin & Bros., Ltd.	£110 10
F. J Wea y & Co.	98 10

MAGHULL.—For an epileptic colony, to provide accommodation for 200 epileptics. Messrs. Briggs, Wolstenholme, & Thornely, architects, Liverpool :—
T. Spencer, Aintree† £44,685

MARKET HARBOROUGH.—For Grammar School caretaker's cottage, for Leicestershire County Council Education Committee. Mr. Ernest G. Fowler, Architect and Surveyor to the Committee, Leicester :—

E. W. Palmer	£511 0 0	E. Fox	£447 0 0
Frank Sleath	497 0 0	Haycock Bros., Great Glenn, Leicester‡	433 18 0
J. Chapman & Sons, Ltd.	475 0 0		
H. H. Garlick	459 17 6		

‡ Accepted by Committee subject to certain deductions.

ST. ALBANS.—For erection of six cottages, Catherine-street. Mr. H. F. Mence, architect, St. Albans :—

L. Lown & Co.	£3,520	W. Payne	£3,048
C Watts & Co.	3,478	W. Bailey & Sons	2,920
P. F. Whyborn	3,335	C. Miskin & Co.	2,828
C. Ansell	3,300	J. T Bushell	2,747
Kirk & Randall	3,273	S. Williams	2,689
Blow & Peters	3,270	W. Sharp	2,689
H. J. Skelton	3,183	S. Redhouse & Son	2,549
Vail & Shore	3,161	J. Hammond & Son, St. Albans‡	2,513
H. Salisbury & Son	3,128	A. Kell	2,322
W. Tout	3,048		

‡ Accepted with certain modifications.

SOUTHAMPTON.—For alterations and additions to business premises, 157 S, Hivh-street, Southampton, for Mr. S. M. Silverman Mr. W. Burrough Hill, F.S.I., architect :—

Dyer & Sons	£1,627 0 0	Jenkins & Sons, Ltd.	£1,548 0 0
H. Stevens & Co.	1,579 0 0	Playfair & Toole	1,340 0 0
A. Wright & Son	1,555 0 0	W. A Fussell‡	1,537 8 8

‡ Recommended for acceptance.

WALTHAM CROSS For proposed County Council School, for Hertfordshire County Council. Mr. Urban A. Smith, M.Inst.C.E., County Surveyor, Hatfield, Herts :—

Clark Bros.	£6,607 0 0	F. & F. H. Higgs	£5,292 0 0
Fitch & Cox	5,699 0 0	Henson & Son	5,178 2 1
Brown & Son	5,647 5 0	Clark & Son	5,135 0 0
J. Day & Son	5,638 12 6	Lawrence & Son	5,048 0 0
Chessum & Son	5,566 0 0	Willmott & Son, Hitchin*	4,941 0 0
P. R. Paul	5,438 0 0		
Hacksley Bros.	5,375 0 0		
Foster & Son	5,324 0 0		

WATFORD.—For proposed higher elemen school, for Hertfordshire County Council. Urban A. Smith, M.Inst.C.E., County Surve Hatfield, Herts :—

W. E Blake, Ltd	£2,082 4 7	Davey & Armitage	£1,88
J. & M. Patrick	2,004 0 0	Ensor & Ward	1,79
Clark Bros.	1,893 9 0	Hunt & Son	1,77
G. & J. Waterman	1,887 0 0	O. P Drever	1,76
Chessum & Son	1,870 0 0	G. Wigzs & Sons, Watford*	1,74

YORK.—For erection of a side entrance at Theatre Royal. Mr. F. W. Spurr, City Engi Guildhall
W. Fairweather & Son, Spen-lane, York* £396 8

Ham Hill Stone.
Doulting Stone.
Portland Stone.
The Ham Hill and Doulting Stone Co., Limi
(incorporating the Ham Hill Stone Co. and C. Trask & So The Doulting Stone Co.).
Norton, Stoke-under-Ham, Somerset.
London Agent :— Mr. E. A. William 16, Craven-street, Strand.

Asphalte.—The Seyssel and Metallic L Asphalte Co. (Mr. H. Glenn), Office, 42, Poul E.C.—The best and cheapest materials for da courses, railway arches, warehouse floors, roofs, stables, cow-sheds and milk-rooms, g aries, tun-rooms, and terraces. Asphalte C tractors to Forth Bridge Co. T.N. 2644 Centr

SPRAGUE & CO., Ltd.,
LITHOGRAPHERS,
Employ a large and efficient Staff especially Bills of Quantities, &c.
4 & 5, East Harding-st., Fetter-lane, E.C

OGILVIE & CO., Telephone : DALSTON Many years connected the late firm of W. LASCELLES & Co., of Bunhill Row.
Amhurst Works, DALSTON LANE, N
EXPERTS IN HIGH-CLASS JOINERY.
ALTERATIONS AND DECORATIONS. ESTIM. FRE

ASPHALTE
For Horizontal & Vertical Damp Cours
For Flat Roofs, Basements, & other Flo

J. J. ETRIDGE, Jr.
SLATE MERCHANTS. LTD.
EXPERTS IN
SLATING, TILING.
BEST WORK ONLY.
Telephone 2685 Wall, or write—
BETHNAL GREEN SLATE WORKS,
BETHNAL GREEN, LONDON, E.

The best materials and workmanship are supplie
THE
French Asphalte C
Whose name and address should be inserted i specifications.
For estimates, quotations, and all informati apply at the Offices of the Company,
5, LAURENCE POUNTNEY HIL
CANNON STREET, E.C.

EWART'S
Cures in 19 cases out of 20.
"EMPEROR"
Write to-day for Illustrated Catalogue Free to
EWART & SON Ltd.,
346-350, Euston Road, London, N.W.
Established 1834.
Telephone : 2570 North.
SMOKE-CURE

THE BUILDER

VOL. CII.—No. 3803. FEBRUARY 23, 1912.

CONTENTS.

PAGE

UR QUESTIONS AND NATIONALISATION AND URANCE. ... 199
ARCHITECTURAL SOCIETIES OF FRANCE.—II.... 200
S ... 201
ROYAL INSTITUTE OF BRITISH ARCHITECTS TH ILLUSTRATIONS).. ... 202
ARCHITECTURAL ASSOCIATION (WITH ILLUS-TIONS) ... 204
ITECTURAL SOCIETIES ... 207
RAL NEWS ... 207
ETITION NEWS ... 208
ESPONDENCE ... 208
COMMUNICATION COLUMN ... 208
YEARS AGO ... 208
RIAL SUMMARY ... 209
TINGS ... 209
S TO ILLUSTRATIONS ... 209

THLY REVIEW OF ENGINEERING:—
INFORCED CONCRETE IN GREAT BRITAIN.—II. WITH ILLUSTRATIONS) ... 211
E ÆSTHETIC TREATMENT OF CONCRETE ... 213

PAGE

MONTHLY REVIEW OF ENGINEERING (*contd.*): -
THE YORK TOWER COLLAPSE ... 214
NOTES ... 214

THE BUILDING TRADE:—
THE INSTITUTE OF BUILDERS ... 215
SEVENTH MANCHESTER BUILDING TRADES EXHIBITION ... 216
STANDARD TIME RATES OF WAGES ... 216
BUILDERS' CLERKS' BENEVOLENT INSTITUTION ... 216
GENERAL BUILDING NEWS ... 216
APPLICATIONS UNDER LONDON BUILDING ACTS, 1894 TO 1909 ... 217
PROJECTED NEW BUILDINGS IN THE PROVINCES 217

THE ROYAL ACADEMY LECTURES ... 218
THE CARPENTERS' HALL LECTURES ... 218
BOOKS (WITH ILLUSTRATION) ... 219
THE LONDON COUNTY COUNCIL ... 219
COTTAGES AT WALLSEND-ON-TYNE (WITH ILLUSTRATIONS) ... 220
TRAFFIC REPORT OF THE BOARD OF TRADE ... 220
LEGAL COLUMN ... 221
LAW REPORTS ... 221

PAGE

LONDON COUNCILS ... 222
OBITUARY ... 222
PATENTS ... 223
TRADE CATALOGUES ... 223
LIST OF COMPETITIONS, CONTRACTS, ETC., OPEN ... 224
THE QUANTITY SURVEYORS' ASSOCIATION ... 226
FOREIGN AND COLONIAL ... 226
SOME RECENT SALES ... 226
PRICES CURRENT ... 226
TENDERS ... 227

Illustrations.

STAFFORD PUBLIC LIBRARY COMPETITION: -
SELECTED DESIGN, BY MESSRS. BRIGGS, WOLSTENHOLME, & THORNELY.
SECOND PREMIATED DESIGN, BY MESSRS. SUTTON & GREGORY.
ILLUSTRATIONS OF MR. PAUL WATERHOUSE'S ARCHITECTURAL ASSOCIATION PAPER ON "BRIDGES":
LIMBURG ON THE LAHN, FROM A SKETCH BY THE LATE ALFRED WATERHOUSE, R.A.
FLORENCE, FROM A SKETCH BY THE LATE ALFRED WATERHOUSE, R.A.



The Bridge of Prague. From a Sketch by the late Alfred Waterhouse, R.A.
(Illustrating Mr. Paul Waterhouse's Architectural Association Paper on "Bridges.")

LABOUR QUESTIONS AND NATIONALISATION AND INSURANCE.

THE Labour Party moved an amendment to the Address in which was embraced not only t quack panacea for all ills, a statutory imum wage, but also a resolution for nationalisation of "railways, mines, and other monopolies." As has been the case when this latter part of the resolution has been brought before the Trade Union Congress during the past ten years, no attempt was made to justify the motion or to show how nationalisation is to be effected, or how it would affect the wage-earners; the resolution was simply left to speak for itself, serious argument being impossible. The most significant remark in the whole debate was indeed a wholly irrelevant observation

by Mr. Keir Hardie, that as soon as the Insurance Act came into force there would be a universal agitation among the working classes for an extra fourpence a week on their wages to enable them to pay their contributions, which would thus be put upon the employers. This is precisely the attitude which we have always predicted would be assumed by the working classes towards this Act, and it is worthy of attention. In those trades where unemployment insurance is also introduced the contributions of employer and employed will amount to 1s., and if national strikes are likely to be resorted to in order to place the whole of this burden on employers, or if there is even a remote risk of such consequences, the Act on this single ground stands condemned.

In the present agitation in all industries for increased wages the ground put forward for an artificial interference with wages is the rise in the necessities of life; and both, or all, parties in the State profess to recognise some reason in the demand based upon this cause. We venture to suggest that when this cause alone is put forward and accepted the real question is, in fact, being begged, and it is necessary to go further back and inquire what is the cause of the increased cost of living? The answer to this question is, at any rate in part, simple, as the increased cost of living is, to some extent, due to the remedial legislation and the increased taxation that has marked the past decade. The extension of the Factory Acts in 1901, the introduction of Workmen's Compensation in 1897 and its great extension in 1906, and the institution of Old Age Pensions in 1908 would alone suffice to raise the cost of production, and coupled with this the new taxes on land and buildings has tended to increase rents and the cost of house property. The working classes call for remedial legislation, but fail to recognise the cost and its inevitable final incidence upon themselves. Take the Insurance Act. It is assumed by its advocates that for a contribution of fourpence the workman will obtain a handsome *quid pro quo*, represented not only by the contributions of the employers and the State, but by greater security and comfort. The employers' and the State's contributions cannot however be provided out of nothing, and a rise of the price of commodities will ensue. Put the whole of the contributions on the employers and the rise will be greater; increase wages, and again prices must rise. Thus at the moment all parties in the State argue and act in a vicious circle. Legislative interference with wages is suggested as a panacea without consideration of the very causes which render increased wages necessary. Old Age Pensions—13,000,000*l.*—have to be contributed to by persons who are not old, and in the same way unemployment insurance will have to be paid for by persons who are engaged in trades to which this part of the Act is not applicable. Place the whole contribution of 7d. or 1s. on the employer, yet the consumer of the commodities he produces will in the end bear it.

We are eating our cake and grumbling because we cannot keep it. We do not deny the necessity for cake, but we do desire to point out that it has to be paid for, and that no legislation can be devised which will in the end relieve the nation as a whole from paying for the luxuries which it is the custom nowadays to demand and to grant.

THE ARCHITECTURAL SOCIETIES OF FRANCE:

II.—LA SOCIÉTÉ DES ARCHITECTES DIPLÔMÉ PAR LE GOUVERNEMENT.

LA SOCIÉTÉ DES ARCHITECTES Diplômés par le Gouvernement is a comparatively young society, but it is one of growing power in France. The title is an asset in itself, and carries weight with public authorities, as well as with private persons, as all such labels do. We need scarcely say that the diploma is not obligatory, and that it in no way corresponds to the title that would operate under an Act of Registration such as it is sought to establish in England. The diploma is a scholarly degree granted to the students who have undergone successfully a certain course of study—that is to say, the training of the École Nationale des Beaux-Arts. And it is also granted to those who have won the Grand Prix de Rome in Architecture. It guarantees, therefore, a thorough architectural training. The course of study in architecture at the Beaux-Arts is generally accepted as a model of the highest standard. Architectural education in America has almost wholly fallen under its influence. In England there have been tentative attempts to establish its programme, which have not been without useful effect. In Germany and Austria, on the other hand, the Beaux-Arts system has fallen a little into disrepute; even the older men, who were trained more or less under its influence, have practically united forces with the more modern secessionist in the rejection of its teaching. In France itself there are indications that other educational influences are also beginning to count. The qualifying degree of the Société des Architectes Diplômés is sought for the distinction which education at a University (for it amounts to that) with a tradition confers; it is also sought for other reasons. The trammels of bureaucratic centralisation which the first Napoleon established in France, with its manifold ramifications, created (it is one of the most curious facts in history) out of the descendants of the *fauves* of the Revolution a subservient and docile class who are known in France as *fonctionnaires*. The diploma is useful to the man of that class. It makes him a more likely candidate for many useful positions under the State or the various municipalities. A Beaux-Arts man is, notwithstanding, always a Beaux-Arts man; the spirit of the ideal *fonctionnaire* can scarcely evolve out of so liberal an artistic system.

The history of the struggle by French architects for a diploma is both instructive and interesting, and goes back much further than the foundation of the society of which we are speaking. The agitation first began to make itself manifest in 1840, when it was sought to establish an obligatory diploma. The conditions of architectural practice ha begun to change after the Revolutio Previous to that cataclysm the architec under conditions that were much le complex than those which develope subsequently, was his own builder contractor (*entrepreneur*). With th growth of science, the enactment complicated building laws, and so o his duties became so various that was necessary to devolve some pa of them on other shoulders. Howeve this may be, the builder or contract came into being as an independe person—a new fact in the Frenc building world. The consequence his advent was that the client, instea of being able to place himself uni servedly in the hands of an architect, was the case formerly, had also to pla himself more or less in the hands of th builder. M. Bonnier, in an address whic he delivered before the Internationa Congress of Architects in 1897, suggeste that the interests of the builder and th client are necessarily inimical. We do n quite believe that. For, as a general pr position, it is not to the interest of eithe architect or contractor to perform wor which does not give satisfaction. is not a general question of honesty competence that is involved in eithe case. In France it was a question the division of parts, which had hithert been integral, of architectural practic But—and this the French architect of the forties found to be the danger the new state of things opened th way to men who were wholly competen neither as architects nor business me It opened particularly the way to a typ of man who was successful in persuad ing the public that the so-called artisti architect was so engrossed by immateria and abstract views of his art that th details of construction and the interest of his client had become to him matte of small importance. That was th danger which the French architects the forties sought to mitigate by a obligatory diploma, by a sort of Act Registration. And it is curious to not that the agitation for the diploma wa begun by members of the Société Central des Architectes, that it was carried o for many years, and that in the end notwithstanding the meetings and di cussions of an almost interminable seri of "Commissions" appointed for th purpose, a solution of precisely wha qualifications an obligatory diplom should exact has not yet been solve by the most important corporate bod of architects in France.

Many members of the Société de Architectes Diplômés are also members the Société Centrale; the two societie are in no appreciable way antagonistic while in certain matters of genera interest to architects, such as the regu lations of the conditions for competi tions and so on, they exercise commo action. The older society, however does not altogether recognise the Govern ment diploma as a sufficient test o architectural competence. It says, o at any rate some of its members say, i effect, "How are you to gauge th abilities of a man in an art and professio so complex as architecture merely fro his achievement in school studies?

t is to say, while admitting the dis-
antages of the open door, which exists
architectural practice, the Société
trale considers that the closed door
ld still leave a choice between two
ciples, neither of which would work
sfactorily in the higher interests of
itecture. So the door remains open
France—but not, however, to the
bership of either of the societies of
ch we have been speaking. Here
doors are strictly guarded. In
case of the older society admission
only granted to men of proved
itectural competence, whatever may
e been their system of training; and
he case of the younger society it is
granted to those who have won
r spurs in practical scholarship.

e Musset once wrote a charming
edy bearing the title of the French
verb :—"*Il faut que la porte soit*
rte ou fermée." But in France, as
he United Kingdom, the door for
e who wish to practise architecture
neither open nor closed. In each
ntry, however, a *via media* has been
d. In France it is the Société
rale, in Great Britain the Royal
itute of British Architects. The
s of both institutions are only opened
r an examination of the credentials
those who desire to enter. The
al Institute has discovered a
e logical method of establishing the
dard of the credentials than its
ch sister, a standard which solves,
s system of examination and in its
nction of grades, difficulties which
ier of the French societies has solved
e satisfactorily. In formulating a
me of Registration the British society
ckling a question which many years
rganised thoughtful effort in France
e middle of the last century has still
unanswered. The diploma of the
ernment does not provide a sufficient
ver. It is too limited and too
usive. It is in principle wholly
gonistic to any all-embracing Act
Registration. For the purposes of
parison we may ask what would
general body of practising architects
is country say to the British Govern-
t granting its imprimatur and, to
extent, special privileges to the
ents who had passed successfully
ugh the schools of the Architectural
ciation? But the Architectural
ciation does not occupy the same
ion in national estimation as l'École
onale et Spéciale des Beaux-Arts,
it would be absurd not to recognise
the diploma in France is becoming a
er asset to the man in architectural
tice, and that the corporate body
pidly extending its influence.

W PROFESSOR OF FINE ART, CAMBRIDGE.

E. S. Prior, F.S.A., F.R.I.B.A., has been
ed Slade Professor of Fine Art in succession
. Waldstein, resigned. The new Professor
orn in 1852, and was educated at Harrow
Caius. He was a pupil of Mr. Norman
, R.A., and has been architect to Cam-
e University, where he designed the
ing in which the present Medical School is
d, to Harrow School, and to Winchester
ge, and has built churches and houses in
parts of England. Mr. Prior was one of
ounders of the Art-Workers' Guild, and has
Secretary of the Arts and Crafts (London)
ibition Society since 1902. His publica-
include "A History of Gothic Art in
nd."

NOTES.

Site for London University.

THE proposal to acquire the vacant land on either side of the new avenue leading from the British Museum extensions to Torrington-square as a site for London University buildings seems, from many points of view, to be excellent. It is central and easy of access, and its contiguity to the British Museum is a point in its favour. The space available is said to have an area of some 2½ acres, and, although this does not permit of any very spacious architectural lay-out, something can perhaps be made of it if it is suitable in form. The mention of four distinct plots suggests that there may be some difficulty in this respect, but, no doubt, the University will take the best architectural advice obtainable before finally selecting it. We gather that this site is suggested not so much because it is considered to be the one ideal position, but because it happens to be vacant and, in some respects, suitable. The difficulty of finding other available land in the centre of London must necessarily influence the decision of the University; but, all the same, it will be a pity if they are content with anything but the best. The erection of a public monumental building as the centre of the culture and educational life of London is an artistic undertaking of the first importance, and the first necessity is a fine and unrestricted site in the right position. This illustrates once more the pressing need for a general scheme for London to which such a monument as this would be properly related.

Further Improvements for the Marble Arch.

ALTHOUGH most architects will probably agree that it is time that piecemeal tinkering with our streets and open spaces should come to an end, they would no doubt be sorry if any such expression of opinion damped the enthusiasm of those with more zeal than technical knowledge. After all, nothing can be done unless private citizens take an interest in their city. Their desire for improvement supplies the motive power, the driving force which, guided by expert knowledge, should achieve success. The tragedy comes in when it is misdirected, when an idea which in competent hands might have produced good results is mishandled by an incompetent authority. The deplorable result of the Marble Arch improvement may well have so disheartened all those best qualified to judge that they despair of any further attempt to deal with it in detail until it can be handled broadly as part of some general comprehensive scheme.

Victoria and Albert Museum.

THE Victoria and Albert Museum has recently acquired a considerable number of drawings and designs by Alfred Stevens from the collections made by two of his pupils, James Gamble and Reuben Townroe, both of whom died in the early part of 1911. These have now been mounted and labelled; and a selection has been placed on exhibition in Room 75, advantage being taken of the opportunity to rearrange the drawings by Stevens already shown there, which are now grouped according to subject throughout the gallery. Designs for the decoration of St. Paul's Cathedral form one of the most important sections of the exhibition, the various studies in red or black, chalk or pencil, being illustrated by tracings made by Townroe and Stannus of the completed designs. The designs and studies for the decoration of Deysbrook have also been brought together, and are now supplemented with several full-sized working drawings of details in colour, which have not before been exhibited. One of the most interesting of the new acquisitions in this class of work is a sketch in water-colour for the decoration of a staircase and landing of a public building. The collection also includes studies in black chalk for the decorations of Dorchester House, and designs for silversmith's work, candlesticks, street-lamps, pottery and stoves, as well as a large number of slight sketches of architecture and furniture and memoranda of subjects for figure compositions. The Museum now possesses upwards of 500 drawings and studies by Stevens; those not exhibited in Room 75 (or Room 48, where a series related to the Wellington Monument has been hung) being obtainable on application in the Students' Room (71) of the Department of Engraving, Illustration, and Design.

The Society of Twelve.

THE Society of Twelve has increased its numbers by one-half, and yet certainly not more than the Apostolic number exhibits at its seventh annual exhibition at Messrs. Colnaghi and Obach's galleries in Bond-street. The note of distinction of the Society of Twelve is a thing apart. It is, for instance, extremely modern; its work is of the intellectual and theoristic kind, yet the show contains no suggestion of Post-Impressionism; it contains, in fact, no work which has not a sort of traditional justification. The Society is, in a word, academic without being formalistic. The late M. Legros was the Society's only honorary member. And the work of that distinguished artist, which was always so true to the simplicity of his fine temperament, which never, we think, discovered a standard below its highest attainment, expresses in a measure the aim which gives unity of effect to the 117 etchings, pen and pencil drawings, etc., which comprise the exhibition. In the choice of subject architecture is not left out of account. The drawings of Mr. M. Bone are familiar to all architects, though they have been mainly concerned hitherto with scaffoldings and shoring and building in the making. Mr. Francis Dodd and Mr. Ian Strang are definitely interested in architectural forms. Mr. Gordon Craig, so far as his view of architecture is concerned, is either purely inventive or prehistoric. We rarely visit the theatre in England, where so much accuracy in matters of scenic detail is attempted, without feeling the possibilities for composition which would be a joy to the young architect of promise. Could he not give us all that Mr. Gordon Craig gives us and more?

Bridges.

Everyone attending the last meeting of the Architectural Association acquainted with the literary work of Mr. Paul Waterhouse probably expected to hear an admirable lecture from him on "Bridges" on the occasion of the combined meeting of the Association and the Junior Institution of Engineers, but few of his hearers could have been prepared for such a lecture as he delivered—such a happy combination of wit and sound sense, presented in a novel form and with so much literary grace and effectiveness. And the occasion was made additionally interesting from the fact that the lecturer showed various drawings and sketches by his father, the late Mr. Alfred Waterhouse, R.A.—sketches which show the work of an artist of much skill and poetical feeling. In many ways the subject of bridges is a fascinating one. The accomplished result of a bridge, the triumph of man over nature, is always something of a miracle; and when such structures are suitably designed, and in harmony with their surroundings, it is small wonder that they are a source of admiration to all who care for objects that are beautiful as well as useful.

COLLEGIATE ARCHITECTURE.

An ordinary general meeting of the Royal Institute of British Architects was held on Monday, at No. 9, Conduit-street, W. Mr. Leonard Stokes, President, in the chair.

Deceased Members.

Mr. H. T. Hare, Hon. Secretary, announced the decease of Mr. Alexander Graham, F.S.A., formerly Hon. Secretary of the Institute. Mr. Graham was elected a Fellow in 1879, and he had taken an active part in the affairs of the Institute, having served on the Council, acted as Hon. Secretary for ten years, and Vice-President four years. He was for several years a member of the Board of Examiners, and also of the Literature Standing Committee, of which he was some time Chairman. He was a frequent contributor to the *Transactions* in the early years of his connexion with the Institute. Mr. Hare moved that the Institute should record its profound regret at the loss of their esteemed colleague and that a letter of condolence and sympathy be sent to the relatives. He also read a letter from Sir William Emerson. In the course of his letter Sir William said :—

"A steadfast supporter of the Institute, he was from the first one of the most active and zealous of its workers. During my term of office as Member of Council, as Hon. Secretary, and afterwards as President, I had frequent opportunities of observing the high-mindedness and disinterestedness he displayed in all that he did for the Institute. A man of the strictest probity and integrity, he placed the honour of the profession and the well-being of the Institute before everything: to preserve the one and secure the other he would count no personal sacrifice too great.

His courtesy and urbanity of manners were familiar to us all; no one could discharge with greater distinction the various public and social functions that fall to the lot of the Honorary Secretary of the Institute. He was true and sincere in his friendships, ever sympathetic and warm-hearted, and one of the cheeriest and most agreeable of companions. I know personally that not a few young architects have cause to be grateful to him for his kindly advice and assistance."

The motion was agreed to in silence, all the members standing in their places while the President put the motion.

Mr. Hare then mentioned the decease of Mr. T. M. Rickman, F.S.A., a member of the Institute for nearly fifty-eight years. Elected an Associate in 1854, he represented the Associates on the Council of the Institute from 1887 to 1896.

A motion recording the regrets of the members was passed, and it was agreed to send a letter of condolence to the relatives of the deceased.

Mr. Hare also mentioned the decease of Mr. Charles Smith, of Reading, another member of nearly fifty-eight years' standing: and Mr. W. King Lucas, elected an Associate in 1881.

Mr. Edward Warren, F.S.A., then read a paper on "Collegiate Architecture." Having dealt at some length with early and later Collegiate buildings, the author made some personal observations in speaking of residential colleges. In the course of remarks he said :—

"If you adopt the quadrangular plan, a think that you cannot, generally speak do better on all accounts, you will be unless the ground and other circumsta permit of large courts with low surroun buildings, to remember the open front to south, or else to have open corners which be bridged by arches, to admit of air curre Such open corners can be easily and effecti managed if you adopt the cloister gr plans with arcade or colonnade, and thi itself is a practical and architectur admirable arrangement. Or you can perh find useful suggestions in the double scre or pierced ground story of Peterhouse. assuming that you adhere to the healthy invigorating system of passageways open the air.

As the plan of repeated staircases, with dependent groups of rooms on each succe floor, still finds, and is likely still to favour in colleges it may be well for a mo to consider some of its possibilities, and that end, I show you a plan of Brase College, in which you will see the arrange of the old chambers, and Mr. T. G. Jacks disposition of the new. But if you ar your ground floor you must of course na the depth on that floor available for ro and will probably find that lecture ro bursaries, single rooms for non-resident tu or single sets can best be placed there. Lock has pointed out that the arrange of two sets in depth with the dividing has two disadvantages—(1) you lose opportunity of free air passage, or perfla so easily obtainable if you have single se sitting or "keeping" room and bedroo the depth, by means of the usual commun ing doors; (2) both bed and sitting r must have the same aspect. There further disadvantage, which is that as span increases your roof is apt to grow hig and it is generally desirable to keep it d If bathrooms are supplied and with a suffi number of baths the bedrooms can be small, say, about 100 sq. ft., or slightly less; but, of course, a comfortable space not facing the light should be prov Bathrooms are very generally placed in basement, and this where the ground flo raised a little, so that window heads ca brought slightly above ground, does well, provided that the necessary areas light and ventilation can be outside quadrangle, *i.e.*, at the back of the ra and wide enough, and that smaller area fresh air inlets are provided in the quad as to give a cross current. The baths generally arranged in cubicles some 7 f 5 ft., with partitions 6 ft. high or thereab and raised well off the floors, in the ra a bath to four or five men, and about ha number of shower baths. A service-room keeping and drying towels, and a ge dressing room or two, for muddy fresh from "Rugger or "Soccer,"



Presbyterian College, Cambridge. Mr. H. T. Hare, F.R.I.B.A., Architect.

sable, with a supply of lockers for flannels,
If you have a bathroom and consequent
boiler somewhere in the basement a hot
r supply to each pantry can be arranged.
Fellows' rooms are usually now in sets
hree, a large sitting or tutorial room, a
ler sitting-room and a bedroom, and
ld have an "oak." College bursaries
merely offices for college business, and
ld be conveniently placed near the
ance. There must be at least two good
lit rooms, the bursars' and bursary clerks',
a strong-room and lavatory. Frequently
e rooms are needed, a senior and a junior
ars' rooms, and a college office or meeting-
.

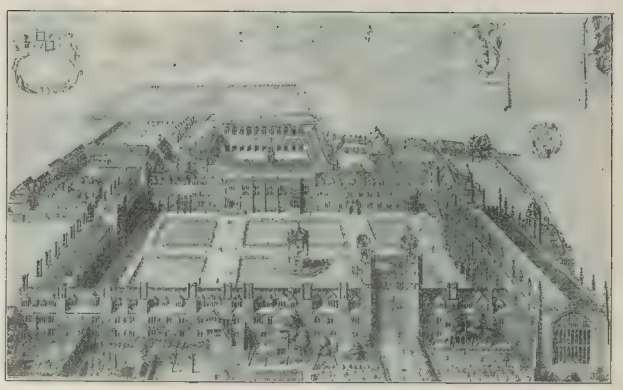
he master's dwelling has grown from the
rooms formerly allotted to celibate
ers, and are now complete domestic
llings for married men, much like a good
ry house in requirements, but with one
ial need, a really large study or library.
an ante-room leading to it. The dining
should also be a large room.

he common-room has expanded from the
nt parlour or solar into a group of rooms
ituting the Fellows' private club, and
ng a large and comfortable sitting-room,
e desert, wine, and coffee are taken after
er in hall, and where luncheons are
rally served. Attached to, or near, this
he now invariable smoking-room, and it
t infrequent to have a third and smaller
for writing, etc. The junior common-
is the undergraduates' club, and usually
sts of one large room, where breakfast,
frequently luncheon also, is served. It is
l to provide a second room for reading,
ing, etc., and for both senior and junior
non room groups a distinct lavatory is
sable. There is a new refinement of the
non-room group which I have just been
d upon to supply at Oxford—that is a
non-room dining-room, with an ante or
ing room leading to it, and a cloakroom
lavatory.

esidential colleges for women are multi
g and extending and growing in archi-
ural importance and beauty. These
rally require somewhat different arrange-
ts, the general system being more
estic, and open-air passages and basement
rooms, etc., being usually avoided.
ge bed-sitting-rooms usually take the
e of the masculine double set, but parlours
music and recreation-rooms are provided.
erwise the recognised collegiate require-
ts apply, the chapel, hall, and library
g just as essential, or even more so, than
the other sex. Bursaries, perhaps, are
so formal, and common-rooms have a
er different character, being, for one
g, connected more with tea than the
e.

Chapels.

he chapel of a college is traditionally a
ncel, screened off from the ante-chapel to
ch the non-collegiate are admitted, and is
survival of the monastic choir screened
the secular nave. In obedience to this
ition the seats are arranged as stalls,
ing inwards instead of eastward as in
lar churches. Return stalls are allotted
he master or president and his more
ediate satellites. The seats are arranged
iers rising from the gangway, the Fellows
pying the upper and more dignified rows,
undergraduates the inner and lower. Thus
ake a bench seat in a college chapel is to
ease and not to diminish one's dignity.
s arrangement seems so suitable as to
no adornment in modern times. There
usually no pulpit, as sermons are only
sional and commendably short, and
vered from the lectern. As is common in
collegiate churches in England, cathedral
ther, the organ and choir gallery are very
lly placed on top of the screen, an
irable arrangement both musically and
tically. A college chapel is of greater
ht than adjacent ranges of the building,
placed axially more or less east and west,
ld, if on the side of a quadrangle, be
ys on the north side, so as not to cast its
lows where shadow is detrimental. The
observation applies to the hall if lofty
if similarly placed. The chapel is the
er without any east window as a rule,
chapel and hall alike are the better for
terrupted ranges of side windows, which
best kept high, in the first case on account
he stalls and their panelled backs, in the

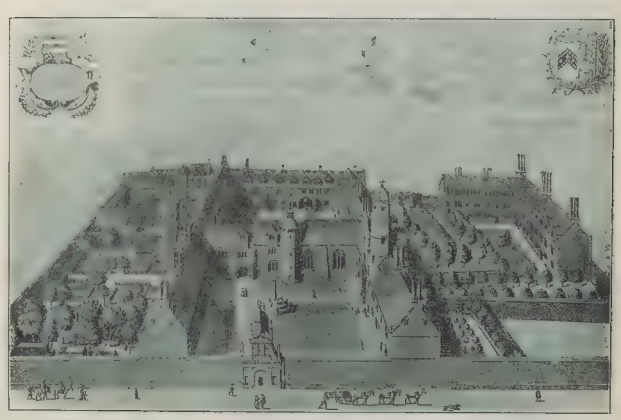


Trinity College, Cambridge.
(From Loggan's "Cantabrigia Illustrata.")

second to avoid a low light in the diners' faces, and to provide the opportunity of a high wainscoting, which is incidentally an admirable background for college portraits. The screen, of course, is a mediæval survival immemorial in refectories and dining-halls. It has survived because of its obvious utility. It shuts off from the hall the draughts of constantly opened doors, the scurry of servants, and all the traffic between buttery or pantry and kitchen. It is as useful now in all these respects as heretofore, and it has an added function in screening the modern appurtenances of service lifts, hot tables, switchboards, and call tubes, and all the constantly growing paraphernalia which science provides for the furtherance of material ends. Its ancient form still subserves modern usages, or, perhaps, more correctly speaking, has begotten them, in the happy fact that its roof provides a gallery, anciently intended for musicians, and still sometimes devoted to music. It is very useful, during the crowded festivities of college balls, as a retired post of vantage for observant chaperons, or a resting-place for the breathless energetic. It has many utilities, and should on no account be omitted. The college dining-hall is the great social centre and the common meeting-place of the college. It has to serve for examinations and special assemblages of various sorts. It needs careful lighting at night, as by day, and careful warming and ventilating. Low or high-pressure hot-water systems, fresh air inlets, and the electric fan provide admirably for these requirements. It is generally wise to give it a good dancing-floor of oak boards. The hall may be, as old halls frequently were, placed over the kitchen, buttery, etc., but should be so disconnected that kitchen smells do not penetrate it.

Libraries.

The recognised collegiate plan for libraries is not only picturesque—*i.e.*, architecturally effective—but practical; the double bookcases standing at right angles to the walls give increased book space, and at the same time divide the room into secluded bays where students can sit at a table and work in comparative isolation. The bays should be not much less than 9 ft. between the bookcases, and will be better from 10 ft. to 12 ft. wide where tables are to be inserted; and this arrangement implies a window to each bay. The lighting of libraries is important; north and east are the best main lights, but if a long library is lit from its north and south or east and west sides blinds or curtains will be needed on the south or west sides. Quietude of effect internally is essential, and a scholastic gravity of exterior seems appropriate, but there is no need externally or internally for the gloom and ponderosity so often bestowed upon libraries. In planning a non-residential college, say the modern university college of a large town, and intended, of course, for both sexes, the problem becomes very different. The chapel is usually not required, the hall subserves different purposes, and is usually more or less of a speech hall; lecture-rooms, lecture theatres, and classrooms, scientific laboratories and workshops are needed, and, not infrequently, some sort of museum is added, and a gymnasium is not unheard of. Colleges, residential and non-residential, have been devised and built in recent years in considerable numbers, and it is interesting to



Gonville and Caius College, Cambridge.
(From Loggan's "Cantabrigia Illustrata.")

observe in what manner the collegiate sense has been accepted or interpreted by those to whom it has fallen in recent years, either at Oxford or Cambridge, in immediate contact with these ancient things, or elsewhere free from such propinquity, to build colleges or schools of collegiate type."

Mr. Basil Champneys,
in moving a vote of thanks to the lecturer, said a question which had been constantly before his mind was, how the standing arrangement of staircases in college buildings came about. To him it was a great puzzle. The only theory which he thought met the case was this. Mr. Warren showed the old buildings of Worcester College, Oxford, where there are a number of small buildings, each with a difference of assignment and each with a different staircase and its rooms. And these form a kind of conglomerate. Worcester was too late a precedent for New College, or even for Merton, but it was known that in the earlier Oxford there were a multiplicity of halls. Was it possible there might have been in Oxford some sort of conglomerate halls like that of Worcester, of earlier date, which might have suggested the plan of separate staircases, such as was adopted, as far as one could tell, by William of Merton, and certainly by William of Wykeham, at a later date? However it originated, there was no doubt the staircase arrangement, as used by William of Wykeham, had held its own, and, though the purposes of the rooms have been converted, it seemed to him the best arrangement on which colleges could be planned for the present day.

Professor Simpson
seconded the vote of thanks, and in doing so said he regretted that the lecturer had not referred to the big modern laboratory buildings for scientific research which must now form a part of every University. Those buildings required an entirely different treatment from the old buildings. In modern buildings large windows, lofty rooms, and the walling reduced to a minimum were absolute necessities.

The Rev. T. B. Lock (Bursar of Gonville and Caius College, Cambridge)
said as to Mr. Champneys' question, how the colleges took their present shape, last summer he studied Haddon Hall, which was almost an exact replica of an Oxford or Cambridge college; there was the hall, the kitchen, the chapel, the combination room, and in addition the long gallery. That was common to all colleges. Queens' College, Cambridge, was almost a replica of Haddon Hall. The arrangement was not quite the same, but there were two courts, and you pass from one court to the other through screens—that is to say, the gallery and the hall. The gallery itself is in exactly the same position in Haddon Hall as the gallery in Queens'. The chapel is in the same position, and the only difference is that the kitchen is on the south side of the court, and is approached not through the screen, but they had to cross the court to get to the hall. With that before us we cannot have any doubt as to the origin of the collegiate form which we see so frequently repeated. The dwellings were separate houses ranged around the quadrangle, we might call them staircases, just as they are at Oxford and Cambridge. As an instance of the advantage of having one side of a quadrangle open, it occurred to him that he might mention in the presence of Mr. Jackson his ingenious solution of that difficulty. When the court in which the Geological Museum, Law Library, and new Archæological Museum which Mr. Jackson was now building were being arranged, it was wished to keep an opening on one side of this long court. Mr. Jackson suggested they should put the library on top of open arches. That seemed at once to solve the question; there was fresh air coming in through the middle of the space, and on the top of it was a beautiful library, devoted to Law, which Mr. Jackson had built.

Mr. T. G. Jackson
referred to the growth of the college plan such as was found at Oxford and Cambridge, and said that they grew up insensibly without any definite motive at first. These college buildings grew up in a sort of accidental way, and the Universities existed for a long time without colleges at all—young men being lodged in halls. There were private houses of the ordinary domestic type, and with two or three of them thrown together we got the origin of the Oxford staircase, and when colleges came to be founded they were made up of half a dozen halls thrown together.

Mr. Aymer Valance showed some additional slides, and also remarked that colleges were built up of pre-existing halls, and that explained how the central staircase came in; it represented a separate cell. The buildings were built up and added to just as they were required.

The Chairman then put the vote of thanks to the meeting, and it was heartily agreed to.

Mr. Warren, in reply said that New College appeared to have been a deliberately planned college, and was not built up by bits, as was the case in other colleges.

The Chairman announced that the next meeting will be held on March 4—a business meeting: Election of the Royal Gold Medallist.

The meeting then terminated.



BRIDGES.

THE following is the second part of the paper which Mr. Paul Waterhouse, M.A., read last week before the combined meeting of the Architectural Association and the Junior Institution of Engineers, together with some notes of the discussion which followed. The sketches which Mr. Waterhouse showed, some of which were reproduced as slides, were the work of the late Alfred Waterhouse, R.A. Other slides were from the photographic collection of the Architectural Association:—

"If the Devil built the Roman bridges, who built Napoleon's? What do you think of this one from the French side of the Pyrenees? Whether it is a true product of Napoleon I do not know, but it is an absolute poem on all that the word 'Napoleon' means. That leap so rash and yet so assured, that exact fitting of available means to an end, and, to crown it all, that trim bit of Roman assumption in the parapet. Add to this the position in Nature, the rugged, lonely, and defiant spot upon which the hand of resistless man has been laid with infinite delicacy, yet infinite pertinacity, and you have here a sonnet or an essay clearer than any in mere words."

"Surely," said Harper, interrupting, "you are beginning to fly rather high in your rhapsodies! The simple fact probably is that the bridge in question presents, in the absence of steel or chain construction, the most obvious and practical device for the purpose. It is really difficult to understand what simpler expedient Napoleon (or the Devil, for that matter) could have adopted."

I ventured to cut in with the suggestion that, after all, the span—as I happened to know—was 150 ft., and that, whether we looked upon the structure as poetry or prose, devilish or Divine, it certainly needed a bold mind to entertain the idea of flinging a bridge across such a chasm at all. Humbler men in a less enterprising civilisation would have been content to master the difficulty by taking a circuitous route.

Bridges and Sentiment.

Said Pargiter: "If you are a man [illegible] sensibility at all—in the good Jane Auste[n] significance of that word—you can't lo[ok] upon bridges in any but a sentimental ligh[t] Bridges are full of sentiment, steeped in [it] and unless you are accustomed to go throug[h] the whole of life seeing nothing but facts a[nd] figures, you are compelled to receive som[e] thing of the message which almost eve[ry] bridge bears."

"Charing Cross Bridge, for example," sa[id] Harper, "and that which exudes fro[m] Cannon-street Station like a slug from [a] loathsome lair!"

"There," said Pargiter, "you rath[er] have me. Let us wipe out the thought [of] poor old Thames by the refreshment of [a] glance at Florence—Florence from S[an] Miniato, one of the fairest prospects in t[he] whole world, and a prospect of which t[he] bridges are the fairest part. Look at the[m] as they glide one after another, marking [in] their perfect radiation the noble curve of t[he] noble river, each true to its trust, economi[s]ing its material, and springing from pier [to] pier with as little waste of stone as w[ill] suffice to bear in safety from shore to sho[re] the gaiety, the commerce, the beauty, a[nd] the strength of the city that was worth[y] to be Dante's and Alberti's home. Pon[te] Vecchio, the old bridge, and the farthes[t] breaks, you think, the rule of economy. B[ut] no; it only shows its mastery by one [of] those delightful thefts from the river [by] which we should have an example in Lond[on] if only old London Bridge were still spar[ed] to us. The Ponte Vecchio is like a travell[er] who, wayfaring through difficult countr[y] traffics as he goes. Its parapets are lin[ed] with shops, and many are the English poun[ds] that have been lured over its entici[ng] counters.

Durham, Conway, and Monmouth.

It is hardly fair (he went on) to co[m]pare London with Florence, for if there [is] one thing more than another that bridg[es] express it is nationality; so let us set up [in] a minute this sketch of Durham. See t[he] rugged British force of the whole co[m]position. The bridge belongs to the Cath[e]dral. Its slope emphasises the height of t[he] crag on which the Cathedral stands, and [its] irregularity—lack of uniformity between o[ne] arch and another—adds immensely to [its] rough vigour of the scene. A suspe[n]sion bridge can be, and often is, a lov[ely] thing, but imagine, if you can, a suspensi[on] bridge taking the place of Durham's ro[ck] causeway, and you will realise that it wo[uld] spoil the picture absolutely."

I instanced the suspension bridge at Co[n]way as an example of the discord to whi[ch] Pargiter referred, but he was not who[lly] willing to agree, declaring, with delight[-]ful inconsistency, that the lightness a[nd] modern grace of the steel-rope structure ga[ve] force and mass to the Castle, and was con[se]quently of pictorial value.

"Your mention of Wales," he adde[d] "reminds me of Monmouth and its truly [ex]cellent bridge. The first time that I saw [it] —quite unprepared—it gave me a shock. [I] could not believe that I was in Brita[in]. The bare idea of a bridge having anythi[ng] on it in the way of a bridge house, [or] chapel, or other structure, is so entir[ely] foreign to our island's methods. Engla[nd] is fearfully parsimonious in the matter [of] little excesses of this kind, so that on[e] first involuntary cry on seeing such [a] development is, 'How did they afford it' Compare this with a Nuremberg example, a[nd] you will hardly guess which is the Engli[sh] and which the German.

There is great charm about a bridg[e] with something on it—of course, as an alt[er]native to the bridge which is a bridge alo[ne]. That is one reason for our bitter regret [at] the loss of old London Bridge. That [at] Florence's Ponte Vecchio, and in a differ[ent] degree Venice's Rialto Bridge, are instances [of] the instinct to make good financial use [of] the space which the bridge has won from [the] water, a picturesque act of commercialis[m] which might well be repeated in mod[ern] times.

Why we habitually shrink from [the] chance of making a bridge pay rent for [its] existence by a row of shops is more than [I] for one, can understand.

Buildings on Bridges.

Of bridges with things on them there are veral kinds. There is the covered bridge, which there are two at Lucerne; there is e bridge with a chapel, of which even ngland has one or two examples; there the noble bridge at Pavia with both oof and chapel. Then there is the festive oman idea of a bridge with one or two iumphal arches. We saw the rudiment of is in the Puente del Diablo; a better xample is the bridge at St. Chamas, of hich I have found an old engraving. Even on, Harper, must allow that such a bridge sentimental, for a triumphal arch has no eaning whatever but a sentimental meaning. is a costly expression of pride."

"I am not quite so sure of that," said arper, "for you will probably find that a ood many so-called triumphal arches are in ality merely glorified versions of toll-bars customs-barriers, and those placed upon bridge may very probably have served both rposes. But I see you have there a photo-raph of the Palladian Bridge at Prior Park, ath, which, like that at Wilton, I frankly mit to be a mere piece of building for fect. In fact, it is a garden ornament, to e classed with statues, urns, and fountains mong those products of masonic and sculp-ral art which by their presentation of nament without use are thereby removed om architecture according to my definitions that art."

"You are on very dangerous ground," id Pargiter (for if you talk of ornament thout use you imply that there is no use r ornament), "but if we enter that ground ow I fear we shall never get through our rtfolio and its enjoyment."

"Very good," said Harper. "Let us ave the dangerous ground, but before you roceed to say anything on the subject of rge towns with large bridges on large vers I want to put in a word of common-nse caution. You are off on the tack, rgiter, of seeing something more than eets the eye in every bridge that ever was uilt, and before we get too far in our ghts I have just a word to say.

We all know the story of the innocent rson who observed that all the larger vers of the world seemed to make a point running through or by the largest towns. he fact, of course, is that ancient cities eded a river (if they could possibly secure site upon one) for transport, for water pply, and for defence. Here were three eat natural advantages to be had for thing, and only one disadvantage, the need cross the river, which need was met by e inevitable bridge.

Thus it comes about that to most ediæval cities—for most of them managed fulfil their desire in finding a river and ttling by or on it—to most mediæval cities substantial bridge was a common utili-rian adjunct as general and as unworthy special artistic enthusiasm as the railway-ation, which is the common accompaniment the modern city. I have here a photo-aph in point. It is the fairly well-known onte del Ammiraglio outside Palermo. I mit it is a well-built, bold, and a very cient structure, but it would be a mistake look upon it as one of the wonders of the chitectural world, or as conveying one of ose poetic messages which you, my friend, e seeking to find in every combination of ers and arches."

Pargiter looked steadily at the photograph d said :—"You have an eye like a Kodak, arper, and I am prepared to admit that the mera which took that view missed a good al of what there was to be seen. I am not lling to say that even that bald present-nt fails to convey to me something of the rit which is really in the bridge, but I certainly claim that the sketch—for, dly enough, there is in the portfolio a etch of the same subject—sees more and ys more.

Toledo and Limburg.

But while we are on this side of the bject just think of Toledo. Toledo on the ap occupies a peninsula three-parts sur-unded by the Tagus. A bridge or two is erything to Toledo—necessities if you will, t none the less gloriously important. To bridge to Toledo is a proud office. Why, King is a necessity (to some of us), and a coachman is a necessity to the Lord Mayor, but you don't think that King or coachman are the less proud for their needfulness. The bridges of Toledo know fairly well the glory of their office, and don't they just show it? Look at this one. There is no common-place drudgery about this fellow; he certainly has his duty to perform, an everyday duty of conveyance, but he goes about it with the gaiety proper to the drummer of a cavalry regiment, and if you were to walk over him you would feel pride arching his back in every yard of his up-and-down gradient. And should you wish to know how Toledo's other bridge bears its burden of office, go and see it by moonlight as painted by Harold Speed in the Tate Gallery.

Your position, Harper, that necessitous duty knocks the sentiment out of these friends of man, is no good. Look at Limburg. Limburg doesn't say that, having settled on the River Lahn for commercial and strategic reasons, it has built a bridge as a traffic necessity. Not a bit. It says, in defiance of history and geography, Here am I, Limburg. I have chosen a fair hill-slope for my township, I have ordered a majestic crag for my cathedral, and, to make my picture perfect and to show that I am lord of my great river, as well as of my noble landscape, I have flung across a bridge—such a bridge. And what does the bridge do for the cathedral? Everything. It makes length to emphasise the cathedral's height, it makes mass to emphasise its detail, fore-ground to give distance, colour to catch sun-shine. Where is your railway-station now?

What Bridges Tell.

No; you can make nothing of your assumption that a bridge is a mere fact. Take even these two quiet English works from the River Thames. What do they tell? A whole story. British character, for one thing; for another, that, though standing in a country landscape, they are near a large and cultivated town. They tell you that the road they carry is an important one; they tell you that they belong to an age in which bridges still ranked as architecture, and their classic detail tells, what classic detail always tells, that the men who built them belong to a brotherhood wider than Europe and as old as Greece.

If you are to criticise them, it will be to say that they are not at one with their surroundings, but they are not wholly meant to be; they are the advance-guard of London coming forward to meet the traveller with a foretaste of the town and its culture.

But if you come to speak of fitness among surroundings, see how these three arches over the moat at Kentwell Hall take their place among the trees—so tenderly, so perfectly, that they almost add to the very silence of the scene!"

I asked Pargiter if there were any sketch of the bridge at Avignon. "Alas, no!" he said. "I wish there were. Such a bridge as it must have been! The lean fragment



Dolce Acqua. From a Sketch by the late Alfred Waterhouse, R.A.

(Illustrating Mr. Paul Waterhouse's Architectural Association Paper on "Bridges.")

that remains is like a greyhound—a bit of tense, almost muscular, masonry. Its very destruction seems to show how fine in its case was the margin between weight and energy.

And what have we here—the last in the portfolio? The bridge of Prague. What a change! Here is nationality with a vengeance. No English town, no French, could have expressed itself in such a guise. Look at its gallery of statues; look at its towers, at their challenging inequality, their fantastic shape! The crucifix that crowns the bridge's centre was paid for, so they say, from the fine laid upon a Jew who had reviled the Cross. There indeed was a rich riot of faith, and faith is a great thing among bridges."

This is, perhaps, hardly the place in which to tell you verbatim the things that Pargiter was led on to say as the result of this train of thought. You can perhaps guess his direction. He suggested that the kind of man who, for one reason or another, takes no heed of sacred emblems might yet find it in him to raise his hat when he came upon such a symbol in such a place as the crown of a noble bridge. A host of ideas ran through our friend's mind and found utterance. Art and skill, he said, had conquered Nature and force; but was that all? What of the old river god and the Divinity that now stood over him? Was there nothing in that thought? And even, apart from this, he said, if you don't care for Christian imagery and take no account of pagan mythology you still must have some faith in the doctrine of outward and visible signs. Those "books in the running brook, sermons in stones, and good in everything" that Shakespeare tells of are very real, and to all but the blindest very intelligible, very readable.

"Depend upon it," said Pargiter, "every bridge has had a bridge-maker, a pontifex, and every pontifex is a priest, and every priest has his message.

Nationality, character, mood, temperament, welcome, defiance, joy, gloom—all these are songs that a bridge can sing. But through them all and with them all it sings by its mere being, by its mere act, the song of the passing, the song of the river crossed, the song of the coming over, which is an overcoming. And for those that overcome there is a crown."

We two came out from Pargiter's room and said good-bye. I walked home with Harper. We didn't talk for a space. Then I said, "You rather curbed our friend once or twice, but I daresay you did well or meant well in bringing him down to earth. Anyhow, I know he never thinks the worse of you for it."

I said this because I thought he might be feeling remorseful.

His reply rather astonished me. "I don't care," he said, "what Pargiter thinks, but I am sure that in all he said to-day he was perfectly right."

Mr. W. T. Dunn (Chairman of the Junior Institution of Engineers),

in proposing a vote of thanks, spoke of the novel and admirable paper which Mr. Waterhouse had read. As engineers they had expected to hear something as to the design of bridges and as to materials. The lecturer had shown Mr. Waterhouse not only as a capable architect, but also as an artist and a word-painter.

Mr. H. H. Statham

seconded the vote of thanks, and said that the lecture had been essentially one on the poetry and picturesque of bridges, and they would be prepared to hear from their engineering visitors that there was another side to it. As an example of an engineering bridge which was perfectly simple but effective, there was the tubular bridge over the Menai Straits a practical construction in which there was nothing which offended the taste. What architects felt about engineering structures was that they would like them better if there was no architecture upon them. He was a great admirer of the Forth Bridge, but if any attempt had been made to ornament that structure it would have been gimcrack. It was expressive because of its enormous size and grandeur of structure.

Mr. Percy Waldram,

in supporting the vote of thanks, said a bridge was a thing with muscles and life, and no bridge-designer could think of the creation of bridges with their huge arms and muscles spanning great spaces without a very keen sense of responsibility. As to the question between architects and engineers, it really came to this—*i.e.*, whether engineers knew enough about architecture or whether architects knew enough about engineering. There was a great deal in the point of view that as structural work truly expresses itself so it grew in beauty, and the putting together of materials in the erection of such works as bridges was not a mechanical operation only. Engineers often built ugly structures, but that was not because they were engineers, but because of their bad engineering—not because they knew too much of stresses, strains, and thrusts, but because they knew too little. As to reinforced concrete for large bridge spans, he thought it was open to serious objection, concrete being such a weak material, weaker even than wood. If the arch of a bridge followed the line of thrusts there ought to be little need for reinforcement, and if there were he thought it was generally due to bad designing. Engineering and architecture were not alien one to the other, they were the necessary complement of each other.

Mr. J. J. Burnet

said he thought such mixed events were provocative of good engineering and the best architecture. He thought that no artistic thought given to a bridge should take away the engineer's work. The first duty of a bridge was to span a river or something and do its practical work, and an architect could come in to make the design suitable to its surroundings—to give an artistic rendering to the highest mechanical realisation. The Forth Bridge was a remarkable work, but some day something would be done to bring it a little more into sympathy with the landscape. He thought the bridge at Prague and the one at Toledo were excellent examples of the artist bringing the bridge form into harmony with the surroundings of the town. There was not a more picturesque example of a bridge than the one at Prague. Architects ought to be sufficiently well trained in engineering to be able, if they saw the engineer's first sketch of a bridge, to make sympathetic suggestions so as to give the design more relation to its surroundings and to suggest alteration for its improvement. The fault was that neither engineer nor architects knew quite enough to sympathise with the responsibilities of the other. The principal delight in bridge work must be its obvious integrity of purpose, open to the understanding of everyone.

Mr. Percy Young having spoken,

Mr. A. T. Bolton

said the bridge was immensely simplified when it had a natural setting—when there was a cliff from which it could spring, giving the idea that it united in a most perfect way with its surroundings. That was one of the great features of Waterloo Bridge, and he was not acquainted with any bridge which had the same beautiful finish; and the bridge was remarkable because the architectural element was so strongly introduced—the columns, though they had no practical structural purpose, were introduced in a way which made them never seem excrescences. London Bridge had a more utilitarian and compact aspect in the way the columns were introduced. He could not help thinking that at the beginning of the XIXth century there was a much better feeling between engineers and architects then had existed since. Engineers of that day seemed more disposed to work with architects and more disposed to artistic influence. Some of the mistakes of architecture among engineers were due to the deplorable summary of architecture which used to exist in engineering handbooks, and probably they did not exist now. Engineers got a sort of idea that all they had to do was to get hold of these summary facts and apply them. He could not see what we should not have bridges lined with shops, and as far as he knew there was no real objection to it. In the erection of future bridges there should be more co-operation between architects and engineers

Mr. Philpot having spoken

Mr. H. W. FitzSimons

said, as to reinforced concrete bridges, if a moving load were placed upon an arch, and if the arch had a very slight rise compared with the span, then provision had to be made for resistance to the tension stresses which came into the arch. No matter how the arch was shaped there must be a tendency to tensi stress. As to Conway Bridge, enginee regarded it with a little reverence as it was o of Telford's first bridges and one of the earlie structures of its kind. It had fully carried o its purpose until recently, when it had to strengthened. The sketches they had se were very beautiful, but think of designing su bridges nowadays! What would a Parliame tary Committee say to an engineer who pr posed the small spans of some of the riv bridges shown? Engineers had to provide no for as large a span as possible, as high a headwa underneath, and as low a gradient as possibl and it was difficult to bring all these poin into proper relation one to the other. T probability was that if engineers worked mo with architects better results would be obtaine but it was a difficult question as to where o was to leave off and the other commence, and was certainly difficult in regarding it from t financial point of view, for public bodies ackno ledged one of the professions, but would n acknowledge both. Some of the Continent steel bridges were beautiful structures, and he d not think exception could be taken to the A bridge was a structure intended to car traffic, and under present conditions the m who must design such a work was he w had been specially trained so to do, and he d not think that architects could deny this be the work of an engineer.

Mr. S. Bylander

said he did not think it was impossible to ma a steel bridge beautiful, and he instanced t Washington Bridge with its two large arch spa at least 500 ft. each; under one was the riv and under the other eight lines of railway. T bridge was entirely built of steel, and, to h mind, it looked beautiful. As to stress, it w interesting to look at the Brooklyn Bridge trains crossed, and see the movement of t members due to increased stress. A bridge w more interesting than a machine—a machi had regular movement, while the stresses in bridge varied greatly.

The Chairman,

in putting the vote of thanks to the meetin said that such meetings led to a better unde standing between the two professions. O could not help being struck by the way in whi engineers approached the question. One gent man said that Parliamentary Committees wou not agree to a bridge which contained as ma arches as the bridge at Limburg. Very like not; but Parliamentary Committees wou tolerate bridges expressive of the needs a the powers of design of the time. If th had been a Parliamentary Committee at Li burg they would have passed that brid with acclamation, because it was a brid which was thoroughly embued with the spi of its own age. If we could learn fr the past—if we could realise that the Rom bridge builders were as much artists wh they were building a bridge as when th were building a basilica, perhaps we should try to combine together—architects and en neers—to make our bridges always things beauty. If we could come to some agreem when a bridge is being designed to make beautiful, he thought it would be a gr advantage.

The vote of thanks having been carried v heartily,

Mr. Waterhouse,

in replying, said as to the great question betwe architects and engineers, he felt that the cr of both of them was so very big that neither them would ever get to the end of it. Th could not be giants combining both functions one, though the ideal solution of the questi was that designers should be almighty, comb ing both professions; then everything would very well! In the meantime he felt the probl was, so to speak, an insoluble one. There h been a seeming indication that he was f friendly to suspension bridges, whereas he h a great reverence for them. As to the Fo Bridge, he could only say that though it was as ugly as an ugly thing, it was nevertheless one the most wonderful things in the world. really ugly was not the right word to use was a compelling thing, and he mentioned ugliness only in order to emphasise the immen force it exercised on him and, he believed, everyone else who looked at it wonderingly a respectfully. It filled him with amazem every time he saw it, and it threw over all

conceived ideas of architecture and the rules rt. It was a thing full of spirit, life, and

The President announced that the next eting would be held on February 26, at p.m. (a combined meeting with the ieva, Sketch, and Debate Club), when a er would be read by Mr. F. C. Eden, tled "Hopes and Fears for Architec-."

RCHITECTURAL SOCIETIES.

Manchester Society of Architects.

n the 14th inst. Mr. A. N. Paterson read aper, entitled "Scottish Architecture, esiastic and Domestic, XVth to XVIIth turies." In tracing the history of the early elopment of Gothic art in Scotland he ved how till the XVth century Scotland owed in the wake of the general traditions building in England. That then, when land had passed to the Perpendicular od of flattened arches, fan vaulting, and endicular windows, Scotland, severed n English influence by the war, developed rchitectural character of her own. This maintained for the two following cen-es, but it was to France rather than land that she turned for friendship and iration. The time for the building of rches had now passed away, and Mr. rson showed with some excellent slides levelopment of the country house from the tower and castle.—A vote of thanks was osed by Professor Capper and seconded Mr. Hewitt and heartily carried.

Birmingham Architectural Association: Modernism *v.* Authority in Architectural Design.

a meeting of the Birmingham Archi-ral Association at Exchange-buildings, -street, on the 8th inst., Mr. Howard Smith delivered a lecture on "Modern-*v.* Authority in Architectural Design." entered a protest against the tendency ertain teaching of the day to stereotype lassical ideal in architecture, which was sed to the flexibility and versatility of l, and then spoke of the domination in ce and Italy of classic design of the two or three centuries, remarking that itional mediæval architecture had been letely suppressed, and that the influence he French schools of architecture in that tion had, in his opinion, been fatal to nore domestic, educational, and ecclesi-al architecture of the country, that of practice which must occupy the rity of professional talent. The prin-s on which he thought our schools of tecture should be conducted, and which sponded with the general trend of the bus of the Education Board of the Royal tute of British Architects, were, above hings, to teach the students to observe , and invent rather than to cram and ; that a sound general education should de entrance to the professional schools; the course of instruction should be pro-ive, commencing with elementary design construction, and leading up to an urs or post-graduate qualification; that ntimate association of construction and n as exemplified in the history of the architecture of the past, and inculcated eans of the school workshop and lecture-. should be insisted on throughout, n and draughtsmanship being empha-as essential elements of architecture; that, while the school course must be ly general and theoretical, the office e should supply the more practical part e training, and for encouragement should fered to advanced students to specialise.

Field Society of Architects and Surveyors: Support for Buildings.

. J. H. Cockburn, of Rotherham, by al request, gave a lecture before the ield Society of Architects and Surveyors e 8th inst. upon "The Law of Support Buildings." After dealing with certain ptional cases, he stated that the general was that a right to lateral support from ning property might be acquired for a ing which had enjoyed that support peaceably and without interruption for twenty years. He explained the circumstances in which the right of support might be acquired, and how it could be hindered, and within what time damages must be claimed. He then dealt with questions of liability where a contractor was employed, and with what had to be done for avoiding damages; and concluded by a short reference to support for party-walls and flats.

Mr. J. B. Mitchell-Withers (President) occupied the chair. A hearty vote of thanks was accorded, on the proposition of Councillor W. C. Fenton, seconded by Mr. E. M. Gibbs, and supported by Messrs. Roberts (on behalf of the Law Students' Society), W. G. Buck, C. B. Flockton, T. Winder, W. S. Purchon, J. E. Whitehead, A. C. Caporn, and the President.

Nottingham Architectural Society.

The fourth meeting of the Designing Club was held on February 13, the President, Mr. Robert Evans, presiding.

The subject set was, "A Carriage Porch and Entrance to an Hotel." Six designs had been submitted and Mr. F. E. Littler, Associate of the Royal Institute, who had prepared the conditions, gave an interesting criticism upon them. He remarked upon the general excellence of all the drawings and gave credit for the various good points in each, but called attention to the fact that some competitors had not followed the conditions in the matter of scale, etc., and impressed upon the students that it was a very important point in entering any competition to keep to the conditions.

Upon being asked to place the first three his award was as follows:—1, Garcon; 2, Carbon; 3, Fiasco.

At the close the President said they were greatly indebted to those members who gave their time to setting and criticising the designs in these competitions, and he proposed that their best thanks be accorded to Mr. Littler. Mr. Swann seconded, and it was heartily approved.

GENERAL NEWS.

The New Capital of Delhi.

Liverpool Health Committee recommend that the Council accede to the request of the Secretary of State for India that the Corporation should lend the services of their City Engineer, Mr. J. A. Brodie, to the Government of India for a few months to advise them as to the laying-out of the new capital at Delhi, subject to the Government making satisfactory arrangements with the City Engineer in regard to his remuneration and expenses, and to their refunding to the Corporation the amount of the City Engineer's salary during his absence.

London University Site.

In connexion with the provision of a site for London University it is announced that the Duke of Bedford has granted an option to purchase four plots of land, covering an area of nearly two and a half acres, near the British Museum. The plots lie on either side of the new avenue leading across Montague-place and Keppel-street into Torrington-square.

Hampton Court House.

Hampton Court House, the front of which faces the Green and the rear of which abuts on Bushey Park, is shortly to be demolished. Messrs. Knight, Frank, & Rutley have now submitted plans to the Hampton Council for the development of the grounds comprising the estate, and have asked the Council to state definitely that they would not object to the scheme provided the plans and general intentions regarding the buildings to be erected are otherwise satisfactory. The matter has been considered by the Council, who have replied that they will be prepared to consider favourably a proposal to construct a circular road, provided that complete plans are submitted showing the construction of the buildings in accordance with the Council's by-laws.

Suggested Sale of St. Botolph's.

Nothing has as yet been decided concerning the Church of St. Botolph Without, Aldersgate, which it was reported would be sold to make way for offices. It is stated on the authority of the Vicar, the Rev. C. O. Becker, that no proposal has been carried through, and that the question of sale is only under discussion.

Sanitary Building Construction.

A lecture on this subject by Professor Henry Adams, M.Inst.C.E., M.I.Mech.E., etc., illustrated with lantern slides, will be given at a sessional meeting of the Institute of Sanitary Engineers to be held at Caxton Hall, Westminster, S.W., on Monday, February 26. Mr. Edwin T. Hall, F.R.I.B.A., F.R.San.I., will take the chair at 8 p.m.

The Surveyors' Institution.

The programme of papers to be read at ordinary general meetings of the Surveyors' Institution during the remainder of the session has now been settled by the Council as follows:—

February 26 (afternoon meeting).—"The Tendency towards Uniformity in Compensation for Agricultural Improvements," by Mr. Leslie S. Wood (Fellow).

March 11. The adjourned discussion of Mr. Edwin Savill's paper on "The Single Tax Movement," to be opened by Mr. H. Trustram Eve (Fellow).

April 15.—"The Cost of Labour in Connexion with the Erection of Buildings," by Mr. R. M. Kearns (Fellow).

April 29.—"Some Principles in the Valuation of Land and Buildings," by Mr. G. T. Loban (Fellow).

May 13.—"The Mortgage of Real Estate as Affecting Values," by Mr. A. S. Cox (Fellow).

The Church Building Society.

The Incorporated Society for Promoting the Enlargement, Building, and Repairing of Churches and Chapels held its usual monthly meeting on the 15th inst., at the Society's House, 7, Dean's-yard, Westminster Abbey, S.W., the Rev. Canon C. F. Norman in the chair. Grants of money were made in aid of the following objects, viz.:—Building new churches at Frimley Green, St. Andrew, Surrey, 60*l.*; and Preston, St. Matthias, Brighton, 110*l.*; rebuilding the Church of St. Peter, Stanley, Yorks, 80*l.*; and towards enlarging or otherwise improving the accommodation in the churches at Cropredy, St. Mary, Oxon, 10*l.*; Upwood, St. Peter, Hunts, 10*l.*; Southend-on-Sea, St. John the Baptist, 50*l.*; and Weymouth, St. Paul, 25*l.*; making in all 225*l.* Grants were also made from the Special Mission Buildings Fund towards building mission churches at Borth-y-Gest, Portmadoc, Carn., 20*l.*, making in all 50*l.*; Newport, St. James, Mon., 40*l.*; and Trebanos, Clydach, Glam., 40*l.* The following grants were also paid for works completed:—Hanborough, St. Peter, near Oxford, 25*l.*; Hoxton, Christ Church, Middlesex, 50*l.*; Hollinwood, Emmanuel, Lancs., 80*l.*; Forest Town, St. Alban, Mansfield Woodhouse, Notts, 100*l.*; York, St. Luke, 75*l.* on account of a grant of 150*l.*; South Bermondsey, St. Bartholomew, Surrey, 40*l.*; and The Brook Mission Church, Chatham, 30*l.* In addition to this the sum of 470*l.* was paid towards the repairs of nineteen churches from Trust Funds held by the Society. The Secretary reported the receipt of an anonymous contribution of 500*l.* to the Society's funds.

City of London Fire Inquests.

On Wednesday last week Dr. F. J. Waldo addressed, by invitation, the members of the Farringdon Ward Club at Anderton's Hotel. His subject was the history, working, and results of the City of London Fire Inquests, and, in the course of his remarks, he said that under the City of London Fire Inquests Act wide powers were conferred on the coroner to make private and preliminary investigations on his own initiative into any case of fire reported to him by the Police or the Fire Brigade Service. The method now in force is for the coroner and his jury to inspect the burnt premises, together with any officials the jury may wish to consult. Dr. Waldo stated that his predecessor, the late Mr. Langham, held eighty-five fire inquests, while he, himself, had held forty-eight between 1901 and 1911. The result of these fire inquests may be fairly inferred from the steady decrease of fires; during the

past five years there has been an average annual decrease of thirty-eight fires, as against that of the five years immediately preceding the passing of the Act in 1888. Again, in the year 1902, 47 per cent. of fires were reported as of unknown origin as against 25 per cent. in 1905. The proportion of serious fires has also considerably decreased; whereas the figures for the rest of London show a steady increase, both in frequency and in seriousness.

Theatre Royal, Worcester.

This theatre was destroyed by fire early on Monday morning last, and the only part of the building saved was the dressing-rooms. The theatre was rebuilt about ten years ago.

Clerk of Works to St. Paul's.

The Dean and Chapter of St. Paul's have appointed Mr. Bolwell to be their clerk of the works.

COMPETITION NEWS.

Port of London Offices.

We are informed by Sir Aston Webb that the date for sending in preliminary designs for this building has been extended from February 17 to March 9.

School, York.

The drawings submitted in the competition for the new elementary school in Campleshon-lane, York, were due to be sent in on Saturday last; 202 sets of designs were received.

The cost of the school, which will accommodate 550 in the boys' and girls' department and 250 in the infants', is not to exceed 10,000*l*. The assessors appointed by the committee are Messrs. T. Mellard Reade & Son, of Liverpool. The conditions were notable for the wide scope they allowed to competitors as to the type of school to be adopted.

Rhos Chair Eisteddfod.

Prizes of 10*l*. and 5*l*. are offered for a pair of workmen's cottages, Mr. Raymond Unwin, F.R.I.B.A., being the assessor. Clause 5 is as follows:—"The prizes will be paid in accordance with the adjudicator's award, but no competition will take place and the prizes will be withheld unless there are six entries at the least, received before May 6, 1912." This contradicts Clause 9, which says that designs must be sent in by May 1: but that is a minor point.

Municipal Buildings, Sofia.

In reference to the competition for Municipal Buildings at Sofia, H.M. Consul-General at Sofia writes as follows:—

"The prize for the competition for a design for the new Municipal Palace at Sofia was not awarded, but amounts of 3,250 francs and 2,250 francs were paid for the two best designs submitted by M. Nikola Lazaroff, Boulevard Dondoukoff, Sofia, and 1,000 francs for the third best, submitted by M. Nesheff, architect, Sofia. It is understood that the design for the palace will be based on the above plans, and at a later date the construction of the building will be put up to public contract." No responsibility is accepted in regard to the standing of firms or individuals mentioned.

BOOKS RECEIVED.

THE PRECISE CALCULATION OF PIPE, DRAIN, AND SEWER DIMENSIONS FOR USE IN WATER SUPPLY, DRAINAGE, ETC. By C. E. Housden. (London: Longmans, Green, & Co. 2s. 6d. net.)

OUR HOMELAND CHURCHES AND HOW TO STUDY THEM. By Sidney Heath. (London: The Homeland Association. 2s. 6d. net.)

COPYRIGHT LAW AND THE COPYRIGHT ACT, 1911. By Henry Hurrell. (London: Waterlow & Sons. 3s. 6d. net.)

BRITISH CLAYS, SHALES, AND SANDS. By Alfred B. Searle. (London: Charles Griffin & Co. 7s. 6d. net.)

THE CLAYWORKERS' HANDBOOK. By Alfred B. Searle. (London: Charles Griffin & Co. 6s. net.)

CORRESPONDENCE.

Architects, Clients, and Specialists.

SIR,—Your leading article in last week's issue is so entirely true that one would wish every client could have the opportunity given him to digest it. Looking at the various points you raise, the first is that an architect cannot reasonably be expected to enlist the aid of professional specialists at his own expense. May I say that a considerable percentage of my work is given to me by architects who pay me out of their own pockets? I understand from them that their reasons for so doing are:—

(1) They will have unbiassed judgment.

(2) They do not have to place themselves under obligations to specialist sub-contractors, who will always assist an architect with an eye on the future.

(3) They reduce their risks of mistakes and even failures to a minimum.

A considerable proportion of my work is also for architects who have little difficulty in persuading their clients to pay two commissions.

That is to say, the architect receives his usual fees on the whole of the work, and I also obtain my usual fees on my part of that work.

Every client in such cases has, so far, realised that he was benefiting by doing so.

PROFESSIONAL SPECIALIST.

Trade Unionism and Restraint of Trade.

SIR,—On page 181 2 of your issue dated the 16th inst. you quote at length from an article appearing in the *National Review* by the Countess of Stradbroke on "Trade Unionism and Character." Based upon a statement that the trade union prevents the bricklayers from laying more than a given number of bricks per day, deductions are made and arguments advanced claiming that the trade unions operate in restraint of trade and are inimical to the interests of the community.

I hold no brief for the trade unions, but, during a lifetime spent in the building trade I have seen this statement very often, both in your pages and elsewhere.

Is it a true statement, or is it untrue?

If it is true, surely some of the many builders who read your pages can give us uncontradictable facts and data which will put it beyond question. If it is untrue, then, in justice and fairplay, let it be stopped. My own experience may be given for what it is worth. For some years I was a member of a trade union; there were no by-laws or rules in that union which in the slightest degree had a bearing upon how much or how little work a member had or had not to execute. I attended many branch meetings in three of the principal cities; at no meeting have I heard the question raised or discussed. I have met thousands of trade union workmen, and still have never known the question to be raised. Indeed, my experience has been to the contrary; I found that a lazy workman or a malingerer was deprecated by the union officials. For sixteen years I have been supervising the erection of large public buildings in the north, south, east, and west of England, and yet I have not known of an instance in which the trade unions have interfered with the quantity of work executed by any one of their members. But as the statement is generally applied to bricklayers, I have procured a copy of the full rules and by-laws of the Operative Bricklayers' Society. It is on the table before me now. I have carefully searched page by page and cannot find the slightest reference to the quantity of bricks its members may or may not lay per day, nor can I find anything which has the remotest bearing on the subject or anything which could possibly be strained into having a bearing on the subject. I have questioned the bricklayers (unionist and non-unionists) on my buildings, and from all I have had the same reply—the unions do not interfere with their members regarding the quantity of work they may or may not do.

In the face of these inquiries and my own experience, am I to believe that if a bricklayer lays more than a given number of bricks per day the union finds fault or restrains him?

Amongst architects and the public generally the statement is commonly believed—it is quite accepted as true—that the union restricts the output of the bricklayers. We have it reiterated by the Countess of Stradbroke in the *National Review*.

Is is conceivable that on some buildings the bricklayers (both unionist and non-unionists) have put their heads together and agreed they would not lay more than a stated number of bricks per day—personally I have never met with this experience—but what has an occurrence of this description got to do with the trade unions? It would happen just the same if there were none, and in any case must be extremely rare. The value of the Countess of Stradbroke's article depends entirely on the correctness of the statement that the trade unions prevent their members from doing more than a given quantity of work per day, and if this is incorrect, her article is of no value because her deductions must all be wrong. She refers particularly to the bricklayers, and I maintain that this statement with reference to the bricklayers' trade union is not in accordance with facts. Owing to the labour unrest, the subject is one of particular interest at present, and may be discussed with great benefit. X.

INTERCOMMUNICATION COLUMN.

Public Swimming-Baths.

SIR,—Will any of your readers who have practical knowledge of the initial expenses and cost of upkeep of a public swimming-bath in a village give the benefit of his experience? I thought of having two or three private baths under the same roof, which may be filled with hot water. What is now considered the most economical way of heating water for this purpose? Has there been any improvement on the geysers? What charges should be made to ensure a bath being self supporting, and to what number of bathers? How should the caretaker be arranged for? The village contains about one thousand inhabitants.

WELWYN.

Echo.

SIR,—I wonder if any of your readers would be able to give me any information as to what is the easiest way to cure an echo? Some six months ago I completed a ballroom in Cheshire, which is 50 ft. long by 25 ft. broad, with a bay-window in the centre of one of the side walls and a fireplace recess opposite. The roof is segmental in form, springing off the cornice, 15 ft. from the floor level and rising to 19 ft. in the centre. This room is used as a music-room on ordinary occasions, so this echo (which mercifully is not very bad) is a distinct nuisance. Naturally I wish to avoid having to stretch unsightly wires across if this can be in any way prevented. Thanking you in advance, A BEGINNER.

Staircase, Devonshire House.

SIR,—Can you or any of your readers give some account of the staircase at Devonshire House, especially the handrail? Or say where a description is to be found? R. C.

FIFTY YEARS AGO.

From the *Builder* of February 22, 1862.

St. Thomas's Hospital.

TWO VERY important questions present themselves with reference to this hospital—the question of site and that of architectural design and arrangements. The *Times*, in speaking as to site, appears to consider that those who, like ourselves, have urged the advantages of a suburban site for the recovery of patients, contemplate nothing less than the total removal of the hospital and all its appendages; whereas, so far as regards ourselves at least, we have ever kept in view the necessity and advantage of having an establishment connected with the hospital placed somewhere in the neighbourhood whence it is about to be removed. As for the immense advantages of a suburban site to the recovery of the patients—which surely is a question above all else for consideration—there cannot be a doubt, and if the governors are unwilling to remove the principal establishment from London, with such means as they possess—between 30,000*l*. and 40,000*l*. a year, and rapidly on the increase, besides a very large sum from the railway company for the express purpose of building the required new hospital—surely they ought at least to have an extensive establishment also in the suburbs, within easy time distance from their town establishment, and whereto every possible case could be transferred at the earliest available moment.

EDITORIAL SUMMARY.

Our leading article deals with Labour Questions and Nationalisation and Insurance.

A second article on the "Architectural Societies of France" refers at length to La Société des Architectes Diplômés par le Gouvernement (p. 200).

In "Notes" Column (p. 201) will be found observations on: "Victoria and Albert Museum"; "The Society of Twelve"; "Bridges"; "Site for London University"; "Further Improvement for the Marble Arch."

A meeting of the Royal Institute of British Architects was held on Monday, when Mr. Edward Warren read an interesting paper on "Collegiate Architecture." (See p. 202.)

Our report of the combined meeting of the Architectural Association and the Junior Institution of Engineers, when a paper on "Bridges" was read by Mr. Paul Waterhouse, A.A., is continued on p. 204.

In Architectural Societies (p. 207) will be found short reports of: "Sheffield Society of Architects and Surveyors"; "Birmingham Architectural Association"; "Nottingham Architectural Society."

In Correspondence columns (p. 203) will be found letters on: "Trade Unionism and Restraint of Trade"; "Architects, Clients, and Specialists."

The Monthly Illustrated Review of Engineering (p. 211) includes: "Reinforced Concrete in Great Britain"; "Æsthetic Treatment of Concrete"; "York Tower Collapse"; and Notes.

In the Building Trade Section (p. 215) will be found: "How to Cheapen Transport"; "Manchester Building Trades Exhibition"; "Standard Time Rates of Wages"; "Builders' Clerks' Benevolent Institution."

The last of Professor Reginald Blomfield's Royal Academy lectures on "Architectural Draughtsmanship" was given on Thursday last week, and an abstract appears on p. 218.

The fourth of the present series of Carpenters' Hall lectures on "Arts Connected with Building" was given on Wednesday last week by Mr. Stirling Lee, the title of whose address was "The Sculptor's Craft," with demonstrations. (See p. 218.)

Book Notices (p. 219) include: "Memorials of Old Gloucestershire"; "Laxton's and Lockwood's Price Books"; "Everybody's Guide to the National Insurance Act."

An article on the "Traffic Report of the Board of Trade" is given on p. 220.

In Legal Column (p. 221) are some observations on: "Obstruction to Light"; "Mistake at an Auction."

In Law Reports (p. 221) will be found: "Padbury *v.* Holliday & Greenwood, Ltd."; "Chapman *v.* Greenwood, Ltd."; "London County Council *re* Euston-road Building Line."

MEETINGS.

FRIDAY, FEBRUARY 23.

The Royal Institution.—Mr. George K. B. Elphinstone "The Gyrostatic Compass and Practical Applications of Gyrostats." 9 p.m.

Royal Academy of Arts.—Mr. A. P. Laurie, M.A., D.Sc., on "The Chemistry of Pigments." 8 p.m.

Leicester and Leicestershire Society of Architects. Paper by Mr. H. L. Goddard, M.A., entitled "Rambles and Reminiscences." 8 p.m.

Institution of Civil Engineers (Students' Meeting).—The Vernon-Harcourt Lectures on "Works for the Prevention of Coast Erosion," by Mr. W. T. Douglass, Assoc.Inst.C.E. 8 p.m.

SATURDAY, FEBRUARY 24.

The Royal Institution.—Professor Sir J. J. Thomson, M.A., D.Sc., on "Molecular Physics"—I. 3 p.m.

Builders' Foremen and Clerks of Works' Institution.—Annual dinner, Holborn Restaurant. 6 p.m.

MONDAY, FEBRUARY 26.

Architectural Association (Combined Camera, Sketch, and Debate Club Meeting). Mr. F. C. Eden on "Hopes and Fears for Architecture." 7.30 p.m.

Royal Sanitary Institute. Mr. Alan E. Munby, M.A., on "Elementary Science Physics, Chemistry." 7 p.m.

Institute of Sanitary Engineers (Caxton Hall).—Professor Henry Adams on "Sanitary Building Construction." 8 p.m.

The Surveyors' Institution.—Mr. Leslie S. Wood on "The Tendency Towards Uniformity in Compensation for Agricultural Improvements." 5 p.m.

TUESDAY, FEBRUARY 27.

The Royal Institution. Professor Ernest G. Coker, M.A., D.Sc., on "Optical Determination of Stress, and Some Applications to Engineering Problems"—I. 3 p.m.

Royal Sanitary Institute.—Mr. Alan E. Munby, M.A., on "Elementary Science: Physics, Chemistry." 7 p.m.

Nottingham Architectural Society.—Mr. W. Bond on "Church Restoration." 8 p.m.

Northampton Polytechnic (Illuminating Engineering).—Dr. W. Ettles on "Physiological Factors in Illumination." 7.30 p.m.

Institution of Civil Engineers.—(1) Paper to be further discussed. "Some Features of the West African Government Railways," by Mr. F. Shelford, B.Sc; (2)—time permitting—papers to be read: "Roller and Ball Bearings" and "The Testing of Anti-friction Bearing Metals," by Professor John Goodman. 8 p.m.

WEDNESDAY, FEBRUARY 28.

Carpenters' Hall, London-wall (Lecture on Arts Connected with Building). Mr. M. H. Baillie Scott on "House Building, Past and Present." 7.45 p.m.

Royal Sanitary Institute.—Mr. Alan E. Munby, M.A., on "Elementary Science: Physics, Chemistry." 7 p.m.

Royal Society of Arts.—Mr. H. A. Roberts, M.A., on "The Relations of Science to Commerce and Industry." Principal Sir Henry A. Miers, M.A., D.Sc., F.R.S., in the chair. 8 p.m.

THURSDAY, FEBRUARY 29.

Carpenters' Hall (London-wall).—Mr. Banister F. Fletcher on "The Tower of London." 8 p.m.

Society of Antiquaries.—8.30 p.m.

FRIDAY, MARCH 1.

Royal Sanitary Institute. Mr. Edward Willis on "Calculations, Measurements, and Plans and Sections." 7 p.m.

Glasgow Architectural Craftsmen's Society (Technical College). Mr. Robert Moon on "Various Timbers and their Practical Uses." 7.45 p.m.

Institution of Civil Engineers (Students' Meeting). Mr. H. J. F. Gourley, B.Eng., on "The Design and Construction of Masonry Dams." 8 p.m.

ILLUSTRATIONS.

Stafford Public Library.

LAST week we noticed some of the competition designs sent in for the Stafford Public Library, and we now illustrate the design placed first and the second and third premiated designs.

The authors of the design placed first, Messrs. Briggs, Wolstenholme, & Thornely, FF.R.I.B.A., of Liverpool and Blackburn, write:

"The building is entirely isolated from others which may be hereafter erected on the adjacent site, which safeguards it against fire, and secures many other advantages. An alternative boundary line is suggested to that given in the instructions, which would enable the building to occupy rather less land. The principal entrance is placed at the apex of the site, the same being emphasised by a semi-circular portico boldly treated, forming a striking architectural feature as viewed from Bridge-street. The entrance hall, which is spacious without being wasteful, gives direct access to the ladies' room, newspaper-room and magazine-room, and also to the lending library. Close to the entrance a public telephone-box is provided, which enables it to be used without bringing the public far into the building.

Immediately facing the principal entrance, after passing through a pair of swing doors, the borrowers' counter, with indicators, is placed, at the rear of which are the book stacks in slightly fan-shaped form.

The position of the attendants' space in the lending library is such as to ensure their commanding a complete view of the whole of the lending department, news and magazine and ladies' room, and entrance hall.

This department is well lighted by means of a series of dome lights, each of which is provided with ventilating extractors. The windows in the east wall are provided mainly for the purpose of ventilation. The book stacks are 7 ft. high, and accommodate 12,000 volumes, as shown on the plan.

The newspaper-room runs uninterruptedly along the frontage to Bailey-street. Large windows are spaced evenly along the external wall, sufficiently high above the floor to allow newspaper wall stands to be placed under them; the centre of the rooms in which the tables are placed is, therefore, not obstructed by high fittings.

The magazine-room and ladies' room occupy the frontage towards Lichfield-road, and it is suggested they should be divided by glazed screens architecturally treated, which will facilitate supervision and give a more spacious effect to these rooms.

The book store is placed in convenient relation to the lending department, and is in close connexion with the reference library by means of the book lift and staff staircase.

The staff lavatory is adjoining the staff entrance. The cleaners' sink-room is provided under the staircase near the entrance, from which a staircase leads down to the heating chamber.

The reference room is placed upon the first floor, and is lit with vertical lights placed on either side high up in the room above the book stacks, which it is suggested should be placed round the whole of the room. The librarians' office is also provided on this floor, and is approached either by means of the staff stair from lending library or through the reference library, which it commands. The caretaker's day-room is also suggested on this floor, which would ensure the reference-room being under supervision during the whole day.

We have suggested the possibility of a future lecture-room. It is quite probable that this will be built immediately, with lecturers' retiring-room over the staff lavatory.

The heating chamber has been placed in the basement on the Bailey-street frontage, with a coal shoot, so that coal and coke may be tipped direct from the side street into the coal-cellar. Access to the heating chamber is obtained under the staircase, so that the caretaker would not have to traverse the library from his day-room in attending to the heating.

The walls will be constructed of common brick, faced with approved wire-cut facing bricks or sand stocks 2 in. thick. The stone dressings to be of Hollington or other approved stone which has been found to weather well in the neighbourhood.

The ground floors throughout to be of Portland cement concrete, with 1-in. floated surface finished with cork linoleum. The entrance vestibule to have a floor of black and white marble.

The first floor would be constructed of fireproof flooring and floated with cement finished with cork linoleum, as provided on the ground floor. The whole of the internal woodwork to entrance hall, borrowers' counter, and screens on ground floor will be of American white oak quarter cut. The internal woodwork of other parts of the building to be of American whitewood stained oak colour and dull polished. The building will be lighted by electricity, with drop pendants arranged in suitable positions for the readers. The heating will be on the low-pressure hot-water system, the boiler being the National Radiator Company's "Ideal," or other suitable pattern. Ventilating radiators will be placed under the windows and in other suitable positions. Ventilating flues will be provided to all the rooms terminating on the external face of the walls. A small fan will be provided in the ceiling of the reference-room.

An endeavour has been made in planning the building to let the elevations express the plan in a simple and dignified manner."

Messrs. Sutton & Gregory, of Nottingham, the authors of the second premiated design, write:—

"In preparing our design it has been our endeavour to arrange the public rooms in such a manner that perfect supervision is obtained with a minimum of staff. The attendant in the lending library has direct supervision of the staircase to the upper floor, entrance hall, newsroom, and magazine-room. The rooms on the first floor are under the immediate control from the librarian's-room.

The magazine-room and reference library are on the right of the entrance hall and away from the noise of the traffic of the main road. The newspaper-room and ladies' room and librarian's office are on the left of the entrance hall. The caretaker's-room is placed on the ground floor, near the back entrance and heating chamber, and also in direct communication with the staff in the lending library. A store is placed in this room for the preparation of meals. The following accommodation is provided on the ground floor:—Newspaper-room, 822 super. ft.; magazine-room, 600 super. ft.; lending library, 913 super. ft., with shelving for 12,800 volumes; book store, caretaker's-room. On the first floor—reference-room, 714 super. ft.;

ladies' room, 350 super. ft.; librarian's office, 351 super. ft.

The cubic contents are as follows:—

Foundations, 16,800 ft. at 5d., 350*l.*; superstructure, 84,840 ft. at 10d., 3,535*l.*; boundary wall, etc., 100*l.*; total, 3,985*l.*"

Third Premiated Design.

The authors of the third premiated design, Messrs. Castle & Warren, Norfolk-street, Strand, London, write:—

"The intention of the authors of the third premiated design was to embrace the accommodation by taking up the smallest possible amount of space on the site, thus to arrive at a compact scheme from the points of view of limitation of cost and concentration of supervision. In this way all the rooms are supervised and controlled by a staff of three (two at the service counter, and the librarian in a central position upstairs) and a porter on the entrance.

The ell-shaped lending library in this particular case is considered a great advantage, and the required storage of volumes was just provided for, and the 40-ft. length of counter as required.

The magazine-room in actual practice being frequented only as a rule by quite desirable readers, no objection was seen to the position of the ladies' room, and none would be felt in actual execution.

The scheme was entirely dictated by the cost, and the elevations were based on extremely simple lines in view of this."

Bridges.

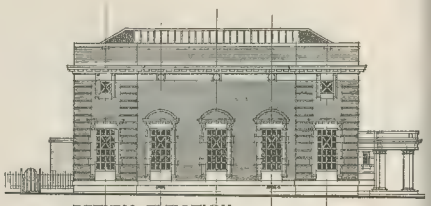
THESE two illustrations, from water-colour drawings by the late Mr. Alfred Waterhouse, R.A., are given in connexion with the lecture on "Bridges" which Mr. Paul Waterhouse recently delivered before the Architectural Association, the second part of which appears on another page. The drawings and many others by the same artist were shown on the occasion of the lecture.

GREEN PARK ALTERATIONS.

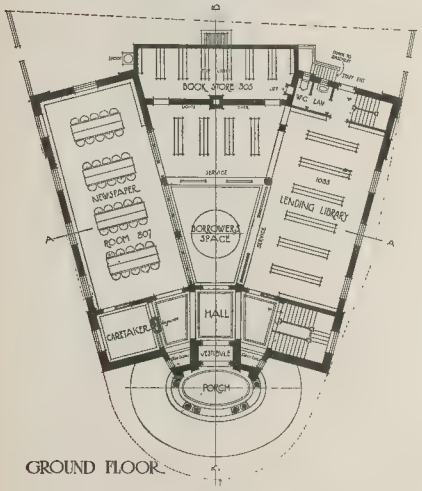
The Broad Walk of Green Park is now being reconstructed. Instead of the wide path which was opened from Buckingham Palace gate to Piccadilly a few years ago, two gravel paths of about 15 ft. wide each are being constructed at either side, and the Broad Walk is being placed under turf, thus making a large green space about 150 ft. wide continuing the length of the walk. It is understood that the intention is to leave this ground treeless, so that a clear view may be had of the Victoria Memorial from Piccadilly.



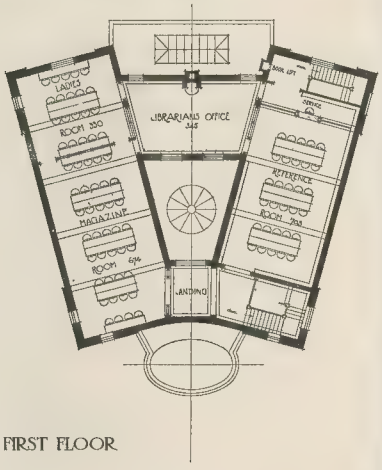
ANGLE ELEVATION



RETURN ELEVATION.



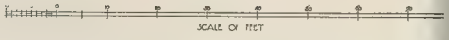
GROUND FLOOR

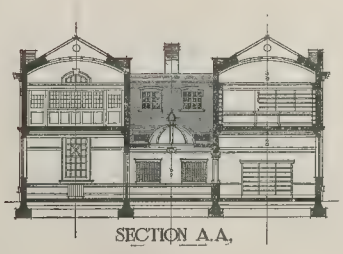


FIRST FLOOR

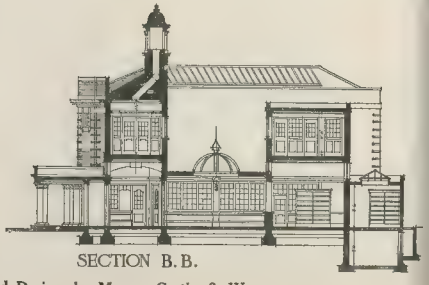


BASEMENT





SECTION A.A.

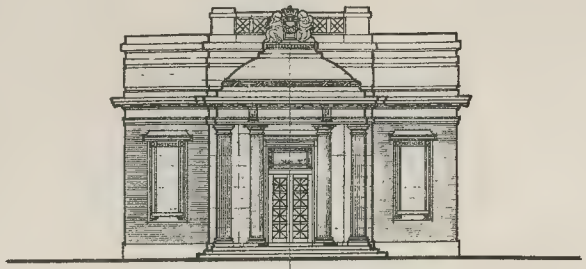


SECTION B.B.

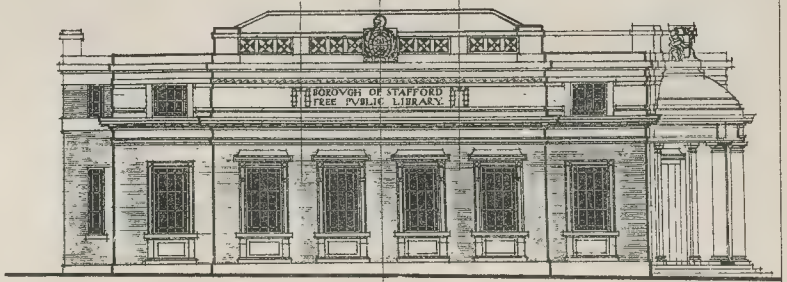
Stafford Public Library Competition: Third Premiated Design, by Messrs. Castle & Warren.



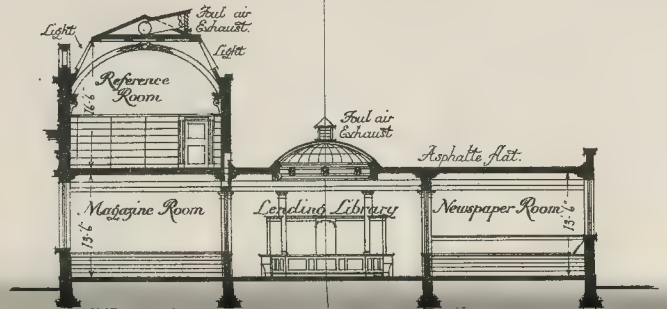
Borough of Stafford NEW PUBLIC LIBRARY.



N.W. Elevation.



N.E. Elevation.
Lichfield Road.





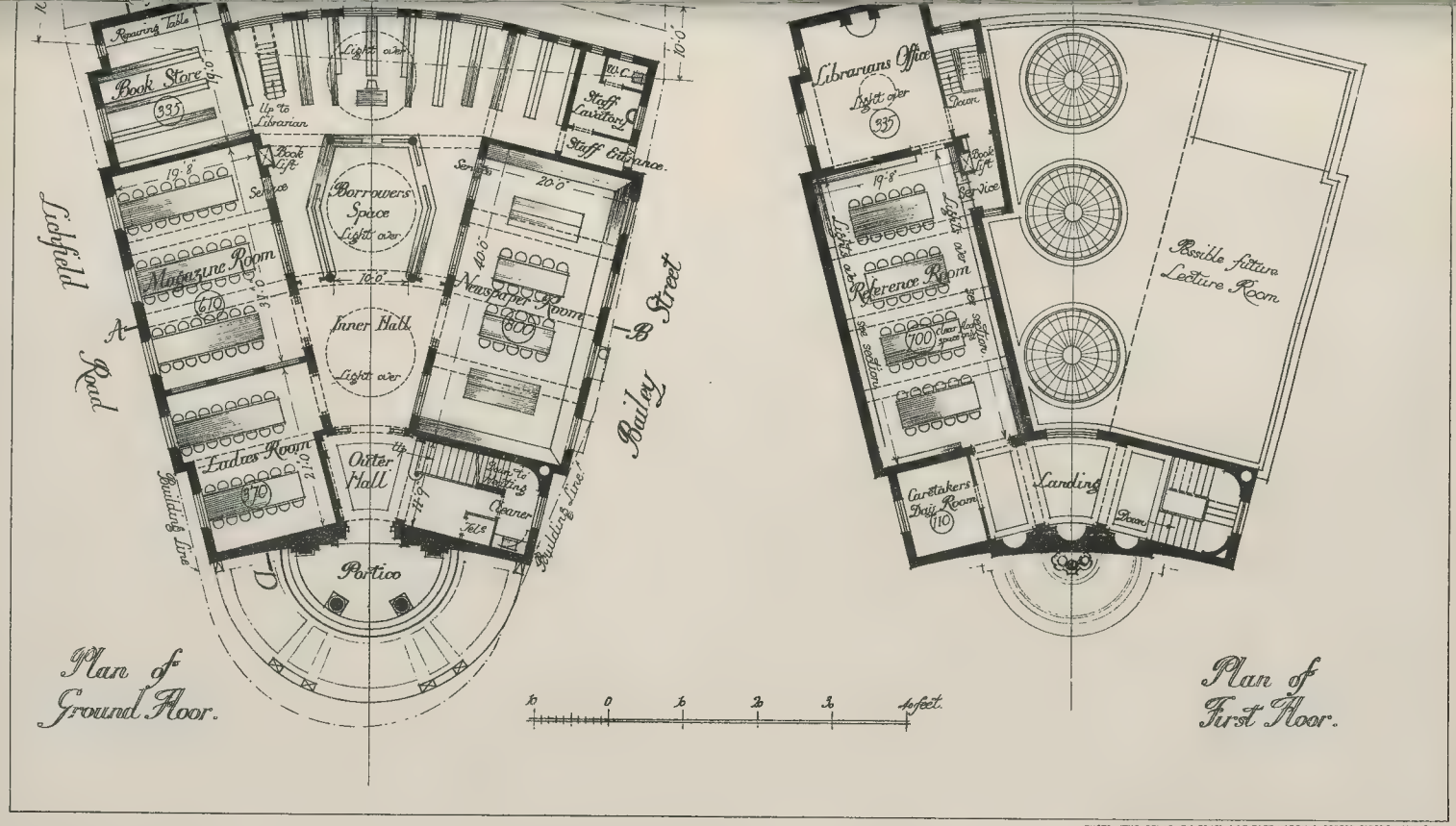
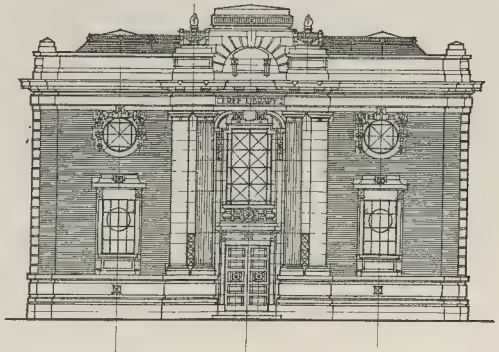


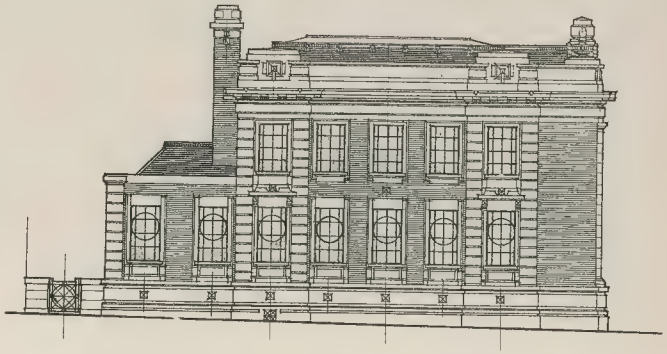
PHOTO LITHO BRAGUE & Co LTD 4 & 5, EAST HARDING STREET, FETTER LANE, E.C.

STAFFORD PUBLIC LIBRARY COMPETITION,

SELECTED DESIGN BY MESSRS. BRIGGS, WOLSTENHOLME & THORNELY.



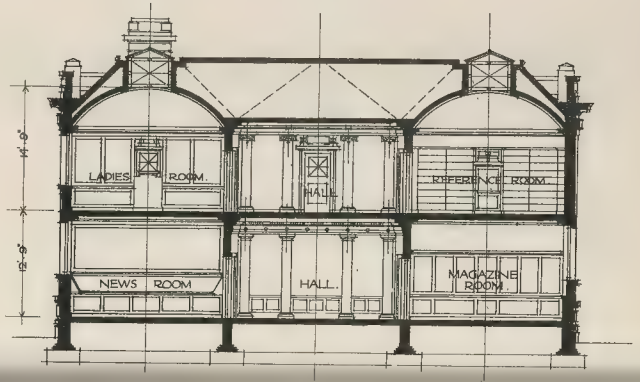
FRONT ELEVATION



SIDE ELEVATION

LICHFIELD ROAD





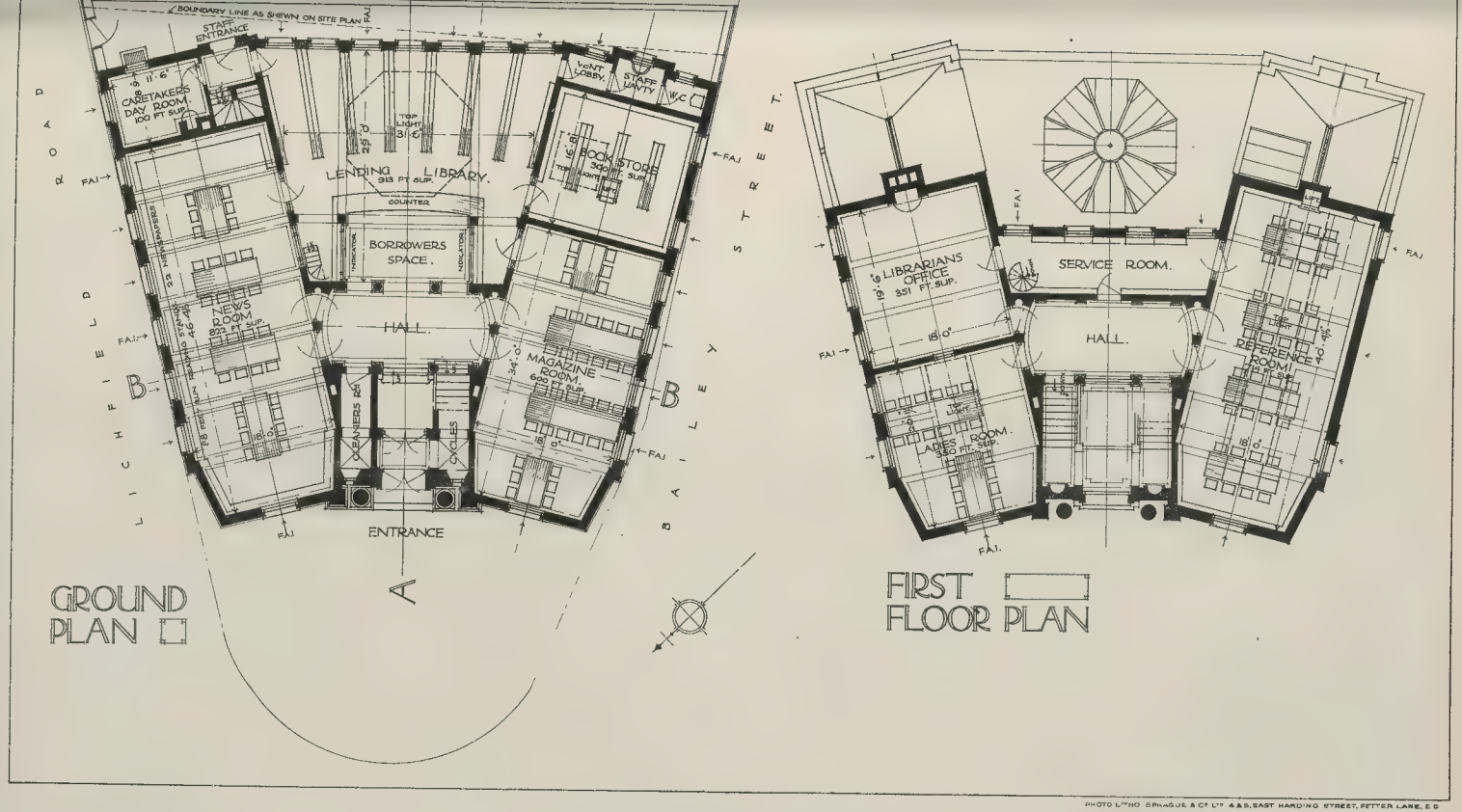


PHOTO LITHO SPRAGUE & Cº LTD 4 & 5, EAST HARDING STREET, FETTER LANE, E.C.

STAFFORD PUBLIC LIBRARY COMPETITION.

SECOND PREMIATED DESIGN BY MESSRS. SUTTON & GREGORY.



FLORENCE.—From a Sketch by the late Alfred Waterhouse, R.A.

(Illustrating Mr. Paul Waterhouse's Architectural Association Paper on "Bridges.")

MONTHLY REVIEW · *of* · ENGINEERING.

FORCED CONCRETE IN GREAT BRITAIN.—II.

By W. Noble Twelvetrees.

(Continued from page 98.)

Classification of Systems.

various systems of reinforced concrete mployed in Great Britain may be onveniently considered under two eads:—

ose representing a special arrangement ary steel bars, rods, wire, or strip ing the reinforcement, and in which orcing units are prepared as may be on the site of the works to be executed, r having been placed and temporarily the moulds as required by the working are afterwards held in position the embedding concrete; and

ose characterised by the employment lly formed bars or meshwork, or of s to which special types of auxiliary ment are attached in suitable manner.

ld be noted that systems of class (*a*) ly intended to provide for the applica- steel to such parts of the concrete as reinforcement for the resistance of ompressive, and other stresses. Their s believe ordinary mercantile forms o be quite adequate, more convenient, costly than specially formed bars. e is no reason why any of the systems on should not be applied in connexion e of the special types of reinforcement narket if such a course were thought

gh certain details in most systems of are protected by patents, the firms making a speciality of the systems appear to be gradually acquiring a status somewhat akin to that of structural engineers generally, and their experience is probably considered by clients to be quite as valuable as the system with which each of them is identified.

While systems of class (*b*) are distinguished by the various special forms of reinforcement employed, such types of reinforcement do not in themselves constitute a "system" strictly so called, and it is necessary that the reinforcement should be applied in accordance with the fundamental principles of reinforced concrete construction. Special bars and auxiliaries do not in any way obviate the need for scientific design, and it should be clearly understood that purchasers must either have at command the requisite technical knowledge or procure designs from the firms by whom the reinforcement is sold. Most of these firms lay themselves out for the preparation of designs, and consequently are very much in the same position as specialists having systems placed under class (*a*).

In the following summary the characteristics of the principal systems are given briefly, with special regard to the uses of reinforced concrete in building practice, and attention has been confined to systems suitable for the design and construction of complete buildings

Systems of Class (a).

Hennebique System. In 1879, when engaged as a contractor for public works and buildings, M. François Hennebique constructed reinforced concrete floors, and ever since that date has been connected with the same class of construction. In 1892, being then established in Brussels, M. Hennebique first introduced a clearly defined system as set forth in his British patent of 1892 relating to "improvements in the manufacture or construction of joists, girders, and the like." The complete specification claims, among other things, the assemblage of two appropriate materials, such as iron and cement, in such manner that the tensile resistance of one material is added to the compressive resistance of the other material; the combination of the two substances in such manner that the one subject to tension is embedded in the lower part of the substance on which the effects of compression are to be exerted, and the upper part only of which becomes of use; the use of round, square, bent, or other bars (*B*) and cement of trapezoidal section (*P*) as being the most practical arrangement; and the use of anchors (*A*) of any suitable form or section, forming with the cement a complete and indissoluble union of the lines of tension and allowing the application to the reinforced beam of the methods of calculation for lattice work girders, such anchors being placed at intervals determined by calculation. Fig. 1 includes transverse and longitudinal sections of beams constructed as described in the specification, which evinces a correct appreciation of the principles of reinforced concrete design as accepted in the present day.

Two British patents taken out in 1897 denote the development of the Hennebique system to the form in which it is now employed in the construction of beams and floors.

One of these patents describes a beam built in at the ends or continuous over one or more intermediate supports, the reinforcement consisting of straight and bent bars and U-shaped stirrups arranged as shown in section Fig. 2, and in perspective by Fig. 3. The bent-up

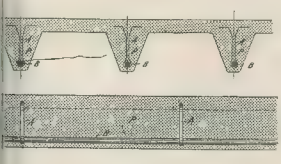


Fig. 1.

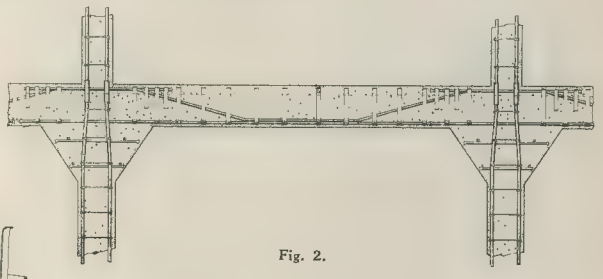


Fig. 2.



Fig. 3.

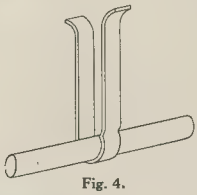


Fig. 4.

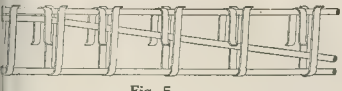
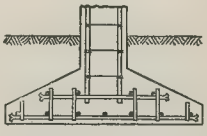


Fig. 5.



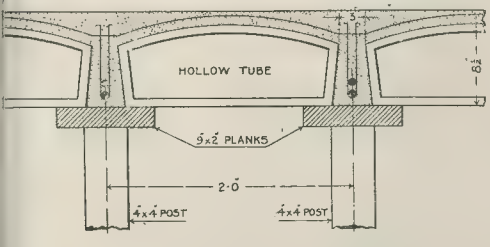


Fig. 6.

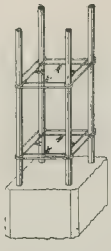


Fig. 7.

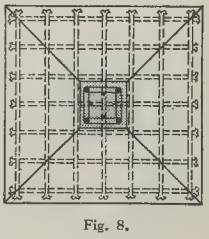


Fig. 8.

Illustrations of Hennebique System.

Fig. 1. Original Beam Construction. Beam and Columns.
Fig. 3. Single Reinforcement for Beams.
Fig. 4. Stirrup for Beams.
Fig. 5. Double Reinforcement for Beams.
Fig. 6. Hollow Floor.
Fig. 7. Column Reinforcement.
Fig. 8. Column Base.

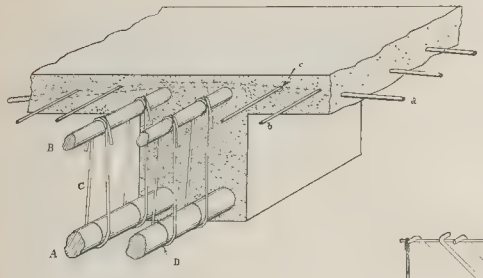


Fig. 1.

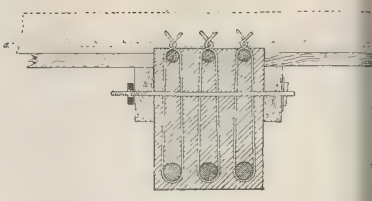


Fig. 2.



Fig. 5.

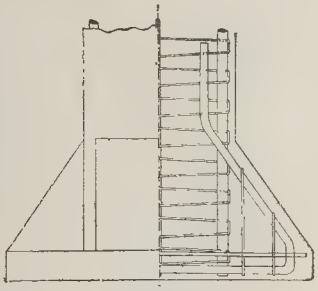


Fig. 3.

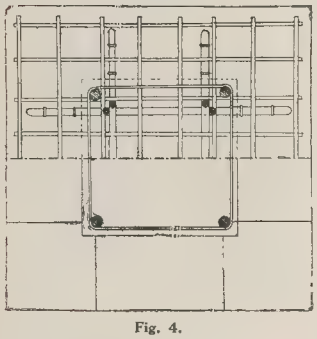


Fig. 4.

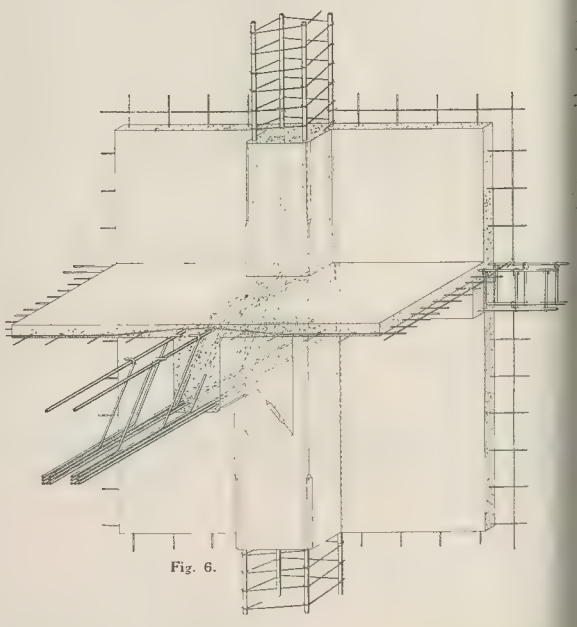


Fig. 6.

Illustrations of Coignet System

Fig. 1. Beam Construction.
Fig. 2. Beam Supporting Floor Centring.
Fig. 3. Column Base Elevation, Half in Section
Fig. 4. Column Base Plan, Half in Section.
Fig. 5. Alternative Method of Beam Construct
Fig. 6. Various Examples.

bars are carried into the wall in the case of a built-in beam, or taken for some distance over the intermediate supports in continuous beams. The stirrups, now made with a kink as in Fig. 4 to make them grip the main bars, are spaced more and more closely together near the ends of the beam to form a triangle of resistance outside each point of contraflexture. Fig. 5 represents the arrangement of the bars and stirrups for a beam having both tension and compression reinforcement. Floor slabs are reinforced similarly to beams, and are applied so as to act as compression flanges to the beams projecting below them.

The other patent of 1897 provides for the construction of hollow floors composed of slabs moulded in advance and beams moulded on the site. This method has been employed in this country chiefly for the construction of floors for cold storage, the hollow being partly filled with insulating material. It may be regarded as the precursor of several floor systems since introduced with the object of reducing the quantity of centring required, and possibly suggested the Hennebique type of hollow flooring illustrated in Fig. 6. This floor is formed by placing fireclay or concrete tubes in rows on planks temporarily supported by posts, the spaces between the tubes forming moulds for the beams and the upper surface of the tubes forming centring for the covering layer of reinforced concrete.

Columns and struts as originally designed in this system were reinforced by four or more longitudinal bars connected at intervals by flat plates in sets of four, the bars passing through holes in the plates. Such members are now made with sets of wire links (see Fig. 7) as transverse reinforcement in accordance with the patent of 1904.

Column bases are reinforced, as shown in Fig. 8, by two or more sets of bars crossing one another and connected by stirrups similar to those employed in beams.

By the aid of structural elements of the general classes described the foundations, skeleton frame, floors, and roof for a building can be constructed, leaving only walls for consideration. These are usually reinforced by a series of vertical bars near each face of the concrete and a series of horizontal bars in the middle of the wall, the vertical bars being provided with stirrups similar to those used for beams.

A type of reinforced concrete wall patented in 1908 was illustrated and described in the *Builder* of November 26, 1910, to which readers are referred for particulars. This wall consists of special concrete blocks reinforced by a network of rods and jointed by cement mortar in the horizontal and vertical grooves pro for reception of the reinforcing bar.

Among the advantages claimed for the H bique system as employed in this countr Messrs. L. G. Mouchel & Partners, Ltd Westminster, are the following:—

(1) That the sloping portions of the up bent bars in beams lie fairly across the of possible rupture near the supports, and the vertical stirrups, being closely space the same portions of the beam, int numerous lines of maximum tension which considerably in direction.

(2) That the vertical position of the st facilitates ramming without risk of their placement, and that the spring clip at bottom dispenses with wedges and wire t

(3) That the successive sets of trans links in columns are more effective in bu the bars and concrete in every direction a circumferential winding or circular bands

Finally, we may state that work on Hennebique system is executed only by lic contractors, for whom the patentees pr working drawings and quantities based the general designs of the architect or eng that the patentees hold themselves respon for the efficiency of the reinforced co designs, and that the contract price cove payments to the patentees.

t System.—The late François Coignet, , whose British patent of 1855 has been mentioned, was one of the first beate the advantages to be derived b combination of iron and concrete in al practice, although it does not appear made any important use of reinforced His son, M. Edmond Coignet, himself to a study of the subject, 888 and 1894 read papers on reinforced theory and design before the French of Civil Engineers. The second of o papers attracted considerable atten- the part of Continental engineers, and rthy of note that the views therein t have been in great measure con- y the investigations of various scientific ies.

Paris Exhibition of 1900 afforded M. as well as other pioneers, a good ity of demonstrating the valuable es of reinforced concrete and of making known the utility of the system which time he had formulated on a practical

irst British patent relating to the system was taken out in 1904, and is "Improvements in and connected with ld or armoured concrete construc- nd in the same year the system was d into this country. In the complete ion, after stating his knowledge has been previously proposed to use forms of metallic reinforcement for construction, as described, for example, cation No. 3,377, A.D. 1883, strengthen- in the upper parts of concrete beams s to resist tensile stresses, helical coils ngs for pipes, culverts, piles, and the metal bars or members for resisting nd compressive stresses in concrete ions generally," the inventor makes ving claims:—

e method of tying together the rods the reinforcement of beam flanges and r bars in the compression area of beams g over the rods the ends of the web ties C in Fig. 1) which connect the tension pression bars of the reinforcement.

e method of reinforcing column bases illustrated by Figs. 3 and 4.

thods of arranging the reinforcement circular tanks, and spherical domes, roofs or arches.

r first with beams as described in the nt, it should be pointed out that the ment preferably consists of round steel that while the general principle is to steel for resistance to tension and upon for resistance to compression, yet in the concrete is usually reinforced by on bars (B, Fig. 1), partly for the of reducing the dimensions and dead the members, and partly for the pur- providing for the connexion of the ad compression areas by means of the (C), which are secured by annealed The latter are arranged at distances by calculation, and may be placed but the vertical position is always n practice. In cases where a number n bars (A, Fig. 1) are used, cross- steel may be provided so as to distribute es over all the bars. Beams, flanges, cting floor slabs are reinforced by rods (*a*) and secondary rods (*b*), e intersections by annealed wire, as it should be noticed that these rods down on each side of the beam so as hem as near as possible to the tension e the concrete. Where a very heavy to be constructed the reinforcement f both tension and compression bars by web ties, the arrangement being as that adopted for beams.

re to which importance is attached e wiring together of the bars and ives assurance that their position will ered during the process of concreting, enables the contractor to prepare the etons in advance according to the rawings.

shows a special arrangement by which ng for floor slabs may be supported moulded in advance. The main bars m project about a foot at either end xion to the supports, and the ends of ies project above the beams, so that be embedded in the concrete of afterwards moulded on the site. beams have been fixed, the centring planks secured by bolts passed through holes made for the purpose in the beams at the time of moulding.

Columns of the Coignet type are made of any suitable sectional form, the reinforcement consisting of four or more longitudinal bars bound by horizontal ties or a spiral winding of stout wire or thin steel rods, the lateral reinforcement so formed being held in place by annealed wire. Figs. 3 and 4 show part of a column as described in the specification of 1904, and the manner in which the column base is reinforced.

An alternative type of beam construction is the subject of a patent taken out in 1906, the object of the invention being to provide a reinforcing framework without requiring the web ties involved in the patent of 1904. This framework, illustrated in Fig. 5, comprises a group of tension bars of different lengths, the ends of most of these being bent up at an angle of about 45 deg. and hooked over a compression bar, while the bars are bound together by vertical ties of annealed wire, as shown in the drawing. Additional bars are placed over the intermediate supports of continuous beams to withstand tension due to negative bending moments. The bars in each group are kept about ¼ in. apart to allow the concrete grout to surround each individual bar. As in the case of the other beam design, the skeleton framework can be built up in advance, and the position of the bars cannot well be altered by the work of concreting.

Fig. 6 is a diagram representing the various types of Coignet members already described, and including also part of a wall panel with the method of reinforcement adopted under this system.

The chief advantages claimed for the Coignet system may be thus briefly stated:—

(1) In beams the reinforcement can be completed beforehand and put into place as a complete skeleton, the parts of which cannot be displaced accidentally by the deposition and ramming of concrete.

(2) The form of beam reinforcement with bent-up bars saves both labour and material.

(3) Beams can be moulded in advance and used to carry centring for floor slabs, thereby saving material and labour.

Work on the Coignet system is carried out by licensed contractors, whose estimates or tenders include provision for the drawings and other technical details prepared by the patentees in accordance with the general designs of the architect or engineer under whose superintendence the works are executed.

THE ÆSTHETIC TREATMENT OF CONCRETE.

Sir Henry Tanner, F.R.I.B.A., presided over a meeting of the Concrete Institute on February 8, at Denison House, S.W., when the discussion was resumed on the paper which Professor Beresford Pite read before the Institute on June 7 of last year.*

In view of the length of time which had elapsed, the author again read his paper and afterwards exhibited a number of lantern slides of ferro-concrete buildings. He pointed out where in practically every instance æsthetic treatment was lacking.

Mr. A. Alban H. Scott

remarked that with this new material problems arose which did in every way alter constructive work. One point brought out recently was the treatment of floors. In other materials it was necessary to introduce beams of greater depth than the floor itself, but now with reinforced concrete they were able to keep the whole of the ceiling flat. He thought this was a proper and legitimate treatment of the material, although perhaps it would not conform to the grammar of architecture. He did not think concrete necessarily required coarse treatment, but it should be treated with the highest degree of refinement.

Mr A. T. Bolton

said what to do with a new material involved a vast amount of thought. Many of those present would probably like the best analysis of that very difficult subject. It was Garbett's "Architectural Design," which was written about the time of the Gothic revival and contained a good many things which would be considered absurd nowadays. The main lines of it were, however, remarkably good, and there was a very curious prophecy in the book which the photograph of the goods station at Newcastle-on-Tyne showed had actually been realised. Garbett summed the whole thing up by saying, "In Greece we have the architecture of the post and lintel, and in Rome we have the architecture of the arch, and there is no other constructive principle except that of the truss." In a building like the Vere-street Post Office they saw the truss employed on an enormous scale. There was a question of whether this reinforced concrete was known to the Romans, and he would suggest to the engineers that they should consider the subject of the cold-water bath of Caracalla in Rome. It was an enormous hall, and ancient writers told them that its ceiling was one of the marvels of Rome. It was flat, and had three or four large openings for lanterns. How did the Romans support a ceiling of that gigantic scale, flat, and with these openings in it? Professor Lanciani mentioned that when the cold-water bath was explored great quantities of T-irons were removed. The engineers might consider in what way with the aid of T-irons and concrete they could restore this wonderful roof of the Romans. There was no doubt that Roman construction was extraordinarily vast, and anyone who wandered about Palestine Hill and Hadrian's Villa and saw the great apses and wonderful vaults must come to the conclusion that the Romans had little to learn in this regard. He knew that the roof of the Pantheon had some extraordinary truss construction of flat bars of bronze. There was a sketch of it by Raphael, but the bronze was afterwards melted down. The Romans reinforced their concrete with quarry tiles, by which they counteracted the shrinkage and other defects of concrete. They had only one text-book on architecture descending from the Romans, and that was by Vitruvius. It was, however, the work of a provincial architect, who seemed to have copied what he might term the War Office specifications of the period. He held that there were some Roman specifications issued by the Army, because in every part of the world they found the Roman walls uniform. The secret of Roman concrete was to him absolutely unknown. He was very familiar with the Roman fortress known as Richborough Castle near Sandwich, which was still surrounded by a great Roman wall. The wall was 20 ft. high and 10 ft. thick, but when the railway was being built the barbarians destroyed the sea wall, and on the return wall they excavated a great opening which was high enough to walk under and was over 8 ft. in depth. The span of the opening was 50 ft., and yet this wall had remained in such a state for sixty years without the slightest sign of cracking. So far as one could see, the wall was constructed of nothing but the materials on the spot, and the mortar seemed to be ordinary chalk mortar. What was it, then, that the Romans mixed with the mortar to transform it into a material as hard as our Portland cement? When the Romans left the country, whatever used to be done to the mortar ceased to be done, for when the Normans attempted to do buildings of a Roman character they made a fearful mess of it. Turning to another aspect of the question, he thought in mica they had an opportunity of lighting up the surface of concrete, and there were also considerable opportunities by the use of acids in removing the excess of cement over certain portions. Professor Pite had rather omitted the Byzantine period, but it was in Byzantine times that Roman architecture found itself. Byzantine buildings were Roman buildings released from the bondage of the Orders. The whole question of shams was worth serious consideration, for, after all, in architecture the effect of beauty had to be attained.

Mr. E. P. Wells

considered there was no reason why the usual architectural methods should not be adopted in the treatment of concrete. It was artificial stone in the same way that brick was artificial material, and he could see no reason why it should not be moulded and treated in a proper manner so as to be pleasing to the eye.

* The paper was printed in the *Builder* for December 29 last.

Mr. E. Fiander Etchells
remarked that the problem had two sides; the first was whether they should consider ferro-concrete as a material which should be announced naked to the world. The second was whether they should deal with it only as a skeleton, and clothe it with some other material until the architects themselves decided into which category they would put it. He would express no opinion, especially as architects seemed to judge solely by their feelings, and feelings were unreliable things.

Mr. H. Shepherd
thought it was permissible to use joints in concrete, and suggested that the joint should be made where each day's work began. In one of the earliest examples of Greek art—the Colossus—they had a great wall made of unburned brick, which was plastered over, and in this was moulded large figures. That was a possible suggestion for the treatment of a ferro-concrete building.

Professor Pite,
in reply, said it was impossible to imagine a system of proportion for a new material apart from those ideas of proportion which they derived from others. The subject before them wanted study, but it could only be undertaken by a serious study of architecture.

THE YORK TOWER COLLAPSE.

IN the course of an inquest at York extending over six days into the death of Arthur Bowman, cabinet-maker, the victim of the collapse of a York clock-tower.

Mr. William Black, of Leeds, the district manager for the Trussed Concrete Steel Company, Ltd., said his firm did not undertake any responsibility for the material and workmanship of the ferro-concrete. He believed, however, the work was carried out in accordance with their plans and drawings. In a letter to the architect he referred to the necessity of a clerk of works to superintend the work, but he believed that on this job there was no clerk of works in the strict sense of the term. Witness said he was not aware till after the accident that one of the beams, known as R23, was not put in its proper place.

By Mr. Kay (for the architect, Mr. Monkman): He did not find any fault with the work which the contractors were doing.

By the Coroner: He accepted responsibility that the beams were strong enough to carry the tower if constructed of proper workmanship and material.

By Mr. Stewart Anderson (for Messrs. Sage): It would obviously have been better to have had a clerk of works.

Mr. Moritz Kahn, C.E., Managing Director of the Trussed Concrete Steel Company, Ltd., and inventor of the "Kahn" system, was the principal witness, and was under examination for several hours. He explained the operation of the strains and stresses on ferro-concrete work by a series of demonstrations on a blackboard and by means of models. He gave details of the design of the construction of the beams, and said they were originally asked to design for a tower weighing between 25 and 30 tons. This was afterwards altered to a weight of between 35 and 40 tons. They altered their plans, but accepted no responsibility, for a tower which weighed more than 40 tons, nor did they assume responsibility for the brick tower *per se*, and the details were never submitted to them.

Witness explained the details of the foundation beams for the tower, and showed by diagrams the stress to which they were to be submitted. He said that, as a matter of fact, the beams on which the tower rested would have required 155 tons dead weight to bring the beams down, whereas the tower only weighed about 38 tons. He had carefully examined the *débris* and found no evidence of failure by tension, compression, or shear. He concluded that the collapse was due to the shock of some load suddenly applied to a back beam. Whatever was the cause, it was something beyond the control of his firm. If the dome weighing 2 tons fell on to this beam it would give a shock equal to a dead load of 480 tons, "which would go through the beam like cheese."

Examined by the Coroner as to the allegation of the witness Porteous, the previous day, that a piece of wood was made up in the beam R22, witness said he had examined the beam, and there was no trace of it. Even if it had been left in it would not have been the cause of failure. Had that wood block anything to do with the tower coming down?—No. Witness also added that the two steel joists, which were used in place of the beam for the back, which had been misplaced, had nothing whatever to do with the cause of the accident.

Cross-examined by Mr. Kay (for the architect), witness said he believed the cause of the tower collapsing was the weakness of the walls, caused by the small brick arch round the clock dial, which was not properly bonded. It was a physical impossibility to bond the terra-cotta rings to the brickwork. The vertical joints in the terra-cotta were another cause of weakness. He believed, also, the cast-iron ring inside the dial would be a contributory cause to the weight of the tower. Witness added that in his view the tower was merely being held up by the strength of frozen lime mortar, and, owing to its design, was in a state of unequilibrium, which only required the slightest disturbance to bring it over. Dealing in detail with some parts of the design of the tower, he said he found at one corner stresses which were absolutely prohibitory in engineering designs.

By Mr. Black (for Messrs. Boyes): He usually designed buildings with a safety factor of 4, and the beams under the tower were designed to this factor. They were designed to carry 40 tons, and, therefore, their factor of safety would be 160 tons, and as a matter of fact he found that the breaking weight was about 155 tons.

By Mr. Camidge: He had built at least six hundred buildings and other works on his system in the last six years.

The Foreman: We think it would have been better for the firm to have had an experienced clerk of works.—That is beyond our control. It was a matter for the architect.

In answer to a juror, Mr. Kahn said his formula for the concrete was 4 gravel, 2 sand, 1 cement. He did not know some ferro-concrete firms used a proportion of only 1 of sand, but 4—2—1 was the standard formula of the Royal Institute of British Architects.

Mr. Frederick Rings, architect, surveyor, and civil engineer, London, was asked by the Coroner if he attributed the fall of the tower to superstructure under it, to the tower itself, or to the concrete construction. Witness said he thought the fall was caused by the failure of the two beams R24, which acted as cross-beams from the main beams at the front and back. This was due to the faulty design of the reinforced concrete.

In cross-examination by Mr. Kahn, Mr. Rings admitted that he had made a mistake in his calculations as to the shearing stress, and in cross-examination by the Factory Inspector he said he acknowledged now that the beams were four times stronger than he anticipated in his first calculations, but he was still of opinion that the tower fell because the cross-beam R24 came away from the main beams on account of tension in the upper area of the cross-beam.

Mr. Geo. Fredk. Bowman, architect, Leeds, who had made an inspection of the building at the request of the Coroner, said in his opinion the material used in the concrete beams was sound and good, and complied with the formulæ of the Royal Institute of British Architects. In his view, if the tower had been carried out to the details in the bonding of the angles and to the specifications, which stated that the whole of the terra-cotta work should be filled with cement concrete and walled and jointed with cement mortar, it would have stood. The weakest part about the tower was the straight joints up the side of the pilasters. One of the weak points was the clock rim, which was not tied to the two half-brick rim arch at the back.

In reply to Mr. Newbald Kay (for the architect, Mr. Monkman), witness said Mr. Kahn's theories as to the cause of the accident given to him before his inspection had no weight with him in coming to his conclusions. There was no material difference between them. There was no evidence of the beams having failed, either by compression or tension. There was no sign of a stump or of shearing where the beams joined, but there was the fact that the concrete was good, and that the calculations showed that at those points it was very strong indeed. The beams running from front to back were fixed, but they took a dead weight, and were quite capable of carrying all that was upon them.

Mr. Alan Ruddle, architect, Peterborough, called by Mr. Camidge for Mr. Kahn, said he had examined the drawings and plans of the tower, and also the plan for the terra-cotta work. It was his fixed belief that the tower would not have stood for long. The whole of weight of the superstructure must have b thrown on to the terra-cotta, which was p tically unsupported by anything, and w tend to burst open.

The Coroner, in summing up, dealt with various theories propounded to account for disaster. He said the theory that the fe concrete work was defective in design and g way was dependent on the proof that the p under the beams had been removed. evidence of the contractors was that no p had been removed, and he thought prob the jury would come to the conclusion that props had been confused with the remova the side casings. As to the other theory the tower fell first, he said it appeared to h been built rather quickly in wet weather with lime mortar, and according to the evid the mortar was not thoroughly set when collapse took place. Most of the witne were agreed that it would have been bett built in cement. It also appeared that th was something not quite right about the ce of gravity. It was for the jury to say whe the variations in the terra-cotta work and adhering to the specifications gravely weake the structure, or was a cause contributing t collapse, or whether it was due to being built lime mortar in wet weather, or the effect frost, or to being too quickly built, or whe it was due to all or any of these things, o some other cause. It was for the jury to what caused the tower and the under-struct to fall, and who, if anyone, was crimin responsible for that falling.

The jury were absent for an hour and a and on returning the foreman stated that found that "Bowman died from shock as result of injuries caused by the fall of tower, but the evidence is so conflicting, chiefly theoretical, that we are not able to what caused the tower to fall." They added a rider that "in our opinion it would been better for all parties concerned ha fully qualified clerk of works been engaged."

[The above is abstracted from a full re which appeared in the *Yorkshire Post*.]

ENGINEERING NOTES.

The Institution of Civil Engineers.

THE following is an abst of a paper by Mr. F. ford, B.Sc., entitled " Features of the West Afr Government Railways," at the ordinary meeting of the Institutio Tuesday. A brief history of railway cons tion in the West African Colonies of S Leone, Gold Coast, Southern Nigeria Northern Nigeria is first given, and its e upon the pacification of these countries upon their revenues is described. The meth of surveying are then dealt with in detail the difficulties met with in the clearing of fe are referred to, some description being g of the more important trees found and uses. The method of constructing earthw is dealt with, and the forms of pipes and culv found most suitable for these tropical rail are referred to. Particulars of about of the more important bridges are given tabular form, with general remarks upon methods of erection employed; and the and Denton Bridges at Lagos, aggrega 3,000 ft. in length, are described in some d The types of structures adopted for tem and wayside stations, workshops, engine-s coal-stores, carriage-sheds, wagon-repair s stores, bungalows, quarters, water-tanks, are mentioned, and the permanent way system of signalling are described. The concludes with particulars of the cos construction and the results of working i case of each colony. A brief reference i made to the railway work carried out by in her West African Colonies.

The Liverpool-street Tunnel.

THE engineers engaged tunnelling for the exten of the Central London Rail from the Bank to Liver street have completed the boring. The p working from opposite directions—from present terminus and from Liverpool-str have effected a junction. The engin calculations were so accurate that the through which the working parties were to speak was only 30 in. in diameter. expected that the extension, which is about a mile in length, will be ready for traffic in or July next.

THE BUILDING TRADE.



THE ITUTE OF BUILDERS: V TO CHEAPEN TRANSPORT.

following is the continuation of our stract of the paper by Mr. A. W. Gattie ently read before the Institute of ilders and the London Master Builders' on: –

king of the building trade, I imagine cost of transport must be quite 33 of the value of building materials ; it is so of the most expensive forms and it is 100 per cent. of the cost of per bricks, when carried from Peter-

If we can get our building material heaper, the immediate result would be could build houses more cheaply. ntly there would be a larger demand es, and, while economic methods of would undoubtedly save labour and ployment per ton, they would increase age and also would provide labour in ections. I know of no trade in which activity would boom the labour market n activity in the building trade.

s I may here give two examples of of material, the first of which I have ie uneconomic and the second the . Let us suppose that it is necessary 100,000 glazed bricks from Yorkshire n, a distance of 200 miles. The weight :–

of such bricks would weigh	301 tons
ck would carry under nor- nospheric conditions about water, or a total of 44 tons	
er	44 ,,
load to be carried would erefore	345 ,,
rney is now performed in pen trucks, each weighing weather about 6·6 tons e, which gives a total tare including the brake van, of	345 ,,
weight behind the engine equently	690 ,,
these trucks would be ed to Yorkshire empty, ng the haulage of	345 ,,
s hauled would be therefore	1,035 ,,

tons hauled 200 miles = 207,000 ton presenting 207,000 ton miles work done. me occupied in the journeys would be 4 hours or more, at about 3 miles an rage.

ne occupied in loading and unloading, s or more.

tal time occupied from start to finish nsequently be 336 hours or fourteen

pital value of fifty trucks at 70*l.* apiece 3,500*l.*, and the occupation of railway olved would be about 10,000 sq. ft. for days.

tal charge for railway haulage in rail- panies' own trucks is 11s. 8d. per ton for 200 miles.

345 tons of bricks at 11s. 8d. per ton = 48,300d. = 201*l.* 5s. 2d.

But, as we have seen, the haulage of the bricks is really only a part of the job; the bricks have been hauled 200 miles and the trucks have been hauled 400 miles. Therefore the actual work done for this money is 207,000 ton miles.

This charge gives the railway companies a gross earning of 0·23d. per ton mile, under a farthing, and that figure demonstrates the enormous value of the locomotive, which only absorbs a little over a quarter of this sum, or say 0·05d. per ton mile.

We now have to add to this cost of railway haulage the cost of handling and road haulage or carting. The net labour cost of packing 1,000 glazed bricks in straw, taken from the adjacent stack and put into the truck, would be 2s. 3d., exclusive of establishment charges. Quoting the labour at 6d. per hour, we therefore have a loading cost, into the railway trucks at the brick factory in Yorkshire of £11 5 0

The next handling is at the depôt in London, and consists of unloading from the truck to the stack, at the same rate, viz.:	11	5	0
Subsequently we have a third handling from the stack to the road cart, which with the carman's help, not here charged for, would amount to	5	7	6
The bricks now have to be carted to the job.			
The minimum charge for this cartage per thousand bricks is 4s. 6d. for a distance not exceeding 2 miles, and this sum includes waiting on arrival at the job, sometimes for hours, and helping the brick-makers' labourer to load the cart and the contractors' labourer at the job to unload the cart, 4s. 6d. per 1,000 on 100,000 bricks .. –	22	10	0
The labour in assisting the carman to unload and stack the bricks at the job at 2s. 3d. per 1,000 on 100,000 bricks .. .. =	5	7	6
Total cost of cartage and handling –	55	15	0
Which, added to cost of rail haulage	201	5	2
Gives us a grand total of	£257	0	2

The cost of these bricks, delivered in London would be 1,000*l.*, out of which the brick-makers would pay 251*l.* 2s. 8d. for transport, and the contractor would pay 5*l.* 7s. 6d. for unloading. This total of 257*l.* 0s. 2d. would amount to over 33 per cent. of the sale value of the bricks as stacked in Yorkshire.

We will now consider whether this work could be done more cheaply and without injury to any of the parties concerned.

Let us take the same load sent for the same distance, but on this occasion let it be sent in seven big truck loads, each carrying thirty skips, or 210 skips in all, there being an average of 476 bricks in a skip. The total load of these bricks would be, as before, 345 tons, including 44 tons of water, not easy to eliminate 345 tons

Add to this the weight of 210 skips at 1 cwt. apiece, say	11 ,,
Seven bogie trucks, weighing 25 tons each, and each measuring 50 ft. over all	175 ,,
The total weight behind the engine would be	531 ,,

instead of 691 tons estimated in the former example.

It must not, however, be forgotten that these skips would have to be returned to Yorkshire, and, in order to make this return journey as economic as possible, the skips are so constructed that they can be taken to pieces and packed together Chinese-puzzle fashion, so that a bundle of eight skips will occupy a cube of 41 in. These skips could easily be packed into one truck and not fill it. The full capacity of a truck having a platform of 48 ft. by 8 ft. would allow of 240 skips being placed upon it. However, we are only considering 210 skips as being the necessary work involved in the delivery of these particular 100,000 bricks, and the return journey therefore amounts to—

	11 tons of skips
and one truck weighing	25 tons
or	36 tons in all.

With regard to the remaining six bogie trucks, these would not be returned empty from the Clearing House unless at that time the Clearing House had no goods to send to Yorkshire, an extremely improbable contingency, as the Clearing House would represent the whole of the seventy-four existing goods stations of London, and would consequently have, on an average, seventy-four times as much to send away as any individual goods station. However, we will allow, for the sake of argument, that one of these six waggons had to be returned unloaded, and we then have to add 25 tons tare, to be carried unremuneratively to Yorkshire. We must therefore assume that the total tons hauled in performing this brick business would be 592 tons, which, carried for 200 miles, would amount to 118,400 ton miles. The time occupied by the journeys would be reduced on account of the reduced load behind the engine, and also because the bogie trucks would be fitted with continuous brakes which would admit of the train pulling up within a reasonable distance. The length of the train would be decreased to 350 ft., as from the length of a train of fifty trucks of 18 ft. each, or 900 ft. in all.

Fifty 18-ft. trucks would measure 900 ft., and seven 50-foot trucks would measure 350 ft. Putting the time of the journey of such at 20 hours, *i.e.*, 10 miles per hour, including stopping, the actual running time being at 20 miles an hour, we have:—

Seven trucks at 20 hours and one truck returned at 20 hours, or eight trucks occupied for 20 hours loading and unloading, say 4 hours' detention, altogether (3¼ hours at the brick-field and half-hour at Clearing House), we have one day's use of eight trucks, capital value 500*l.* each .. .. =	£4,000	0	0
And, say, one month's detention of 210 skips, capital value 2*l.* each =	420	0	0
Occupation of railway space would be about 4,000 sq. ft. for one day.			
The total charge at current rates is, we know, 11s. 8d. per ton, which gives us	201	5	2
On 345 tons load, involving 207.000 ton miles work done, at 0·23 per ton mile.			
Allow the railway company the same rate per ton mile, the charge on 118,400 ton miles would be	113	9	4

In this manner it will be seen that on the item of railway haulage a saving of 87*l.* 15s. 10d. will be made out of an expenditure of 201*l.* 5s. 2d.

We will now leave the consideration of railway haulage and turn to the handling, storage, and cartage of these bricks on Clearing House principles. The original cost of packing the bricks in skips at the brick factory in Yorkshire would amount to the same as packing in trucks.

This operation would cost	£11	5	0
The cost of hoisting these 210 skips by crane, four at a time, into the railway waggons, would amount to about 2s. 6d., and perhaps occupy half an hour.			
Unloading these 210 skips by cranes at the Clearing House might occupy some ten minutes, and the cost per skip for either hoisting from the truck and lowering into the crypt for storage, or hoisting on to the road level and depositing on a road-car for direct delivery, may be put at 3d. per skip, inclusive Clearing House charge, or 6d. per skip including unloading the railway waggon, loading motor-car and storage ..	5	5	0
Total	16	10	0

Cartage by motor-car at 2s. 6d. per load of 1,000 bricks, for a distance not exceeding 2 miles, and including unloading at the job without assistance, by means of a special apparatus carried by the car	£12	10	0
Total loading, unloading, and cartage, and delivery at the job ..	29	0	0
which, added to cost of rail haulage	113	9	4
Gives a total cost of bringing bricks from Yorkshire to London within 2 miles of the Clearing House of	142	9	4

instead of 257*l.* 0s. 2d., showing an economy of 114*l.* 10s. 10d., or a saving of about 45 per cent.

This, however, would only allow of delivery on a job within 2 miles from the Clearing House, and all jobs would not be within 2 miles of the Clearing House. I have been asked many times whether it would not be cheaper to have the bricks sent to the nearest station to the job than have them sent from the Clearing House. If it can be shown that it would be cheaper to send a consignment of bricks to any particular station in London, that could be very easily arranged at the Clearing House, as, for instance, we will assume that half a truck-load, that is, fifteen skips of bricks, need to be sent to Croydon, the skips would be put on to the first goods train leaving the Clearing House for Croydon, and on arrival at Croydon they could be very easily lifted off the train and deposited on any convenient spot without any delay, with the minimum of loading and unloading expense, and a suitable charge for haulage; but for any distance within 10 miles of the Clearing House it would be cheaper to carry the bricks by road direct, in Clearing House motor vehicles, carrying 1,000 bricks in two skips per load.

The class of brick I have been considering is the most expensive kind, and is, of course, not so much used as the common Fletton brick. When fairly dry, the Fletton brick weighs 5 lb. 4 oz., and easily absorbs 1 lb. of water, bringing its weight up to 6 lb. 4 oz. The cost of carrying 100,000 bricks from Peterborough, a distance of 76 miles, at 4s. per ton, would amount to 50*l.* By present methods this operation involves an engine haulage of 44,080 ton miles at a little over a farthing per ton mile. On Clearing House principles, the work done would amount to 34,884 ton miles, which, at the same rate, would be 39*l.* 4s. 10d., and you will thus see that, instead of making a 45 per cent. economy in this instance, we can only make an economy of 20 per cent., amounting to 10*l.* 15s. 2d. However, it must be remembered that the gross saving on Fletton bricks on a year's deliveries would be far larger than that of the happy gentleman who ships glazed bricks from Yorkshire. Fletton bricks are not handled with that delicacy and care which is bestowed upon glazed bricks, but the handling of them costs a considerable sum of money which I venture to put at 5s. per 1,000, which on 100,000 bricks would consequently be 25*l.*, and here again the Clearing House could effect an economy of 50 per cent. The total cost of carrying 100,000 Flettons from Peterborough to a job within 2 miles of the goods station to which they were taken would be 75*l.* By Clearing House methods, the work could be done for 52*l.*, making only an economy of 30 per cent. on the entire job. I think that these two examples are a very fair criterion of what could be achieved by Clearing House methods in the matter of building material.

If we compare the equipment of the Clearing House with its immense array of powerful apparatus with a goods station, such as Paddington or Bricklayers' Arms, we at once realise that the handling of steelwork or heavy timber could be carried out with modern apparatus, far more cheaply than with prehistoric. However, there is a point to which I should like to draw your attention. Modern apparatus costs money, and in order to use it to the very best advantage it must be kept busy, and the installation of the Clearing House would not be kept busy if it were reduplicated all over London. It would cost seventy-four times as much, if it were placed in all the goods stations, and it would be unremunerative, and it could not possibly discharge its function as a depôt of universal exchange. A dozen little Clearing Houses dotted about London could not possibly do the work of one big Clearing House. The great virtue of the Clearing House is that it is a system of unification. All vehicles inwards or outwards proceed on radiant routes. All vehicles starting from it carry goods from everywhere to everywhere and pass everywhere on the road, and all vehicles, either road or rail, going to the Clearing House bring goods from everywhere to everywhere and pass everywhere on the road.

Before leaving the subject of the handling of building material at the Clearing House, I would like to draw your attention to the fact that all transactions are carried on under cover, hence if a load of limestone is delivered at the Clearing House the transhipment of this would not need to be done in the wet, although a thunderstorm might be in full swing outside the Clearing House. The limestone would arrive in Clearing House skips and would be dealt with in similar manner to the bricks. I think most builders' foremen know very well that they may send for a truck-load of lime, and directly it is uncovered have to cover it again because it begins to rain. Sometimes this leads to considerable loss of time and money, and there are other circumstances when it is undesirable to unload goods in wet weather. This drawback would never happen in the Clearing House."

The lecturer then dealt with the handling of miscellaneous goods of all kinds.

SEVENTH MANCHESTER BUILDING TRADES EXHIBITION.

MR. CAWOOD presided at the Midland Hotel, Manchester, on the 15th inst., at a meeting of the exhibitors of the Seventh Manchester Building Trades Exhibition, which will be held at the City Exhibition Hall from March 5-16. The minutes of the last meeting were read, and it was pointed out that the dates of the exhibition, the band engaged, and other arrangements had been carried out as duly authorised by the exhibitors at the 1910 exhibition.

It was announced that Councillor S. W. Royse, J.P., Lord Mayor of Manchester, had consented to open the exhibition at twelve noon on March 5, and that Alderman J. R. Wilson, J.P., Chairman of the Manchester Improvements Committee and Town Planning Committee, had consented to take the chair upon that occasion. Resolutions dealing with the Reception Committee and the names of gentlemen to propose and second various votes of thanks were duly carried. It was announced that telephones at the special rate of 1*l.* (one pound) each could be affixed to the various exhibitors' stands, thus permitting the exhibitor to telephone from his own stand at the City Hall to his works. Another communication was as to the printed list showing the special railway facilities from towns within the radius of 100 miles of Manchester to the exhibition.

A number of other resolutions were passed, and suggestions were made of interest to exhibitors not only at this but at other building trades exhibitions far removed from Manchester.

It was generally agreed that the exhibitor had a right to have a voice in the management of exhibitions that he supported with time and money, and the Chairman was thanked for the manner in which he had given exhibitors the opportunity of taking part in the direction of exhibitions under his control.

The Chairman announced that more exhibitors had booked space this year than any previous exhibition, and that there was every prospect of a Seventh Manchester Building Trades Exhibition being a successful exhibition. Over seventy firms are now included in the list of exhibitors. An exhibitor drew the meeting's attention to the fact that local architects, surveyors, and builders were in sympathy with the City Hall Exhibition, which had been recognised for years as the building trades exhibition for the North of England.

STANDARD TIME RATES OF WAGES.

A REPORT has been issued on Standard Time Rates of Wages and Hours of Labour in the United Kingdom at January 1, 1912 [Cd. 6054], by the Labour Department. The information has been collated from statements issued by employers' and workmen's associations or collected by the Department from the officials of the associations. It is pointed out that the rates given in the report are not necessarily the rates actually predominant in each trade and district covered, several factors being necessary for consideration to determine these. In the building trades there are over 800 local agreements in operation regulating wages and hours and other conditions of labour. The statistics, generally, show that longer h are worked where the lowest rates are pa

In the building trades in the London di the wage paid to bricklayers, masons, penters, and joiners was 10½d. per plumbers and plasterers 11d., painters and 9d., and bricklayers', masons', plasterers' labourers, 7d. Amongst the tricts where the lowest rates are pai these trades are Driffield, Boston, Ledb Market Drayton, Stratford-on-Avon, Dereham, and Lynn. In these the rat bricklayers is 7d. per hour, with the exce of East Dereham, where it is 6d. The for the other branches of the building t in these towns are not fully stated, but small variations where given. In the engi ing trades the rates were fairly constant general areas, though slightly lower rates usually to be found in the less impo centres.

BUILDERS' CLERKS' BENEVOLENT INSTITUTIO

WE understand that the President, Dudley Bartlett, of Messrs. Perry & Co. Ltd., is actively engaged in organisi theatrical performance at the Royal Theatre, Sloane-square, on Saturday, Ma in aid of the funds of this Institution. piece to be presented is Mr. George Be Shaw's "You Never Can Tell," and, as i be interpreted by members of "The Str Players" Dramatic Society, an exc evening's entertainment is assured. We s like particularly to draw the attention readers to this undertaking, as we feel strongly that the Institution deserve hearty support of all connected with building trade in London. We all know difficult it is to get people to interest selves in charitable work of this sort because they are not in sympathy wit work, or do not want to put their han their pockets, but rather because there certain amount of personal trouble en in writing for tickets. Mr. Dudley B assures us that, with the very loyal energetic support of the Committee Institution, he is confident that this dif can and will be overcome, and he will fully acknowledge any applications for Tickets may be obtained from hi Tredegar Works, Bow, E.

GENERAL BUILDING NEW

BOTANICAL INSTITUTE.

Sir Aston Webb, R.A., is the archite the Botanical Institute in Prince Consor The building will form part of the In College of Science and Technology. A r able feature will be the greenhouse-labo on the top floor, which Sir Aston We evolved in consultation with the author

GLASGOW BUILDING SCHEME.

The Glasgow City Improvements Com have approved the adoption of plans pr by the City Engineer, Mr. A. B. M'T for the reconstruction of the Trongat which was recently destroyed by fire. north side between Tontine-lane and street it is proposed to construct two bl buildings, of which the front one will floor area of 22,000 sq. ft., with shop and basement facing the Trongate, a upper stories. The back block betwee tine-lane and several courts will have area of 21,000 sq. ft. on the ground flo four upper stories. The buildings are built as warehouses, and are so desig either to serve one occupant or to be d into flats. They are to be fireproof throu and are to be provided with lifts for pas and goods. The estimated cost of th buildings is 25,150*l.*

NEW BUILDINGS ON THE EMBANKMEN

Alterations are about to be carried the Charing-cross and Temple Stations District Railway on the Victoria-embar At Charing-cross the booking-hall a entrances to the station are to be structed, and above the booking-offic be erected a large building of stone a brick, which will have 140 rooms, and used either as an hotel or as offices. Temple Station there are to be changes. The booking-office is to be and enlarged, and a new entrance p from the Embankment. Adjoining th ing-office and with entrances from the and from the bottom of the steps lea Norfolk-street will be a restaurant with space of 5,000 sq. ft. It is also suggest the flat roof, extending over the whole new building, should be used as an

garden This would have an area of sq. ft., with a frontage to the Embank- of 260 ft. Mr. H. W. Ford is the archi- or the work.

TRADE NEWS.

notice has been called to Pollock's t reinforced wood-blocks for paving and ng (also adaptable to other purposes). blocks are built into sections of any nient size at the mill or factory. It is ed that the adoption of this method will e the time occupied in handling the ial and the ultimate placing of the work minimum, the work being accurately red in advance from drawings. The ns may be straight-edged and grooved ngueing, and can be so constructed as to fely laid on the bare joisting like an ary floor-board, abolishing the necessity bed, and when used for road-paving (on ated bottom) the usual grouting process be dispensed with. Further information be obtained from Mr. Pollock, 151, ver-buildings, Fair-street, Tooley-street, on, S.E.

Yale No. 45 cylinder deadlocking night embodies a new method of combining the nience of a spring bolt with the security lead bolt. The bolt is square-ended, and, projected, cannot be pushed back by end ure. When held in the retracted position e stop its end is flush with the front e lock and fills the bolt hole completely. the door closes the two pivoted hooks strike are forced apart by the bolt, and automatically close over it, thus securely g the door. The hooks are so guarded make it impossible for them to be ked through the door stile or otherwise ction of this lock in closing is smooth and thus making it suitable for use on doors ped with door checks.

der the direction of Mr. W. Inglis, archi- Glasgow, Boyle's latest patent "air- " ventilators have been applied to Coat- Church, Coatdyke, Scotland.

Infectious Diseases Hospital, West wich, is being supplied with Shorland's -air ventilating patent Manchester grates essrs. E. H. Shorland & Brother, Ltd., of worth, Manchester.

LICATIONS UNDER LONDON ILDING ACTS, 1894 to 1909.

Tuesday's meeting of the London County il the following applications under the n Building Acts were dealt with. (The of the applicants are given in paren-):—

ines of Frontage and Projections.

tford.—Addition at the rear of No. 195, -street, Deptford, to abut upon the rn side of Hanlon-street (Mr. L. Jacob). sent.

sington, North.—Retention of a green- at the rear of No. 33, Wallingford- , Kensington (Mr. B. Hamburger). — nt.

sington, South.†—Covered way in front 37, Victoria-road, Kensington (Mr. D. for Mr. A. le Rossignol and Miss E. le nol).—Refused.

isham.—Five houses with porches and boards on the eastern side of Siddons- Forest-hill (Mr. E. C. Christmas).—Con-

lington, South.—Retention of a con- ory over the porch at the entrance to 4, Marlborough-gate, Bayswater-road I. J. Edgar).—Consent.

lington, South.—Projecting illuminated n front of No. 2, Woodfield-crescent, w-road, Paddington (Mr. J. Lawrance . C. Mickleburgh).—Consent.

lington, South.—Wood and glass screens sides of the entrance porch at No. 70, ess-terrace, Bayswater (Messrs. J. Vears . —Consent.

dsworth.—Buildings on the southern side lrose-road, Southfields (Messrs. A. W. & Co.).—Consent.

minster.—Shelter at the entrance to No. tillery row, Westminster (Mr. W. V. er for the Army and Navy Co-operative , Ltd.).—Refused.

Width of Way.

ea.—Building upon a site abutting avilion-road, Charlotte-street, and Cross- Chelsea (Mr. C. W. Stephens for le' Stores, Ltd.).—Consent.

of London. Building across the eastern Cockerill's-buildings (Mr. W. Pam- .—Consent.

erhithe.—Buildings on the southern side therhithe-street, Bermondsey (Mr. F. d for the South Metropolitan Gas Com- —Consent.

Width of Way and Lines of Frontage.

Camberwell, North.—Building upon the site of No. 419, Old Kent-road, Camberwell (Mr. W. F. Young for Mr. P. F. R. Saillard) — Consent.

Islington, South.—Building at the rear of No. 503, Liverpool-road, Islington (Mr. H. Kenchington for Messrs. Headland & Son).—Consent.

Paddington, North.—Projecting teak sill in front of No. 4a, Charles-mews, Paddington (Mr. W. R. Phillips for Messrs. C. Rickards).—Consent.

Woolwich.—Two story oriel window in front of No. 56, Beresford-street, Woolwich (Mr. R. J. Bolton).—Refused.

Line of Frontage, Space at Rear, and Projections.

Kensington, North.—House on the southern side of St. Quintin-avenue, Kensington, and the eastern side of Wallingford-avenue (Messrs. E. T. Daley & Son).—Consent.

Lines of Frontage and Construction.

Greenwich.—Addition to a coachhouse at the rear of No. 56, Shooters-hill-road (Messrs. Dyer, Son, & Hilton).—Consent.

Hampstead.—Temporary wood and iron building at No. 1a, Linstead-street, Hampstead (Mr. E. W. Steward).—Consent.

Holborn.—Iron and glass shelter at the entrance to the Chancery-lane tube railway-station, High Holborn (Mr. E. P. Grove for the Central London Railway Company).—Consent.

St. George, Hanover-square.—Temporary wood and iron building at the premises of the Motor Spirit Direct Supply Company, Ltd.—Consent.

Deviation from Certified Plans.

Peckham.—Rebuilding of No. 86, Rye-lane, Peckham (Mr. F. Nicholls for Messrs. Upson & Co.).—Consent.

St. George, Hanover-square.—Re-erection of No. 34, Three Kings yard, Grosvenor-street, Westminster (Mr. F. W. Foster).—Consent.

Alteration of Buildings.

Westminster.—Additional story at No. 32, Old Queen-street, Westminster (Mr. P. H. Feilding for the Right Hon. Lord Lucas).—Consent.

Uniting of Buildings.

City of London.—Openings in a division wall and use of doors of special construction in lieu of iron doors on one side of such openings at Nos. 171, 172, and 173, Aldersgate-street, City (Mr. T. B. Whinney).—Consent.

Finsbury, Central.—Uniting of Nos. 80 and 82, Clerkenwell-road, Finsbury (Mr. F. Eilsart for Messrs. Butler & Crispe).—Consent.

Holborn.—Openings in the party walls at Nos. 100, 101, and 102, Hatton-garden, and Nos. 13, 14, and 15, Robin Hood-yard, Holborn (Mr. J. Sawyer for Mr. A. W. Gamage).—Refused.

Kensington, North.—Opening between Nos. 5 and 9, Colville-mansions, Talbot-road, Bayswater, at the first-floor level (Mr. J. M. Beveridge for the Hon. E. G. Strutt).—Consent.

Strand.—Uniting of Nos. 57 and 59, Regent-street, by openings at the second, third, and fourth floor levels (Messrs. Emden, Egan, & Co., for Messrs. Swan & Edgar, Ltd.). - Consent.

The recommendation marked † is contrary to the views of the Metropolitan Borough Council concerned.

PROJECTED NEW BUILDINGS IN THE PROVINCES.*

ASHFORD.—Technical institute, Elwick-road; Mr. F. W. Crook, Secretary, Education Committee, Kent County Council, Caxton House, Westminster, S.W.

Auchterless (Aberdeenshire).—Additions to school (1,800*l.*); Mr. W. L. Duncan, architect, Hall Hill House, Turiff, Aberdeenshire.

Audley (Stoke-on Trent).—Schools (2,000*l.*); Messrs. Watkin & Adams, The Square, Burslem.

Banbury.—Tar distillery works, near Great Western Railway-station, for Messrs. Robinson Brothers. Additions to factory for Messrs. H. Stone & Sons, Ltd.

Banchory.—Additions to school; Messrs. Wilson & Walker, architects, 181A, Union-street, Aberdeen.

Barrow-in-Furness.—Six houses, etc., Bridge-gate Estate (2,150*l.*); Mr. A. Race, Surveyor, Town Hall, Barrow.

Bedlington.—School (4,500*l.*); Mr. Tart Sen ton, builder, Delaval

Benfieldside. — Hospital, Ritson's - road (10,000*l.*); Mr. J. J. Eltringham, architect, Blackhill.

Beverley.—Baths, Lord Roberts'-road; Mr. J. G. Smith, Surveyor, Town Hall, Beverley.

Blackpool. — Workshop, etc., Hull-street (2,700*l.*), for the Fylde Water Board.

Blyth.—Offices for Harbour Commissioners (6,000*l.*); Messrs. Cackitt & Burns Dick, architects, Grey-street, Newcastle.

Bolton.—Picture theatre (2,100*l.*); Mr. H. Booth, 42, Regent-street, Haslingden.

Bournemouth.—Vicarage (2,000*l.*); Mr. H. E. Hawker, architect, St. Peter's-chambers, Bournemouth. Alterations to Palmerston Hotel for Messrs. Whitbread & Co., Ltd.

Brechin.—Proposed baths (6,000*l.*); Mr. W. Eggie, Surveyor, Burgh Offices, Brechin.

Brinscall. –Weaving-shed (19,000*l.*); Messrs. Duxbury & Ward, architects, Blackburn.

Buxton (Derbyshire). –Extensions to pump-room; Mr. W. H. Grieves, Surveyor, Urban District Council Offices, Buxton.

Cardiff.—Buildings on site of old Town Hall (75,000*l.*) for the Co-operative Wholesale Society.

Carnarvon.—Infirmary (6,850*l.*); Mr. R. Jones, builder, Llanwndd.

Colebrook.—Vicarage; Messrs. E. H. Harbottle & Son, architects, County-chambers, Exeter.

Desborough (Northants). — Congregational church (3,500*l.*); Messrs. Sharman & Archer, architects, 3, Market-street, Wellingborough; Messrs. Hacksley Brothers, builders, 1, Regent-street, Wellingborough.

Dunfermline.—Offices, opposite Carnegie Library (7,500*l.*); Surveyor, Town Hall, Dunfermline Parish Council. Branch premises, New-row (7,000*l.*), for the Bank of Scotland.

Edinburgh.—Additions and alterations to Victoria Hospital for Consumption (2,000*l.*); Messrs. Sydney Mitchell & Wilson, architects, 13, Young-street, Edinburgh. Printing works, St. James's-square (10,000*l.*); Mr. C. H. Greig, architect, 6, York-place, Edinburgh. Mission hall for Nelson Bequest Trustees, Spittalfield-crescent (2,150*l.*); Messrs. Cousin, Ormiston, & Taylor, architects, 140, Princes-street, Edinburgh.

Exeter.—The estimate of Messrs. C. H. Hunt & Son, builders and contractors, High Wycombe, has been accepted for rebuilding of Exeter Station, Great Western Railway. Warehouse, High-street; Messrs. J. M. & A. J. Pinn, architects, Bedford-circus, Exeter.

Exmouth.—Café, bakeries, etc.; Mr. T. Abell, architect, Rolle-street, Exmouth: Messrs. T. Abell & Son, builders, Rolle-street, Exmouth.

Gateshead.—Lecture hall and Sunday-school (2,000*l.*); Mr. J. W. Taylor, architect, St. John-street, Newcastle.

Gloucester.—St. Catherine's Church (8,000*l.*) · Mr. W. B. Wood, architect, Queen-street, Gloucester; Messrs. W. Byard & Son, builders, Queen-street, Gloucester. Extensions to Moreland's Match Factory (3,000*l.*); Mr. E. A. Pryer, 18, Clarence street, Gloucester.

Grassington. — Weaving-shed: Mr. James Hartley, architect, Swadford-chambers, Skipton.

Greenock.—Picture theatre (1,800*l.*); Mr. C. A. Boswell, architect, 53, Bothwell-street, Glasgow.

Harwich. — Fire-station, Wellington-street: Mr. H. Ditcham, Surveyor, Harwich Town Council.

Haslingden.—Additions to Messrs. Tattersall's Mill, Grave-road (2,134*l.*); Mr. W. Tattersall, architect, Market-place, Haslingden.

Hawick.—Swimming-baths (3,000*l.*); Mr. A. Inglis, architect, 12, North Bridge street, Hawick.

Highgate, N.B.—Lodging-house (2,200*l.*); Messrs. John Melvin & Son, architects, 64, Mar-street, Alloa.

Keighley.—Extensions to baths (5,000*l.*); Messrs. J. B. Bailey & Sons, architects, Scott-street, Keighley.

Larne.—Extensions to fever hospital (550*l.*); Mr. A. M'Neill, builder, Larne.

Lochgarron.—Additions to parish church, also manse and offices (1,850*l.*); Messrs. A. Ross & Son, Queensgate, Inverness

Lochness. –Church (3,000*l.*): Messrs. George Gordon & Co, architects, 6, Queensgate-street, Inverness.

Montrose.—Slaughter-house (2,500*l.*); Mr. S. L. Christie, Surveyor, Town Hall, Montrose.

Otley. Underground conveniences, Market-place; Mr. C. F. Hodgson, Surveyor, Urban District Council Offices, Otley.

Paxton.—Manse buildings (2,000*l.*); Messrs. J. Stevenson & Son, architects, 14, North-terrace, Berwick-on-Tweed.

Peasedown St. John (near Bath).—School; Mr. W. F. Bird, architect, Midsomer Norton.

* See also our list of Competitions, Contracts, etc., on another page.

THE ROYAL ACADEMY LECTURES:

ITALIAN DRAUGHTSMEN OF XVIITH AND XVIIITH CENTURIES, AND PIRANESI.

THE fourth and concluding lecture of the present series of Royal Academy lectures on "Architectural Draughtsmanship" was delivered by Professor Reginald Blomfield, A.R.A., on the 15th inst., the subject being "Some Italian Draughtsmen of the XVIIth and XVIIIth Centuries, and Piranesi."

Professor Blomfield said that one man dominated architectural draughtsmanship in the XVIIIth century—*i.e.*, Giovanni Battista Piranesi, who stood apart from his predecessors and contemporaries. But however transcendant his achievements, whatever degree of perfection such a man may ultimately reach, careful study would always show that he is the child of his age, and that his genius is shown not least in the advance that he makes along a path already trodden by his predecessors. It was necessary, therefore, to pick up again the threads of Italian draughtsmanship at the end of the XVIth century. In the year 1589 Domenico Fontana, the well-known architect of Sixtus V., brought out a folio of illustrations of the means by which he had moved and set up the great Obelisk of the Vatican, generally known as the Guglia, in the piazza of St. Pietro. It was evidently the work of a draughtsman and engraver of a higher order than those who had worked for Serlio and Palladio. Fontana was perhaps the first to feel that fascination of scaffolding on which a well-known modern artist had played so skilfully. The book set up a new standard of architectural presentation, a method far ahead of the summary, though suggestive, wood-cuts of Palladio. The next stage was to abandon the formal method of Fontana's plates and to introduce sky and landscape in combination with architecture, a freer perspective, and more suggestion of the atmosphere and of light and shade. There were plates in Giovanni Battista Falda's famous "Fontane di Roma" in which the architecture is in correct perspective, and his figures and landscapes were excellent.

To Fontana had succeeded Carlo Maderno, Bernini Borromini, and Rainaldi, clever men in their exuberant and unscrupulous way, but not great architects or draughtsmen. Bernini was far the most considerable figure among the artists of the two middle quarters of the XVIIth century. His word was law in France as well as in Italy until the revolt of the French architects over the additions to the Louvre; and probably no artist had ever obtained a position of such unquestioned supremacy. But Bernini was from the first a sculptor, and a sculptor who, almost by instinct, rebelled against all restraint; and, though he did a great deal of architecture, some of it in a way of first-rate importance, he never looked at things from the standpoint of an architect, and was one of the most conspicuous offenders among that not inconsiderable class of artists who had regarded architecture only as so much stage scenery. He felt his way to vaguely realised efforts, and this failure, both in his training and in his habit of mind, was apparent in such of his architectural drawings as he (the lecturer) had come across. The passion for dramatic effect, always latent in the Italian, began to assert itself in the XVIIth century with ever-increasing insistency, until it finally overpowered their sense of architecture and substituted mere stage effects for that grave and serious art. There were still able architects, but Italian architecture was on the wane, and the slip-shod architectural drawings of Bernini and Borromini were evidence of its failure. Unless a man was a fine draughtsman it was almost impossible for him to be a fine architect. He did not mean that an architect was to devote himself to turning out magnificent drawings; far from it; he had greater work to do. Rather, by a severe gymnastic of drawing he should have trained his eye to the subtleties of form and composition, and his hand to interpret his ideas without hesitation and failure. Great painters did not parade their draughtsmanship, but it was implicit in their work. So, too, was it with architects; their draughtsmanship was shown in its highest form, not only in the beauty of their profiles, but in the scale, proportion, and composition of their buildings. But these qualities were only to be reached and fully realised through the assiduous study of great examples of the past, by means of which the architect accumulates a wealth of realised ideas in the background of his own imagination, trains his eye to seize at a glance the essential qualities of design, and his hand to interpret his conception without those mischances and blunders which lie in wait for the incompetent draughtsman. The purely technical drawings (*i.e.*, working drawings) made by such men as Bernini and Borromini were inferior to the drawings of Bramante, Peruzzi, and the two Sangallo, and it was evident that they were not real masters of this branch of their art, but were fumbling about for a motive in the hope of coming on it unawares in the tangle and confusion of their tentative lines. On the other hand, their dexterity in putting in figures and details of rococo ornament was amazing.

The lecturer then referred to the topographical work of Canaletto and his school, and the theatrical designs of the Bibiena family. The R.I.B.A. possess thirty-one original drawings of Giuseppi Galli Bibiena, most of which show an astonishing ability in draughtsmanship and mastery of perspective. But Bibiena was an artist of rather commonplace instincts and narrow range, and his archæology was simply absurd.

Piranesi, who was born at Venice in 1720, derived his fondness for composition of ruins from Ricci and Pannini. He was a draughtsman pure and simple, and not a painter. His earliest plates were issued in 1741, but his first serious publication of Roman antiquities and triumphal arches did not appear till 1748, followed by the "Carcere d'Invenzione" in 1750; and in 1751 his collected works up to date were published by Bouchard in a vast folio, entitled "Le Magnificenze di Roma le piu Remarcabili"—a miscellaneous collection carefully arranged, but splendidly printed on thick paper with noble margins—perhaps the finest publication of architectural drawings that has ever yet been produced. The "Antichita Romane," in four volumes, containing 216 plates, appeared in 1756, and was first dedicated to Lord Charlemont, but Piranesi considered his attitude so ungenerous that he removed his name and afterwards dedicated the work to Robert Adam. In 1761 Piranesi, who now described himself as "Fellow of the Society of Antiquaries of London," brought out his huge volume of "The Magnificence of the Architecture of Rome," in which he gave at great length his views of the origin of Roman architecture, and used his extraordinary ability as an etcher to demonstrate his quite erroneous argument. The "Diverse maniere d'adornare i Cammini," etc., appeared in 1769, and the "Vasi, Candelabri," etc., in 1778, the year of his death.

Piranesi's temperament was so complex and turbulent that he was a man of many manners, and the problem of disentangling these was made the more difficult by the fact that for years after his death his son continued to issue his father's plates with modifications of his own, and plates of his own from his father's drawings, just sufficiently like to be confused with his father's work by careless observers. Piranesi's art work is contained in Bouchard's folio. He did an abundance of work after that date, much of it very accomplished, but finish and elaboration took the place of the tense emotion that lay concealed beneath the surface of the wonderful plates that he made in the ten years before 1750. Even in his most restrained manner he could do wonders in the way of suggesting texture and reflected lights. Nor was his success merely technical. In nearly all his plates he succeeded in conveying an impression of that great scale, and of the magnificence of the buildings of ancient Rome, which from first to last were the predominant motives of his work, and became with him almost an obsession. He had a power of imparting to all he did a certain epic quality, some feeling of an heroic age long past that haunted his imagination, even to the tainting of its sanity. No one had ever approached Piranesi in his power of drawing architecture, though he was not a practical designer at all.

REPAYMENT OF LOANS FOR WOOD-BLOCK PAVING.

The Improved Wood Pavement Company, Ltd., have received the following letter from the Local Government Board:—"I am directed by the Local Government Board to advert to your letter of the 6th instant, and to state that they are now prepared to allow a period of ten years for the repayment of loans sanctioned by them for soft wood creosoted block paving."

THE CARPENTERS' HA LECTURES:

THE SCULPTOR'S CRAFT.

THE fourth of the present ser Carpenters' Hall lectures on "The Connected with Building" was delive Wednesday last week by Mr. T. S Lee in the Hall of the Company, L wall, the Rev. C. B. Bartlett, Past-M presiding.

Mr. Stirling Lee, the title of whose was "The Sculptor's Craft, with strations and lantern views," said brought his studio with him, and he in to take the craft side of sculpture there were one or two things he had and the first was that we have lost s the present day of the fact that sculp a language. Ruskin had well put it t history of a nation was written in books—*i.e.*, the book of its deeds, th of its words, and the book of its a three were necessary to complete but the only reliable one is the histo nation's arts. That was very true, arts were and could be only an expre time—*i.e.*, the work an artist wa missioned to do, and in the works of saw in exhibitions we got a very go of the ideals of nations. Sculptu written history; it spoke a language. men could read and write, when they to express their thoughts they did means of representations of things th and the earliest art was drawing on drawings of animals, because the artis hunters. This went on until the pe ideals, and we got symbolism—s language. So all through the ages s was a record of man's thoughts—hi and aspirations and the history of We were told by physiologists that of us use all the parts of our brain, was very true in regard to the art had in his brain the faculty, the form, which had to be controlled intelligence; and so without the sense and colour governed by ideals, with use of the intelligent part of his b artist became sensuous and degenera all had this faculty of form and col joy-giving sense, and the highest senses—*i.e.*, the sense of feeling, nation which did not develop thes of form and feeling was only ha and was cutting away the joy Nations which did not encourage were swept from the face of the ea those which had, had handed down to the greatest of riches the world ha If we did not develop this side of ou life we lost one of the greatest ch joy to the world. The nation whic encourage art was like a man w through the world blind because were not open to the beauty of it.

As to the evolution of these thi language; what was at first figura now phonetic. When the phonetic got to the printed language, the great use of the figurative langua to be, and so printing had more o placed or displaced the figurative No longer did people want the written on walls of their public for they had their books, and pri displaced the use of decorative though it could never destroy tha man which had the faculty of for who had that faculty were the pr lovers of it as long as man existed.

There were two essentials which the sculptor's work, and like ev art it must have its scientific b began where science ended, and t the two sides to sculpture work science of the human form, anatom science of geometry; and all th ages different artists were governe one science than the other. If th was plastic, or a modeller, anato assert itself in his work; if he w or a carver, the geometrical s govern his work. And the reason the clayworker builds up his wor carver carves down, and he (the proposed to show them how th built up the clay, and also how cuts his marble.

he lecturer, with a small clay model of a
before him, proceeded with pliable clay
uild up, on a movable lead pipe or skele-
stand, the beginning of a figure, bit by
He explained that every line must
into every other line and harmonise
t through. Every line should have some
ning, and there must be no stop anywhere
he flowing lines of the work. He also
ved the geometrical method of carving
istinction to the anatomical science, and
arked that directly sculpture was divorced
n architecture it became academic and
ly clay, for in sculpture related to archi-
ure the mason's side had to prevail, and
reason why a great deal of sculpture
r harmonised with architecture was
nse it was purely plastic.
he lecturer described some of the sculp-
s tools and then showed some lantern
es of beautiful sculpture work.

BOOKS.

norials of Old Gloucestershire. Edited
r P. H. DITCHFIELD, M.A. With many
ustrations. Demy 8vo. (London : George
llen & Co., Ruskin House, Rathbone-
ace. 15s. net.)

s is another of that excellent series of the
orials of the counties of England and
been edited by the general Editor, who
produced in this volume an admirable
ition to the numerous volumes of the
es already published, and has given a
prehensive review of the chief treasures
historic interest and antiquity of the
e. Of special interest are the accounts
the treasures of mediæval and ecclesi-
cal art that are to be found within the
ity, "the curious fonts, the Norman doorways with their quaint sculptures, the carved woodwork of the misericords, the bells that sound in minster and in church, the unique stained glass of the Fairford windows." The Editor contributes a chapter on historic Gloucestershire; Mr. E. A. B. Barnard on Winchcombe and Sudeley Castle; Miss M. Phillips Perry on the misericords of Bristol Cathedral; Canon Carbonel, M.A., on the Fairfax windows; and the Rev. Canon Bazeley, M.A., on Berkeley Castle, and an exceptionally able essay on the Norman doorways of the county is contributed by Mr. C. E. Keyser, M.A., F.S.A., accompanied by a unique set of plates illustrating the doorways and showing how rich in beautiful work of the kind Gloucester is. We are able to illustrate one of the doorways. The volume is worth possessing if only for this essay and the accompanying plates, but other interesting articles needing special reference are "Chipping Campden and Its Craftsmanship," by Mr. C. R. Ashbee, F.R.I.B.A., and "Gloucestershire Fonts," by Dr. A. C. Fryer. The article on the city of Gloucester, by Mr. J. Sawyer, contains illustrations of some of Mr. W. Leighton's drawings. We welcome another of these excellent "Memorials."

Everybody's Guide to the National Insurance Act, 1911. By THOMAS SMITH, Barrister-at-Law. (London : Chas. Knight & Co., Ltd., 227-239, Tooley-street, S.E. Price 1s. net.)

A GOOD many attempts have been made to explain this important and far-reaching measure, and such is its complexity that there is great need for a guide which will explain to everybody—or, certainly, to the great mass of the citizens who are, or will be, seeking for knowledge—what the Act means and how far they are affected by its provisions. The Bill as introduced was subsequently altered so much that even if the work of the Parliamentary draughtsman left nothing to be desired, the public might well be excused if they failed to understand to the full this new piece of legislation. The book before us is a non-political work, and the author has done much to explain the Act and make its meaning clear. The Act is arranged in sections, showing the effect on every class, so that anyone is at once in the position, on reading the book, to find how the new law affects him or her, as the case may be, and what steps it will be necessary to take to obtain the benefits which the Act affords.



South Doorway, Pauntley Church, Gloucestershire.
(From "Memorials of Old Gloucestershire.")

Laxton's Builders' Price Book for 1912. Originally compiled by William Laxton. Ninety-fifth Edition. (London : Kelly's Directories, Ltd., 182, 183, and 184, High Holborn, W.C.)

Lockwood's Builder's, Architect's, Contractor's, and Engineer's Price Book for 1912. Edited by FRANCIS T. W. MILLER, A.R.I.B.A. (London : Crosby Lockwood & Son, 7, Stationers' Hall-court, Ludgate-hill, E.C.)

IN dealing with these two works our remarks apply almost, if not quite, equally to both. Both are excellent in their way, and that way is almost identical. True, Laxton occupies the premier place, but that is principally on account of age, but although it can boast its ninety-fifth year there is no indication of senile decay. It is quite possible that the advent of the younger brother accounted to a large extent for the rejuvenation of the elder. The 1912 edition is quite up-to-date in the best sense of the word.

We have carefully gone through both, and find that the necessary revision has been carefully done, and it is a good sign that more revision has been necessary for this year than for some time past. There are curious little discrepancies in both in the calculations for cost of brickwork, and it is also strange that one allows 4s. per rod and the other 5s. per rod for scaffolding, while there is a difference of over 12 per cent. in the prices of labour only. But we must conclude that they are, after all, only consistent with the variations of prices shown in the bills of builders tendering for work. Whether it will ever be possible to standardise even such a definite matter as the pricing of brickwork is a very open question.

On page 354 of Laxton we would point out what is obviously a printer's error. Milled lead in sheets is priced at 1*l.* 11s. 6d.; this should surely be 1*l.* 1s. 6d. This is borne out by the subsequent prices for lead and labour. It, however, is some satisfaction to know that, notwithstanding a careful examination of the work, this is the only real error that we have traced.

Again we have pleasure in praising both works for their thoroughness and care in production with the reservations we have so often mentioned before—the difficulty of really supplying a standard—and which is emphasised by the references we have given. We could give many more did space allow.

THE LONDON COUNTY COUNCIL.

THE usual weekly meeting of the London County Council was held on Tuesday in the County Hall, Spring-gardens, S.W., Mr. Edward White, Chairman, presiding.

LOAN.—The Finance Committee recommended, and it was agreed, to make a loan of 20,200*l.* to the Westminster City Council for the purpose of obtaining through communication from Great Marlborough street to Noel-street.

SCHOOL SHELTER.—It is proposed to erect a small shelter in the boys' playground at the All Saints' School, Putney Bridge-road.

SOUTHERN HIGH LEVEL SEWER.—In connexion with the construction of the Southern High Level Sewer No. 2, a local sewer in Ivydale-road, Nunhead, is to be connected with the Southern Sewer at a cost of about 185*l.*

NEW STORE.—A permanent store is to be erected at the Barking outfall works at an estimated cost of 350*l.*

THEATRES, ETC.—The following drawings have been approved by the Committee :—226, Commercial-road (Yiddish Theatre)—arrangement of the safety curtain, arrangement of electrical switchboards, battens, ventilation, etc.; Down-place, Hammersmith (cinematograph hall)—formation of exitway; Hotel Cecil, Strand—electrical arrangements for the winter garden; Queen's Hall, High-street, Peckham—enlargement of the entrance vestibule; Royal Academy of Music—sundry minor alterations, lighting and mechanical arrangements; Upper Tooting-road and Fircroft-road (cinematograph hall)—adaptation for use as an office of a shop on the side of the entrance vestibule.

NEW BUILDINGS.—It is also proposed to erect a new dining hall at the Imperial Hotel, Russell-square, and a new cinematograph hall is to be erected at 234, Pentonville-road, N.

COTTAGES AT WALLSEND-ON-TYNE.

THE cottages illustrated on this page represent a type of domestic architecture that is rapidly coming into favour in the district with people who require a house of moderate accommodation and cost. They are planned so that the principal rooms face south, with the portico, hall, and out offices north. The brick-paved paths make a pleasant feature to the interior porches, which are also paved in bricks.

TRAFFIC REPORT OF THE BOARD OF TRADE.

ONCE again the London Traffic Branch of the Board of Trade calls attention to the stupendous nature of the traffic problem. We rise from a study of the fourth Annual Report with an overwhelming sense of the vastness and intricacy of the subject and of its vital importance to the welfare of London. Whatever preconceived ideas we may have had on the subject of town planning, this Report does bring home to us with irresistible force the fact that the traffic practically governs everything, and, in the present state of London, is the one subject that most requires immediate attention.

The Royal Commission on London Traffic, which reported in 1905, found that the difficulties of the traffic were largely due to the narrowness of the streets and to the lack of any general comprehensive plan, and suggested an investigation into the adequacy of the main arterial roads.

In consequence of this suggestion, an inquiry was begun by the Traffic Branch in 1909, further results of which are now published continuing those already published in 1910. Some excellent maps are included in the appendices to this Report, showing, in addition to other information, the volume and nature of the traffic on the main roads and bridges leading out of London.

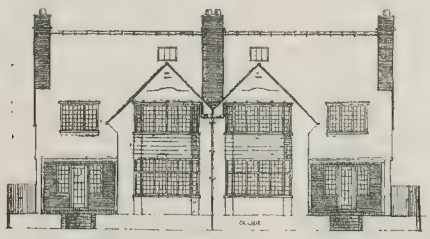
It is perhaps not too much to say that this problem of the arterial roads is the most important of all, or, at any rate, the one most in need of immediate attention, in view of the preparation of town-planning schemes now being taken in hand by various local authorities within the radius of Greater London.

It is obvious that such local schemes should be brought into proper relation to and form part of a general scheme. But as this Report points out, although the publication of last year's Report lead to inquiries from local authorities, yet

"From the point of view of the local authorities, there are two main difficulties in adopting the scheme. The first is the absence of such assurance that a proposed road will be carried through from end to end, as would justify a particular authority in undertaking the construction of an isolated section. The second arises from the likelihood of claims being made for compensation in respect of land over and above the statutory width which should be reserved in order to secure a minimum of 100 ft.—claims which a local authority might be unable or unwilling to meet without assistance. There is, however, reason to hope that where new roads would greatly benefit their estates, owners of large properties would be willing to give the additional width on favourable terms, if not free of cost, where satisfied that the roads would be completed throughout. It will, moreover, often happen that the line of a proposed new road runs through an area which, being developed, cannot be included in any town planning scheme. The construction of such a road might involve the purchase and demolition of buildings, entailing expense, which no single authority could face unassisted even if—as would seldom be the case—the road, when constructed, would be of greater benefit to the district through which it passes than to places further afield. There are also cases in which a proposed line traverses open country not yet ripe for development. Here, although the construction of such sections would not be costly, and extra land could easily be reserved, it is hardly to be expected that local district councils would be prepared to incur the expense out of their own limited resources.

As joint action is clearly indispensable in such cases, it would seem to be desirable that the central authority should be charged with the duty of conferring with the county councils and other authorities, landowners, and others, with a view to arrive at a common agreement both as to the precise line to be adopted, and as to the apportionment of the cost. A settlement of this kind would be facilitated if the inducement of a substantial assistance from public funds could be held out in such cases such as those already referred to. The money, which could properly be allotted to the improvement of traffic facilities in the Metropolitan district, using the term in a wider sense, could undoubtedly be laid out to far greater advantage in procuring the construction of roads in the outskirts, where the value of property is rising, buildings are multiplying, and traffic would add each year to the cost of improvements, rather than in fully developed districts near the centre, where the cost of improvements would be little, if at all, greater a few years hence than it would be now.

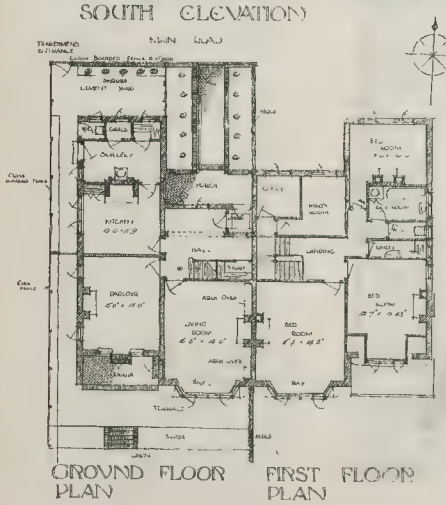
If local authorities and private owners were encouraged to adopt approved lines, in connection with town-planning schemes, by giving assistance from public funds towards the expense of constructing connecting sections, it might be found that the formation of many miles of arterial road could be secured at a moderate cost. Roads which will have to be made in any case for local purposes, could be so laid out as to meet the requirements of arterial communication, and if suitable lines were adopted from the first it would rarely be difficult to bring the ultimate into conformity with them without any sacrifice of local convenience. Town-planning roads, on the other hand, laid out independently, without reference to a general scheme, so far from assisting it, might actually stand in its way, and would be of little or no use except to the authorities concerned. It is therefore suggested that attention should be directed to this question without loss of time, not only with a view to secure the early provision of improved communications which are so urgently required, but also to obtain for the community the best value for their money."



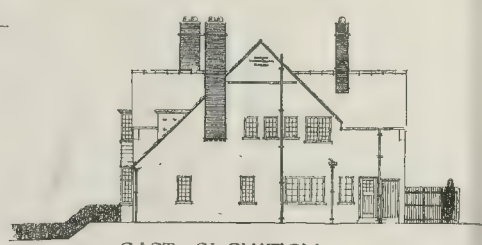
SOUTH ELEVATION



NORTH ELEVATION



GROUND FLOOR PLAN FIRST FLOOR PLAN



EAST ELEVATION

PAIR OF COTTAGES WALLSEND ON TYNE

SCALE OF FEET



Cottages at Wallsend-on-Tyne. Mr. Edward Cratney, Architect.

ough the general conclusions of the Branch seem eminently reasonable, and cessity for new or widened arterial proved up to the hilt, there is another of the question which, we think, must e lost sight of. Where a road is ed there seems to be two ways of with it—either widen the road or the amount of the traffic. In a town as grown to such an enormous and dy size without any definite plan, it s evident that the lack of any proper tions of its various trades in relation to otlier or to the railway centres creates ormous amount of traffic which is, speaking, unnecessary, or rather be so if the life of the town was better ed. Even as things are at present, the nts for a general Clearing House for supports the contention that much of sent traffic is quite unnecessary and better organisation would result in a elief to the streets.

suggestion naturally presents itself that o aspects of the question should be together with a view to the suppression ecessary traffic where possible before expense is incurred in widening. , in some cases where the cost of g a congested road or of creating a oad is altogether prohibitive, this he only hope left to us.

is much to be done in the same n by the better organisation of the tion of goods and by the better on of the traffic generally. Such, for e, is the proposal for an underground for the conveyance of mails, which ake 1,000 Post Office motor-vans off ets which now perform 5,000 to 6,000 ervices. The Report notes the relief would be thus afforded, particularly ystem were extended to the general tion of goods, but, of course, still relief would be gained if the dis- g centres were properly placed.

tain a proper basis for the production a general scheme for London as is vely required it is obvious that a survey of the life of London and an ve inquiry into the whole of its nents will be necessary. Such a undertaking could probably only be by those possessing the authority urces of a Government department. rsuit of data on which to found its ns for new or improved roads the Branch has collected much valuable ion as to the recent growth, density, ration of the population, as well as robable growth in the future. The lking fact in this connexion is that rst time in more than a hundred years ulation of the administrative county m to decline. The increase in the g is greater than ever, while beyond r ring considerable increases have lace in many localities up to 30 more from the centre.

impossible within the limits of a o do justice to the immense amount nation contained in this Report. It t only with population and arterial t with street improvements, bridges nels, public carriages, tramways, steamboats, strikes, and the regula- traffic, to which is added a dum by the Home Office. Numerous es give exhaustive statistics on all bjects, and the eight maps which y it are by no means the least part of the report which should be y all interested in the subject. To nt of town planning it is a mine of on and suggestion.

LEGAL COLUMN.

Obstruction to Light.

cent case, Griffith *v.* Richard Clay & ., the defendants admitted obstruction n ancient lights, and the plaintiff, aived his claim to an injunction, the ion for the Court was the assessment es.

laintiff's premises comprised two houses let at weekly rentals and a e at the back. The district was no sidential, and the buildings were very would soon have to be demolished. lights of the dwelling-houses appear een obstructed, and the question was raised whether in assessing the damages only the site value of the dwelling-houses was to be considered or the site value of the whole area. The Court adopted the latter view.

Mistake at an Auction.

A curious point in connexion with an estate sale has recently been raised in one of the County Courts. The vendor had placed a reserve upon one of the lots to be sold by auction of 375*l.*, but by an oversight it had been entered in the auctioneer's sheet at 170*l.* The mistake was discovered during the bidding, but the lot was knocked down at 170*l.* before the auctioneer became aware of it. The plaintiff in the action was the purchaser, who was claiming specific performance of the contract against the vendor. The plaintiff contended that this was not an auction subject to a reserve price, because the fact was not specifically stated, although certain sale conditions were incorporated which did contain such a condition.

The Judge found that the plaintiff knew that the sale was subject to reserve, and therefore had sufficient notice. The Court decided that the plaintiff could not claim specific performance of an agreement which, if entered into at all, was made through a slip or mistake on the part of the vendor's agent unaccompanied by gross negligence, and judgment was entered for the defendant.

When a sale is subject to a reserve price, and the fact is known, it has been held by the Court of Appeal that the offer of the auctioneer to sell, the bidding, and the knocking down of the article to the highest bidder, are all subject to the condition that the reserve price shall be reached, and the bidder has no right of action against the auctioneer either for breach of duty in refusing to sign a memorandum or otherwise to complete the contract, or for breach of warranty of authority to accept the bid (McManus *v.* Fortescue, 1907, 2 K.B., 1).

In another case, Rainbow *v.* Hawkins (1904), where an auctioneer had inadvertently knocked down a pony without reserve, and immediately on discovering his mistake put it up again, the Divisional Court held that the action against the auctioneer failed because no memorandum of the sale had been made. These are both cases where the action was brought against the auctioneer, not as in the present case, where the action was brought against the vendor; but in the latter case it was intimated that as an auctioneer has an implied authority to sell without reserve, unless that limitation is brought to the notice of the purchaser, the purchaser would have a right of action against the vendor if a memorandum of sale existed.

LAW REPORTS.

Right to Injunction in an Ancient Light and Air Case.

In the House of Lords on Thursday, the 15th inst., Lords Macnaghten, Atkinson, Shaw, and Robson disposed of an appeal brought by Mr. H. M. Cockerill against an order of the Court of Appeal in favour of the respondents, the Middlesbrough Co-operative Society, Ltd.

Mr. Tindal Atkinson, K.C., and Mr. Edward Shortt, K.C., instructed by Messrs. Tatham & Lousada for Messrs. Faber, Fawcett, & Faber, Stockton-on-Tees, appeared in support of the appeal; Mr. Waugh, K.C., and Mr. J. A. Slater, instructed by Messrs. Griffith & Gardiner, for Mr. M. W. Hutchinson, of Middlesbrough, for the respondent Society.

Mr. Atkinson, in opening the case, said the plaintiff owned some cottages close to where the buildings of the defendant Society were erected, and he brought his action at Leeds in March, 1910, to recover damages for obstructing the access of light and air to his premises by the erection on the defendants' adjoining land of a warehouse and other buildings, and for nuisance and for breach of an agreement alleged to have been entered into between the parties in the previous April. Further, he claimed an injunction to restrain the defendants allowing the new buildings to remain in such a condition as to diminish his light and air, otherwise than as agreed. The defendants denied there was any such nuisance as the plaintiff alleged.

At the trial, the jury, by consent, were discharged, Mr. Justice Ridley agreeing to the request of the parties that there should be a report on the premises made by Mr. G. T. Brown, of Sunderland, who should answer certain questions framed as the basis on which he should make his report, and that he should find what damages (if any) the plaintiff had sustained by reason of the alleged breach of the agreement, if it was found by him that the common law rights of the plaintiff had not been infringed.

In his report he found that the plaintiff had suffered no damage.

The question whether in these circumstances the plaintiff was entitled to a mandatory injunction was reserved for further argument before the same Judge in London. The short point of law was this:—

The plaintiff said that the substance of the agreement was that the defendants would not so erect the warehouse to such a height as would obstruct his ancient lights, and that the roof should be, by arrangement between the plaintiff and the defendants' architect, pitched as low as practicable. The roof was pitched at 34° 4′. The plaintiff alleged that a pitch of 30° (a degree more or less to be considered immaterial) alone satisfied the words "as low as practicable."

Mr. Justice Ridley, in giving judgment, declined to treat the arrangement to be come to as to the pitch of the roof as a negative covenant, and therefore refused to grant an injunction.

Lord Macnaghten: Why do you say the learned Judge was wrong? Surely it is a matter of discretion.

Mr. Atkinson said it was not a matter of discretion. In 1868 Lord Cairns, in delivering judgment in Doherty *v.* Allen, three Appeal Cases at p. 719, where he was dealing with a covenant to repair a building, and the remedies and rights of the parties under that covenant said:—"If the parties, for valuable consideration, with their eyes open contract that a particular thing shall not be done, all that a Court of Equity has to do is to say, by way of injunction, that, which the parties have already said by way of covenant, that the thing shall not be done; and in such case the injunction does nothing more than give the sanction of the process of the Court to that which already is the contract between the parties."

Lord Atkinson: You contend that if a man says, "I agree to pitch the roof as low as practicable," it is equivalent to his saying, "I will not pitch the roof higher than it is absolutely necessary."

Mr. Atkinson: My submission is that where it is found that the parties agreed that there should be an undertaking given by one not to do a thing a particular way, and there is a breach of that negative covenant, the other party as of right can claim an injunction.

Lord Atkinson: But there was no agreement that the roof should be pitched at a certain degree.

Mr. Atkinson: No. There was an agreement that it should be pitched as low as possible. There was no evidence that the plaintiff knew that the respondents were building the roof in such a way as to be a breach of their negative undertaking, or that he knew or could have known the height or pitch of the roof until it was completed.

Mr. Shortt followed on the same side, without hearing Counsel for the respondent.

Lord Macnaghten said that in this case the Court of Appeal had affirmed a decision of Mr. Justice Ridley, who had refused, in his discretion, to grant a mandatory injunction. In his opinion, that decision was right. It seemed to him that the Court of Appeal, where elaborate judgments had been delivered, had treated the question raised with too much ceremony. It was not necessary for him to trouble the House with the facts in order that they might pass their judgment on whether this undertaking amounted to a negative covenant, which on the authority of Doherty *v.* Allen should be enforced by mandatory injunction. Whether on the facts disclosed an injunction should be granted was a matter of discretion for the Judge. Mr. Justice Ridley had refused to grant an injunction. It was perfectly clear that no damages had in fact been sustained by the plaintiff, and therefore he should merely move that the appeal be dismissed with the usual consequences.

The other noble and learned Lords concurred.

Order accordingly.

Euston-Road Building Line: High Court Application.

On Friday, February 9, before a Divisional Court of the King's Bench Division, composed of Justices Hamilton and Lush, Mr. Daldy applied *ex parte* on behalf of the London County Council for a *rule nisi* to the Tribunal of Appeal under the London Building Act to show cause why they should not state a case for the opinion of the Court.

Counsel said that under the Act the determination of the general line of buildings in any particular street or part of the street was in the first instance carried out by the

Surveyor and the Superintending Architect, but against that certificate the Act gave an appeal—which was an appeal both on facts and law—to what was known as the Tribunal of Appeal. From that Tribunal there was an appeal by way of a case stated on questions of law to that Court.

His present application had regard to a difficulty that had arisen in respect to Euston-road. There was the certificate of an architect as to the general line of the buildings in a certain part of Euston-road, and there was an appeal to the Tribunal of Appeal in connexion with which many people appeared.

There were originally five appellants, and there were interested parties who were also called. The Tribunal decided the case in a certain way, and there was an application for a case or cases to be stated. The Tribunal took the view that there were five different proceedings before them, in each of which they ought to give a separate determination and state separate cases. The question for their Lordships was whether there ought to be one or more cases. There were now three appellants only, said Counsel.

Mr. Justice Hamilton: Do you say the Tribunal propose to state three cases?

Counsel: Yes. We ask that there should be one case stated, to which all the parties who appeared before the Tribunal of Appeal should be named.

Mr. Justice Hamilton: If there were three cases raising the same point, I take it they would all be in the paper together, and judgment would not be given until they had been argued, and the three respondents would be heard separately.

Mr. Daldy said that the London County Council would be the respondents in every case here, and with three cases it would amount to a very considerable quantity of litigation. He agreed with what Mr. Justice Hamilton had said with regard to each party having the right to a separate case; but, as his Lordship was probably aware, the House of Lords had decided that the determination of the position of the building line was not the determination as between the Superintending Architect and any particular party who had a house along that line of building, so that it might be left open to a party having a different house to get another determination.

Mr. Justice Hamilton: Is there any divergence in the arguments of these different appellants?

Counsel replied that he believed that with one slight exception their contentions were practically the same.

Mr. Daldy proceeded to quote legal sections dealing with the determination of the general line of buildings in streets and the provisions concerning the stating of a case for the opinion of the High Court on questions of law, and said he submitted that a local authority or anybody who had a grievance might go before the Tribunal of Appeal, and any party interested could also go before them and be heard. The Tribunal of Appeal had to state a case for the opinion of the High Court on any question of law involved in any appeal submitted to them.

Mr. Justice Hamilton said he saw the Tribunal of Appeal had given an elaborate statement as to its refusal to comply with Counsel's wishes, and it was stated that it would be difficult to consolidate the points of law and facts in one combined case, and it might create hardship, whereas it was simple to state in three cases, and they thought that would be more conducive to justice being done.

Counsel, in further reply to the Court, said that originally there were five parties who gave notice to appeal, and the London County Council were the respondents.

Mr. Justice Lush: Then the Tribunal of Appeal might not, by their decision, satisfy the appellants or the respondents?

Counsel said that in this case the Tribunal of Appeal had "broke out" with a judgment which was unexpected by the parties concerned. The Superintending Architect had defined the general line of buildings along a certain part of the Euston-road, and the whole discussion was with reference to that length in which the particular line was situated. The Tribunal of Appeal rightly or wrongly divided it into three, and defined building lines in three different parts of the street. Something was decided by the Tribunal which neither of the parties had asked for.

Counsel added later that if the rule were granted it would have to be served on the appellants and notice given to the parties interested. There were appellants as to the middle part, and as to the west end the Metropolitan Railway Company would be made respondents and the London County Council would be made appellants.

Ultimately, after further discussion, the rule was granted.

KING'S BENCH DIVISION.
(Before Mr. Justice COLERIDGE and a Special Jury.)

Padbury *v.* Holliday & Greenwood, Ltd., and Others.

IN this case Mr. Alfred Goulton Padbury, of 64, Brownlow-road, N., claimed damages for personal injuries from Messrs. Holliday & Greenwood, Ltd., builders and contractors, of Loughborough Park, Brixton. The action involved an interesting question in regard to liability for an accident on January 4, 1910, and the defence embodied a general denial of such liability.

Messrs. Holliday & Greenwood had been erecting premises at the corner of Fenchurch-street and Lime-street in January of last year, and Messrs. Wainwright & Waring, of Chiswick, as sub-contractors, were engaged to fix in casements for the windows. Plaintiff passed the building on January 4, and was struck by an iron cramp that fell on his head and rendered him unconscious. He was taken to the hospital on an ambulance, and now told the Court what he had suffered in consequence of the accident. His right side, he said, was partially paralysed for a time; loss of memory since the accident had necessitated the use of a dictionary when writing letters; he was unable to resume work for over eight months, and now had to wear glasses when writing or reading. His doctors did not think he would ever be "the same man again."

Mr. Wainwright, director of Messrs. Wainwright & Waring, Ltd., gave evidence in support of the claim. He said his company were originally coupled as defendants to the action, but as against them the case was discontinued.

Mr. Spencer Bower, K.C. (for Messrs. Holliday & Greenwood): How did it come to be discontinued?

Mr. Wainwright: By the plaintiff's solicitor seeing me. I gave him an account of our position in the matter, and the terms of our sub-contract.

Witness added that when his company tendered to supply the window casements it was understood that they should have the use of the defendant's scaffolding, etc.

It was urged, on behalf of the defendants, that they were not responsible for the accident, inasmuch as it was caused by an employee of a sub-contractor letting the iron cramp drop. Mr. Spencer Bower submitted that there was no evidence of liability as against Messrs. Holliday & Greenwood. The sub-contractors, he said, were in control of the third floor, from which the cramp fell, and, he argued, plaintiff could not rely upon any alleged contractual relations between the builders and sub-contractors.

Mr. Benjamin Greenwood, a director of the defendant company, stated, in evidence, that they had no voice in the selection of Messrs. Wainwright & Waring, and they had nothing whatever to do with the erection and supply of the window casements. While the defendants' men were erecting the building all reasonable precautions were taken to guard against accidents; but after the building was roofed in the scaffolding, etc., was removed in the usual way. They were under no obligation to take precautionary measures in connexion with the work executed by Messrs. Wainwright & Waring.

The jury eventually awarded Mr. Padbury 500*l.* damages, and his Lordship granted the defendants a conditional stay of execution with a view to the possibility of an appeal.

KING'S BENCH DIVISION.
(Before Mr. Justice AVORY and a Common Jury.)

Personal Injury:
Chapman *v.* Greenwood, Ltd.

THIS was an action by Mr. James Chapman against Messrs. Greenwood, Ltd., builders, of Arthur-street West, to recover damages for personal injuries.

Mr. McCall, K.C. (for the plaintiff), said Mr. Chapman was injured in St. John-street, Clerkenwell, last May, by a brick falling on his head while he was passing a house where employees of the defendant company were at work. The bruise on the plaintiff's head was so serious that he was unable to work for sixteen weeks. His wages were previously 28s. a week, and since the accident he had only been able to earn 5s. or 7s. a week. In addition to his loss of wages, the plaintiff had incurred out-of-pocket expenses, including medical attendance, to the amount of 30*l.* 16s.

Mr. James Chapman, the plaintiff, a man twenty-four years of age, living with his father off the Goswell-road, gave evidence confirming the statement of Counsel. He said that while passing 423, St. John-street, on his way home to dinner, a brick fell upon his head, causing him to be dazed for a while. He fell a hoarding, and a man, whom he took the foreman, came out and said he was giving him 1s. for some brandy, and to be informed if anything serious hap

The defendants did not dispute liabili questioned the amount of damages cl which, it was said, was out of propor the injuries sustained. In support of th tention witnesses were called.

Eventually the jury awarded Mr. Ch 87*l.* 12s., including doctor's fees, and ju was entered accordingly. His Lordship o that 25*l.* paid into Court by the defe should be paid out to the plaintiff.

LONDON COUNCILS.

Bermondsey.—Plans have been pass Messrs. Joseph & Smithem, architec Queen-street, E.C., for the erection of a ing abutting upon Essex-place.

Fulham.—A plot of land adjoining Wharf is to be leased to the Asiatic Pet Company, Ltd., on which the company p erecting stables. Mr. A. Dawkins, on be Mr. R. B. Mason, has had plans passed erection of twenty-three houses on the n side of Clancarty-road, and six houses eastern side of Peterborough-road.

Hackney.—The Public Libraries Com have decided to invite Mr. E. F.R.I.B.A., to prepare plans, specific etc., for the erection of a branch libr Northwold-road and one at Brooksby's also to appoint him architect to superv erection of the buildings at 5 per cent. cost of each of the buildings.

Hanwell.—The Surveyor has been ins to prepare plans for open-air baths lower portion of the Churchfields, Warncliffe-viaduct.

Poplar.—A plan has been passed for J. Chessum & Sons for the erection o tions to the Poplar Hospital.

Watford.—At the last meeting of the District Council the tender of Messrs. Potter & Co., Borough, S.E., at 4,967 accepted for the construction of a w boreholes in connexion with the Counci waterworks scheme. Plans have been for Messrs. Bracey & Clark for three Ashby road, also for Messrs. Barker & S alterations to a part of the frontage High-street.

West Ham.—The following plans ha passed:—Messrs. J. Chessum & Sons, sions to offices at Messrs. Jenson & Nich premises, Warton-road, Stratford; Mes Gladding & Co., showroom at Mes Ingram, Clark, & Co.'s premises, Abbe West Ham; Mr. P. Tree, offices, store at West Ham Chemical Works, Cannin West Ham; Mr. R. Living, warehous at Messrs. Jeyes' premises. Richmond Plaistow; Mr. J. R. Moore-Smith, wo etc., at the Gas Lighting Improvemen pany's premises, Crow's-road, West Plans have been lodged by Mr. A. Me an extension to the cinematograph hall corner of Beckton-road and New Barn Canning Town, also by Mr. H. Bricke extensions to bakery, Plymouth-road, G Town. The Education Committee ha proved plans submitted by the archit (1) For the erection of a school for m and physically defective children on s Knox-road, estimated cost, 6,500*l.*: school adjoining Freemasons-road Rec Ground, 23,250*l.*: (3) enlargement Harold-road handicraft centre, 350*l.*: largement of the Water-lane handicraft 300*l.*; and (5) new handicraft centre, lane School, 900*l.*

OBITUARY.

Mr. T. M. Rickman.

We briefly announced the death Thomas Miller Rickman, whose funera place at Finchley on the 14th inst., last issue. The funeral was attended by relatives and friends, as well as by re of societies to which he belonged. We received the following additional remark one of the pupils and assistants of t ceased:—

"Practising as an architect till the sixties, he found the real field for his in the profession of quantity surveyor, practice he carried on till within a few of his decease at the ripe age of eight There is perhaps no man living who much for his profession, which he carr the highest standard. The very large n of pupils and assistants, many of who

practice, bear testimony to his wonder-
ity. Past-President of the Surveyors'
on, Past-President of the Architectural
ion, A.R.I.B.A., A.M.Inst.C.E., F.S.A.,
great personality and genius com-
itself to all who knew him. He has
most of his *confrères*, but we feel that
man has passed away. He was
ientious, upright, and high-minded.
ther's "Gothic Architecture" is
standard work. His great practice
ost intimately associated with the
r. Alfred Waterhouse and many
rchitects of the late Victorian
o enumerate, therefore, the public
s with which he was so closely con
would need a column in itself. This,
ure, would not be pleasing to him, and
only say that colleges at Oxford and
ge, Manchester, and Leeds, public
hospitals, and other institutions may
mething of the great genius, whose
were by no means confined to his pro-
who has gone from our midst."

PATENTS.

APPLICATIONS PUBLISHED.*

f 1911.—William Toombs: Construc-
reproof floors, ceilings, and roofs.
of 1911.—Percy Lyttelton Liney:
or pulling up or raising floor-boards
like.
of 1911.—Charles Foster Kite and
Henry Skelt: Hot-water circulating

of 1911.—Jacob Bredel and Otto
: Silencing device for interposing in
pply pipes.
of 1911: Thomas William Twyford:
r attaching the seats of water-closets.
f 1911.—Frederick Garben: Hoisting
s.
of 1911.—Eugene Humblot and
Hureau: Implement for cutting holes
ound for posts and the like.
of 1911.—Bertram Imrie Hellyer and
George Gooch: Lavatory basins,
d the like.
of 1911.—Charles William Donholt:
nd valves.
of 1911. -Thompson Naylor: Means
d of reinforcing concrete.
of 1911.—George Armor Fair: Ven-

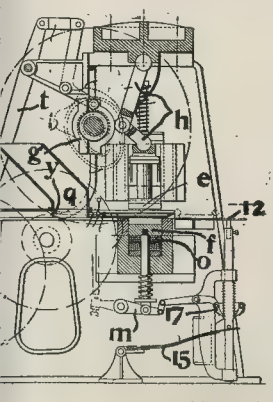
of 1911.—Ambrose Temples: Convey-
atus.

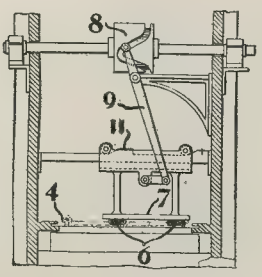
SELECTED PATENTS.

f 1910.—Conrad Dressler: Moulding

lates to tile-presses having upper
pressing-plungers *e*, *f*, wherein the
ngers are depressed several times in
by means of a cam *g* having pro-
ngaging with toggles *h*, so as to
series of compressions and free the
completely from air. The plungers
lly retained by springs, and exces-
ure is prevented by a spring device
of two sets of circular dished
Material is fed into the moulds by
q, which is reciprocated by lever
i actuated by a cam. The bottom
re elevated to discharge the moulded

se applications are in the stage in
osition to the grant of Patents upon
e made.



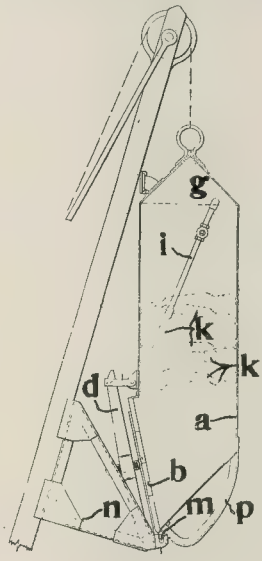


14,661 of 1910.

tiles by means of levers *m* operated by a cam-actuated rod. An extension of the feed-box *q* engages with the discharged tiles, and pushes them forward to a bur-removing device comprising gauze-covered frames 4, past which the tiles are pushed, and transverse gauze devices 5 mounted upon a frame 7, which is reciprocated by a cam 8 and lever 9, being normally elevated upon cam-surfaces 11. The finished tiles pass to a receiving table 12, supported by a spring 15, which is successively depressed to receive a pile of tiles by means of a ratchet 17 operated by the lever *m*.

20,149 of 1910.—John Wulstan Twinberrow: Mixing concrete.

This relates to an apparatus for mixing concrete in which the materials are placed in a container adapted to be removed by a crane to the place required, the container being also agitated to mix the materials by means of the crane, which apparatus is provided with trunnions on the container adapted to enter supports to allow the container to be reciprocated. The container *a* is provided with



20,149 of 1910.

cross-bars *k* for mixing the material, a charging-opening *b* provided with a tightly-fitting cover held in place by a lever *d* and link, and trunnions *m* which can be caused to engage with supports in a bracket *n* attached to the jib of the crane. One end of the container is formed as a water vessel *g* communicating with the remainder by a pipe *i*. To the lower end of the container are attached pieces *p* so formed as to ensure the container falling on its back when lowered on to the ground.

21,316 of 1910.—James Henry MacDonald: Concrete paving.

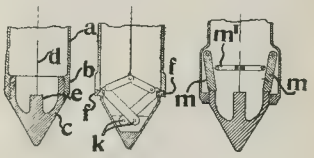
This relates to a reinforcement to be entirely embedded in the concrete for concrete paving, which reinforcement consists of two vertical series of sheet-metal bands intersecting at right angles and stamped with openings; the skeleton is laid directly on a prepared bed.

22,659 of 1910.—Matthew Parry and Douglas-Stuart Gladstone: Ventilation chimneys.

This relates to a system for improving the ventilation and chimney draught in dwelling-houses, which comprises outlet bends and ducts placed near the ceilings of the apartments, and other bends placed in the four sides of the stack so as to catch the wind. Caps of wire gauze are placed over the bends.

22,695 of 1910.—Moritz Kahn: Piles.

This relates to a preparatory hollow pile which is provided with a detachable shoe and means for withdrawing the shoe through the pile. The shoe, *c*, is screwed into the preparatory pile *a*, and has a square neck *e*. When the driving operations are complete, a tubular spanner is used to screw the shoe into the pile, until the screw-threads are disengaged when the shoe is raised by the



22,695 of 1910.

chain *d* or by spring pawls on the spanner. In another form segmental levers are mounted on links pivoted at *k* to the shoe and attached to the lifting-chain. The tube is slightly raised so that, upon pulling the chain, the flanges *f* are moved inwards clear of the tube when the shoe is ready for removal. The tube may carry pawls *m*, which bear on the shoe during driving operations, but are moved out of the way by a ring m^1 when the operations are complete so as to enable the shoe to be drawn up.

TRADE CATALOGUES.

We have received from Messrs. Benham & Sons, Ltd., of Wigmore-street, W., a booklet describing their "Perfect" system of hot-water heating for buildings, and pointing out the special advantages carried by the system. Briefly stated, the method adopted is to place a circulating pump on the return main close to the boiler, the pump being operated by a small electric or other motor, as may be most convenient. One effect is to accelerate the flow of water throughout the entire installation, replacing the slow movement due to gravity by a rapid circulation, which distributes heat generated in the boiler in a most efficient manner. Other beneficial effects are:—(1) That the main and branch circulation pipes can be reduced to about half the diameter of those requisite in a gravity apparatus; and (2) that the boiler can be placed at any level instead of having to be fixed in a basement or in a chamber excavated for the purpose. Naturally, the smaller pipes are less costly and do not cause the disfigurement hitherto so common. Moreover, the cost of installing pipes and the boiler is considerably reduced. The new system is one which we have pleasure and confidence in commending to the attention of architects and others interested.

We have received from the old-established firm of Messrs. Francis Morton & Co., Ltd., of Garston, Liverpool, and 27, Victoria-street, London, their latest net price-list for wrought-iron and wire fencing, railing, gates, etc. In the course of their seventy-odd years' experience the firm have executed numerous orders for many of the largest railway companies, corporations, land owners, and gentry in the United Kingdom and abroad, and they are, in addition, large manufacturers of steel bridges and girders, and steel constructional work generally.

List of Competitions, Contracts, etc.

For some Contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) are advertised in this number**: Competitions, iv.; Contracts, iv. vi. viii. x.; Public Appointment, xviii.; Auction Sales, xxiv.

Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Competitions.

MARCH 9. — **London, E.C.** — NEW OFFICES.—The Port of London Authority invite preliminary sketch designs for new head offices in Trinity-square, and for laying out remainder of land as a building site. See advertisement in issue of November 24 for further particulars.

MARCH 15. — **Drammen, Norway.**—RAILWAY-STATION.—Particulars from the Norges Statsbaner, Christiania.

MARCH 15. — **Prestatyn, North Wales.** — LAYING-OUT ESTATE.—Lord Aberconway and the Trustees of the Prestatyn Estate invite designs for laying-out of the estate. Three premiums are offered. Particulars from 33, Henrietta-street, W.C. See advertisement in issue of January 5 for further particulars.

MARCH 16. — **Harrow.** PUBLIC OFFICES.—The Harrow-on-the-Hill U.D.C. invite tenders for the enlargement of and alterations to their Public Offices. See advertisement in issue of January 5 for further particulars.

MARCH 25. **Colchester.** SCHOOL.—Limited to architects practising in the borough.

MARCH 30.—**Edinburgh.**—MEMORIAL TO KING EDWARD.—Limited. See Competition News, p. 151, February 9.

MARCH 31.—**Manitoba, Canada.**—PARLIAMENT BUILDINGS.—The Government of Manitoba invite designs for the new Parliament buildings to be erected in the City of Winnipeg. See advertisement in issue of February 9 for further particulars.

* APRIL 4.—**Portland.**—COUNCIL OFFICES.—The Portland U.D.C. invite competitive designs for Council Offices. Premiums of 50*l.* and 10*l.* are offered. See advertisement in this issue for further particulars.

APRIL 20.—**Birmingham.**—BLUE COAT SCHOOL.—Limited to local architects. Assessors, Mr. G. H. Hunt, F.R.I.B.A., and Mr. C. E. Bateman, F.R.I.B.A. Particulars from the Secretary, the Blue Coat School, Birmingham.

MAY 1.—**Rhos Ruabon.**—PAIR OF WORKMEN'S COTTAGES.—Premiums of 10*l.* and 5*l.* Assessor, Mr. Raymond Unwin, F.R.I.B.A.

MAY 1.—**Society of Architects' Travelling Studentship.** Design for a Town Hall. 25*l.* and medal.

MAY 1. — **Wombwell.**—SWIMMING BATHS.—The Wombwell U.D.C. invite designs in competition for public swimming baths, to be erected in Hough-lane, Wombwell, Yorkshire. Three prizes of the value of 40*l.*, 30*l.*, and 20*l.* respectively are offered for the designs placed first, second and third respectively by the assessor. See advertisement in issue of February 16 for further particulars.

JUNE 28. — **Hale, Cheshire.**—TOWN PLANNING SCHEME.—Premiums 50*l.* and 25*l.* Particulars from the Council Offices, Hale.

JULY 1. — **Dusseldorf.** — A plan for the extension of the City of Dusseldorf. Premiums of 1,000*l.* to 375*l.* Conditions on application to the Chief Burgomaster, Dusseldorf. A translation appeared on page 365, September 29.

AUGUST 30. — SAXON SNELL PRIZE. — Fifty guineas; with medal, is offered for essay on a hospital subject. Particulars from the Sanitary Institute, 90, Buckingham Palace-road, S.W.

NO DATE.—**Jordanhill, Glasgow.**—PROPOSED TRAINING COLLEGE.—Limited to six firms, named in Competition News, December 1, 1911, page 685.

NO DATE. — **Warrington.** — SCHOOL. — The Warrington Education Committee invite competitive plans for the erection of a public elementary school. See advertisement in issue of February 16 for further particulars.

Contracts.

BUILDING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

FEBRUARY 23. — **Belfast.** — HOUSES.—For erection of a terrace of dwelling-houses in Glenravel-street and Henry-place. Plans and specification with Mr. J. V. Brennan, C.E., architect, Belfast Bank-chambers, Belfast.

FEBRUARY 24. — **Bradford.** · OFFICES.—Alterations to tramway offices, Hall lngs. Drawing and conditions seen, and quantities and form of tender from the City Architect, Town Hall, Bradford.

FEBRUARY 24.—**Morley.**—GARAGE.—For erection of motor garage, Thorneycroft. Plans and specifications seen, and quantities from Mr. T. A. Buttery, Lic.R.I.B.A., architect, Queen-street, Morley

FEBRUARY 24.—**Sowerby Bridge.**—PAVILION.—For erection of a wooden pavilion. Plan and specification at the Town Hall Hotel, Sowerby Bridge.

FEBRUARY 26.—**Minehead.**—CONVENIENCES, ETC. —For erection of conveniences and shelters on the sea front. Specification and plans with the Surveyor, Market House, Minehead.

FEBRUARY 26.— **Swansea.** — HOUSE.—Erection of fifty houses in Cwm-road. Plans and specifications seen, and forms of tender from Mr. H. C. Portsmouth, architect, Llanfair-buildings, St. Mary-street, Swansea, on deposit of 2*l.* 2s.

FEBRUARY 26. — **Swansea.**—HOUSES.—Erection of fifty-three houses at Trewyddfa Common. Plans and specifications seen, and forms of tender from Mr. H. C. Portsmouth, architect, Llanfair-buildings, St. Mary-street, Swansea, on deposit of 2*l.* 2s.

FEBRUARY 27. **London.**—COTTAGES.—Erection of four workmen's cottages on grounds adjoining Isolation Hospital, World's End, Winchmore Hill, N. Drawings and specification seen, and information from Mr. Richard Collins, Public Offices, Enfield, Middlesex.

FEBRUARY 27. — **Milnsbridge.** — PICTURE THEATRE. For erection of a picture palace in Savile-street. Plans seen, and quantities from Messrs. Lunn & Kaye, architects and surveyors, Milnsbridge.

FEBRUARY 27. — **Todmorden.** — HOUSES, ETC.— For erection of eight houses and appurtenances at Watty. Plans and specifications seen, and quantities from Mr. T. H. Mitchell, architect, Todmorden.

FEBRUARY 28.—**Distington.**—HOUSE.—For erection of dwelling-house. Plans and specifications with Messrs. J. S. Moffat & Bentley, Lic.R.I.B.A., architects, 53, Church-street, Whitehaven.

FEBRUARY 28. — **Manchester.** — BUILDINGS.— Erection of corrugated-iron buildings at Chesthaim Hill-road. Plans and specification at the Education Offices, Deansgate, Manchester, on deposit of 1*l.* 1s.

FEBRUARY 29. — **Annfield Plain.**—HOUSE.—For erection of house and stable, etc., Durham-road. Drawings and specifications with Mr. T. E. Taylor, Lic.R.I.B.A., M.S.A., architect and surveyor, The Grove, Lanchester, or Front-street, Annfield Plain.

FEBRUARY 29. — **Ashford.** — ROOM, ETC.—For construction of a general dressing-room and a range of six dressing-boxes, at the open-air swimming bath, Beaver-road. Plans and specification with Mr. William Terrill, Surveyor, 5, North-street, Ashford, Kent.

* FEBRUARY 29. **Birmingham.**—ADDITIONS.— The Corporation of Birmingham invite tenders for alterations and additions at Moseley-street Police-station. See advertisement in this issue for further particulars.

FEBRUARY 29. **Coventry.**—PAVILION, ETC.—For erection of new scarlet fever pavilion and alterations and additions to existing administrative and mortuary blocks. Drawings, conditions of contract and specification, forms of tender, and quantities from Mr. J. E. Swindlehurst, City Engineer and Surveyor, St Mary's Hall, Coventry. Deposit of 2*l.* 2s.

FEBRUARY 29.—**Hoole.**—HOUSE, ETC.—For erection of a park-keeper's lodge, bowl-house, and public conveniences in the Alexandra Park, and erection of a store-room over the existing fire-engine station, Westminster-road. Plans and specifications seen, and quantities and form of tender from the Building Surveyor, Mr. Fred. Davies, 14, Newgate-street, Chester, on deposit of 1*l.* 1s.

FEBRUARY 29. — **Inverness.**—ADDITIONS.—For additions and alterations to Glenmazeran Shooting Lodge and gun-room and larders at Dalmigavie Lodge. Plans, specifications, and quantities from Mr. Thos. Munro, architect, 62, Academy-street, Inverness.

FEBRUARY 29. **Longwood.**—HOUSES. Erection of ten dwelling-houses, Prospect-road, for the Longwood Industrial Society, Ltd. Plans seen, and quantities from Mr. Sanderson M. Balmford, architect, Longwood.

FEBRUARY 29. — **Paisley.** STORE. -Erection of a coal store at the Gasworks, Blackstoun-road. Specifications, quantities, with forms of tender, from Mr. Geo. R. Hislop, Engineer and Manager, Corporation Gasworks, Paisley.

FEBRUARY 29. — **Rushden.** · SHED.—The Midland Railway invite tenders for the extension of goods shed. Plans and specifications seen, quantities and particulars at the Engineer's Office, Derby Station.

FEBRUARY 29. — **Stokesley.** — CONVENIENCES, ETC.—Erection of a washhouse, store-room, and conveniences in connexion with the Wesleyan Manse. Plans and specifications with Mr. Wm. Armstrong, grocer, Stokesley.

MARCH 1.—**London.** ADDITION. For the construction of an additional story to the Ge Post Office, South. Drawings, specification a copy of the conditions and form of co with Mr. J. Rutherford, 22, Carlisle- London, S.W. Quantities and forms of t on deposit of 1*l.* 1s., from the Secretary, Office of Works, etc., Storey's-gate, Lo S.W.

MARCH 2. **Hyde.**—ADDITIONS, ETC.—For tions and additions to the dwelling-h situate 26 and 28, Union-street. Plan specification with the Secretary, Water Offices, Town Hall, Manchester. Depo 1*l.* 1s.

MARCH 2. — **London.**—SCHOOL.—Erection public secondary school for boys at Crescent, Croydon. Drawings by Mr. H. Pegg, F.R.I.B.A., of Thornton Heath. Q ties and forms of tender on deposit of 1*l.* Mr. James Smyth, Clerk to the Comm Education Office, Katharine-street, Croydon

MARCH 2. **Nelson.** BATHS.—For erecti Public Baths at Bradley. Plans and spe tions seen, and quantities and forms of t on deposit of 1*l.* 1s., from Mr. W. Shack A.M.Inst.C.E., Borough Engineer and Sur Town Hall, Nelson.

MARCH 4.—**Aberkenfig.**—HOUSES.—For er of fourteen houses for the Pandy Estate ing Club No. 2. Plans and specifications Mr. F. W. Burnett, architect, Tondu, Bridgend.

MARCH 4.—**Bideford.**—CHURCH, ETC. Er of a large United Methodist Church, w school hall, classrooms, etc. Plans and s cation seen, and quantities, on deposit of from Mr. W. Beddoe Rees, architect, 3, Dun place, Cardiff.

MARCH 4. — **Birmingham.** STATION.—F erection of an electric sub-station in E road, Greet. Quantities on deposit of 2*l.* the Quantity Surveyor, Mr. Anthony King's Court, 117, Colmore-row, Birmin Drawings at the offices of the architects, M Arthur Harrison & Cox, Council Chamber Colmore-row, Birmingham.

MARCH 4. — **Blackwood.** — HALL.—For e of a mission hall. Plans and specific with Mr. A. F. Webb, M.S.A., architect an veyor, Blackwood. Quantities on depo 2*l.* 2s.

MARCH 4. — **Devizes.**—CONVENIENCE.—Fo public convenience on the Green. Plan specifications seen, and forms of tender fro F. G. Billingham, Borough Surveyor, Town Devizes.

MARCH 4. — **Devon.**— HEADQUARTERS.—E of a headquarters and drill hall for t Wessex Brigade, R.F.A. (T.F.). Plan specification with Messrs. E. H. Harbo Son, County Chambers, Exeter. Quanti deposit of 3*l.*

* MARCH 4.—**Hendon.** MORTUARY, SHED —The Hendon U.D.C. invite tenders fo tion of a public mortuary, shedding, etc., depôt, The Burroughs, Hendon, and a sto at the Recreation Ground, Child's Hill. vertisement in this issue for further partic

MARCH 4. — **Little Weston.** — COTTAGE erection of two cottages on farm at Weston, Sparkford, Somerset. Messrs. forde & Drewett, solicitors, Castle Cary

MARCH 4. — **Reading.** — ADDITIONS, ET alterations, additions, repairs, and pain the swimming bath, Tilehurst-road. Dr specification, and general conditions see form of tender from Mr. J. A.M.Inst.C.E., Borough Engineer and Su Town Hall, Reading.

MARCH 4. — **Tipperary.**—HOUSES.—For ing of thirteen stone houses for the v classes, on the Bansha-road. Plans, s tions, and conditions by the Town Su Urban Council Offices, Emmet-street, Tip Deposit of 1*l.*

MARCH 5.—**Llanfairfechan.**—WALL.—F of a new retaining wall at Viaduct Bay, Clip, Llanfairfechan. Plans and specif at the Council Offices, and informatio Mr. Thomas Hughes, Surveyor to the Council Offices, Llanfairfechan.

MARCH 6. **Blackwood.**—VILLAS.—For of twelve semi-detached villas, for the Ble Central Building Club. Plans and specifi with Mr. A. F. Webb, M.S.A., architect veyor, Blackwood.

* MARCH 6. **Hayes.**—HOUSES, ETC.—The U.D.C. invite tenders for laying-out construction of roads, sewers, fences, e the building of fifty-one houses, at Elder The tender may be for part of the wor See advertisement in this issue for particulars.

BUILDING—*continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

MARCH 6. -**Hove.**—STORES, ETC.—For building boundary walling, shedding, stores, and other work at Erroll-road Depôt. Drawings, specification, and form of contract seen, and quantities and form of tender from the Borough Surveyor, Mr. H. H. Scott, Town Hall, Hove. Deposit of 1l. 1s.

MARCH 6. — **Scarborough.** — STAND.—Erection of a grand stand (timber construction) in the Castle Yard. Plans, specification and conditions seen, and quantities and form of tender from Mr. T. W. Whipp, A.R.I.B.A., architect and chartered surveyor, 15, Valley Bridge-parade, Scarborough. Deposit of 1l. 1s.

MARCH 6. — **Ventnor.** — SEA WALL.—For construction of a sea wall. Plans, specification, and general conditions with Mr. H. Hughes Oakes, engineer and Surveyor to the Council, Town Hall, Ventnor, I.W.

MARCH 12. -**West Ham.**—BUILDING. The West Ham B.C. invite tenders for a building to contain twelve slipper-baths, with waiting-room, &c., in Fen-street, Tidal Basin, E. See advertisement in this issue for further particulars.

MARCH 13. **Hampton Court, etc.**—WORKS REPAIRS. The Commissioners of H.M. Works and Public Buildings invite tenders for ordinary works and repairs to buildings in Hampton Court, Kew, and Richmond district. See advertisement in this issue for further particulars.

MARCH 13. — **St. Helens.** — CONSERVATORY.—Erection of a new conservatory at the Victoria Park. Particulars and site plan from Mr. Arthur J. Bradley, M.Inst.C.E., the Borough Engineer, Town Hall, St. Helens. Deposit of 1l.

MARCH 23.—**East Finchley, N.**—SCHOOL.—The Finchley U.D.C. invite tenders for new elementary school. See advertisement in this issue for further particulars.

TO DATE.—**Bolton Bridge.** HOUSE. -Erection of a new farm-house. Plans seen, and quantities from Mr. James Hartley, architect, Skipton.

TO DATE. — **Bolton-by-Bowland.**—ADDITIONS, ETC. — Alterations and additions to Fox Ghyll House. Mr. W. F. Tempest, Estate Offices, Ackrith Grange, Pontefract.

TO DATE. — **Daventry.** — ADDITIONS. -Alterations and additions to the casual wards at the Union Workhouse. Quantities from the architect, Mr. J. B. Williams, Moot Hall, Daventry.

TO DATE.—**Gosport.**—SCHOOL.—For erection of school in Stone-lane. Deposit of 1l. 1s. to George R. Walker, Secretary to the Committee, High-street, Gosport.

TO DATE. **Halifax.** — HOUSES. -Erection of new houses and alterations to old premises Triangle. Messrs. Clement Williams & Sons, Architects. Post-office-buildings, Commercial-street, Halifax.

TO DATE. — **Halifax.** -HOUSES.—Erection of dwelling-houses, Dudwell-lane. Messrs. Jackson & Fox, architects, surveyors and valuers, 7, Rawson-street, Halifax.

NO DATE. **Lichfield.**—SCHOOL.—Tenders are invited for the erection of the proposed new Central mixed and infants' schools for 410 children, in Frog-lane, Lichfield. See advertisement in this issue for further particulars.

TO DATE. — **Lindale-in-Cartmel.** — ENLARGEMENT.—For the enlargement of St. Paul's Church, Lindale-in-Cartmel. Plans and specifications with Mr. Cowhard at the School House, Lindale. Quantities and forms of tenders from G. Gordon Stanham, architect, 26 and 27, Cross-lane, Cannon-street, London, E.C.

TO DATE. — **Lowestoft.**—SCHOOL.—Erection of school at Rowan-hill. Deposit of 2l. 2s. to Mr. Beattie Nicholson, Town Clerk, Town Hall, Lowestoft.

TO DATE.—**Machynlleth.**—SCHOOL.—For erection of a national school and domestic science room. Architects, Messrs. Deakin & Howard of Bangor, M.S.A., Plas Ynys Borth, S.O.

TO DATE. **Newcastle-on-Tyne.**—ADDITIONS.—For two additional storys to the Tyne Improvement Commissioners' premises, Bewick-street. Deposit of 1l. 1s. to Mr. W. H. Wood, F.R.I.B.A., architect, 20, Collingwood-street, Newcastle-upon-Tyne.

NO DATE.—**Old Cornforth.** -HOUSE.—For erection of the Terrace House. Messrs Kitching & Lee, architects, Houndgate-chambers, Darlington.

NO DATE. — **Penrith.** -SCHOOL. Erection of a new mixed secondary school. Mr. T. D. Shepherd, Clerk to the Governors, 21, King-street, Penrith.

NO DATE.—**Pontardulais.**—EMPIRE.—For erection of Messrs. Haggar's new Empire. Names to Messrs. C. S. Thomas, Meager, & Jones, 15-16, Wind-street, Swansea.

NO DATE.—**Portmadoc.** -VICARAGE.—For erection of a vicarage at Pentrefelin, Portmadoc. Mr. Clough Williams-Ellis, architect, Arundel House, Victoria-embankment, London, W.C.

NO DATE.—**Ruswarp.**—COTTAGE.—Erection of a cottage on The Carrs. Drawings and specifications with Mr. Arthur E. Young, architect and surveyor, 77, Baxtergate, Whitby.

NO DATE. -**South Bank.**—THEATRE.—Erection of an electric theatre in Normanby-road. Messrs. Moore & Archibald, architects, Prudential-chambers, Albert-road, Middlesbrough.

NO DATE. — **Stoke-on-Trent.** — ADDITIONS.—Stoke-on-Trent and Stoke Rural Joint Hospital Board. Additions and alterations to the administrative block; additions to engine and boiler house. Mr. Elijah Jones, M.S.A., Architect to the Board, 16, Albion-street, Hanley, Stoke-on-Trent.

NO DATE.—**Swansea.**—PREMISES.—For erection of new premises, Castle-street. Deposit of 3l. 3s. to Mr. C. Russell Peacock, M.S.A., architect, 19-21, Metal-exchange, Swansea.

ENGINEERING, IRON, AND STEEL.

FEBRUARY 27. — **Manchester.** — CRANE.—For erection at Stuart-street generating station of one 8-ton overhead hand-power travelling crane over auxiliaries. Specifications and forms of tender from Mr. F. E. Hughes, Secretary, Electricity Department, Town Hall, Manchester, on deposit fee of 1l. 1s. Particulars from Mr. S. L. Pearce, Chief Electrical Engineer, Dickinson-street, Manchester.

FEBRUARY 28. — **Ipswich.** — DISINFECTOR.—For supply and fixing of a high-pressure steam disinfector at the St. John's Home, Freehold-road. Specifications from Mr. L. W. Greenhalgh, Clerk to the Guardians, Guardians' Offices, 19, Tower-street, Ipswich.

MARCH 1.—**Isle of Man.** -BRIDGE. -For widening the Quarter Bridge, Braddan. Specifications and quantities from the Surveyor-General of Highways, 27, Athol-street, Douglas. Deposit of 1l. 1s.

MARCH 2. — **Chipping Ongar.** — BRIDGE.—For building a new bridge over the Cripsey Brook, Chipping Ongar, known as "Ackingford" Bridge. Drawings seen, and specification from Mr. Percy J. Sheldon, M.Inst.C.E., County Surveyor, Chelmsford

MARCH 2. — **Elgin.** — BRIDGE.—For removal of the existing superstructure of one span of the bridge over the River Spey at Fochabers, and for the erection of a new steel superstructure and other works. Plans, specifications, and quantities with Mr. Alexander Hogg, County Road Surveyor, 24, Academy-street, Elgin. Deposit of 1l.

MARCH 2.—**Halstead.**—BRIDGE.—For widening the bridge over the River Colne at Halstead. Drawings seen, and specifications, quantities, etc., from Mr. Percy J. Sheldon, M.Inst.C.E., County Surveyor, County Surveyor's Office, Chelmsford.

MARCH 23. — **Southampton.**—HEATING, ETC.—For erection of heating and hot-water supply systems, etc., at Infirmary, Shirley Warren. Specification and drawings, on deposit of 2l. 2s., from Mr. A. J. Walden, Clerk to the Guardians, Clerk's Offices, the Workhouse, St. Mary-street, Southampton.

FURNITURE, PAINTING, MATERIALS, etc.

FEBRUARY 24.—**York.**—PAINTING.—For painting the outside of the Court-houses and police-stations at Beverley, Bridlington, Driffield, Escrick, Holme-on-Spalding Moor, Hornsea, Howden, Market Weighton, Patrington, Pocklington. Specifications seen and forms of tender from the County Surveyor, County Hall, Beverley.

FEBRUARY 26. — **Harrogate.** — PAINTING.—For painting the exterior and interior of the Kursaal. Particulars from Mr. C. E. Rivers, A.M.Inst.C.E., Borough Engineer and Surveyor.

FEBRUARY 26 — **Stockport.** — PAINTING.—For painting, etc., at the Union Offices, Shaw Heath. Specification from Messrs. Peirce & Son, architects, 30, St. Petersgate, Stockport

★ FEBRUARY 27. — **Willesden.** — VARIOUS MATERIALS AND WORK.—The Willesden D.C. invite tenders for execution of certain works, and supply of materials for periods commencing April 1 next. See advertisement in this issue for further particulars.

MARCH 7. — **London.**—PAINTING.—For repairs, painting, whitewashing, etc., at the Newington Workhouse, Westmoreland-road, Walworth, S.E., and the Boyson-road Homes, S.E. Specification and form of tender from the Guardians' Architect, Mr. A. Saxon Snell, F.R.I.B.A., of 22, Southampton-buildings, Chancery-lane, W.C. Deposit of 10l.

★ MARCH 13. — **Herne Bay.** — PAINTING AND CLEANING.—The Metropolitan Asylums Board invite tenders for painting and cleaning work at St. Anne's Home, Herne Bay, Kent. See advertisement in this issue for further particulars.

★ MARCH 13.—**London.**—WINDOW CLEANING.—The Commissioners of H.M. Works and Public Buildings invite tenders for window cleaning at buildings under their charge for one year from April 1 next. See advertisement in this issue for further particulars.

★ MARCH 13. — **London, W.**—MATERIALS.—The St. Marylebone B.C. invite tenders for supply of materials for one year commencing April 1 next. See advertisement in this issue for further particulars.

ROADS, SANITARY AND WATER WORKS.

FEBRUARY 27. — **Bootle.**—STREETS.—For private street works. Plans, etc., at the Borough Engineer's Office.

FEBRUARY 27. — **Southampton.**—STREETS.—For private street works in Trinity-terrace Plans, specification, and conditions seen, and form of tender and quantities at the Borough Engineer's Office. Deposit of 1l. 1s.

FEBRUARY 28. — **Langley Moor.** — ROAD.—For raising the main road at Langley Cottages. Plans, specification, and conditions of contract seen, and quantities from Mr. W. Crozier, A.M.Inst.C.E., County Surveyor, Shire Hall, Durham

MARCH 2.—**York.**—STONE.—For supply of about 7,000 tons of stone. Conditions, forms of tender, and particulars from the County Surveyor, County Hall, Beverley.

★ MARCH 4.—**Hendon.**—WATER DRAINAGE.—The Hendon U.D.C. invite tenders for certain sewerage and surface-water drainage, kerbing, channelling, paving, metalling, etc., in connexion with certain roads. See advertisement in this issue for further particulars

MARCH 5. — **London.** — ROAD.—For kerbing, channelling, and metalling the roadways, and paving the footpaths with artificial stone, of Collingtree-road, Sydenham. Plan at the Town Hall, Catford (Surveyor's Department). Form of tender, general conditions, and specification, on deposit of 5s., from Mr. Edward Wright, Town Clerk, Town Hall, Catford, S.E.

★ MARCH 23. — **Westmancote.** — SEWER.—The Tewkesbury R.D.C. invite tenders for laying sewer and construction of works at Westmancote, in the Parish of Bredon. See advertisement in this issue for further particulars.

Public Appointment.

Nature of Appointment.	By whom Advertised.	Salary.	Application to be in
...RK OF WORKS	.. The Gdns. of St. George's U.	3l. 10s. per week	Feb. 28

Auction Sales.

Nature and Place of Sale.	By whom Offered.	Date of Sale.
...EHOLD PROPERTY, EUSTON-ROAD, N.W.—At the Mart	Rutley, Son, & Vine.....	Feb. 27
...DER AND CONTRACTOR'S PLANT—Upon the Premises	Wheatley Kirk, Price, & Co.	Feb. 27, 28, 29
...DING LEASE, NEWGATE-STREET—At the Mart	H. Collier & Madge	Mar. 1
...DING SITE, LONG ACRE, W.C.—At the Mart	Robins, Gore, & Mercer	Mar. 5
...EHOLD LAND, TOOTING, S.W.—At the Mart	Douglas Young & Co.....	Mar. 6
...DERS, CONTRACTORS', ETC., PLANT—At the Maltings, Fishpool-st., St. Albans	J. T. Skelding	Mar. 12
...CE BUILDING, CHEAPSIDE—At the Mart	Marler & Marler	Mar. 18
...EHOLD PROPERTY, SOHO-SQUARE, W.—At the Mart.....	Farebrother, Ellis, Egerton, Breach, Galsworthy, & Co. ...	Mar. 21
...DING SITE, HATTON-GARDEN, E.C.—At the Mart	Farebrother, Ellis, Egerton, Breach, Galsworthy, & Co. ...	Mar. 21

THE QUANTITY SURVEYORS' ASSOCIATION.

An extraordinary general meeting of the members of this Association was held on Monday evening last at Caxton House, Westminster, S.W., at which the following by-law was adopted:—

"No Member or Associate of the Association shall prepare Bills of Quantities for less than the Schedule of Charges recommended by the Association for adoption by Public Authorities, excepting only in cases where a Public Authority may have already issued a special scale of charges for their particular work. No Member or Associate shall under any circumstances work for the said Authority for a lower remuneration than this special scale.

"Any Member or Associate of the Association who shall act in contravention of this by-law shall be considered guilty of conduct prejudicially affecting the reputation of the Association, and shall be dealt with by the Council as provided in Clause 29 of the Articles of Association.

"It shall be the duty of the Members or Associates of the Association to acquaint the Council, through the Secretary, of the existence of any scale of charges issued by any public body which stipulates lower rates of charges than those recommended by the Association, in order that the Council may communicate with the public body in question, with the view of endeavouring to prevail upon such public body to make their scale conform with that of the Association."

FOREIGN AND COLONIAL.

Building Construction and Material, Southern Nigeria.

The official *Lagos Customs and Trade Journal* of January 2 states that tenders are invited for the construction of a new General Post Office at Lagos. Copies of the specifications and bills of quantities may be obtained from the Director of Public Works, Lagos, on deposit of 10*l.* 10s., which will be returned on receipt of a *bonâ-fide* tender. No date is mentioned to which tenders will be received. The *Customs and Trade Journal* points out that the rapidly expanding trade of Lagos affords opportunity of substantial business to British builders. The Government expenditure in Lagos this year on new works and buildings is estimated at 68,000*l.*, including 15,000*l.* for quarters for officials, 5,000*l.* for a new wing to Government House, 11,500*l.* for the new General Post Office, etc. Further, as the trade of Lagos and the wealth of the people increase, substantial buildings are taking the place of the shanties and huts formerly used, and a large business might be done with private individuals.

Building Works, Brazil.

The *Diario Official* of January 5 publishes the text of the Brazilian Budget expenditure for 1912 as per law No. 2,356 of January 4, 1912. Among the items of interest the following may be noted:—

The Ministry of Justice and Home Affairs is authorised to expend 700,000 milreis (currency) for continuing building operations and carrying out improvements at the Pedro II College, the Central Disinfecting Institute for Public Health, the Library of the National Institute of Music, and at the Benjamin Constant Institute; 168,000 milreis (currency) for the purchase of fire extinguishing appliances, etc., such as pumps, fire alarms, and motor fire-engines; 350,000 milreis (currency) to complete the building and equipment of the hospital for tuberculosis; 272,575 milreis (currency) to complete the National School of Fine Arts.

The Ministry of Marine is authorised to expend 30,000 milreis (currency) for the purchase and erection of a lighthouse; 1,000,000 milreis (currency) for the reconstruction of the Arsenal at Rio de Janeiro.

The President of the Republic is authorised (1) to expend up to 150,000 milreis (currency) for the erection of a technical school for apprentices in the State of São Paulo; (2) to make a grant to the municipal authorities of Federal States of 4,000 milreis (currency) per kilometre for the making of roads suitable for motor vehicle traffic; (3) to expend up to 300,000 milreis (currency) for the erection of a new Arts and Crafts College in Rio. The Government are further authorised (1) to expend up to 500,000 milreis (currency) for the rebuilding of the National Printing Office; (2) to negotiate with the Government of Uruguay for the building of frontier bridges across the rivers Jaguarao and Quarahim; and (3) to expend up to 5,000,000 milreis (currency) for building and rebuilding and repairing Customs houses and other Revenue offices.

Milreis (currency) = 1s. 4d.; Milreis (gold) = 2s. 3d.

SOME RECENT SALES OF PROPERTY: ESTATE EXCHANGE REPORT.

February 1.—By GRIMLEY & SON.

Edgbaston, Warwick.—Sandon-rd., f.g. rents 29*l.*, 13s. 3d., reversion in 80 yrs. £700
Rathbone-rd., f.g. rents 15*l.*, reversion in 94 yrs. 350
Small Heath, Worcs.—45 and 47, Arthur-st. (s.), u.t. 58 yrs., g.r. 9*l.* 6s. 4d. 1,290
79 to 89 (odd), Mansel-rd., u.t. 86 yrs., g.r. 15*l.*, w.r. 101*l.* 8s. 700

February 6. By MILLER, PAXTON, & FAIRMINER.

Stamford Hill.—Plevna-rd., f.g. rents 35*l.*, reversion in 62 yrs. 705

By TYSER, GREENWOOD, & Co.

Chiswick. Hartington-rd., Melville, u.t. 87 yrs., g.r. 16*l.* 16s., e.r. 80*l.* 500

By W. B. HALLETT.

Goring, Oxon.—Portion of the Hardwick Estate, 904 acres, f. 19,005

February 7. By EDWIN FOX, BOUSFIELD, BURNETTS, & BADDELEY.

City. 22, Basinghall-st., u.t. 26½ yrs, g.r 305*l.*, gross rental 1,503*l.* 10s. 5,800

By FURBER.

Chelsea.—65, Edith-gr., u.t. 52 yrs., g.r. 7*l.*, p. Pimlico.—3, Churton-pl., u.t. 18 yrs., g.r. 6*l.* 10s., q.r. 48*l.* 170

By DOUGLAS YOUNG & Co.

South Lambeth.—46, 48, and 50, Wilcox-rd., and 1 to 4, Little Spring-pl., u.t. 10 yrs., g.r. 20*l.* 10s., w.r. 150*l.* 16s. 150

By ERNEST R. OXBOROW.

Ipswich, Suffolk.—249 to 255 (odd), Cauldwell Hall-rd., f., y. and e.r. 69*l.* 1,045
28 and 30, Cardigan-st., f., y.r 37*l.* 480

February 8. By HERRING, SON, & DAW.

Tooting. 76 and 78, Morina-rd., u.t. 85 yrs., g.r. 14*l.*, w.r. 67*l.* 12s. 250

By NEWBON & SHEPHARDS.

Kentish Town.—73 and 75, Bartholomew-rd., u.t. 47½ yrs., g.r. nil, y.r. 104*l.* 900
30, Goldington-st, u.t. 39 yrs., g.r. 5*l.* 10s., y.r. 38*l.* 220
Islington.—William-st., f.g.r. 26*l.*, reversion in 33¾ yrs. 580
Clerkenwell.—38, Red Lion-st., f., p. 255

February 8. By STIMSON & SONS.

Bermondsey. 29, Fort-rd (s.), u.t. 11¼ yrs., g.r. 3*l.*, y.r. 32*l.* 100
34, Beatrice rd., u.t. 26¾ yrs., g.r. 5*l.*, w.r. 37*l.* 14s. 180
44, Southwark Park-rd., u.t. 21¼ yrs., g.r. 5*l.*, w.r. 46*l.* 16s. 175
New Cross.—14 and 16, Achilles-st., f., w.r. 62*l.* 8s. 580
Camberwell.—24 and 26, St. Georges rd., u.t. 22 yrs., g.r. 7*l.*, w.r. 70*l.* 4s. 230
Peckham.—119, Peckham-rd., f., e.r. 32*l.* 270
Hoxton. 66 and 70, Hyde-rd. (s.), u.t. 24½ yrs., g.r. 13*l.*, y.r. 104*l.* 645
Stoke Newington.—48, Spenser-rd., u.t 40 yrs., g.r. 5*l.*, w.r. 36*l.* 8s. 120

By JOSEPH STOWER.

Kennington.—Church-st, f.g.r. 3*l.*, reversion in 7 yrs. 200
By DYER, SON, & HILTON.
Blackheath.—34, Lee-rd., u.t. 41 yrs., g.r. 11*l.*, ... 870

February 9.—By JOHN DAVEY & Co.

Charlton.—41, Kinveachy-gdns., u.t. 91 yrs., g.r. 5*l.* 10s., w.r. 41*l.* 12s. 280

By PERCIVAL HODSON.

Finsbury Park. 41 and 43, Campbell rd., f., w.r. 84*l.* 10s. 370
Stroud Green.—1, Osborne-gr., f., q.r. 28*l.* 335

February 12. By WALLER & KING.

Southampton. 9, 13, and 14, St. Mark's-rd. (s.), u.t. 953 yrs., g.r. 14*l.*, y. and e.r. 100*l.* 1,350
31 and 33, North-rd., f., w.r. 31*l.* 4s. 280

February 13. By THURGOOD & MARTIN

Thornton Heath.—Trafford and Silverleigh roads, f.g. rents 398*l.* 5s., reversion in 85 yrs. 8,200

By HASLETT.

Westminster.—Princes-st, Red Lion p.h., lease for 18 yrs. at 100*l.* p.a. 1,800

By WEATHERALL & GREEN

Pimlico.—3, St. Georges-sq., u.t. 21¼ yrs, g.r. 16*l.* 10s., e.r. 120*l.* 210

By DREWEATT & WATSON.

Donnington, Berks.—The Cedars, cottage and 3 acres, f. 2,350

By SEDGWICK, SON, & WEALL.

Watford. 21, Market-st. (s.), f., p. 900
High-st., freehold malting 510
Market-st., plot of land, f. 175

February 14.—By DONALDSON & SONS

Dalston.—15, Albion-rd., u.t. 33 yrs., g.r. 6*l.*, p. 200

By DUNCAN & KIMPTON.

Tottenham Court-rd.—9 and 11, Warren-st., f., y. and w r. 170*l.* 10s 1,390
Hackney.—167 and 173, Cassland-rd., u.t. 33 yrs., g.r. 8*l.*, w.r. 78*l.* 375

By GILBERT & HOW.

Holloway.—19, Thane-villas, u.t. 143 yrs., g.r. 12*l.* 12s., e.r. 50*l.* 350
47, St. John's-villas, f., y.r. 52*l.* 10s 555
Crouch Hill.—41, Ashley-rd., u.t. 63 yrs., g.r. 11*l.*, e.r. 60*l.* 415
West Ham.—Ash-rd., f.g.r. 6*l.*, reversion in 48 yrs. 115

February 15. By G. ERNEST CLARKE & Co.

Walthamstow.—352 and 354, Hoe-st., f., y.r. 45*l.* and p. 1,070
289 to 299 (odd), Hoe-st., f., y.r. 130*l.* and p.. 3,175
42, 44, 51, 53, 63, and 65, Grosvenor Park-rd., f., y.r. 158*l.* 2,100
1, Granville-rd., f., w.r. 44*l.* 4s. 350

By STIMSON & SONS.

Tooting.—Beechcroft-rd., f.g. rents 37*l.* 16s., reversion in 95 yrs. ....
Mandrake-rd., f.g. rents 18*l.* 18s., reversion in 95 yrs. ....
Wimbledon. Arthur rd., f.g.r. 24*l.*, reversion in 93 yrs ....
Home Park-rd., f.g. rents 20*l.*, reversion in 93 yrs. ....
Wandsworth.—43, 45, 47, 49, 55, 57, 59, and 61, Fairfield st., f., w.r. 262*l.* 12s. ....
571, York-rd., f., y.r. 55*l.* ....
72, 78, 80 82, and 84, Putney Bridge-rd, f., w.r. 124*l.* 16s. ....
113, Lavenham-rd., u.t. 88½ yrs., g.r. 5*l.* 10s., w.r. 32*l.* 10s. ....
Wimbledon. 51 and 75, Revelstoke-rd., u.t. 93 yrs., g.r. 12*l.*, w.r. 74*l.* 4s. ....
113, 115, and 143, Revelstoke-rd., u.t. 93 yrs., g.r 18*l.*, w.r. 114*l.* 12s ....
195, Revelstoke-rd., u.t. 91 yrs., g.r. 6*l.*, w.r. 37*l.* 16s .. ..
66 and 68, Bruemar-rd., u.t. 93 yrs., g.r. 6*l.*, w.r. 70*l.* 4s. ....
12, 14, and 49, Marlborough-rd., u.t. 93 yrs., g.r. 18*l.*, y. and w.r. 106*l.* ... .

February 16.—By GARLANDS.

Caledonian-rd. 50, Brewery-rd., u.t. 47 yrs., g r. 25*l.*, y.r. 200*l.* ....
Forest Gate.—4, Westbury-rd., u.t. 850 yrs., g.r. 4*l.* 10s., w.r. 36*l.* ....

By DANIEL WATNEY & SONS.

Cudham, Kent. South-st, The Cottage and 5 a. 3 r. 11 p., f., p ....

Contractions used in these lists.—P.g.r. for fr ground-rent; l.g.r. for leasehold ground-rent; i. improved ground-rent; g.r. for ground-rent; r. fo f. for freehold; c. for copyhold; l. for leasehold; possession; e.r. for estimated rental; w.r. for rental; q.r. for quarterly rental; y.r. for yearly u.t. for unexpired term; p.a. for per annum; y years; la. for lane; st. for street; rd. for road; square; pl. for place; ter. for terrace; cres. for cre av. for avenue; gdns. for gardens; yd. for yard; grove; b.h. for beerhouse; p.h. for public-house offices; s. for shops; ct. for court.

TERMS OF SUBSCRIPTION.

"THE BUILDER" (Published Weekly) is supplied from the Office to residents in any part of the United K at the prepaid rate of 19s. per annum, with delivery *Morning's Post* in London and its suburbs.

To Canada, post-free, 21s. 8d. per annum; and to all Europe, America, Australia, New Zealand, India, China, etc., 26s. per annum.

Remittances (payable to J. MORGAN) should be addr The Publisher of "THE BUILDER," 4, Catherine-street,

PRICES CURRENT OF MATERI

*** Our aim in this list is to give, as far as possi *average* prices of materials, not necessarily the Quality and quantity obviously affect prices which should be remembered by those who make this information.

BRICKS, &c.

	£ s. d.		
Per 1000 Alongside, in River.			
Best Stocks			
Picked Stocks for Facings			
Per 1000, Delivered at Railway Depôt.			
Flettons	1 12 0	Best Blue Pressed	
Best Fareham Red	3 12 0	Staffordshire...	
Best Red Pressed		Do. Bullnose.....	
Ruabon Facing	5 0 0	Best Stourbridge Fire Bricks ...	
GLAZED BRICKS—			
Best White, Ivory, and Salt		Double Headers	1
Glzd. Str'tch'rs	11 7 6	One Side and two Ends	1
Headers	10 17 6	Two Sides and one End	1
Quoins, Bullnose, and 4½ in. Flats	14 17 6	Splays & Squints	1
D'ble Stretchers	16 17 6		

Second Quality £1 10s. per 1000 less than be

	s. d.	
Thames and Pit Sand	6 9	per yard, del
Thames Ballast	5 6	"
Best Portland Cement	31 0	per ton,
Best Ground Blue Lias Lime	19 0	"

NOTE—The cement or lime is exclusive ordinary charge for sacks.

Grey Stone Lime ..... 12s. 0d. per yard del
Stourbridge Fireclay in sacks 27s. 0d. per ton at

STONE.

Per Ft. Cube.	s. d.	
BATH STONE — delivered on road waggons		
Paddington Depôt		
Do. do. delivered on road waggons, Nine Elms Depôt		
PORTLAND STONE (20 ft. average)—		
Brown Whitbed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf		
White Basebed, delivered on road waggons Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf		

Per Ft. Cube, delivered at Railway Depôt

	s. d.		
Ancaster in blocks..	1 10	Closeburn Red	
Beer in blocks	1 6	Freestone	
Greenshill in blocks	1 10	Red Mansfield	
Darley Dale in blocks	2 4	Freestone	
Red Corsehill in blocks	2 3	Talacre & Gwespyr Stone	

STONE (*Continued*).

RK STONE—*Robin Hood Quality.*

	s.	d.
Per Ft. Cube, Delivered at Railway Depôt.		
ppled random blocks	2	10
Per Ft. Super., Delivered at Railway Depôt.		
n. sawn two sides landings to sizes (under 0 t. super.)	2	3
n. rubbed two sides ditto, ditto	2	6
n. sawn two sides slabs (random sizes)	0	11½
n. to 2½ in. sawn one side slabs (random sizes)	0	7
in. to 2 in. ditto, ditto	0	6

RD YORK—

	s.	d.
Per Ft. Cube, Delivered at Railway Depôt.		
ppled random blocks	3	0
Per Ft. Super., Delivered at Railway Depôt.		
. sawn two sides landing to sizes (under 40 ft. uper.)	2	8
n. rubbed two sides ditto	3	0
n. sawn two sides slabs (random sizes)	1	2
. self-faced random flags	0	5

SLATES.

Per 1000 of 1200 at Railway Depôt.

In.	£	s.	d.
10 best blue			
angor	13	2	6
12 ditto	13	17	6
10 1st quality			
tto	13	0	0
12 ditto	13	15	0
8 ditto	7	5	0
10 best blue			
rtmadoc	12	12	6
8 ditto	6	12	6

In. In.	£	s.	d.
20×10 best Eur'ka unfading green	15	17	6
20×12 ditto	18	7	6
18×10 ditto	13	5	0
16×8 ditto	10	5	0
20×10 permanent green	11	12	6
18×10 ditto	9	12	6
16×8 ditto	6	12	6

TILES.

At Railway Depôt.

	s.	d.
plain red roofing (per 1000)	42	0
Hip and Valve (per doz.)	3	7
Broseley (per 000)	50	0
Ornamental (per 000)	52	6
Hip and Valve (per doz.)	4	0
Ruabon red, own, or brindled dw'ds) (per 1000)	57	6
Ornamental (per 000)	60	0
Hip (per doz.)	4	0
Valley (per doz.)	3	0

	s.	d.
Best "Hartshill" brand, plain sand-faced (per 1000)	50	0
Do. pressed (per 1000)	47	6
Do. Ornamental (per 1000)	50	0
Hip (per doz.)	4	0
Valley (per doz.)	3	6
Staffords. (Hanley) Reds or Brindled (per 1000)	42	6
Hand-made sand-faced (per 1000)	45	0
Hip (per doz.)	4	0
Valley (per doz.)	3	6

WOOD.

BUILDING WOOD.	At per standard. £	s.	d.	£	s.	d.
s: best 3 in. by 11 in. and 4 in. by 9 in. and 11 in.	14	0	0 ...	15	10	0
s: best 3 by 9	13	10	0 ...	14	10	0
ms: best 2½ in. by 7 in. and m., and 3 in. by 7 in. and 8 in.	11	10	0 ...	12	10	0
ms: best 2½ by 6 and 3 by 6	0	10	0 less than 7 in. and 8 in.			
s: seconds	1	0	0 less than best.			
ms: seconds	0	10	0 "			
n. by in. and 2 in. by 9 in.	9	10	0 ...	10	10	0
by 4½ in. and 2 in. by 5 in.	9	0	0 ...	10	0	0
gn Sawn Boards— and 1½ in. by 7 in.	0	10	0 more than battens.			
	1	0	0 "			
mber: best middling Danzig (femel (average specification)	5	0	0 ...	5	10	0
onds	4	10	0 ...	5	0	0
all timber (8 in. to 10 in.)	3	17	6 ...	4	0	0
all timber (6 in. to 8 in.)	3	5	0 ...	3	10	0
dish balks	2	12	6 ...	3	0	0
pine timber (30 ft. average)	5	5	0 ...	6	0	0

JOINERS' WOOD.	At per standard. £	s.	d.	£	s.	d.
e Sea: first yellow deals, in. by 11 in.	24	10	0 ...	25	10	0
in. by 9 in.	22	10	0 ...	23	10	0
attens, 2½ in. and 3 in. by 7 in.	17	0	0 ...	18	0	0
nd yellow deals, 3in. by 11in.	19	0	0 ...	20	0	0
" 3 in. by 9 in.	18	0	0 ...	19	10	0
attens, 2½ in. and 3in. by 7 in.	14	0	0 ...	15	0	0
ed yellow deals, 3 in. by in. and 9 in.	14	0	0 ...	15	0	0
attens, 2½ in. and 3 in. by 7 in.	11	10	0 ...	12	10	0
bury: first yellow deals, in. by 11 in.	21	10	0 ...	22	10	0
), 3 in. by 9 in.	18	10	0 ...	19	10	0
attens	14	0	0 ...	15	0	0
ed yellow deals, 3 in. by in.	16	10	0 ...	17	10	0
), 3 in. by 9 in.	15	0	0 ...	16	0	0
attens	11	10	0 ...	12	10	0
d yellow deals, 3in. by 11 in.	13	10	0 ...	14	10	0
), 3 in. by 9 in.	13	0	0 ...	14	0	0
ttens	10	10	0 ...	11	0	0
Sea and Petersburg—), 3 white deals, 3 in. by 11 in.	15	0	0 ...	16	0	0
" 3 in. by 9 in.	14	0	0 ...	14	10	0
ttens	11	10	0 ...	12	10	0
nd white deals, 3in. by 11in.	14	0	0 ...	15	0	0
" 3 in. by 9 in.	13	0	0 ...	14	0	0
ttens	10	10	0 ...	11	0	0
ine: deals	19	0	0 ...	21	0	0
r 2 in. thick extra	0	10	0 ...	1	0	0
Pine—First, regular sizes	48	0	0 upwards.			
ents	32	0	0 "			
nds, regular sizes	33	0	0 "			
ents	28	0	0 "			
ine—Planks per ft. cube	0	4	6 ...	0	6	0
and Stettin Oak Logs— , per ft. cube	0	3	0 ...	0	3	9
" "	0	2	6 ...	0	2	6
ot Oak Logs, per ft. cube	0	6	6 ...	0	8	0
ainsoot Oak, per ft. sup. as	0	0	10 ...	0	1	0
do. do.	0	0	8½ ...		—	
ahogany—Houndras, Ta- co, per ft. super. as inch.	0	0	10 ...	0	1	1
ed, Figury, per ft. super. nch	0	1	6 ...	0	2	6

WOOD (*Continued*).

JOINERS' WOOD (*Continued*)—	At per standard. £	s.	d.	£	s.	d.
Dry Walnut, American, per ft. super. as inch	0	0	10 ...	0	1	0
Teak, per load	18	0	0 ...	22	0	0
American Whitewood planks, per ft. cube	0	5	0 ...	0	6	0
Prepared Flooring, etc.—	Per square.					
1 in. by 7 in. yellow, planed and shot	0	13	6 ...	0	17	0
1 in. by 7 in. yellow, planed and matched	0	14	0 ...	0	18	0
1¼ in. by 7 in. yellow, planed and matched	0	16	0 ...	1	0	0
1 in. by 7 in. white, planed and shot	0	12	0 ...	0	14	6
1 in. by 7 in. white, planed and matched	0	12	6 ...	0	15	0
1¼ in. by 7 in. white, planed and matched	0	15	0 ...	0	16	6
¾ in. by 7 in. yellow, matched and beaded or V-jointed brds.	0	11	0 ...	0	13	6
1 in. by 7 in. " "	0	14	0 ...	0	18	6
¾ in. by 7 in. white " "	0	10	0 ...	0	11	0
1 in. by 7 in. " "	0	12	9 ...	0	15	0

6 in. at 6d. to 9d. per square less than 7 in.

JOISTS, GIRDERS, &c.

	In London, or delivered Railway Vans, per ton. £	s.	d.	£	s.	d.
Rolled Steel Joists, ordinary sections	7	10	0 ...	8	0	0
Compound Girders, ordinary sections	9	10	0 ...	10	0	0
Steel Compound Stanchions	11	0	0 ...	12	0	0
Angles, Tees, and Channels, ordinary sections	9	10	0 ...	10	0	0
Flitch Plates	9	10	0 ...	9	10	0
Cast Iron Columns & Stanchions, including ordinary patterns	7	10	0 ...	8	10	0

METALS.

IRON—	Per ton, in London. £	s.	d.	£	s.	d.
Common Bars	9	0	0 ...	9	10	0
Staffordshire Crown Bars, good merchant quality	9	5	0 ...	9	15	0
Staffordshire "Marked Bars"	11	0	0 ...	—		
Mild Steel Bars	9	5	0 ...	9	15	0
Hoop Iron, basis price	10	0	0 ...	—		
" " Galvanised	17	10	0 ...	—		
(*And upwards, according to size and gauge.)						
Sheet Iron Black—						
Ordinary sizes to 20 g.	10	5	0 ...	—		
" " 24 g.	11	5	0 ...	—		
" " 26 g.	12	15	0 ...	—		
Sheet Iron, Galvanised, flat, ordinary quality—						
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15	10	0 ...	—		
Ordinary sizes to 22 g. and 24 g.	16	0	0 ...	—		
" " 26 g.	17	0	0 ...	—		
Sheet Iron, Galvanised, flat, best quality—						
Ordinary sizes to 20 g.	18	10	0 ...	—		
" " 22 g. and 24 g.	19	0	0 ...	—		
" " 26 g.	20	17	6 ...	—		
Galvanised Corrugated Sheets—						
Ordinary sizes, 6ft. to 8ft. 20 g.	15	0	0 ...	—		
" " 22 g. and 24 g.	15	5	0 ...	—		
" " 26 g.	16	15	0 ...	—		
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	12	10	0 ...	—		
Best Soft Steel Sheets, 2 g. & 24 g.	13	10	0 ...	—		
" " 26 g.	15	10	0 ...	—		
Cut Nails, 3 in. to 6 in. (Under 3 in., usual trade extras.)	11	0	0 ...	11	10	0

LEAD, &c.

	£	s.	d.			
LEAD—Sheet, English, 4lb. and up	19	12	6	...	—	
Pipe in coils	20	2	6	...	—	
Soil pipe	23	2	6	...	—	
Compo pipe	23	2	6	...	—	
ZINC—Sheet— In casks of 10 cwt.						
Vieille Montagne	33	10	0	...	—	
Silesian	33	5	0	...	—	
Zinc, in bundles, 1s. per cwt. extra.						
COPPER—						
Strong Sheet per lb.	0	1	0	...	—	
Thin "	0	1	1	...	—	
Copper nails "	0	0	10	...	—	
Copper wire "	0	0	10	...	—	
BRASS—						
Strong Sheet "	0	0	11	...	—	
Thin "	0	1	0	...	—	
TIN—English Ingots "	0	1	11	...	—	
SOLDER—Plumbers' "	0	0	8½	...	—	
Tinmen's "	0	0	11	...	—	
Blowpipe "	0	1	2	...	—	

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

15 oz. thirds	2½d.	26 oz. fourths	3½d.
" fourths	1¾d.	32 oz. thirds	5d.
21 oz. thirds	3d.	" fourths	4½d.
" fourths	2⅝d.	Fluted Sheet, 15 oz.	3½d.
26 oz. thirds	4d.	" 21 oz.	4½d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

⅛ Hartley's	2d.	Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white	3½d.
¼ "	2½d.		
⅜ "	2¾d.	Ditto, tinted	5d.

* Not less than three crates.

OILS, &c.

		£	s.	d.
Raw Linseed Oil in pipes	per gallon	0	3	3
" " in casrels	"	0	3	4
" " in drums	"	0	3	6
Boiled " in barrels	"	0	3	6
" " in drums	"	0	3	9
Turpentine in barrels	"	0	2	11
" in drums	"	0	3	1
Genuine Ground English White Lead, per ton		26	10	0
Red Lead, Dry	"	23	5	0
Best Linseed Oil Putty	per cwt.	0	10	0
Stockholm Tar	per barrel	1	12	0

VARNISHES, &c.

	Per gallon. £	s.	d.
Fine Pale Oak Varnish	0	8	0
Pale Copal Oak	0	10	6
Superfine Pale Elastic Oak	0	12	6
Fine Extra Hard Church Oak	0	10	0
Superfine Hard-drying Oak, for seats of Churches	0	14	6
Fine Elastic Carriage	0	12	0
Superfine Pale Elastic Carriage	0	16	0
Fine Pale Maple	0	10	0
Finest Pale Durable Copal	0	18	0
Extra Pale French Oil	1	1	0
Eggshell Flating Varnish	0	18	0
White Pale Enamel	1	4	0
Extra Pale Paper	0	12	0
Best Japan Gold Size	0	10	6
Best Black Japan	0	16	0
Oak and Mahogany Stain	0	9	0
Brunswick Black	0	8	0
Berlin Black	0	16	0
Knotting	0	10	9
French and Brush Polish	0	10	6

TO CORRESPONDENTS.

NOTE.—All communications with respect to literary and artistic matters should be addressed to "THE EDITOR" (and not to any person by name); those relating to advertisements and other exclusively business matters should be addressed to "THE PUBLISHER," and not to the Editor.

All communications must be authenticated by the name and address of the sender, whether for publication or not. No notice can be taken of anonymous communications.

The responsibility of signed articles, letters, and papers read at meetings rests, of course, with the authors.

We cannot undertake to return rejected communications; and the Editor cannot be responsible for drawings, photographs, manuscripts, or other documents, or for models or samples sent to or left at this office, unless he has specially asked for them.

All drawings sent to or left at this office for consideration should bear the owner's name and address on either the face or back of the drawing. Delay and inconvenience may result from inattention to this.

Any commission to a contributor to write an article, or to execute or lend a drawing for publication, is given subject to the approval of the article or drawing, when received, by the Editor, who retains the right to reject it if unsatisfactory. The receipt by the author of a proof of an article in type does not necessarily imply its acceptance.

N.B.—Illustrations of the First Premiated Design in any important architectural competition will always be accepted for publication by the Editor, whether they have been formally asked for or not.

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than* 10 *a.m. on Thursday.* [N.B.—We cannot publish Tenders unless authenticated either by the architect or the building owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is stated, nor any list in which the lowest Tender is under 100*l.* unless in some exceptional cases and for special reasons.]

* Denotes *accepted.* † Denotes *provisionally accepted.*

AYLESFORD.—For erection of a small engine-house at the sewage works, for Maidstone Corporation. Mr. T. F. Bunting, Borough Surveyor:—

G. Fearce & Son	£220	0	R. Barnly £209 4
C. B. Benfield	217	0	Martin & Newman 208 10
W. T. Barrows	210	10	B. Ballard 195 0

BEXHILL.—For the erection of an infants' school, for the Education Committee of the Borough of Bexhill-on-Sea. Mr. Burke-Downing, F.R.I.B.A., architect. Quantities by Messrs. John Leaning & Sons:—

Martin Wells & Co	£5,455 0 0
W. J. Ingleton	5,311 6 11
W. Bell & Sons	5,267 0 0
A. J. Bessant	5,201 0 0
Hutchinson & Co	5,189 3 0
Strange & Sons, Ltd.	5,094 10 0
W. J. Fryer & Co	5,068 16 9
J. Longley & Co.	4,971 0 0
Banks & Gearing	4,951 0 0
W. T. Burrows	4,930 15 0
Peerless Dennis & Co., Ltd	4,898 0 0
F. Sandell & Sons	4,842 10 0
R. Cook & Sons, Crawley*	4,826 10 0

BOGNOR (Sussex). For the erection of Courtfield House School, Victoria-drive. Mr. W. Tilbot Barlow, A.R.I.B.A., architect, 4, Queen-street-place, London, E.C. Quantities by Mr. Henry G. Tarrant, M.Q.S.A., Falcon-court, 32, Fleet-street, London, E.C:—

Cummins & Sons, Ltd.	£5,619
J. Jarvis & Sons	5,388
G. Trollope & Colls, Ltd.	5,326
W. Johnson & Co., Ltd.	5,105
Rowland Bros.*	5,099

BRIDLINGTON.—For erection of a detached residence, Meadowfield-road. Mr. A. Chas. Blackmore, architect, Hull and Bridlington. Quantities by Mr. H. Ashley Cooper, Hull:—

F. W. Martindale	£1,148	0 0	Quebell, Son, & Greenwood, Ltd. £1,057 0 0
J. H. Fenwick	1,139	0 0	F. Usher 1,021 15 3
T. A. Moore, Ltd.	1,126	4 8	Turner & Son 1,011 4 10
A. A. Booth	1,071	12 6	Sampson & Liddall, Bridlington* 1,008 17 3
J. M. Smallwood	1,064	7 2	

GRAVESEND.—For erection of a concert stand and refreshment kiosk, for Corporation of Gravesend:—

W. & F. Tuffee	£298	0 0	Milton Bros. £240 10 0
Multon & Wallis	280	0 0	Smith & Co. 239 17 6
Lingham & Etherington	278	15 0	A. E. Tony 237 0 0

HARLOW.—For construction of sewage-disposal works and laying sewer. Messrs. Tooley & Foster, engineers, Buckhurst Hill :—

T. Adams & Son	£8,042 0 0	Middleton & Hopper	£7,000 0 0
Kemp Bros.	7,844 6 2	D. T. Jackson	6,888 0 0
Manders & Hill	7,757 0 0	W. & C. French	6,645 0 0
P. R. Paul	7,750 0 0	T. W. Pedrette	6,578 0 0
P. Wilson	7,584 0 0		
Wilson, Border, & Co.	7,075 0 0		

HATFIELD.—For construction of sewers and cast-iron pumping main, also pumping station, tanks, etc., for Hatfield Rural District Council. Mr. G. Bertram Kershaw, engineer, West Wickham :—

Pethick Bros.	£8,706 2 0	A. G. Osenton	£6,900 17 10
J. Stone	7,568 16 8	C. Ford	6,815 6 10
Middleton & Hopper	7,527 7 5	P. Wilson & Co.	6,478 6 1
D. J. Jackson	7,429 6 6	H. M. Blaker	6,463 9 0
T. Smart	7,239 11 1	W. Moss & Son	6,350 13 0
A. Hyslop	7,178 19 8	Simon, Johnson, & Co., Manchester*	5,924 15 7
W. Griffith & Co.	7,126 12 7	S. Redhouse & Son‡	5,732 5 4
T. W. Pedrette	7,065 7 6		
T. Wood	6,943 14 2		

‡ Withdrawn.

LONDON. For the erection of the Church of the Holy Spirit, Clapham Common, S.W. Mr. H. P. Burke-Downing, F.R.I.B.A., architect, 12, Little College street, Westminster Abbey. Quantities by Messrs. Widnell & Trollope :

Staines & Sons	£11,195	L. H & R. Roberts	£9,998
J. Carmichael	10,544	Dove Bros.	9,775
J. W. Faulkner & Son	10,391	J. Garrett & Son	9,532
R. A. Lowe & Co.	10,299	A. Fairhead & Son, Enfield*	9,525
R. Cook & Sons	10,153		

LONDON.—For the alterations at West Hampstead Police-station. Mr. J. Dixon Butler, F.R.I.B.A., Surveyor to the Metropolitan Police District, New Scotland-yard, S.W. Quantities by Messrs. Thurgood, Son, & Chidgey, 8, Adelphi-terrace, Strand, W.C. :—

Prestige & Co., Ltd	£2,469 0 0	J. Gibb	£2,323 0 0
C. B. King, Ltd.	2,430 9 6	Grover & Son	2,280 0 0
W. J. Maddison	2,413 0 0	Higgs & Hill, Ltd.	2,180 0 0
Holloway Bros. (London), Ltd.	2,400 0 0	W. Eyre	2,087 0 0
Moss & Sons, Ltd.	2,392 0 0	Loie & Co	2,052 0 0
		J. Chessum & Sons	1,892 0 0

LONDON.—For erection of greenhouses at Clissold Park and Ravenscourt Park, for the London County Council :—

Clissold Park.

J. Grover & Son	£162
J. & C. Bowyer, Ltd.	142
Marchant, Hirst, & Co	144 / 141‡

Ravenscourt Park.

J. Grover & Son	£185 10
J. & C. Bowyer, Ltd.	170 0
Marchant, Hirst, & Co.	156 10 / 151 0‡

‡ Alternative tender.

LONDON.—For supply of pneumatic tools required for the third section of the central car repair depôt, for the London County Council :—

Consolidated Pneumatic Tool Co., Ltd.	£498 3 8
Howard Pneumatic Engineering Co., Ltd.	361 4 0‡ / 447 18 0
Globe Pneumatic Engineering Co., Ltd.	411 8 4

[The estimate of the Chief Officer of Tramways, comparable with the tenders, is £500.]

‡ Alternative tender, not to specification.

LONDON.—For erection of the Vauxhall sub-station, for the London County Council :—

Leslie & Co., Ltd.	£7,643	W. Downs	£6,882
Kerridge & Shaw	7,337	Holloway Bros. (London), Ltd.	6,830
Higgs & Hill, Ltd.	7,290	C. Wall, Ltd.	6,785
H. L. Holloway	7,076	Patman & Fotheringham, Ltd.	6,743
E. Lawrance & Sons, Ltd.	6,932		
J. & C. Bowyer, Ltd.	6,885		

[The Architect's estimate, comparable with the tenders, is £6,818.]

LONDON. For the enlargement and improvement of the infants' school on the Northey-street site, for the London County Council :—

W. Harris	£3,037 0 0
Friday & Ling	2,944 17 10
Griggs & Son	2,813 7 11
McLaughlin & Harvey	2,770 0 0
H. Groves	2,696 0 0
F. & T. Thorne	2,591 0 0
A. E Symes	2,501 0 0
H. Kent	2,490 0 0
H. L Holloway	2,467 0 0
T. D. Long	2,414 0 0
E. A. Roome & Co.	2,381 0 0
J. & C. Bowyer, Ltd.	2,338 0 0

[The Architect's estimate, comparable with the tenders, is £2,350.]

LONDON.—For electric lighting work at the London County Council School of Photo-Engraving and Lithography (City of London), for the London County Council :—

E. Lawrance & Sons, Ltd.	£1,320 0 0	G. E. Taylor & Co.	£949 6 6
W. H. Gaze & Sons, Ltd.	1,269 0 0	Tilley Bros.	948 3 8
G. Weston & Sons, Ltd.	1,221 0 0	E. Newbald	834 0 0
W. J. Fryer & Co.	1,135 0 0	A. Hawkins & Sons	819 0 0
		Pinching & Walton	684 6 0
		Tredegar & Co.	612 0 0

[The Chief Engineer's estimate, comparable with the tenders, is £712.]

LONDON.—For adapting the Ponton-road Industrial School, Clapham, as a place of detention, for the London County Council :—

Lathey Bros.	£1,849	J. & C. Bowyer, Ltd.	£1,373
Rice & Son	1,847	W. Johnson & Co., Ltd.	1,362
J. Garrett & Son	1,822	Triggs & Co.	1,319
G. Munday & Sons	1,419		

REDCAR.—For erection of the memorial clock-tower. Mr. J. Howcroft, surveyor, Redcar :—

King & Co.	£300 10 0	J. F. Bainbridge	£189 18 3
M. W. S. France, Ltd.	193 9 0	J. Dobson, Redcar‡	156 10 0

‡ Accepted according to specification.

ROYDON.—For construction of sewage-disposal works and laying sewers. Messrs. Tooley & Foster, engineers, Buckhurst Hill :—

W. Jackson	£4,777 0 0	D. T. Jackson	£3,054 0 0
T. Adams & Son	3,819 0 0	P. R. Paul	2,932 0 0
Wilson, Border, & Co.	3,440 0 0	T. W. Pedrette	2,880 0 0
Kemp Bros.	3,394 5 11	W. & C. French	2,857 0 0
P. Wilson	3,325 0 0	G. Porter	2,840 0 0
Manders & Hill	3,148 0 0	Middleton & Hopper	2,840 0 0

SUNNINGDALE.—For the erection of Cor Memorial Institute. Messrs. Roberts & Smith tects and surveyors, Sunningdale :

F. Pizzey & Son	£777	E Pack	
H. Charman	748	J. H. Wakelin	
W. Lucas	745	W. Watson	
Norris & Co	733	R. Love & Co.	

TREGOES.—For alterations and additions school. Mr. G. Dickens-Lewis, County Ar Aberystwyth :—

J. James	£510 15	J. Evans	
W. Edwards	489 10	J. Davies, Ffostras	
D. Jones	437 0	sol*	
Davies & Jones	389 10		

WOODFORD.—For erection of a school at grove. Messrs Tooley & Foster, architects, Bu Hill.

F. B. Self	£2,488 19	F. J. Coxhead	
T. Osborn & Sons	1,99 0	W. J. Maddison	
Fitch & Cox	1,948 0	J. Oram & Son,	
Knight & Son	1,841 0	Waltham Ab	
C. S. Foster & Son	1,836 0	bey‡	

‡ Recommended for acceptance.

Ham Hill Stone, Doulting Stone, Portland Stone.
The Ham Hill and Doulting Stone Co.,
(incorporating the Ham Hill Stone Co. and C. Tras The Doulting Stone Co.).
Norton, Stoke-under-Ham, Somer
London Agent :—Mr. E. A. Wil
16, Craven-street, Strand.

Asphalte.—The Seyssel and Metal Asphalte Co. (Mr. H. Glenn), Office, 42, E.C.—The best and cheapest materials courses, railway arches, warehouse fl roofs, stables, cow-sheds and milk-room aries, tun-rooms, and terraces. Asph tractors to Forth Bridge Co. T.N. 2644

SPRAGUE & CO., Ltd
LITHOGRAPHERS AND PRINT
Estate Plans and Particulars of Sale executed.
4 & 5, East Harding-st., Fetter-lan

PILKINGTON &
(ESTABLISHED 1838),
DEPTFORD WHARF,
190 & 192, CREEK ROAD, DEPTFORD
Telephone No.: New Cross 1102 (two li

Registered Trade Mark.
Polonceau Asph
PATENT ASPHALTE AND FELT R
ACID-RESISTING ASPHALTE.
WHITE SILICA
SEYSSEL ASPHALTE (*Direct from th*

J. J. ETRIDGE, Jr.
SLATE MERCHANTS. LTD.

EXPERTS IN
SLATING, TILING.
BEST WORK ONLY.
Telephone 2685 Wall, or write—
BETHNAL GREEN SLATE WORKS,
BETHNAL GREEN, LONDON, E.

"Drop Dry" Glazin
ECONOMICAL, EFFECTIVE. THE PERFECT SELF-SUSTAINING BAR.
Copper & Zinc Roofin
The most Efficient and Economical System in the Kingdom.
Designs and Estimates Free on Application.
Telegraphic Address: "COURTEOUS, LONDON."
F. BRABY & CO., LTD.
Telephone North 3032 (4
Chief Offices: 352-364, EUSTON ROAD, LONDON, N
Works: LONDON, LIVERPOOL, BRISTOL, GLASGOW, FALKIRK.

THE BUILDER

VOL. CII.—No. 3604. MARCH 1, 1912.

CONTENTS.

PAGE

E Old Town Hall, Manchester (with Illustrations) .. 229
E Associates and the R.I.B.A. . 230
TES (with Illustrations) 231
E Architectural Association .. 232
E Architecture of Stamford (with Illustrations) .. 236
CHITECTURAL SOCIETIES .. 237
NERAL NEWS .. 238
RRESPONDENCE .. 238
'RECOMMUNICATION COLUMN 238
ITORIAL SUMMARY .. 239
ETINGS .. 239
MPETITION NEWS .. 239
TES TO ILLUSTRATIONS .. 239
TY YEARS AGO .. 240
NTHLY REVIEW OF CIVIC DESIGN: -
HALIFAX TOWN-PLANNING COMPETITION (with Illustrations) .. 241
HE CITY DEVELOPMENT PLAN .. 243
HE IMPROVEMENT OF LONDON .. 244
OTES .. 245

PAGE

ETON CLOISTERS .. 246

THE BUILDING TRADE:—
TRADE UNIONS AND THE MINIMUM WAGE .. 247
THE LONDON MASTER BUILDERS' ASSOCIATION (ANNUAL DINNER) .. 247
A CAMPAIGN AGAINST LABOUR TYRANNY 248
THE PROVIDENT INSTITUTION OF BUILDERS' FOREMEN AND CLERKS OF WORKS .. 248
BUILDERS' CLERKS' BENEVOLENT INSTITUTION .. 248
THE YORKSHIRE FEDERATION OF BUILDING TRADES' EMPLOYERS .. 247
BATH MASTER BUILDERS' ASSOCIATION 249
GENERAL BUILDING NEWS .. 249
APPLICATIONS UNDER LONDON BUILDING ACTS, 1894 TO 1909 .. 249
PROJECTED NEW BUILDINGS IN THE PROVINCES 250

LONDON COUNCILS .. 250
BOOKS (WITH ILLUSTRATIONS) .. 251
SCIENCE EXAMINATIONS FOR 1911 .. 252
THE INSTITUTION OF MUNICIPAL ENGINEERS .. 252

PAGE

THE ARCHITECTURAL ASSOCIATION THIRD SPRING VISIT .. 252
THE LONDON COUNTY COUNCIL .. 253
LAW REPORTS .. 253
LIST OF COMPETITIONS, CONTRACTS, ETC., OPEN .. 254
FOREIGN AND COLONIAL .. 256
PATENTS .. 256
TRADE CATALOGUE .. 256
SOME RECENT SALES .. 256
PRICES CURRENT .. 257
TENDERS .. 258

Illustrations.

R.I.B.A. ARTHUR CATES PRIZE: AWARDED TO MR. J. B. F. COWPER.

EAST SUSSEX HOSPITAL, HASTINGS: -
SECOND PREMIATED DESIGN, BY MESSRS. C. K. & T. C. MAYOR.
THIRD PREMIATED DESIGN, BY MESSRS. H. PERCY ADAMS & C. H. HOLDEN.



The Old Town Hall, Manchester (now the Reference Library).

THE OLD TOWN HALL, MANCHESTER.

THERE are, as yet, few indications as to whether the Manchester Art Gallery and Library, which was the object of the most important competition since that for the London County Hall was decided, will ever be erected on the old infirmary site. There are, unfortunately, dire calamities involved in the chain of events which led to the purchase of the Infirmary site by the Corporation, and the one that is now imminent, and will indeed shortly be compassed, is the destruction of the Reference Library, once the Town Hall.

It is no exaggeration to state that in losing Francis Goodwin's masterpiece Manchester will lose not only a notable historical monument of a memorable stage of its civic growth, but a priceless work of architecture. Built in 1825, it ranks as the noblest of the remarkable series of buildings in Manchester that marks that fine period of the English Renaissance, and which includes its near neighbour, Cockerell's Bank of England, and Barry's Royal Institution. In the splendid simple lines of its composition, as original in its modelling as it is scholarly in its Greek detail, the façade is a supreme example of monumental design. The fine depth of shadow of the portico throws into high relief the subtle lines of the Ionic colonnade, giving a striking rhythm of light and shade emphasised by its contrast with the severe masses of walling at the ends, and it has a wonderful dignity, notwithstanding the want of sufficient base due largely to its unfortunate position. The great hall of the interior, now that it is stripped of the bookshelves and other properties that have encumbered it

during its years of service as the Reference Library, is revealed as a reception hall of noble proportions, in which academic detail is combined with daring originality of planning such as produce an interior probably unsurpassed by more than two or three examples in the country. The boldness of the planning of the axial lines, two secondary axes at the ends crossing the main vista at right angles, takes away the obviousness of a hall with a single vista culminating at the end, whereby the whole would be comprehended at a glance, and is convincingly appropriate to its purpose as a reception hall, where one finds fresh points of almost primary interest besides the main vista down the room. The great sweep of the plain walls and the severity of the graceful shafts of the columns are sharply contrasted with the exuberant Greek treatment of the ceiling.

The sale of the building was effected several years ago, and is irrevocable. The price was the purchase-money of the Infirmary site. Its destruction is inevitable; its demolition will probably commence in a week or two. It is seemingly too late for Manchester to restore the building to its former glory, but it could do nothing that would give better reason for civic pride than to reinstate the hall and various rooms as its City Hall. Waterhouse's Gothic Town Hall, notwithstanding its brilliant plan and as great strength of design as is ever found in the work of its transitory epoch, has no suggestion in its State rooms of municipal greatness at all comparable to its predecessor, or to those in Wood's Town Hall at Liverpool, and the building is now far too small for the increasing demands upon it. The opportunity of saving the interior is gone, but it is not too late to save the façade. If the building were a crumbling mediæval wreck it would find protectors by the score, and we trust that support will not be lacking to the strenuous efforts which are being made by the Manchester Society of Architects and its President for the removal of the façade to one of the Manchester parks. Mr. Edgar Wood, in a letter to the *Manchester Guardian*, insists strongly upon the educational value of such a building, and puts forward a plea for help for its partial retainment. It is being measured by the students of the Society and the School of Architecture, under the direction of Professor Capper, with a view to the publication of the drawings as complete records of its design.



The Old Town Hall, Manchester: Interior.

THE ASSOCIATES AND THE R.I.B.A.

THE proposal to be considered at the business meeting on Monday that the Associates of the Institute should have a representation on the Council equal to that of the Fellows raises a point of great interest and of considerable importance to the future of the Institute.

We have already called attention to what is, we believe, the undoubted fact that the present abnormal state of affairs is largely due to the action of those of the Associates who, though eligible for the Fellowship, have deliberately, and as a matter of policy, refrained from taking it up.

From the point of view of the Institute as a whole it is probable that the original object of giving any representation to the Associates was to make sure that the Council should always contain an adequate number of members competent to represent the views and feelings of the coming generation, whose youthful enthusiasm and new ideas would influence the Institute in the direction of progress; but if the best known and most influential of the Associates—those most likely, therefore, to obtain seats on the Council—are in long-established practice and in years and experience more on a level with the Fellows, and more likely to take their point of view, this object appears to be defeated.

What the original constitution of t
Institute seemed to aim at, and wh
still seems required, is that the point
view of the man who has not had sev
years of practice, or who does r
practise at all, should be adequat
represented on the Council. While t
present state of affairs lasts there is
guarantee that this could be attained
increasing the representatives of
Associates, unless this increase is acco
panied by a regulation that those As
ciates who have been in practice
seven years are not eligible to repres
their class on the Council.

It is always difficult enough to asc
tain just the right amount of represen
tion that is due to the younger gene
tion in such a society as the Institu
and this difficulty is not lessened wh
the class which is supposed to repres
them no longer does so exclusively.
is a great pity that the question is
needlessly complicated in this w
What we are afraid of is that the ca
of the younger men and of those who
not practise is likely to be prejudice
it is thought that a complaint of w
of adequate representation is being
vanced by members who could imm
diately obtain it by passing on to
Fellowship. Such members, no dou
might with justice be reminded that t
cannot have it both ways, and t
if they prefer the advantages of
Associateship they must be prepared
put up with its disadvantages; but t
does not dispose of those who are
eligible.

Here we are inclined to think
anomaly exists which calls for seri
attention. Apart from the quest
whether the present representation of
Associates is sufficient under nor
conditions to obtain the desired ben
of the young man's point of view on
Council, the position of the Associate
never practises should be taken i
consideration.

Owing to the fact that the independ
practice of architecture is the
qualification for admission to the Fell
ship, there must always be a cer
number of Associates who, whether f
choice or necessity, will always ren
Associates. In this connexion it sh
be fully realised that successful prac
is not everything, and that there
able men to whom it is not the goal o
earthly ambition. A love for scholar
or research, a preference for teachin
taste for archæology, or a distaste for
commonplace business worries inse
able from everyday practice may
fluence many a sensitive and cultu
man to devote himself to the th
rather than the practice of architect
As men of means and education bec
more cognisant of its attractions
possibilities as an intellectual pursuit,
as the newer responsibilities of
practising architect continue to m
up indefinitely, this type of man ma
expected to increase. Although it
be urged that his point of view is of l
value to a society which exists to fur
the interests of practising architects,
it should have some weight wit
learned society holding a Royal ch
for the advancement of architecture
fine art. Under present conditions
most distinguished of historians

chæologists, the most learned of pro-ssors, whatever his age, is liable to find mself bracketed with the youngest and ost inexperienced member of the junior ass, and no special machinery seems exist for the purpose of securing his rvices on the Council.

Then, again, the recent growth of the ge architectural departments of such dies as the Office of Works or the ndon County Council entails the em-yment of many members in positions ich, though technically subordinate, ist no doubt be filled by men of mature ars and considerable ability and ex-rience. Their point of view and their cial interests must differ from those the junior practitioner, or from those the scholar or archæologist who does t practise; yet we find them all grouped gether in one class with a small re-sentation on the Council.

This representation appears, in the ture of things, to be sufficiently com-cated without the further complication endeavouring to provide for members ose interests and point of view are eady provided for elsewhere.

Indeed, it will be most interesting to on what grounds this claim is based—ether special attainments will ask for cial representation, equality of age and perience demand equality of represen-ion, or youth and inexperience request ther protection.

We imagine, however, that so im-rtant a proposal would not be put ward unless its proposers were pre-red to support it with serious argu-nts tending to show that it would be the interests of the whole Institute, d not merely in the interests of any e class or section of a class. Perhaps y will take the opportunity to explain y it is to the advantage of the In-tute that eligible Associates should not ce up the Fellowship, what disasters uld be caused if they did, and in at special way they can serve the titute and advance architecture better Associates than as Fellows.

Although it may not be necessary to ce this actual proposal too seriously, it does probably reflect a real ling of dissatisfaction amongst the neral body of the Associates on the ject of representation. It is a ques-n, however, whether a proper repre-tation can ever be arrived at while s class is constituted as at present, and might perhaps be more useful to try amend its constitution first and its presentation afterwards, and so en-avour to weld the Institute into a re compact and harmonious whole.

The opposition from the Associates ich the Institute has recently encoun-ed in efforts which tend to the unity the profession suggests that before ther progress can be made in this ection it would be as well to endeavour obtain that unity in its own household on which all wider unity must, we agine, be founded.

That on every question as it arises lividual members should be found to pute the wisdom of the action of the verning body is only natural, and is a matter that need cause any search-of heart, but where a distinct class members appear to discover in almost ery proposal something detrimental to their particular interests as a class it suggests a lack of proper organi-sation in the constitution of the whole body.

Class distinctions of any kind are not altogether in harmony with the spirit of the age, and the opinion seems to be gaining ground that it would be better for the Institute if they were abolished altogether and the whole of its members placed on the same footing. Unfortunately, from this point of view, the institution of a compulsory examination and the creation of a class of Licentiates have tended to emphasise such distinctions. and the Institute must perforce deal with the situation thus created.

The trouble seems to be in all societies that, although any definite proposal is usually opposed by individual members on its merits or demerits, it is generally found that when opposed by any class of the members as a class it is not so much on its merits as on its bearing on the privileges or interests of that class. It is conceivable that a proposal may be in the interests of architecture and of the profession generally, and yet be contrary to the interests of any one class of the Institute as at present constituted. It is surely a source of weakness if the Institute before taking any action in the public interest has to stop and consider just how far the somewhat conflicting interests of its different classes of members may be affected by its proposals, and then trim its sails accordingly. The suggestion inevitably presents itself that the more the interests and privileges of its members coincide, and the fewer these interests and privileges are, the easier it will be for the Institute to act in the public interest with promptitude and decision, and so carry out the intentions and discharge the obligations of its charter.

NOTES.

The Competitive System in America.

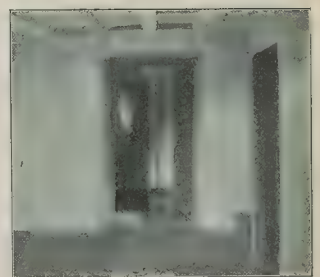
FROM an address delivered by Mr. J. Milton Dyer, F.A.I.A., before the Annual Convention of the American Institute of Architects, on the effect of competitions on design, we gather that as much improvement in the general ethics and conduct of competitions is required there as here, if they are always to exercise a beneficial influence on architectural design. It is as true here as there that "you are afraid to be impulsive, to play with the motives, to do the thing you yourself feel," because your "independence is only too often influenced by a vague mistrust as to the personal likes or dislikes of the jury," and that this does too often create the temptation to "sell one's soul to win." Both this and the complaint that the competitor cannot get into touch with his client seem to be rather defects of method than vices inherent in the nature of the competitive system. When juries and assessors learn to judge on generally accepted principles, rather than on personal predilection, the first should disappear. The second would be considerably mitigated if assessors, remembering that they are the interpreters of the wishes of the promoters, would acquire all such general information on the whole situation—beyond the bare facts of the case—and on the ultimate intentions and point of view of the promoters, as they would themselves acquire from their own clients if called upon to design a similar building. If this was incorporated in the conditions by way of information only, the competitors would not feel quite so much in the dark. Even more perhaps in this country than in America do "the efforts of all in collaboration, working in an office upon a serious competition, develop not only draughtsmanship, but a real conception of architecture in its higher meaning, such as many months of routine work may not accomplish," for here there are fewer educational opportunities than appear to obtain in America for the study of large architectural schemes. It is hardly to be disputed that in this respect the competitive system has had a beneficial influence here, although we are not perhaps altogether free from the tyranny of the order which Mr. Dyer considers so undesirable a result of this system in America.

An Isolation "Hospital."

No. 61 (New Series) of those valuable Reports to the Local Government Board on Public Health and Medical



Side View of a "Hospital."



A View of the Interior of the "Hospital."

"Although at the time the photograph was taken there had been no rain for a month, water stands several inches deep on the floor of the back room seen through the doorway. There is no furniture."

Subjects deals with the prevalence of acute poliomyelitis in Devonshire and Cornwall in 1911, and, while the greater part of the Report is devoted to medical consideration, there are occasional references to matters of more general interest. In one district it appears that the Clerk of the authority, in order to allay public anxiety, claimed that hospital provision was available, and in a letter to the local Press made the statement :—"There is an isolation hospital at . . . ." The Report contains four photographs of this "hospital" taken a few days after the Clerk's letter was published, and we reproduce two of them. As the Report states, they show without need of written description, the character of the hospital accommodation provided.

Vacation Courses, Sheffield University. SOON after the formation of the Department of Architecture at the University of Sheffield it was considered advisable to organise Vacation Courses at places in which buildings of architectural importance could be studied by means of the making of sketches and measured drawings, and to make attendance at a certain number of these courses compulsory for students working for the Diploma in Architecture awarded by the University. As this is, we believe, a new departure, it may be useful to give some particulars of the courses. The Easter course generally begins about the end of March, and lasts from a week to ten days, while the summer course begins about July 8, and lasts from three weeks to a month. The advantages of these courses are that permission to sketch and measure a series of important buildings is obtained, all difficulties as to the use and hire of ladders, etc., are avoided, and that an instructor is present with the students to give such advice and guidance as may be needed. Up to the present only local students have been admitted to the courses, but it is thought that they may be of value to other students of architecture, while students other than those attending the University can join. The students make their own arrangements with regard to rooms and board, but particulars of suitable accommodation are supplied to them. Easter courses have already been held in Lincoln and Stamford, and summer courses in Oxford, Cambridge, and London. The Easter course will be held in Bath this year, commencing on March 23, and permission to sketch or measure at several important buildings has already been obtained, and at the beginning of the course a lecture on the architecture of Bath will be given by Mr. Mowbray A. Green, F.R.I.B.A. For the summer course, 1912, a sketching and measuring tour in Northamptonshire will probably be arranged. The experience of members of the London Architectural Association who have taken part in the summer excursion of the Association and in other visits is evidence of the useful work accomplished at such times, and, though the compulsory character of the Sheffield outings constitutes a difference, we have no doubt the work carried on will be just as valuable and interesting to those students who take part.



Mr. F. R. Yerbury, Secretary to the Architectural Association.

The Secretary of the A.A. THE appointment of Mr. F. R. Yerbury as Secretary of the Architectural Association in succession to the late Mr. Driver should have the hearty support of all members of the Association. Mr. Yerbury has been acting Secretary since the office became vacant, and the successful manner in which the work has been carried out during that time was to be expected from one who was associated with the late Secretary for so many years, and who has grasped and applied the successful methods of the late Secretary. We congratulate both Mr. Yerbury and the Association upon the appointment.

PARLIAMENT BUILDINGS, WELLINGTON, N.Z.

With the issue of the New Zealand journal *Progress* for December last is given as a supplement a selection of the designs submitted in the competition for the proposed Parliament Buildings, Wellington, New Zealand, including the first, second, third, and fourth prize designs. The supplement is admirably got up, and the various designs can be conveniently studied. The supplement includes the conditions of competition, etc.

THE LATE MR. CHRISTIAN SYMONS.

An exhibition was opened recently at the Goupil Gallery, Regent-street, of the work of the late W. Christian Symons, who designed the mosaics in the Chapel of the Holy Souls, Westminster Cathedral, and the great rood which hangs from the roof. This decorative work has been praised by Mr. John S. Sargent, R.A., among other artists, and Mr. Robert Ross writes that "Bentley's masterpiece could hardly have been adorned by a more sympathetic and more appropriately chosen craftsman." Mr. Symons also designed some spandrel decorations at St. Botolph's, Bishopsgate. His work in the exhibition consists chiefly of easel pictures in oil and water-colour.



COMBINED ORDINARY GENERAL / CAMERA, SKETCH, AND DEB CLUB MEETING.

A MEETING of the Architectural Associ was held on Monday, at No. 18, Tufton-s Westminster, S.W., Mr. W. Curtis Green, President, in the chair.

Mr. Hall, Hon. Secretary, announced the next meeting of the Camera Sketch Debate Club will be held on Thursday, Marc when a paper by Mr. Alan Snow, en "Neo-Grec" will be read. He also annou that the Annual Smoking Concert and Re the A.A. Athletic Club will be held on Mar at the Pillar Hall, Victoria Station Restau

Messrs. J. Burford (London) and C. E. (Palmer's Green) were elected as members.

It was announced that a Special General ing will be held on Monday, March 11, to By-law No. 36. (It is proposed that the b shall read:—"The office of Hon. Secretary not be held for more than two sessions togeth

The Chairman proposed a vote of th to Mr. J. J. Burnet for kindly allowing me to visit the British Museum Extensio

ruary 17, and to Mr. Theodore Fyfe for luncting the party over the buildings; also Ir. W. E. Blake for his kindness in providing upon the occasion.

e also proposed a vote of thanks to Mrs. ur Cates for kindly presenting a large ber of photographs to the Association.

he motions were agreed to.

New Secretary.

he Chairman said he had much pleasure in ouncing that Mr. F. R. Yerbury had been ointed Secretary of the Association. Mr. bury had been doing the work of Secretary of Association for the last three months, and would all be glad that he had been elected hat position.

he announcement was received with applause.

HOPES AND FEARS FOR ARCHITECTURE.

r. F. C. Eden then read a paper, entitled opes and Fears for Architecture." He :—

As one glances over the history of Eng- architecture during the past century the ight intrudes with disturbing iteration s the Mistress Art, she of the mien serene dignified deportment, shares to the full weakness of her sex, and has an eye as n as the most frivolous of her sisters the latest fashion, especially when it es from Paris.

arly in the century the Greek revival ch had been suggested by Stuart and ett's great work, and vivified by the ortation of the Elgin marbles, attracted ts rather dreary refinements such men as ood, Smirke, Elmes, and Cockerell, to be ently thrust aside by the careful, if un- ired, Italian manner which we associate n the name of Barry. Meanwhile, a more arkable movement was gaining strength, tely, the Gothic revival, with Pugin for ophant and Ruskin for its prophet. ugh these enthusiasts deemed its founda- s to be upon the holy hills of truth, nal and immutable, the Gothic phase ved to be as temporary as any edifice ed with hands. Weakened by the strain upon it by such essays in the ungainly Eaton Hall and Keble College, the crush- weight of Street's Law Courts brought ut the slow collapse of the movement, and ugh the opening cracks was heard the ll voice of Sedding crying for originality any price. The votaries of the cult dually dwindled to a little flock, and ugh some stray worshipper may still offer nse at the deserted shrine, the embers the altar are well-nigh spent, if they e not utterly extinguished by the death Bodley, truly the last, as the most ured, of the Goths.

Arts and Crafts Movement.

he reaction against mediæval copyism, what was intended for such, set in with e violence; fretful versions of "Queen ne," free (and easy) or ungrammatical sic; Dutch and Flemish motives all their little day. Soon we began to hear workman whispered of as a "craftsman" ng a certain coterie, whose esoteric doc- e seems to have been this: that you have to leave the workman, chisel in hand, to face with a lump of material, and ething beautiful will come into existence; other words, the inspired being will be to "express himself." And so, not out some British mingling of sense and , the arts and crafts movement was ched. The professional architect became bugbear of some. "Burn your books," their cry; but the eminent author of *mot* goes on writing all the same. The tsman then it was who was to redeem the ; though how he was to do so without his ent backing of tradition and hereditary is not even yet apparent. More closely ed to this movement than some of its porters might care to acknowledge is the Art, now quite discredited—in this try at least, though its pet motives still rive in trade catalogues and on purely mercial wares. A small vogue, hardly to called a fashion, was once started in our of the Byzantine manner by a build- not far from here (much as Sedding's ch in Sloane-street bred a weedy crop of ative west fronts, or Scotland-yard an epidemic of obelisk-crowned gables), but I do not fancy it ever came to much.

All this time the grand manner of domestic building had been forgotten; picturesqueness was everywhere attempted, and misunderstood to consist of jagged skylines and jumbled incompatibles. There was a sort of affectation of rusticity, like the bastard simple life of the present, which may be suitably described as the cottage heresy.

In the next stage the hidden stirring of some classic impulse moved the professors of this nook and corner style to prune, chasten, and square up their designs. Sobriety began to rule; but not even yet is the restless Goddess of Fashion appeased.

Artistic Salvation.

People are still wondering whether our artistic salvation is to come from the East or from the West, or yet from the South. Is it to be Byzantine, Georgian, or neo-Grec? Will it come from the land of the skyscraper, or from the Ecole des Beaux-Arts and the Petit Palais? Observation shows that the conditions are still of a very unsettled character. So down drops the vacillating mercury once more, and mutterings of a second Greek revival threaten further disturbance of the architectural atmosphere, already charged with electricity from across the Channel.

"Except the blind forces of nature nothing moves in this world that is not Greek in its origin," and so, I suppose, we must anticipate that periodical Attic depressions will reach these shores. We are not, then, altogether surprised to notice how large a proportion of the designs submitted in recent competitions are rather bleak and toneless efforts in the sort of Greek that is learnt by looking over a Frenchman's shoulder. Whatever excellencies they may possess in planning and so forth, it must be admitted that they leave us cold. But of all fashions in art Paris fashions are now for us the most pernicious. Just as in literature each language has its individual genius and rhythm, so in art. Gallic idioms are not ours, Gallic excellencies quite other. Consider the influence of French ideas upon the current manner of design as displayed in recent buildings and competitions. I do not know how to describe it except as a kind of architectural "cubism." The dominant *motif* is the block. We watch it standing uneasily on cornices, hanging from sills, stepped, imposed, superimposed, *appliqué* to the wall face; tight wreaths of laurel and myrtle clasp and interpenetrate it, *guttæ* weep from it—there is no designing without tears now for the young architect—while scraps of columns, mouldings, or carving emerge with Rodinesque inconsequence from ponderous chunks of masoned stone.

Are we to account for the incessant change which the last hundred years have witnessed as a stirring of vigorous life or as a restless craving for some new thing, a fashionable acquiescence in the unimportance of being earnest about anything for long; as the gushing of a perpetual fount of fresh ideas, or as mere idle floating with the stream, a feat, as we have been reminded, which any dead dog can perform? Is it inspiration or decay, the waving of a banner or the flapping of a shroud?

Seeing that all great accomplishment in the past has come from working steadily along a simple line of age-long tradition, it cannot be seriously maintained that such rapidly changing fashions are beneficial to art. Nevertheless, almost every passing phase has left some good behind it.

The Gothic Revival.

For example, there is still something to be learnt from the Gothic revival. The lesson is, I think, twofold. Firstly, enthusiasm. The writings of Pugin, Street, and others brim over with it. Such books as "Brick and Marble in Italy," or Webb's "Continental Ecclesiology," are most refreshing reading for this very reason. However much we may smile at some of its manifestations of zeal we may well sigh for a share of that contagious spirit. And, secondly, definite principles, without which enthusiasm runs to seed. The chief apostles of the movement—Pugin, Morris, and pre-eminently Ruskin—made an earnest attempt to decipher and codify the laws of artistic conduct. Ought I to apologise for mentioning the author of the "Seven Lamps"? If it has been the custom of the prigs of a past generation to swear by Ruskin, it is the custom of their successors to swear at him. Even a serious writer like Mr. Blomfield cannot resist a kick at the dying lion, as "most intolerant and uncritical of amateurs." Perhaps to the modern mind any forcible exponent of definite opinions is bigoted and intolerant, and one suspects that the most popular teacher of to-day would be a professor of hypothetics, a sort of dealer in honest doubt. Still, if the principles enunciated by these "intolerant amateurs" were universal and sound, I am not concerned to deny that a certain falseness and partiality in their application has run back like a taint and corrupted the source; with the result that now there is little recognition of any fixed laws or æsthetic standard. The followers of art have become an undisciplined mob, with a mob's capricious temper, and the practice of art has become a riot or eclecticism and experiment. The rules and precedents which are the police of art are discredited and powerless, and the artistic hooligan remains master of the situation.

Again, it was the arts and crafts movement which emphasised the importance of a more intimate relationship between material, workmanship, and design; and though the doctrine is sometimes pushed to the point of absurdity, its influence has already been considerable and in the main wholesome.

An Age of Connoisseurship.

The present is an age of connoisseurship. The collector is abroad. He is as the sand which is by the seashore for multitude, and the Jew flourishes in the land. We have omnivorous collectors and collectors who specialise in all things curious and antique, from Chinese ridge-tiles to old stay-bones. Nor are people content to fill their houses with old furniture and bric-à-brac. If reluctantly compelled to build they fit up old panelling, chimneypieces, and other fixtures in their new homes. Old vases, figures, sundials, and worn-out paving-stones grace their freshly-laid-out gardens and terraces. Pavements are laid and walls built to give hold to vegetable growths, and sprayed to encourage lichen and mosses symptomatic of hoary antiquity. Oak is greyed with lime and sandblasted to give it texture, marble is stained, gilding and paint are toned and glazed to obtain the effect of age. The same effect is sought by reversion to materials and methods that were used of old time. The materials selected are such as weather well and soon lose their rawness and novelty. Bricks are rough and small, joints are wide and white, and pointing is eschewed; timber is wrought with the adze and peppered with protruding pins; stone is roughly tooled and so left; wall plastering is finished with an undulating surface; roofs are laid in gently sweeping curves and of second-hand tiles, if such may conveniently be got.

Some may be inclined to divide these methods of treatment into legitimate and otherwise. The use of the adze, for example, though somewhat of an affected archaism, may be tolerated; while the sandblast is a fraud and a fake. The whole tendency will be condemned by others as unwholesome, decadent, and dilettante. But if the surface produced upon timber by the sandblast be artificial, is it one whit more so than that produced by the circular saw or the planing machine? And if greying with lime be illegitimate, what about yellowing with boiled oil? And, finally, if it be a fraud to make new buildings look old, how shall we characterise the really successful attempts of many architects to make old buildings look new?

Education of the Public.

The question of the education of the architect is ever with us, but what is really pressing is the education of the general public. However scholarly and efficient as a body architects may be, they are powerless until the outside world becomes interested and appreciative. If not exactly fish out of water they resemble fishes in this, that they always have to swim with their heads against the stream. However, there is little doubt that among educated people the knowledge of architecture has made enormous strides during the past thirty years, and I think that for this advance connoisseurship or the

collecting mania is largely responsible. It does breed in its victims a feeling for form, an appreciation of good workmanship, and it creates a standard. In other words, it educates popular taste.

XVIIIth-Century Art.

It would seem to be partly the cause and partly the effect of the present popularity of XVIIIth-century art, which is, at first sight, so strange and unaccountable. What is there in its refinement, repose, and freedom from advertisement, its coldness and aloofness and well-bred restraint to appeal to a bustling and commercial age? For art does not go by contraries. It is an expression of contemporary life. The haphazard, unrelated, and individualistic dwellings of the Victorian era, for example, reflect clearly enough the industrial expansion of the time and consequent emergence of the middle classes. They are eloquent of newly fledged and inarticulate ambitions, of that self-assertiveness and carelessness of treading on another's toes so characteristic of the race of men who have started in life with the proverbial shilling.

The author of a recent article on "The Aristocratic Influence in Art" notes with surprise that this cult of Georgian art is "accompanied by no sign of interest in the human significance of the style. It never seems to be imagined by its votaries that XVIIIth-century art, coherent and consistent as it is in all its details, stands for a certain definite philosophy of life. Not a trace does it exhibit of the superabundant vitality and warmth of popular art, but rather inclines to a certain coldness and arrogance of expression, its very perfection of taste lending it an air of exclusiveness, as a thing aloof from common appreciation. It is its aristocratic purpose or tendency which constitutes its note as a style," and is an accurate reflection of the aristocratic ascendancy which began with the overthrow of the autocracy of the Monarch in 1688, and lasted until the Reform Bill. The author goes on to suggest that the coming democratic ascendancy will be registered in art in the same way, and concludes that "the air is full of promise. Beneath modern connoisseurship, itself the inevitable legacy of the aristocratic epoch, a healthier and stronger movement is fermenting. It is from the workshops of England that the rescuers of our art are coming. In the modern democratic advance lies the best hope for art." This reads like an echo of the old arts and crafts movement, but there is room for serious doubt whether great art can be born or thrive under a democracy. Athens was to all intents and purposes an oligarchy, so was Venice. What has Switzerland done for art? And she alone among democratic States has had time to show her capabilities.

Still, if there be ground for this hope, if the democratic advance be reddening the horizon, surely our public architecture should catch some reflection of the coming dawn. To take certain buildings of importance and representative of diverse activities—the Victoria and Albert Museum and the Birkbeck Bank—are these aristocratic or democratic? I cannot tell. Then what of the Ecclesiastical Commissioners' offices and the Imperial Hotel? Of the Wesleyan Hall and Harrod's Stores? Are these "the inevitable legacy of the aristocratic epoch," or signs that a "healthier and stronger movement is fermenting," and that it is "from the workshops of England that the rescuers of our art are coming"? Again I cannot tell.

Art of the Jerry-Builder.

But of this I am convinced, that we have a form of architecture which is pure vernacular, racy of the soil, straight from the "great heart of the People." It is built with entire and obvious singleness of aim, without affectation or conscious striving after beauty, and of the materials that are easiest to be got. The professional architect, that bogey of a certain school of critics, has no part nor lot in it. It comes as direct from the workshop as anything possibly could do. I allude to the architecture of the typical suburb, of the artizans' quarter, of the speculator, in other words, the art of the jerry-builder. Perhaps this is where the true hope for architecture lies. Who can tell?

Style and New Material.

The main purpose of all mechanical inventions, from the printing press onwards, has been not that things may be better done, but that they may be more quickly done. The ideal of speed has supplanted the ideal of efficiency. This, I suppose, is the chief recommendation of reinforced concrete as a building material. For instance, we are told that in the United States of America a wall 200 ft. long and three storeys high can be made in a single day, with all its architectural trimmings of buttresses, pilasters, pediments, and what-not complete; and that after forty-eight hours it is sufficiently set to be elevated into position. In the same way a simple four-walled building can be cast in four pieces, which are then raised on jacks, and put together like a box, ready for the lid to go on. This is quite legitimate evolution of monolithic construction; and if the method does not commend itself to us it must be owing to our English distaste for pushing principles to their logical conclusion. After all, a genuine timber-framed house is erected in just the same way, each wall being put together on the ground and then hoisted into place.

What concerns us here is the influence for good or ill which this new method of construction is likely to exercise upon the art of architecture. Attempts have been made abroad if not at home to originate a style peculiar to a new and untried material. We are to use it in the most direct way possible, with entire truth to its qualities of thinness, toughness, and so forth. A monolithic building should achieve such expression as it is capable of without imitation of other materials or reminiscence of other methods of construction. Let it confess itself for what it is without concealment and without shame. This is the way, we are told, to achieve character; beauty may come later. *Ex forti dulcedo*—out of the strong will come forth sweetness.

But whatever the material we are using the natural conditions of gravity, weather and light, remain unchanged; and our endeavours to meet these conditions cannot be expressed in ways wholly different from those of the past. We are not in a state of architectural innocence; the fruit of the tree of knowledge has been tasted; and sooner or later we are forced to cover our nakedness with the usual paraphernalia of the architect's wardrobe.

Some, again, are sorely puzzled over the proper treatment of the wall face. One will employ acid to dissolve the matrix and expose the aggregate, another will tap the surface to remove the aggregate and emphasise the matrix. A third, following a counsel of despair, cloaks his skeleton with stone, brick, or faience, which does not seem a great advance upon the Tower Bridge type.

Ferro-Concrete.

To the man whose tastes are calculating and scientific ferro-concrete makes an irresistible appeal; whereas, in the view of the *laudator temporis acti*, an ounce of tradition, that is to say, experience methodised by the knowledge that comes with centuries of practice, will always outweigh a ton of professional theorising. Though, I daresay, he will be glad enough to use it on occasion, however shamefacedly, to help a lame dog over a style or cut some Gordian knot of construction.

If one were concerned to deprecate its use for general building purposes as likely to retard genuine architectural advance he would, I suppose, do so on some such grounds as these. Firstly, that by its use it is quite possible to erect buildings of monumental scale with walls of startling thinness. But if we are to enjoy beauty in a building there must be restfulness; and to be restful it must appear stable. All supports must satisfy the eye as to their adequacy as well as the intellect. It may be thought that this is all matter of association; in time the eye will accustom itself to lightness of effect. There is some truth in this, and no doubt those whose days were spent under the old roof of Charing Cross Station felt no misgivings as to its stability. But familiarity is not all. The reason why steel, whether embedded or not, can never be æsthetically satisfactory as a weight-carrier seems to be partly that it is not a na but an artificial product (we do not fi in nature resisting strains and stresse does the growing timber of the forest tr the rocky vault of the cave), and partly all fine architecture is generous of materials. It is never content with a mum of solidity or a bare margin of strea It has been left to the engineer and speculating builder to work that out in several lines.

In the next place he would urge th greatly increased use of reinforced con would have a disastrous effect upon portion as we have learnt it from the monuments of the past. And until they disappeared from the face of the earth standard remains fixed, quite apart from Vitruvian rules or mathematical ratios.

Lastly, it is in reality a method of d tive construction quite independently any outer casing. To the eye a beam c inforced concrete differs in no way fr beam without such reinforcement. again, no doubt our critic would be met the reply that so far as proportion deception are concerned it is all a m of education of the eye. When that become habituated to the new metho building his objection will cease to hav force. Be that as it may, I am dispos agree with him that it will never prod Mont S. Michel or a Caprarola, wha may be its adaptability to modern need

The Shop-Front and Block of Flats

Just as the church and the castle ma taken as typical mediæval aspirations we may safely select as the building representative of the spirit of this indu age the shop-front. It has been dinned us from our architectural cradles as a axiom of criticism that every edifice mu expressive of its purpose and use. the requirements of an up-to-date may be an up-to-date shopkeeper be trusted to know. In the din rattle of commercial activity it is d less necessary to yell like a virago on a step in order to be heard; and so the man declares for the largest possible of glass for the advertisement of his w and threatens the building owner wit appreciably lowered rental for every pos pier beyond the engineer's minimum.

What, then, is to happen when the c tions imposed are vulgar, sordid, or worthy? Simply this, if the axiom stated is to hold good the architecture have to follow suit; and then the stra result ensues. To save his art from wreck the skilled architect throws overb its first principles, and his design becom inexpressive or lying mask. But such ditions do not hamper the careless titioner. He complies with them will enough, and so his work is actually characteristic and expressive than th his conscientious brother. Look at American "store" in Oxford-street. A design, but surely not a shop! It h the appearance of a great building upon evil days and converted from nobler use into a drapery establishmer do not blame the architect for the decey I commend him. The vision of atlantic hustle expressed in terms of tectural permanence would, I think, one awake o' nights.

Or we may consider another class of ing common enough in large towns—the of flats, or the oddly-named "model lings." Here conditions which imply s storeys of approximately equal height, divided into suites of small rooms, pr of necessity frontages in which the pr tion of solids to voids is much the sa in a sieve. Add to this the necessi building cheaply enough to show a percentage upon capital invested, and you whether architecture so conditione be monumental.

But it is possible to take a rosier "The true artist," it is said, "m tatingly accepts the conditions imposed him, whatever they may be, and is ofter to turn the stumbling-block in his path a stepping-stone to higher things." I in this spirit that a lecturer not long twitted architects with overmuch clingi the past. He maintained with spirit

architecture must be living, and in order to live must find its poetry in the life and its inspiration in the opportunities of the present; and surely never were opportunities so many, so splendid, or so various as now. To make his meaning clear he was obliging enough to enumerate some of the occasions upon which the divine *afflatus* may be trusted to inspire the erection of poems in (I suppose) ferro-concrete. Are we not building every day, he cried, hotels, railway-stations, asylums, baths and washhouses, and abattoirs?

Town Planning.

And now what of town planning, that ancient fad of doctrinaire and tyrant, whether monarchial or democratic? For Nebuchadnezzar had his views upon the subject no less than Mr. John Burns. Is the movement which has by this time gained considerable momentum likely to communicate any forward impetus to your art?

The cottage heresy, to which I alluded just now, is indicative of a sickness which has long afflicted British architecture, and that is pettiness. By this I mean not only the material malady, timidity of scale—so noticeable in our larger buildings—but the more serious spiritual disorder, smallness of idea.

Have we any ground for hope, based on the experiments at Port Sunlight, Letchworth, Golder's Green, and Gidea Park, that when the designer has to think in acres instead of poles and in streets and squares instead of single houses his ideas will be braced to a larger scope, or will they peter out in a mere multiplication of diminutive and unrelated units?

In all spheres of activity the age is one of small men and myopic vision. When the poor millionaire can conceive of no larger, nobler employment for his own wealth than providing greasy novels for idle people to thumb, how can we expect bigger things of those corporate bodies who have the spending of other people's money? Schemes whose greatness is to be measured in ideas rather than acreage have been carried out under the grinding tyranny of a despot, never, so far as I know, under the axe-grinding tyranny of a municipality.

Still, in so far as it may tend to promote orderliness and grandeur of conception the movement is all to the good. But in appraising its value it should be remembered that the congestion which the recent Act attempts to relieve is, after all, only a symptom. The real disease is the monstrous overgrowth of modern towns. Check that by legislation if you can; all else is merely palliative.

But housing reform and the planning of lately towns with grandiose approaches to public buildings centrally placed are, of course, entirely distinct problems, since it is not the poor who will inhabit these pompous avenues. The latter, if a less pressing need, naturally affords greater scope for architecture. At the same time there is a certain unpleasant kind of artificiality about the town that is consciously planned. The normal town is not planned, but grows, and that with an unmechanical, quasi-organic growth. Certainly we have no need to imitate this in our drawing-board schemes, but I think the town planner should note that if there be one unvarying æsthetic principle which the town that has grown with the centuries—the natural town, if I may so call it—teaches it is this: the narrower the street the taller the houses, and, conversely, the wider the street the lower, relatively, do the houses become. Whatever extraneous causes may be adduced, as, for instance, value of land, cramped sites on hilltops, mutual protection, and so forth, the law that is excellent proportion is possible between lofty buildings and wide streets is incontrovertible; and it is no less true that the effect of a narrow lane bordered by two-storied tenements is one of typical squalor and meanness.

In a recent work on town planning the author shows that he does suspect the existence of this law, and feels rather uneasy in consequence, if one may judge by the haste with which he hustles it out of sight as an unwelcome intruder.

For, of course, modern notions of hygiene and traffic facilities incline to the spacious boulevard—icy and wind-swept in winter, dusty and scorching in summer, and wide enough to enable the greatest possible number of steam-lorries to rattle your windows and jar your nerves in the shortest possible time.

But where, I ask, is the lover of good things wont to linger in his search for beauty and historic interest? Among the straight, unhaunted streets of Mannheim, Karlsruhe, and Turin, or among the memories and surprises of Toledo, Siena, and Bruges? And as to what constitutes the ideal town, some of us may be inclined to think that the opinions of the painter and the poet are at least as valuable as those of the inspector of nuisances and the sewage farmer.

Traditional Treatment of Material.

When all deductions have been made for the evils to which architecture has to submit in following the dictates of fashion or in compliance with requirements of ever-increasing complexity and uselessness, we may, I think, claim to have made real progress in one, and that a most important, particular, since it covers nearly the whole ground—namely, sympathetic and, as far as possible, traditional treatment of material, involving as it does both texture and colour. We have realised that architectural, like other beauty, is only skin-deep.

Though the spectre of a contaminated and underbred Gothic still haunts the purlieus of Westminster, it is now generally admitted that in this style of all others traditional methods of workmanship and construction are, strictly speaking, essential, and that where they are neglected the bedizening of buildings with the mediæval stock-in trade is perverse and futile.

It is also matter for congratulation that in recent work we seldom meet with those combinations of red granite, red Mansfield stone, and red brickwork black pointed which were at one time in such high favour. Nor do we any longer hold that the collocation of varnished pitch-pine with yellow faïence makes an agreeable scheme of interior decoration.

Such examples are, of course, only typical, but these and all other improvements in taste and feeling have been brought to pass not by the invention of new materials and methods, but by increased knowledge of the past. The further we are enabled to enter into that rich heritage the clearer will it become to us that "in its contact with the ages the wisdom of the ancients has come down to us absolutely unimpaired."

Mr. E. P. Warren,

in proposing a vote of thanks, said the paper was a most entertaining and suggestive one, but destructive rather than constructive, and the fears predominated over the hopes. While Mr. Eden was inclined to be pessimistic, he (the speaker) had hope in many directions. He wished to protest against coupling Keble College with Eaton Hall as "essays in the ungainly." The proportions at Keble were fine, the chapel splendid, and much of the detail admirably designed, though hard in execution. It was un-Oxonian and inappropriate where it is, but in comparison with the Parks Museum facing it it was superb. Sedding, with his quick-witted charm and rather unscrupulous flitting from form to form in search of originality, prompted restlessness, and begot an evanescent unscholarly school which drifted along to inevitable reaction. The earlier Gothic devotees had a kind of scholarship, and they had that great and wholesome driving force of absolute conviction which is what most of us lack nowadays. Butterfield, Bodley, Street, and Pearson all had conviction and all had personal force and personal vision—real enthusiasm and an unhesitating sense of the vital importance of their Gothic presentments: a faith that moves mountains. That faith had waned, and as yet there was nothing so strong to take its place. After a short dalliance with the wriggly abominations of New Art, we had, at any rate, steadied down to a saner and more educated view of the meaning of architecture. There is, and probably there always will be, a tendency amongst men lacking in imagination, or of little originality—*i.e.*, the majority in any walk of life—to borrow fashions, and our French neighbours, who were convinced, direct and purposeful, were in the ascendant here. This had its benefits and its dangers—benefits in the lesson in proportionate refinement that the best French work can teach; dangers in the unsuitability of a manner alien to the climate, the character and the needs of this country, and further danger in the half understanding, the half assimilating of foreign ideals. Foreign work needed translation to the native vernacular to be successful here. If we must borrow we should at least translate, as we cannot well supply any form of architectural inverted commas to suggest a mere quotation. Men of strong bent, of fervid imagination—men, in short, of character—could follow, like Inigo Jones and Wren, foreign ideas and forms and express themselves still with native vigour therein. To genius all was possible, and genius could take care of itself. We had to consider the average run of the mildly talented, for whom the architectural outlook was difficult, if not obscured. It seemed to him that safety was only to be found in a steady purpose to make all architectural design subserve its appointed ends, and express its individual meaning, and to cast aside all forms that did not manifestly contribute to or emphasise construction. There was no need to ignore tradition or the comelinesses and pleasantnesses of ancient acceptations. The point was to understand, without which appreciation or sensible application of accepted form was impossible. And to this end patient, enthusiastic study, and careful education were necessary. Honest constructive training and refined schooling in expression would help the architectural students to avoid the many pitfalls presented by the facilities of modern methods, the steel and ferro-concrete aids to constructive disabilities. He believed there was hope, and strong hope, in the steadily growing consensus of architectural opinion. He saw every day and everywhere better, plainer, and more reasonable building and less ornament. Even jerry-builders were building a bit plainer and more reasonably. There was a lot of leeway to make up, but it was to the rising generation, who were to push us from our stools, that we must look for greater sanity, more earnestness, and less nonsense.

Mr. H. H. Statham,

in seconding the vote of thanks, said he repudiated the idea that architectural beauty was only skin-deep. The curse of the day was the desire to do everything in a hurry; buildings were run up as fast as possible in order to make them pay money, and he did not know how we were to get good architecture or good buildings if it was done in a hurry. As to shop fronts, he thought shopkeepers were learning something, and that they were beginning to find that an architectural shop front might pay in the long run. As to cottage architecture, what had struck him in visiting the new garden cities was the foolish attempt to imitate the picturesque of another generation. There was no need to build high-pitched roofs now, especially as there was the possibility of building these roofs in concrete. Another weakness was the putting of small windows in these houses; they looked very pretty, but people want light. He was inclined to think that there was rather an effort to come round again to tradition in architecture, and it was by giving due weight to the finest traditions of the past that one should be able to do something equally good in the future.

Mr. Arthur Keen

said they had heard Mr. Eden's fears, but very little of his hopes. Mr. Eden was not quite fair to the present Georgian revival. It was justified because it was really appreciated by the clients. He was afraid we should not settle down to anything approaching a national style in view of the social changes and developments going on at a faster rate than of old. It seemed to him that the democratic movement would lead to an actively socialistic world, and architecture would become very much officialised, and nothing would be satisfactory which was not academic and formal and scholarly. The hope for architecture in the future lay in training students on those lines, instructing them in the principles which tend to fine architectural conception; teaching to understand the value of mass and proportion, light and shade, and the big characteristics of sound architecture. If students had a proper idea of that it would not matter what developments occur or what style they

expressed themselves in—we should get fine architecture of its kind.

Mr. A. E. Richardson

said Mr. Eden should not have taken such a pessimistic view of things, but should have coupled architecture with hope. The paper struck him as a confession of indecision. If Mr. Eden showed any predilection or sympathy for any particular form of architecture, it was on the Gothic and not the Classic side. Mr. Eden confessed himself as being hopelessly bewildered by the number of past styles; surely a way should have been shown out of the maze. In reviewing the present trend of architecture Mr. Eden should have considered more thoroughly the modern problems which architects have to meet. He (the speaker) thought architectural design might be divided into three main groups:—(1) The monumental manner—civic and city buildings; (2) the suburban manner, which without apeing the city architecture, should be a reflex of its truths; and (3) the grand domestic manner and the avoidance of prettiness. This division was well illustrated in the development of the country town. The centre of the town was given up to the Town Hall and the leading offices; then follow the various important shops, the town houses of the foremost townspeople, the semi-country houses of the well-to-do who live on the outskirts of the town, and, finally, the isolated country house two or three miles outside its boundaries. The hope of modern architecture lay in the furtherance of a cosmopolitan style. Insular prejudices must be forgotten and a broader view taken of the changed conditions of life. To isolate ourselves from the main movements now taking place all over the world was a policy of suicide.

Mr. V. T. Hodgson said he thought the paper was really a hopeful one.

Mr. Alan Potter

said we need have little fear for our domestic, collegiate, and ecclesiastical architecture, they were the outcome of tradition; but there was room for fear in regard to our city architecture, for which there was a lack of sound tradition to build upon. Added to this we knew superficially too much about the past and thought too little about the present. All ancient architecture was the outcome of centuries of work, and was always the development of the modern architecture of the time. There was a constant attempt to improve on the last building erected, and this was the chief lesson to be learned from history. We should build up a tradition in regard to our city architecture in the way the ancients built up their traditions, gradually eliminating those formulæ of ornament, the so-called "Orders," bequeathed to us by our Renaissance ancestors, and finally evolve an order or an arrangement of architectural features suited to our modern problems of large window spaces and large floor areas. The hope for the future of city architecture lay along these lines.

Mr. Cecil C. Brewer

said there was not a single hope in the paper. This was an age of competition, and what was that doing for us? It was making men think about planning and give up thinking about elevation. It was training a school of skilful and rapid planners and producing in many cases extraordinarily fine plans. There was hope in that our men were being scientifically trained as planners and were forgetting a little about elevation.

The Chairman,

in putting the vote of thanks to the meeting, said he always listened to what a man had to say with one eye on his work. Mr. Eden was one of the few men we have ahead of his time. The paper they had heard separated the artist from the Philistine without the latter being aware of it. It was a paper full of golden silence; the reticence of the good craftsman. If he was right, Mr. Eden regarded any recent improvement in our architecture as due to our increased knowledge of and respect for the past. That past was our too-unstudied heritage. We were, in fact, heirs to the æsthetic view and also to the organic view; and we were gifted with ordinary human intelligence in the ordering and use of our inheritance. He detected in Mr. Eden's view three hopes for the future:—(1) Tradition; (2) enthusiasm; (3) definite principles. The first stood for hereditary skill—the gift of the age of thought, typical of the Classic spirit; that was to say, the love of definition, intellectual spaciousness, the search for finite perfection. The second, enthusiasm—the gift of the age of action, typical of the Middle Ages, the magical and mystical element, the search for the infinite. The third hope was in definite principles, the result of all that had gone to produce the present; the two former ages added together giving us the freedom of both views, the æsthetic and the organic. They gave us the power that was to stamp our work with style, to resolve apparently complex problems into their component parts, and to produce architecture as the result. We have before us two types; on the one hand, the architect who within certain well-defined lines always achieves architecture of one type. And on the other, the man who did well with each call upon him, because he had learned to use all his faculties of thought and selection.

The motion having been heartily agreed to,

Mr. Eden,

in reply, said he was not quite as pessimistic as some of his critics appeared to think: possibly the hopes could be read between the lines. In reply to Mr. Warren, his personal opinion was that the colour, proportions, etc., of Keble College were wrong. As to architectural beauty being only skin-deep, he thought that was as true of architecture as of human beings. He did not know where St. Mark's would be without its skin.

The next meeting will be held on March 11. A paper will be read by Mr. C. A. Daubney, F.S.I., A.R.I.B.A., entitled "American Architecture." The House List for Session 1912-13 will be announced.

THE ARCHITECTURE OF STAMFORD.

On January 26 Mr. H. F. Traylen, A.R.I.B.A., gave a lecture on the "Architecture of Stamford," before the members of the Leicester Architectural Association. The lecture was illustrated with a series of lantern slides of the chief features of architectural interest in Stamford.

Mr. Traylen pointed out that, whilst there was no Saxon work in Stamford, they had an admirable example of that period in the neighbouring church at Barnack, about three miles distant. The oldest work in Stamford was the Norman Priory of St. Leonard. It was founded by St. Wilfrid of Ripon in the VIIth century, and was restored soon after the Conquest by William of St. Carlief, Bishop of Durham. The ruins consist of the west end of the nave of the chapel, five arches of the north arcade, and part of the clearstory above them. Two or three of the eastern bays may date back to the Conquest, the rest are stamped with details of later periods. The glory of this interesting fragment is the west front, which dates back to the end of the XIIth century, but was restored by the Marquess of Exeter in 1833.

This Priory is especially interesting becau of the features showing the transition fr the Norman to the Early English, cushi caps, simple moulded arches, no carving; the next arch there are bell caps, rich mouldings and slight "feelings after" stiff-stalked XIIIth-century work, and the respond the sturdy fat column is split into a central semicircular member w detached shafts on either side each s mounted by its own capital. The west fr continues the wonderful development in banding of the shafts, increased ornament the arches, almost fully developed carving, a other slight indications of perfect Ea English.

Tracing the development further, arcading outside All Saints Church is next order, the caps, columns, and arches of south arcade of the same church. Then, crown all, the beautiful St. Mary's, with arcading increasing in richness upwards to great windows, triple orders of arches s shafts.

The only portion of XIVth-century w in the town is the spire of this same chur and which has characteristic and grace details: the ball flower, the ogee curv arches, and each niche on the spires of tower containing a figure of an apostle.

The XVth-century work is especia beautiful; all the essential details are pres in the south aisle windows, but under t centred arches; the buttresses are notably good.

Of the later Perpendicular there are seve very fine examples in parts of All Sai Church, St. John's Church, St. Marti Church, Browne's Hospital (XVIth centur all well worth study in all details stonewo woodwork, roofs, and other parts.

Mr. Traylen here ended his description the Gothic and continued his lecture into Renaissance, the houses supplying all tha real lover of this style could wish. There Tudor work, gables, stone mullions, curio wrought in the fitting on of the flat gable the bay below.

St. Paul's-street is a fine example, owes its picturesque appearance from fact that the gables face the street.

Queen Anne work is represented splendid examples in St. George's-squa Barn-hill, High-street: no keystones o the windows, beautiful overdoors, project cornices.

Next we have Early Georgian double even treble keystones to door and wind projecting quoins, classic doorways, cons and brackets to the cornices, some project 3 ft.

The old walls, bastions, Castle-hill, remains of Castle Chapel, crypts, tombsto and woodwork were also described.

These were all illustrated by means lantern slides, as were also many ot features of ecclesiastical architecture in Decorated and Perpendicular styles.



The Domus Dei of Stamford.

Stamford possesses some fine monuments
n the churches, notably those of the great
ord Burghley and other members of the
ecil family, in St. Martin's, and the
hillips and other monuments in St. Mary's.
tamford possesses a considerable number of
ede houses, most of which are of great
nterest to the architectural student, and Mr.
raylen ably described and illustrated the
omus Dei of Stamford (Browne's Hospital),
nd the Bede House founded by the great
ord Burghley. Passing to domestic archi-
cture in which Stamford is exceptionally
ch, the lecturer showed views of Burghley
louse, and of examples of Tudor and
enaissance work in various parts of the
own. Reference was also made to the
xcellence in design of many of the shop
onts.

As a residential town Stamford is excellent,
s added, and the scenery and surroundings
re delightful. People imagine that the town
flat, being in Lincolnshire, but it is not so.
he Welland runs through the ancient
orough of this the third oldest corporation
n England, which is connected with English
istory from Danish times.

ARCHITECTURAL SOCIETIES.

York and Yorkshire Architectural Society: Life of Michele San Micheli.

A lecture by Mr. J. Stuart Syme, ic.R.I.B.A., was delivered on the 14th ult. efore this Society on "The Life and Work f Michele San Micheli." The President, r. A. B. Burleigh, Lic.R.I.B.A., occupied ie chair.

In the course of his paper Mr. Syme id:—

"A study of the life of San Micheli is teresting not only on account of the dis-nctive qualities of his work, but also on count of his position in perhaps the most portant period of the Italian Renaissance. orn in 1484, the son of an architect, brought o in an architectural atmosphere, sent to ome at the age of sixteen to study for his rofession, it is not surprising that he eveloped into an architect *par excellence*, in ntradistinction to some of the other masters ho bestowed part of their allegiance on the her arts of sculpture and painting. Nor is surprising that his work appears to have rtain architectonic qualities lacking to some ttent in the works of his contemporaries. he most famous architect practising during n Micheli's youth was Bramante, who was gaged during the early part of it in Lom-rdy, not so very far from Verona, and ring the later years in Rome. In fact, the outh and the master went to Rome about e same time—namely, about the year 1500, ramante to engage in the work of the



Tower of St. Mary's Church, Stamford.

Cancellaria and Giraud Palaces, and the youth, we can hardly doubt, to seek inspiration equally from new and old work, the practice then, as it is to-day. We may be



St. Leonard's Priory, Stamford.

pardoned, therefore, for supposing that San Micheli came under Bramante's influence, and there is something to support this in the similarity of the façades of the churches of Santa Maria in Organo at Verona and San Satiro at Milan, not to mention other points of similarity in various window and other details.

San Micheli's greatest claim to fame arises out of his military architecture. His first direct connexion with such work appears to have occurred when he was about thirty years of age, and within a few years he had effected a revolution in the design of permanent fortifications, the importance of which entitles him to rank with Vauban among the greatest of military engineers of all time. This work was the invention of a new type of bastion, whose front was angular, the apex towards the attack, and the subtending sides when produced cutting the line of the curtain outside the bastion and at points more or less remote from it as circumstances directed. The new arrangement permitted the faces of the bastion to be completely swept by fire from the curtain, and also to some extent from the adjoining bastions. This was impossible with the square and circular towers in use previously, and, combined with the other new features the designs presented, was of enormous advantage to the defence. It should be pointed out that Viollet-le-duc has disputed San Micheli's claim to this honour, in favour of some unknown French engineer, but his evidence is by no means conclusive. San Micheli seems to have been engaged almost exclusively in fortification work for a number of years, and there can be little doubt that this experience, which involved a careful consideration of questions of utility and sound construction, greatly influenced him when called upon to design works of a more decorative and architectural character.

Two of his finest buildings are the Porta Nuova and Porto del Palio at Verona, both designed with remarkable simplicity and directness. He also designed amongst other work four fine palaces in Verona, of which the Pompeo and Bevilacqua are the most notable, and the Grimani Palace at Venice, the perfection of whose lower storey is somewhat marred by the faulty proportion of the upper stages for which it is possible that San Micheli was not responsible. He made several designs for churches, but, unfortunately, few of them were carried into execution, and even these were not completed in the author's lifetime. As a designer he was gifted with considerable facility, which he exercised with the greatest refinement and restraint. His work, while sound both constructionally and artistically, is never dull, and does not lack originality. If we may believe Vasari, the character of the man was in keeping with his work, and would justify one in regarding the study of his life and art as well worthy the attention of the thoughtful members of his profession."—A hearty vote of thanks was accorded to the lecturer on the proposition of Mr. G. W. Milburn, seconded by Mr. A. Cowman, Lic.R.I.B.A.

The following officers for the present session have been elected:—President, Mr. A. B. Burleigh, Lic.R.I.B.A.; Vice-Presidents: Mr. T. W. Whipp, A.R.I.B.A., and Mr. J. H. Rutherford, Lic.R.I.B.A.; Hon. Treasurer, Mr. J. D. White, Lic.R.I.B.A.; Hon. Librarian, Mr. E. R. Tate, Lic.R.I.B.A.; Hon. Secretary, Mr. Harold E. Henderson, Lic.R.I.B.A.; Assistant Hon. Sec., Mr. J. M. Andrew; Members of Council: Messrs. A. E. Munby, A.R.I.B.A., S. R. Kirby, Lic.R.I.B.A., F. Dyer, K. Ward, Lic.R.I.B.A., J. M. Andrew.

The prizes for the best set of Measured Drawings have been awarded by the assessor, Mr. A. E. Munby, M.A., A.R.I.B.A., to:—First, Mr. C. Leconby; and second equally divided between Mr. D. Morrell and Mr. C. W. C. Needham.

Glasgow Royal Technical College Architectural Craftsmen's Society: A Cistercian Monastery.

At a meeting of this Society on the 16th ult. Mr. James S. Boyd presiding, a lecture was delivered by Mr. Jas. A. Lauchlan, entitled "A Cistercian Monastery: (1) Historical; (2) Architectural; (3) a Plea for National Art Tradition." The first part dealt with the history of Europe from the beginning of the Christian era to modern times: it showed how Christian Monarchism originating in Egypt, was introduced into Europe *viâ* Rome, and was organised to suit European ideals by St. Benedict, whose rule of life became one of the most important factors in mediæval civilisation. Then followed an outline of St. Bernard and his work, and the influence of the Order on agriculture, commerce, and art in particular. The lecturer described the Anglo-Romanesque School of Architecture and the influence on it from the Continent. Although there was no style of architecture peculiar to any of the monastic Orders, independent of the country in which they settled, yet the uniformity in arrangement of plan and design in Cistercian works makes the houses of this Order easily picked out from that of their contemporaries, and this peculiarity of Cistercian work was pointed out as one of the most important influences at work on the architecture of the XIIth century. The keynote to Cistercian work was shown to be a logical simplicity of purpose, a rejection of all unnecessary features and ornament which was a direct contrast to the work of their contemporaries. The development of their plan from the simple unaisled churches of their first years to the typical Cistercian plans of Kirkstall and Fontenay was followed, then after the development of the presbytery from the simple unaisled examples of Buildwas and Kirkstall to the more or less complicated systems of Citeaux Pentigny and Fountains, Roche and Bylands was shown, explained by the need for more chapels as the number of



Doorway, Barn Hill, Stamford.

monks in Orders increased. In general design and construction simplicity was again the predominant feature. The aisles were merely passages for intercommunication, and where not vaulted were covered with simple lean-to roofs: there were no triforiums at first (*e.g.*, Fountains, Buildwas, and Kirkstall), although introduced later at Rochecet; the details were kept simple in form, and, although there are signs in later works of a break away from former austerity, yet it is always marked by a quiet restraint and refinement. The treatment of gable and external walls was illustrated by examples at Fountains, Kirkstall, Bylands, Tintern, and others. Regarding pointed arch-vaulting, it was shown that the Cistercians, though not the inventors, hastened the popularity of the former, and were one of the first to arrive at the complete Gothic solution of the ribbed vault, as the result of local experiment by the monks. The arrangement of conventional buildings and apartments was fully described. The lecturer appealed for a revival of arts and crafts, a revival of Gothic, and styles practised by our fathers, founded on the principles of truth and virtue as taught by the seer of Coniston, John Ruskin.

GENERAL NEWS.

Professional Announcement.

On and after Monday, March 4, the address of Mr. H. Ascough Chapman, F.R.I.B.A., architect, Leeds, will be Cantelupe-road, Bexhill-on-Sea.

Slade Professorship, Cambridge.

Supplementing our note (p. 201) that Mr. Edward S. Prior has been appointed as Professor Waldstein's successor, it may be mentioned that the first holder of the Professorship (1869) was Sir M. Digby Wyatt, and the other architect who has occupied the chair (1886) was J. H. Middleton, who died in 1896.

The Royal Sanitary Institute.

His Royal Highness Prince Arthur of Connaught, K.G., has consented to become Patron of the Twenty-Seventh Congress of the Royal Sanitary Institute to be held at York in July next.

A Museum for Brentford.

The late Mr. Thomas Layton, F.S.A., of No. 22, Kew Bridge-road, Brentford, who died on September 4, aged ninety-two years, has left estate of the gross value of 43,360*l.* Subject to the interests of certain beneficiaries for life, he has bequeathed 20,000*l.* Consols, his residence in Kew Bridge-road and grounds, his collection of early British bronze and other implements, and his pictures, prints, and articles of *vertu* to three trustees for the establishment and housing in the premises of a "Layton Museum" for the benefit of students, over eighteen years of age, interested in antiquarian and scientifical research. The trustees are empowered to devote portion of the capital to enlarging or rebuilding the premises upon the present site.

Decoration of the Houses of Parliament.

It will be remembered, says the *Times*, that some fifteen months ago the east corridor, leading from the Central Hall in the Houses of Parliament to the lower waiting hall, was decorated by six historical panels. The subjects, chosen chiefly from the Tudor period, were from the reigns of Henry VI., Henry VII., Henry VIII., Edward VI., and Mary, and the harmonious Gothic decoration achieved by the six painters, who worked in association with each other, has given a great deal of pleasure to members and visitors. Above five of the panels in this corridor are windows, but the space above the sixth panel is filled in with masonry. The donor of the fresco beneath was the ninth Earl of Carlisle, and the painter Mr. F. Cadogan Cowper, A.R.A., the subject being Erasmus and Thomas More visiting the children of Henry VII. at Greenwich. Lord Carlisle suggested, when the scheme was in train, that the tympanum of the arch above this picture should also be decorated, and generously undertook that it should be done at his expense. Mr. Cadogan Cowper was accordingly commissioned to decorate the tympanum of the arch, and the paintings, which are presented by the executors of the ninth Earl of Carlisle, are now being placed upon the spaces above Mr. Cowper's fresco. The subjects are the Kings Edward IV. and Richard III., with the arms, badges, and devices of the House of York.

Submitting of Plans.

At a recent meeting of the Garstang Rural District Council the Inspector reported that certain alterations and additions were being made to a residence, and that plans of the alterations had not been submitted to and approved by the Council, as required by the Council's by-laws. A letter had been received that morning from the architects, forwarding the plans, and expressing regret that plans had not been submitted before the work commenced. It was unanimously resolved that the architects be forthwith directed to stop the work and to pull down such portions already done as might be necessary to enable the Council's Inspector to examine the work, and a Committee was appointed with power to pass the plans afterwards if the same are found satisfactory. The Council intimated that in future if buildings were commenced without plans having been submitted and approved, in compliance with the by-laws, it was their positive intention to take legal proceedings.

CORRESPONDENCE.

Padbury *v.* Holliday, Ltd.

SIR,—The verdict in this case, as reported in last week's *Builder*, is of special interest to master builders, and one which merits their active consideration.

I venture to suggest the responsibilities of builders on their own work are sufficiently great as to necessitate some remedy to guard against the liabilities of the sub-contractor being added to their own.

This, I think, is best dealt with by a proper form of sub-contract.

In my own business I insist upon sub-contractors complying with Clause 20 of the Institute contract and signing a proper sub-contract, yet it is most curious that in many cases I am met with the answer that other builders, including many large firms, do not require a sub-contract, but are content to place a brief order only, thereby not only adding to the builder's responsibilities quite unnecessarily, but acting in direct contravention of the terms of their own contract.

Let me suggest that if every builder, in fairness not only to himself, but to his competitors, insisted on the use of a proper form of sub-contract one would hear less of the vexatious difficulties affecting not only the builders, but the architect and the client.

F. J. GAYER
(E. A. Roome & Co.).

St. Martin's Church, Kensal Rise.

SIR,—My attention has been drawn to the following extract from a lecture delivered by Mr. Thackeray Turner at the Carpenters' Hall on "The Unity and Difference in Art and Craft," and published in the *Builder* of February 2:—

"I made a pilgrimage the other day to Kensal Rise to see Batten's wonderful altar-piece, which was exhibited in the last Arts' and Crafts' Exhibition held in the New Gallery in Regent-street. The only satisfactory way of seeing it, I think, is to get sufficiently near to exclude from view all the surroundings, and to my eyes its great beauty only intensifies the offensiveness of the church itself. Had the triptych not been there I could have gone into the church and walked out again with the usual feeling that it was just a commercial production, but as matters now are one cannot help being exasperated with the complete absence, save the presence of the picture, both of art and of craft in the whole building. The pulpit is most elaborately worked in richly-coloured alabaster. The mason who fixed it used red putty, doubtless according to instructions or custom, to form the joints. In parts the alabaster is cream coloured, but still he used the red putty. Could that man have had any spark of interest in what he was doing? Of course, it is needless to point out that the whole pulpit is as wrong as it could be. It is obvious that if you have a natural material which is richly figured in itself, and you pick out the most varied pieces as being most beautiful, you should not carve it in order to add beauty, because by doing so the carving destroys the beauty of the marble, and its beauty destroys the effect of the carving."

I cannot defend the red putty, and I only know enough about the theories of carving in richly figured natural material to know that one school, to which the lecturer clearly belongs, says it must not be carved, another says it may be. As to the "complete absence save the picture of art and craft in the whole building," there is a good deal which evidently the lecturer did not know. The greatest pains have been taken to have both art and craft in the worthy decoration of the church. If they have not succeeded, the fault is not of "commercialism" in those responsible, but of the artists' or craftsmen's failure. Other judges, possibly as competent as the lecturer, have come to conclusions different from his. The same "Arts' and Crafts' Exhibition" that contained the beautiful triptych contained also Mr. Payne's cartoons of the east window, and the two artists worked, the one recommended by the other, in knowledge of each other's plans. The same Exhibition contained specimens of the beautiful letters designed by Mr. Gill, and the metalwork of Mr. Harold Stabler, who together wrought the memorial tablet on the south wall of the church. The woodwork of the choir stalls, screens, and morning chapel was designed by the late Mr. Dan Gibson, of Windermere, and fashioned by craftsmen of Kendal and Exeter in the workrooms of Simpson & Read. I mention the names because I believe they are well known for the best work to those who are expert in these matters. The memorial tablet to Dean Vaughan was designed by Mr. McGill on the recommendation of the late Lord Carlisle, a trustee of the National Gallery of British Art. The morning chapel window, it is enough to say, was designed by Mr. Anning Bell, than whom abroad or at home few English designers are better known. I agree with the lecturer that without harmony there cannot be art as a whole, and that the artist's works in the church are not yet harmonised. How can they be for these reasons? The church is eleven years old; the work has to be done slowly because we of Kensal Rise have little money, and we can only get one thing at a time; though the harmony is not there yet, the need of it has never been lost sight of. Only a month or two ago one of the foremost architects and designers in London spent several hours in the church with me in study and suggestion as to the best way of continuing the necessary decoration and attaining the harmony desired. Who will give us 1,000*l.* or more? Will the lecturer, whose aim, if it be worthy, must be no damage, but delight?

A. M. HANLEY, Vicar.

INTERCOMMUNICATION COLUMN.

Public Swimming-Baths.

SIR,—If your contributor, "Welwyn," can to communicate with me, I shall be pleased to give him information as to the first cost one or two existing baths of the size requires, the method of warming the water and the cost of fuel, etc. NEMO.

The Possibilities for an Architect in Australia

SIR,—I understand from various sources that the building trade is booming in Australia and I have been considering the possibility for an architect there. It appears that in Tasmania there is a demand for architects, and I shall be obliged if any of your readers can give me any information which would be useful to a young architect about to emigrate. My intention would be to obtain a position of an assistant and for this purpose I shall be glad to know of publications, such as the *Builder*, or of any other means of getting into touch with Tasmanian or Australian architects.

M. S. A.

BOOKS RECEIVED.

PRACTICAL CHEMISTRY. By Arthur J. Hall, B.Sc. (London: Longmans, Green, & Co. 3s. net.)

HOUSE PAINTING AND DECORATION. By A. S. Jennings. (London: Thomas Tofil. 2s. net.)

THE ABBEY OF ST. MARY, CROXDEN. Monograph. By Charles Lynam, F.S.A. (London: Sprague & Co. 25s.)

KÆMMERER'S LETTER-BOOK. (London: The Trade Papers Publishing Company. 30s.)

EDITORIAL SUMMARY.

Our first article deals with the threatened struction of the Old Town Hall, Manchester.

"The Associates and the R.I.B.A." is the le of a second article (p. 230).

In "Notes" columns (p. 231) will be found servations on: "Vacation Course, Sheffield iversity"; "An Isolation 'Hospital'"; "The retary of the A.A."; "The Competitive stem in America."

A meeting of the Architectural Association s held on Monday, when Mr. F. C. Eden d a paper on "Hopes and Fears for chitecture" (p. 232).

A brief report on the Architecture of Stamford, h illustrations, appears on p. 236.

n "Architectural Societies" (p. 237) short reports of meetings of: "Glasgow chnical College Architectural Craftsmen's ciety"; "York and Yorkshire Architectural ciety."

n Correspondence columns (p. 238) are ers on: "St. Martin's Church, Kensal Rise"; adbury *v.* Holliday, Ltd."

The Monthly Illustrated Civic Review (p. 241) ludes: "The Halifax Town Planning npetition"; "The City Development n"; "The Improvement of London"; and es.

The Building Trade Section (p. 247) con- ns: "Trade Unions and the Minimum ge"; "London Master Builders' Associa- n Dinner"; "Builders' Foremen and Clerks Works' Dinner"; "Bath Master Builders' ociation"; and "Projected New Buildings he Provinces."

Book Notices (page 251) include: "Brass- ibe Church"; "Chimneypieces and Ingle- oks"; "The House and its Equipment"; rtistic and Decorative Stencilling"; ilgrim Life in the Middle Ages."

Science Examinations for 1911" is the title n article on p. 252, dealing with the Annual port of the Board of Education.

The third spring visit of the Architectural ociation this year was made on February 17 the new galleries of the British Museum, a short report appears on p. 252.

n Law Reports (p. 253) will be found short rts of: "Allen *v.* London Guarantee and ident Company, Ltd."; "Hope & Sons, *v.* Goode."

MEETINGS.

FRIDAY, MARCH 1.

ral Sanitary Institute.—Mr. Edward Willis on iculations, Measurements, and Plans and Sections." m.

asgow Architectural Craftsmen's Society (Technical on).—Mr. Robert Moon on "Various Timbers and r Practical Uses." 7.45 p.m.

stitution of Civil Engineers (Students' Meeting).—R. J. F. Gourley, B.Eng., on "The Design and nstruction of Masonry Dams." 8 p.m.

SATURDAY, MARCH 2.

chitectural Association.—Fourth Spring visit, to the new churches and institute, Hampstead Garden urb. Meet at the institute, 3 p.m.

al Institution.—Professor Sir J. J. Thomson, M.A., D., D.Sc., F.R.S., on "Molecular Physics"—II. n.

erdeen Architectural Association.—Exhibition of hes and designs.

MONDAY, MARCH 4.

yal Institute of British Architects.—Business meet- Election of Royal Gold Medallist. 8 p.m.

al Sanitary Institute.—Mr. Edward Willis, C.M.Inst.C.E., F.S.I., on "Sanitary Appliances." .

yal Academy of Arts. Mr. A. P. Laurie, M.A., , on "Oils, Varnishes, and Mediums." 8 p.m.

erpool Architectural Society.—Paper by John s Burnet, F.R.I.B.A. 6 p.m.

n Society of Engineers.—Mr. H. C. Adams on "The ey Vehicle System of Railless Traction." 7.30 p.m.

TUESDAY, MARCH 5.

n Royal Institution.—Professor Ernest G. Coker, , D.Sc., on "Optical Determination of Stress and Applications to Engineering Problems"—II. n.

Northampton Polytechnic Institute (Illuminating Engineering).—Mr. A. C. Plumtree on "The Practical Use of Arc Lamps." 7.30 p.m.

Institution of Civil Engineers.—Papers on "Roller and Ball Bearings," and "The Testing of Anti-Friction Bearing Metals." By Professor John Goodman, M.Inst.C.E. 8 p.m.

WEDNESDAY, MARCH 6.

Carpenters' Hall, London-wal (Lectures on Arts Connected with Building).—Mr. W. S. Frith on "Form and Vision: with Reference to Art." 7.45 p.m.

Royal Academy o Arts. Mr. A. P. Laurie, M.A., D.Sc., on "Grounds and the Methods of Painting." 8 p.m.

Royal Archæological Institute.—Mr. Aymer Vallance, M.A., F.S.A., on "Old Bridges in England and Wales." With lantern illustrations. 4.30 p.m.

Edinburgh Architectural Association.—Mr. Andrew Ednie on "Comparisons of Styles in English Interiors."

Northern Architectural Association.—Ordinary meeting. 7.30 p.m.

Institution of Civil Engineers. Students' visit to the Associated Portland Cement Manufacturers' Works, Swanscombe, Kent.

Royal Society of Arts.—Mr. T. Thorne Baker on "Some Modern Problems of Illumination: The Measurement and Comparison of Light Sources." 8 p.m.

THURSDAY, MARCH 7.

Carpenters' Hall, London-wall.—Sir Laurence Gomme, F.S.A., on "The Folklore of London." 8 p.m.

Royal Sanitary Institute. Mr. Edward Willis, Assoc.M.Inst.C.E., F.S.I., on "House Drainage." 7 p.m.

Society of Architects. Mr. A. Alban H. Scott on "The Testing of Materials." 8 p.m.

Institution of Electrical Engineers.—Mr. W. W. Lackie on "Tariffs for Electrical Energy with particular reference to Domestic Tariffs." 8 p.m.

FRIDAY, MARCH 8.

Royal Sanitary Institute. Provincial sessional meeting, Municipal School of Technology, Sackville-street, Manchester (1) Discussions: "The Application of the Housing and Town Planning Act to the Re-development of Suburban Areas now in Process of Transition," to be opened by Mr. F. W. Platt, building surveyor, Salford; (2) "The Quantity of Water Available from Upland Drainage Areas," to be opened by Professor J. Radcliffe, M.Sc.Tech. The chair will be taken at 7.30 p.m. by Mr. H. Percy Boulnois, M.Inst.C.E., Chairman of the Council of the Institute.

Leicester and Leicestershire Society of Architects.—Mr. Walter Gilbert on "Metalwork." Lantern illustrations. 8 p.m.

Royal Academy of Arts.—Mr. A. P. Laurie, M.A., D.Sc., on "The Chemistry of Building Stones and Cements." 8 p.m.

Royal Sanitary Institute.—Mr. Edward Willis, Assoc. M.Inst.C.E., F.S.I., on "Building Materials." 7 p.m.

SATURDAY, MARCH 9.

Royal Sanitary Institute.—Members meet at St. Margaret's Church, Prestwich, at 1.45 p.m., and proceed to inspect the new service reservoir at Beaton Park, under the guidance of the resident engineer. 3 p.m.—The party will proceed to the new lake to inspect the works.

COMPETITION NEWS.

North-Western Polytechnic.

Mr. W. Flockhart, F.R.I.B.A., was the assessor in the competition for a proposed polytechnic in the Kentish Town-road. Seven architects were invited to send designs, and the award has been given to Mr. Arnold Mitchell, F.R.I.B.A.

Bolton Infirmary, Nurses' Home.

Mr. John B. Gass, F.R.I.B.A., the assessor in this competition, has issued his award as follows:—First premium, 30*l.*, Messrs. Henderson & Brown; second premium, 20*l.*, Messrs. Marshall Robinson, Son, & Wheeler; third premium, 10*l.*, Messrs. T. E. Smith & Son. The competition was confined to architects practising in Bolton, and the estimated cost of the work is 8,700*l.* Eleven designs were submitted.

Public Hall, etc., Spennymoor.

The first premiated design in this competition is by Mr. Geo. T. Wellburn, 115, Albert-road, Middlesbrough. The second and third respectively are by Messrs. Clark & Moscrop, Darlington, and Mr. A. Farndale, Brotton, Yorks.

New City Hall, Newcastle.

The New Town Hall Committee, Newcastle-on-Tyne, have had under consideration the question of a site for a new City Hall in accordance with the resolution of the Committee confirmed by the Council in 1905. The Committee are of opinion that the most suitable site for the purposes of a new City Hall would be that now occupied by the Northumberland Baths, which contains an area of 4,030 sq. yds. The cost of the proposed scheme, including a large hall to seat 3,500 persons, a small hall to seat 800 persons, reception-rooms, furnishings, contingencies, etc., and site, is roughly estimated at 100,000*l.* The value of the land is estimated at 36,270*l.* If the Council approve of this recommendation the Committee advise that they be authorised to advertise for competitive designs for a new City Hall to cost approximately 100,000*l.*, including site, and to offer therefor the following prizes for the three best: First, 500*l.* (to be merged in commission in the event of the recipient obtaining the work); second, 250*l.*; third, 125*l.* This expenditure would be defrayed under the provisions of the Municipal Corporations Act.

Auchterderran Drainage.

Messrs. Menzies & Cockburn, C.E., 33, York-place, Edinburgh, have been awarded the first premium of fifty guineas offered by the Kirkcaldy District Committee for competitive plans for the Auchterderran drainage scheme. The second premium was awarded to Messrs. Kyle & Frew, C.E., 216, West George-street, Glasgow. Mr. Douglas, C.E., of Hamilton, was the assessor.

ILLUSTRATIONS.

The Arthur Cates Prize Drawings.

THIS sheet is one of the four strainers submitted for the Arthur Cates Prize, 1912, by Mr. J. B. F. Cowper. It is stipulated in the conditions for this prize that a selection of the testimonies of study prepared for the Final Examination R.I.B.A. shall be submitted, and this sheet, with two or three extra ones, comprises the measured drawings. The chapel of St. Leonard, Kirkstead, is completely of one date.

The exquisite proportion of the parts, the great delicacy of the mouldings, and the rare beauty and grace of the carved foliage (which probably owes its present perfect condition to the plastering over of the whole interior in the XVIIth century) in combination, form the most graceful and perfect example of the period.

The other drawings are of the vaulting to the chapel, and a similar sheet from Beverley, to show the construction of a Gothic vault, the tas-de-charge being worked out half full size, and various other details being shown.

Mr. Cowper, the Arthur Cates prizeman this year, is a student of the Manchester School of Architecture (Professor Capper).

East Sussex Hospital, Hastings, Competition.

IN our issue for the 16th ult. we gave the first premiated design, by Messrs. J. Saxon Snell and Stanley M. Spoor, for the East Sussex Hospital, Hastings, and we now reproduce the designs placed second and third.

The authors of the second premiated design, Messrs. C. K. & T. C. Mayor, of Manchester, in their report accompanying their design lay particular stress on the manner with which the levels have been manipulated, especially with regard to economy, not only in construction, but for subsequent administration.



Proposed New East Sussex Hospital, Hastings.
Second Premiated Design, by Messrs. C. K. & T. C. Mayor.

The adoption of the "single corridor" principle, they state, would also trend to attain the utmost economy, efficiency, and most direct supervision. The site for the chapel and the future extensions, it will be observed, are placed behind the main corridor, so that in the event of future building the principal façades would remain undisturbed.

Included in their schedule of leading features in the planning we note the following:—

Pavilions placed with their long axes north and south.

Surgical wards and operating theatre are adjacent, with north light to theatre.

Dispensary serves both the out-patients' department and, by means of lift, all floors of the main hospital, the medicine stores, being below, are immediately under the dispenser's control, the stores being approached from the rear.

Facility provided for future extensions.

The ground floor of the in-patients' department all practically level.

In-patients' lift centrally placed, and also in immediate communication with casualty and reception blocks, with the resident doctors' quarters adjoining.

Facilities afforded for future extensions in both the out-patients' department and the nurses' home when required.

Out-patients' department self-contained, but at the same time is so arranged that in cases of emergency communication with the in-patients' staircase can readily be established.

The eye wards would have north light, and a small operating-room has been arranged for each sex.

The isolation block is placed at the highest part of the site.

The whole of the staff dining-rooms are centralised, this part of the administration buildings being very carefully planned with a view to sequestering the delivery of the stores, dining-rooms, service-rooms, and the kitchen, scullery, larders, etc., from the patients' wards, although all so focussed that the food trollies can be run directly to the wards and every part of the hospital which is to be inhabited without confusion or loss of time.

The kitchen, etc., is designed upon the uppermost floor, cross-ventilated and top-lighted, and the adjoining service-room and lifts have direct access to each floor.

The staff dining-rooms are on the same level as the nurses' home.

The matron's office occupies a central position attainable from the main corridor.

The position of the laundry block, directly behind the administration block, containing the sewing-rooms, etc., is convenient to the housekeeper's quarters, and the covered way assures shelter for the maids.

The medical staff quarters, secretarial department, board-room, etc., are entirely isolated from the patients' wards and such portions of the hospital as are devoted to the usual nursing and other staff at the same time being in sufficiently close touch with all the in-patients' wards, etc., whenever occasion should arise.

Attention should be drawn to the position of the stores entrance, which is at the east end of the main corridor and quite away from the in-patients' wards.

To the children's ward a day-room has been provided, and, as will be seen from the plans, separate sanitary accommodation is allowed for the small wards in the main pavilions.

"It is proposed to adopt fire-resisting material throughout as far as possible, the floors being of steel and concrete. The floor finish to wards to be of fine concrete, covered with linoleum, and all flooring tinted yellow on the plans where not finished with wood blocks to have the boarding nailed direct to breeze concrete. The walls of all wards, out-patients' department, corridors, etc., to have glazed brick dadoes up to a height of 4 ft., finished above with Parian cement. The sanitary turrets to be lined with glazed bricks or tiling from floor to ceiling. The operating theatre is proposed to be lined with a dado of marble, with "adamant" above, and to have the floor paved with "terrazzo," the ceiling being glazed with "opalite." The corridor floors to have granolithic finish, and all principal entrances, etc., to be paved with "terrazzo." Rounded angles are intended to all wards, etc., both at floor and ceiling levels, as well as at the junction of the walls. Where flat roofs occur a covering of "Seyssell" asphalt is proposed, and Welsh slating is proposed where slated roofs occur. The covered ways to have iron sides up to a height of 4 ft., with a space left above the floor level to enable any driving rain to be thrown off at once. All lavatories, sinks, and water-closets to be on the corbel principle, clear of the floor. A subway is provided for the whole of the water, steam, gas, and electric mains, and is lighted and ventilated by lateral windows.

Natural ventilation is advocated throughout the whole of the infirmary, supplemented in such portions of building as may be considered advisable, such as the kitchens, laundry, waiting halls, etc., by electrical fans. In all wards and all buildings used by patients practically all the window space is capable of being thrown open to the fresh air; sash and frame windows being intended, with transom lights placed above, opening inwards, fitted with hoppers with glazed cheeks, and adjustable to the velocity of the wind, so that complete cross-ventilation would be attained. Behind each radiator is intended to be placed a large fresh-air inlet, and the atmosphere of the room would be capable of being changed three times every hour. Extraction shafts on the side walls of the main wards, nurses' home, etc., would also be provided to supplement their ventilation. In the kitchen, laundry, etc., the top lights would open laterally with mechanical gearing.

The front elevations are intended to be of red pressed brick, with Portland stone sparingly used in bands and occasional broad masses where necessary, the principal bays, etc., being all stone."

The authors estimated the cost of scheme at 47,375*l*.

Messrs. H. Percy Adams & C. H write :—

"This plan was evolved after a very ful study of the site, the levels, and existing trees which were capable of pr ing a very effective shelter from the vailing winds and gales. The access t site required careful study; the lowest



Proposed New East Sussex Hospital, Has
Third Premiated Design, by Messrs. Adams & Ho

was 15 ft. above the road and it wi readily seen that a roadway 200 ft. to 3 long was necessary to deliver at this The buildings were placed on the most part of the site, and each block would a clear view of the sea. The boiler-ho placed at the lowest point of the site. outpatients' department and dispensary the same level as the lift and in close imity to it.

The children's ward is centrally p and is provided with a very wide ba part under cover and part open and i view of the sea."

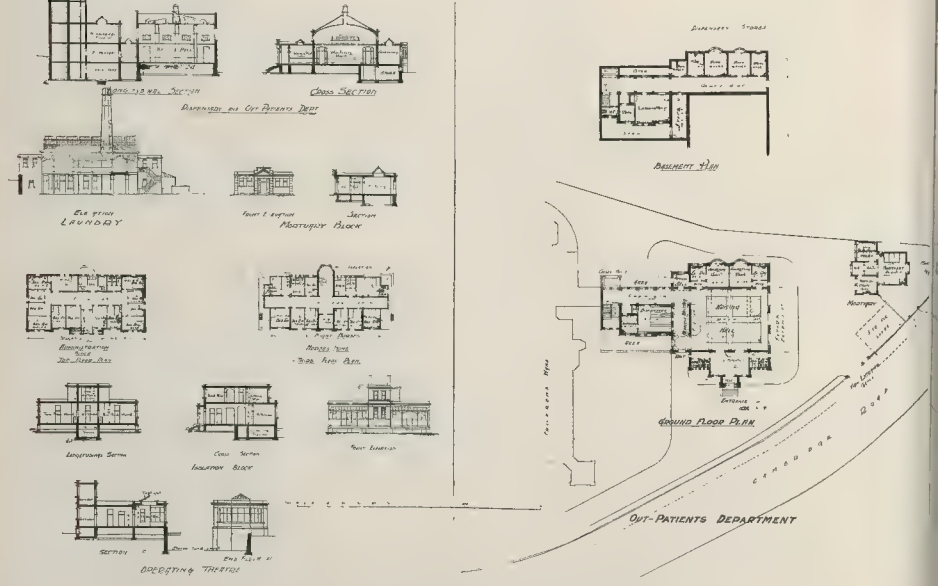
FIFTY YEARS AGO.

From the *Builder* of March 1, 186

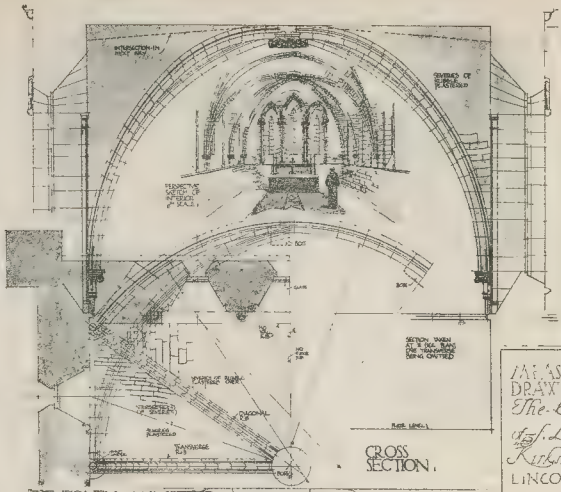
Royal Institute of British Architect The Royal Medal.

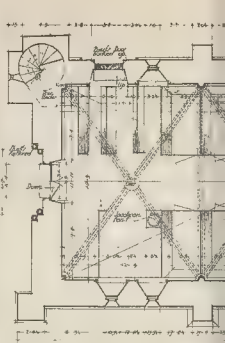
A SPECIAL general meeting of the me was held on Monday evening last t into consideration the recommendati the Council with respect to the award Royal Medal.

It was resolved, subject to the ap of her Majesty, that the Royal Gold should be presented to Professor Willi



Proposed New East Sussex Hospital, Hastings.
Second Premiated Design, by Messrs. C. K. & T. C. Mayor.

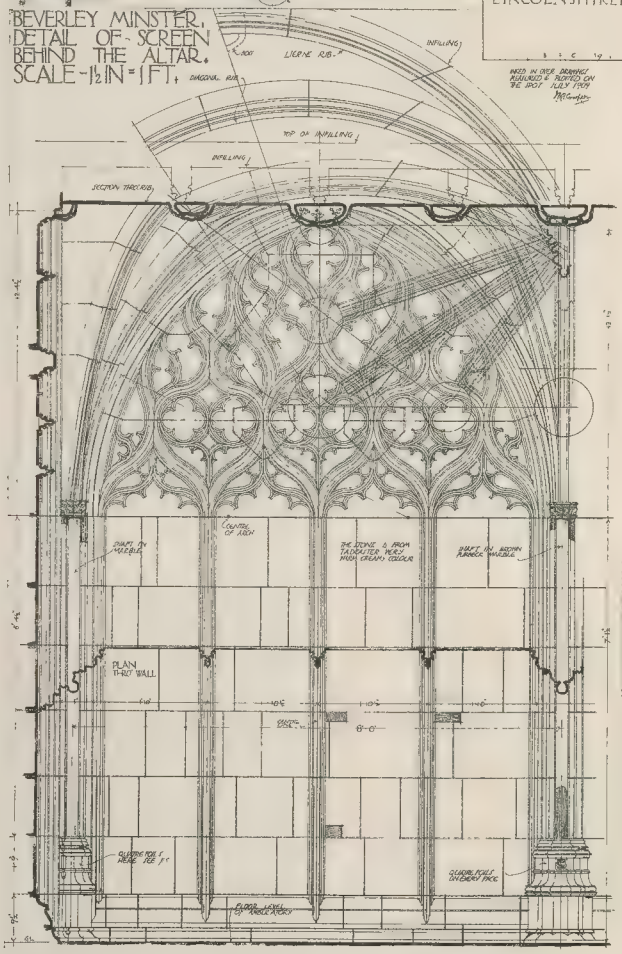




MEASURED DRAWINGS OF The Chapel of St. Leonard Kirkstead LINCOLNSHIRE.

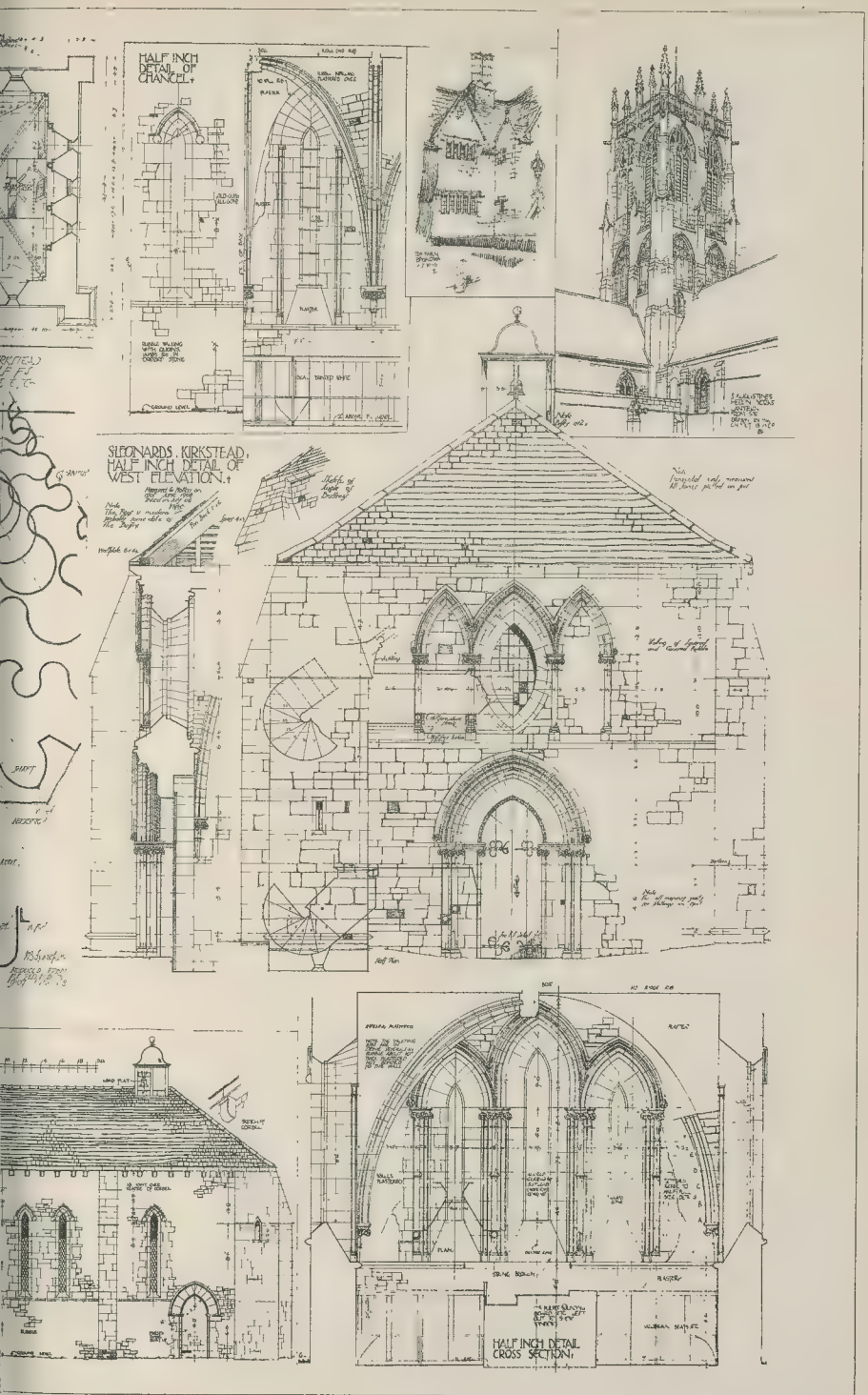


BEVERLEY MINSTER. DETAIL OF SCREEN BEHIND THE ALTAR. SCALE - 1½ IN = 1 FT.



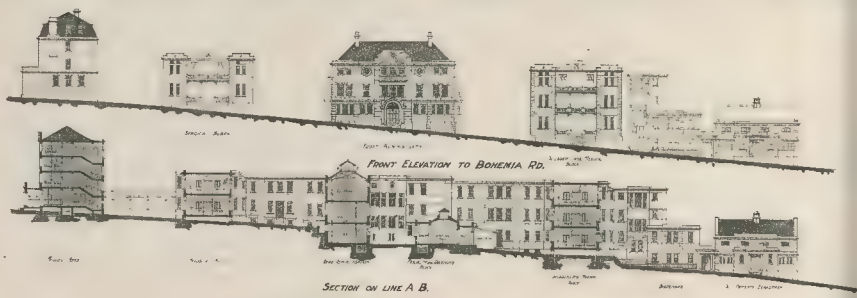
STRAINER No 3 Testimony No 2 Measured Drawings & Studies of a Groined Vault.

J.B.F. Cowper 1914



"INK PHOTO" SPRAGUE & Co LTD 4 & 5, EASTHARDING STREET FETTER LANE E C

PROPOSED NEW EAST SUSSEX HOSPITAL: HASTIN

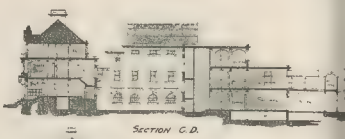


FRONT ELEVATION TO BOHEMIA RD.

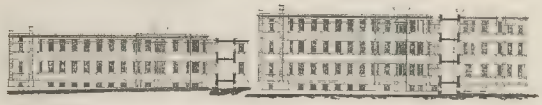
SECTION ON LINE A B.



NORTH-WEST ELEVATION



SECTION C D.

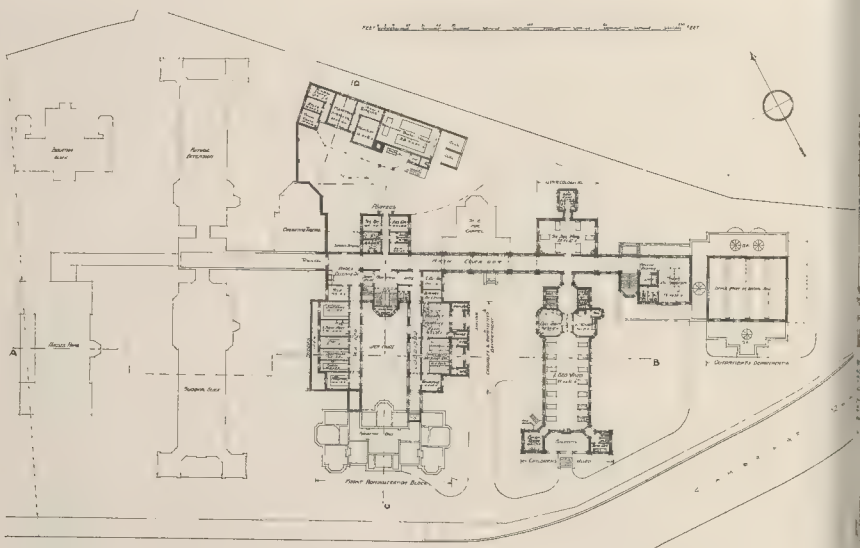


SIDE ELEVATION TO SURGICAL BLOCK

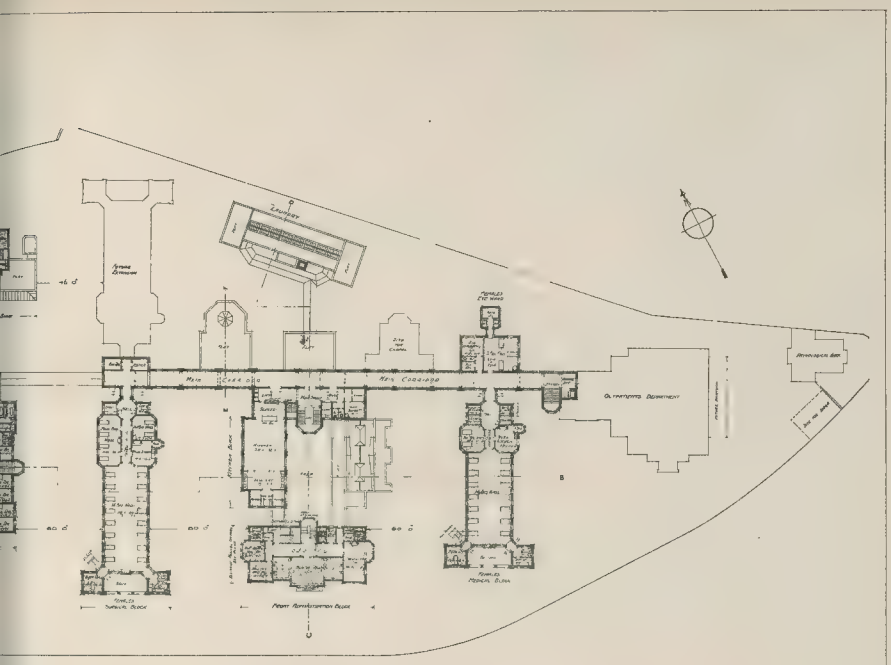
SIDE ELEVATION TO MEDICAL BLOCK



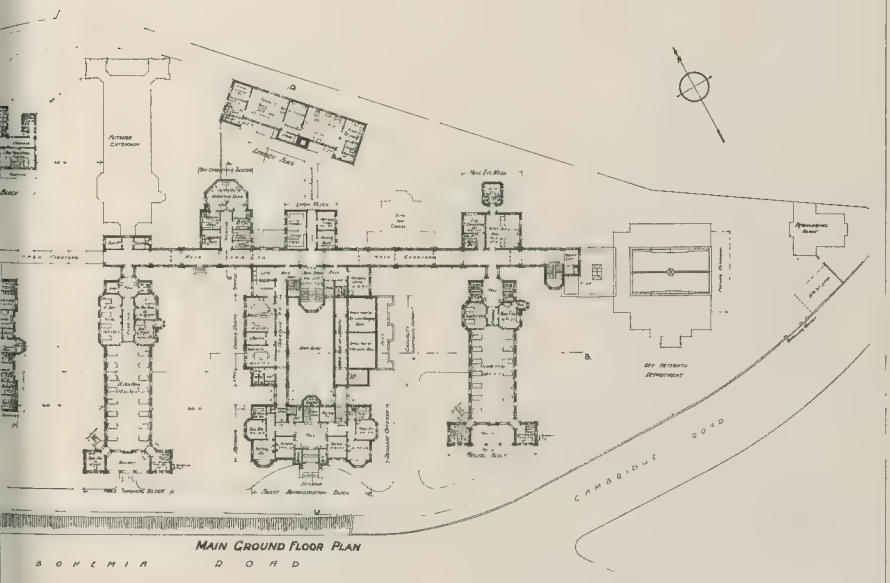
SIDE ELEVATION TO CENTRE BLOCK



LOWER GROUND FLOOR PLAN



FIRST FLOOR PLAN



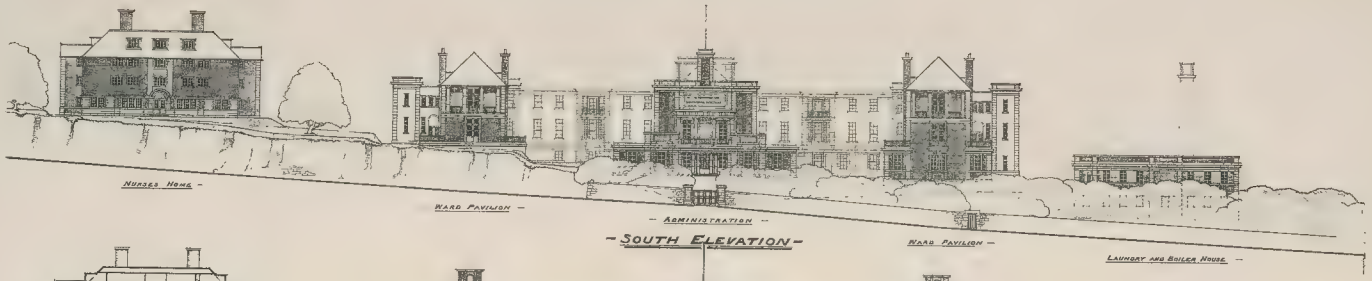
MAIN GROUND FLOOR PLAN

"INK PHOTO" SPRAGUE & Co Ltd 4 & 5, EAST HARDING STREET FETTER LANE E C

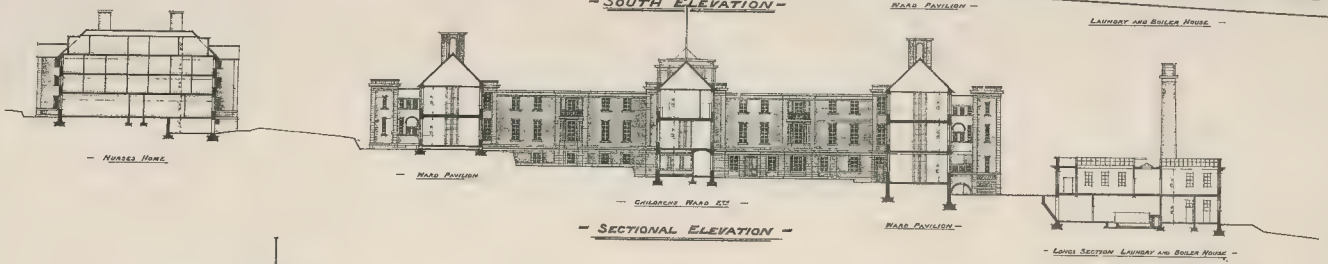
STINGS

., AND T. C. MAYOR.

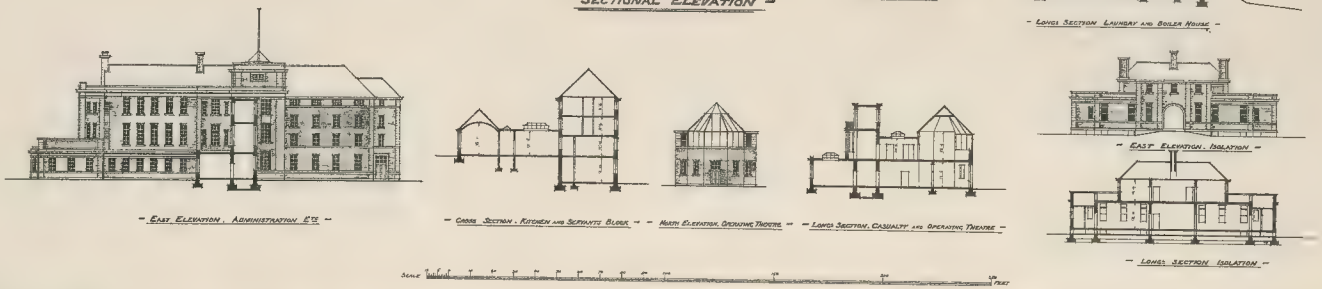
– PROPOSED NEW –
– EAST SUSSEX HOSPITAL HASTINGS –



– South Elevation –



– Sectional Elevation –





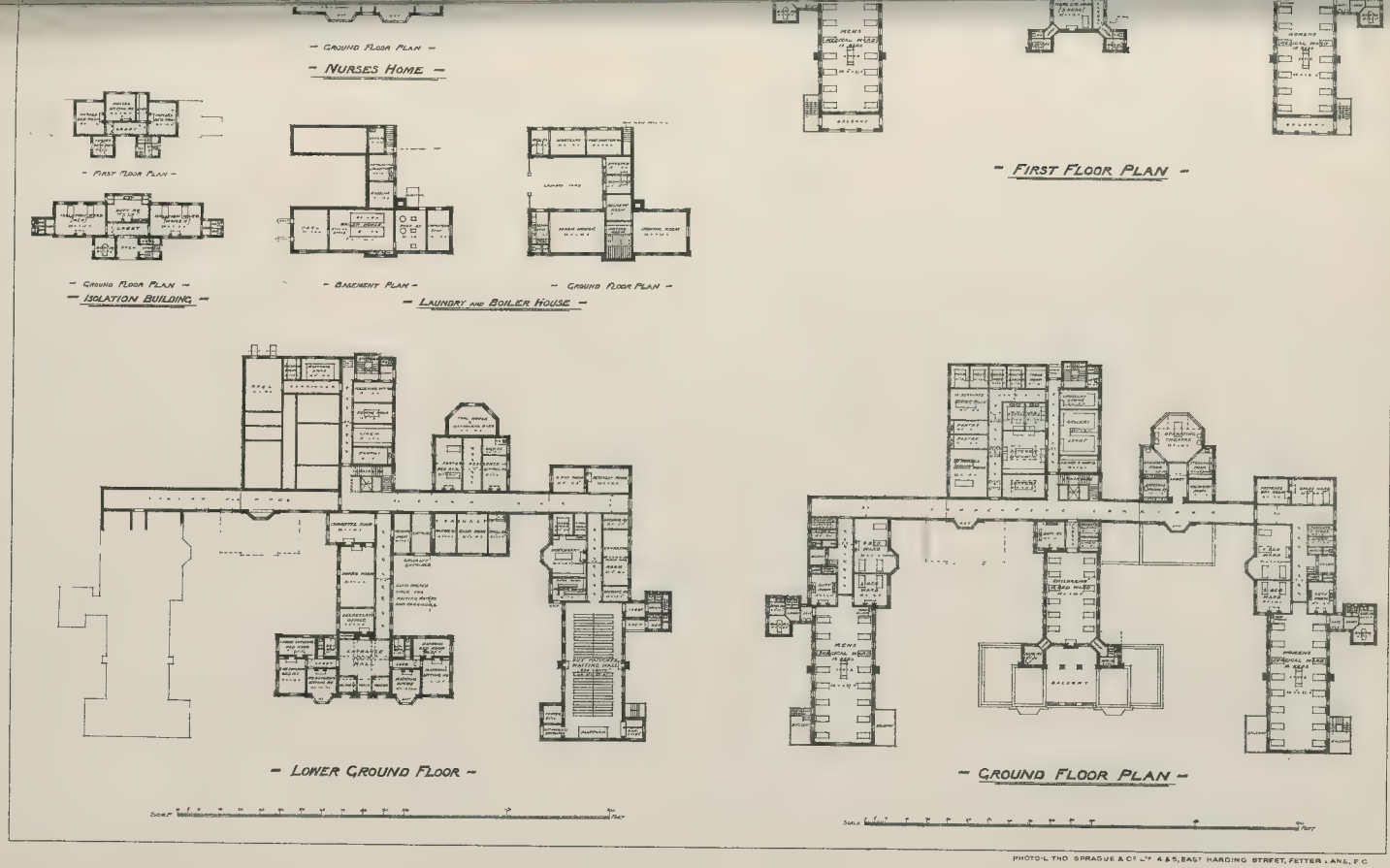
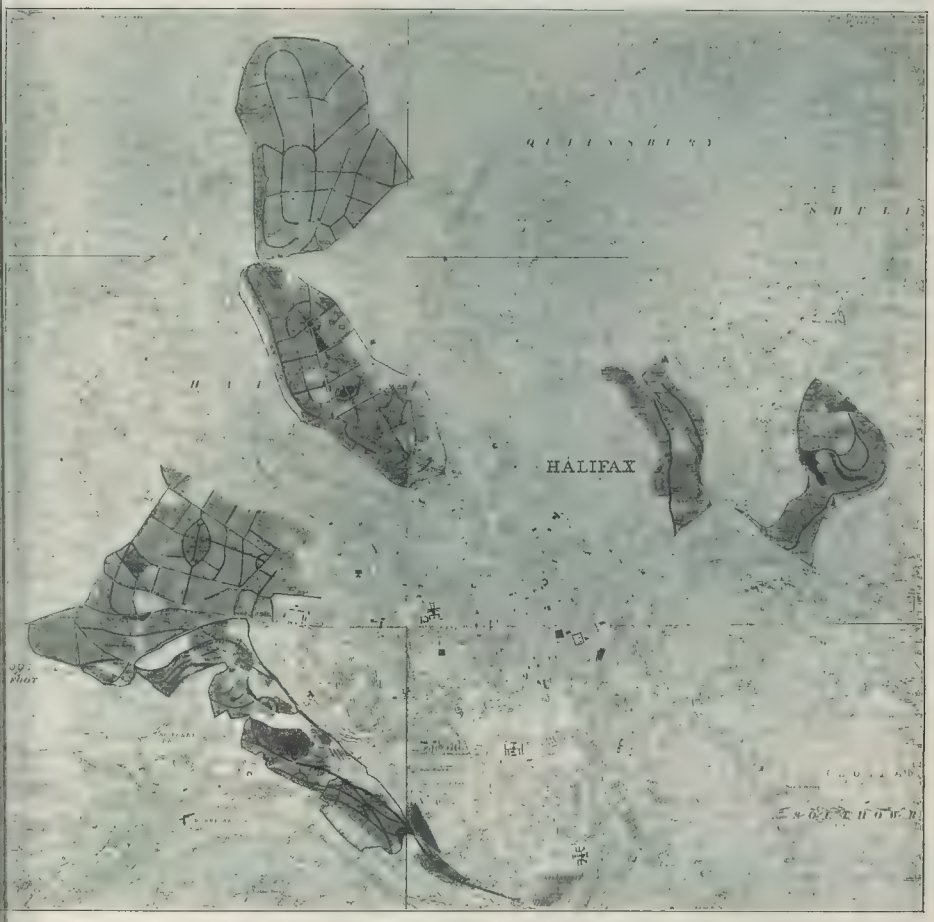


PHOTO-LITHO SPRAGUE & Co LTD 4 & 5, EAST HARDING STREET, FETTER LANE, E.C.

EAST SUSSEX HOSPITAL, HASTINGS.

THIRD PREMIATED DESIGN. BY MESSRS. H. PERCY ADAMS AND C. H. HOLDEN.

MONTHLY REVIEW · *of* · CIVIC DESIGN.



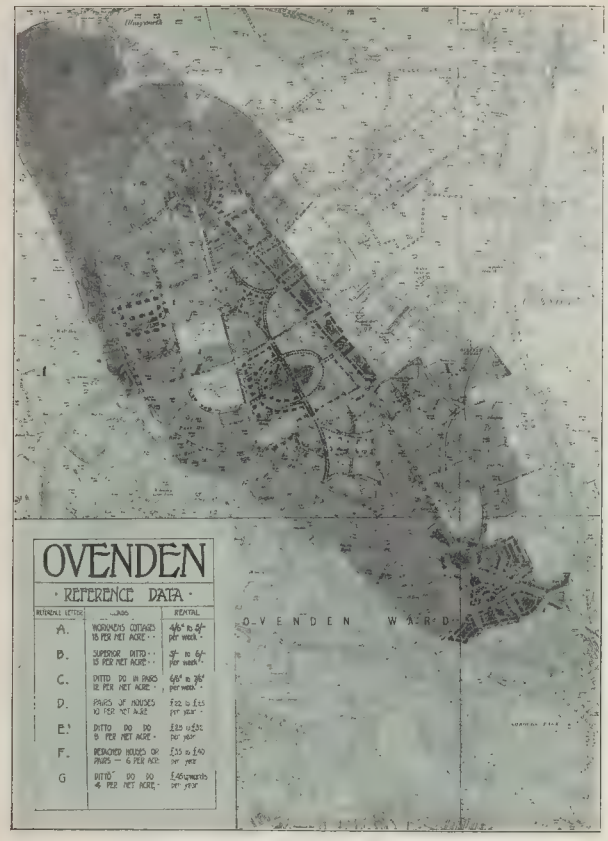
General Plan of Halifax Town Planning Scheme.
First Premiated Design, by Messrs. Longbottom & Culpan.

HALIFAX TOWN PLANNING COMPETITION.

our issue of January 26 we announced the result of the competition for a Town Plan of Halifax in which premiums were H by the Member for the borough, the Hon. J. H. Whitley, M.P. The com-on was limited to local architects, eight om competed. Professor Adshead, who as the assessor, awarded the first pre- of 100 guineas to Messrs. Longbottom lpan; the second, of 30 guineas, to . Medley Hall & Son; and the third, of neas, to Messrs. C. F. L. Horsfall &

scheme is the largest and most compre-e that has yet been made the subject petition between architects, and its tly satisfactory result is therefore the gratifying, and should lead to the co-on of architects being sought in con- with other schemes promoted by the parties. Mr. Whitley is to be con-ted upon the design which is the out- his public-spirited action in promoting the competition. The Corporation are taking steps to submit a scheme dealing with certain areas to the Local Government Board, and although it does not appear that they have as yet adopted Messrs. Longbottom & Culpan's plan, they could not do better than take it as their basis, with Professor Adshead's report, a valuable monograph on town planning for the world at large as well as for Halifax, as their manual.

This is one of those problems in planning whose fascination lies in its difficulties. Architects have frequently found the most interest in design and plan and the greatest ultimate success in problems before which they were at first aghast, and this applies in town planning as in the design of buildings. In this case the difficulties are in dealing with the extraordinary contours of the country. On first regarding Halifax and the surrounding district as an area for orderly development the most experienced town-planner would probably join with fervour in the tramps' litany, "From Hull, hell, and Halifax, Good Lord deliver us!" Here is an industrial town of some 120,000 inhabitants, its centre so deep-seated among the hills, and those hills so steep and looming so hugely all round, that by day one seems to be closed in from the rest of the world, and by night one confuses hundreds of terrestrial lights with the constellations of the sky, and the vision of a lighted tram-car moving through what one has taken for some new constellation makes one stay to sort out the distant street lamps from the stars. The town has spread itself upon these hills in a most disorderly fashion. Though there is some semblance of order in the centre of the town, the roads leading to the outskirts, some new and wide, others old, crooked, and steep, pursue devious ways before they eventually stretch out to the old villages on the hills, at each of which a collection of old cottages forms the nucleus of an industrial community gradually widened until it has become



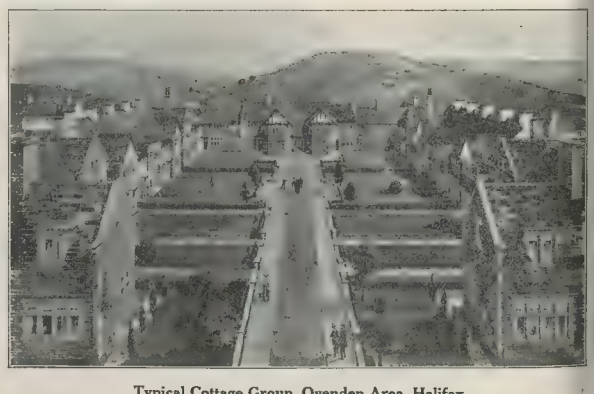
Treatment of Ovenden Area, Halifax.
First Premiated Design, by Messrs. Longbottom & Culpan.

merged into the town itself. Yet, amid the apparent confusion one can see how development has inevitably been guided by natural or social conditions. And this town has to develop further upon some plan; and what the hardy Yorkshiremen of eighty or a hundred years ago tackled, perhaps with more courage than foresight, when they perched their mills and their little industrial villages on the top of rocky crags like Heptonstall, or halfway up some gorge where the kitchen of one house is level with the ridge of another, and the mill grows out of the rocks near the stream from which it takes its power, the modern town-planner must not shirk.

In this Halifax scheme the conditions indicated some half-dozen distinct areas as sites where development is likely to take place during the next fifty years or so, and competitors were required to plan these sections to meet the residential and industrial demands of the coming years of expansion. There is, first, the river valley, stretching towards Sowerby Bridge, which is now a distressful agglomeration of railways, canals, sewage works, and waste places desolate enough, but bounded on one side by the beautiful Copley Woods and on the other by slopes crowned by the frowning crags above the Birdcage Walk—obviously an area for industrial expansion. Beyond are the areas of Pye Nest and High-road Well, the latter a vast open tract at a great altitude, and further to the north-east the fine plateau at Ovenden, touching Halifax at its southern end and stretching northward over a spacious expanse of country commanding wide views across the Pennines. The districts of Illingworth, Shibden Dale, and North Owram will probably not be developed in the immediate future, but competitors were required to indicate outline schemes for these districts.

There is no doubt that the plan of Messrs. Longbottom & Culpan, placed first by the assessor, is by far the best of those submitted. It lacks the broad treatment which so fine an opportunity demands, but no other competitor comes so near to it, and allowance must be made for the crippling effect of the limitation to scheduled areas imposed by the conditions. Apart from this it is, generally speaking, a fine scheme. The main roads are very carefully planned. Special re appears to have been paid to the e ordinary contours of the land, which very largely been allowed to direct the p ning. Without seeming to purposely di the roads the authors have neverth avoided undue interference with exis houses or plantations which should be served, and here and there pains seem have been taken to preserve fine trees. fact, the scheme is notable by reason of observance of the conditions imposed all kinds of existing circumstances. example, in the treatment of the High- Well section the present main roads, wid where necessary, have been retained, provision is made for the gradual deve ment of the area round the golf course so the latter will be the final portion of area to be absorbed in the building schem

With the exception of one or two error judgment pointed out in the assessor's re the authors have carefully considered the fluences, social and geographical, which course of time, will determine the typ residence to be allotted to each of sections. Although it would seem the trend of expansion would inevit assume certain very obvious direct which any competitor with his eyes to clear indications of present likely future circumstances could make mistake, the winners have distingui themselves by their appropriate selectio sites where other competitors have sign failed. They alone have adequately d with the river valley, of which the deve ment is the most imminent; and if scheme can save it from becoming the s of devastation that most of the popul Yorkshire valleys have resolved themse into in the process of civilisation it will amply justified itself. A large area near railway and canal is reserved for factor immediately above this are cottages for w people, and higher up the slope are house a better class, the limit of rental, howe being wisely kept low. The treatment this valley affords an opportunity for the vision of better communication betw Halifax and Sowerby Bridge, but secondary roads shown are unnecessa crowded. The Ovenden area is cle adapted for residential purposes, and treated as a separate garden city, rather separate, in fact. It is the finest of areas included in the scheme, so much so almost every competitor has regarded i his chance for a *pièce de résistance*, to judge by the pains taken to illustrate i plan and bird's eye view, considers it the important part of the scheme. The win deal with it with greater restraint, but wi very cleverly. The existing roads, w form a rather poor and muddled appro from the town, are gathered together in circular "place" at the south end; from a main road strikes northward as a backb to the estate, and, with other subsidiary r which take a more circuitous route, lead another circular "place," cleverly di guished from its southern counterpart by

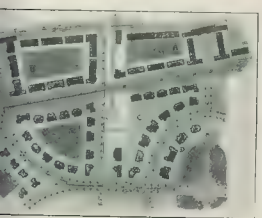


Typical Cottage Group, Ovenden Area, Halifax.
First Premiated Design, by Messrs. Longbottom & Culpan.

arrangement of the public buildings. otment of the inner plots for groups of of moderate rentals, while the outer s of the area, from the slopes of which d views across the hills are obtained, erved for large houses, is very judici- anaged. A typical group of houses, by an admirable water-colour drawing, d a well-deserved commendation from essor. It is a very good rendering in aterials of a picturesque quadrangle e traditional stone architecture of the , the only lapse being the intrusion weak half-timbered gables at what have been the culminating point of nposition. The configuration of the ding country shown on this drawing, nger to the district should note, is in exaggerated.

rtunately, the scheme can hardly be d as an ideal plan for the develop- the town as a whole. For this the ns must partly be blamed in that and defined areas were indicated for nt. We cannot help feeling that a ous competitor would have gone a step and have suggested a wider treat- nking up the detached sections. The 's report insists strongly on this point, doubtless carry weight in the proper

second premiated design has some le features; its general standard of and draughtsmanship is better than all the designs except the first, of falls very far short. The authors have had some qualms about treating r valley, and have got out of their by leaving it almost untouched. cing of some of the factory areas is dered, especially in the case of the



an of Typical Lay-out, Ovenden Area.

remiated Design, by Messrs. Longbottom & Culpan.

tting on the golf course. The one ity for a fine lay out, the Ovenden aimless in its design. Apparently in ire to follow the contours the authors ndoned all idea of formal effect or the opposite extreme to that sought of the competitors. The expensive of a new road cutting across street eet of existing property and involv- stly bridge across a deep valley in provide an unnecessary approach to place of Lee Bank is an unwise one. thors of the third premiated design mpany with the majority of the com- in their too formal arrangement of ich in many cases are driven straight eas, or laid down in geometrical lines ces that should have had special con- n. Too much attention is given to naking, and the results contrast very ably with the flexibility which marks premiated design. The third design s the most cursory treatment to the ley.

ndered at the intrepidity of one com- who, together with many alterations centre of the town, suggests the ent of the magnificent open grass nich sweep up to the fine old Well use, a space which, hardly less than e expanse of Savile Park, gives a distinction which no other York- wn possesses. We trust that the es will take the assessor's hint that should be acquired and retained instead of one day passing into the the builders.

THE CITY DEVELOPMENT PLAN.

On January 29 Mr. Raymond Unwin delivered the Warburton Lecture before the Manchester Society of Architects. In the course of an interesting address he said :—

"There is only one way by which we may be compensated in this country for delaying until now to undertake the proper arrangement of our towns, namely, that we may profit by the experience that has been gained in other countries; that we may avoid their mistakes and improve upon their successes. If we are to do this we must not only study what other countries have done, but we must base our estimate of the results of what we may propose upon a study of our towns, and we must do this sufficiently thoroughly to enable us to distinguish between accidental effects, due to some custom which may be modified, from essential effects dependent on economic laws.

I do not mean that our customs, our land tenure, or the particular form in which we raise our revenue, for example, are not important factors; but that town planning must, as far as possible, be based on the essential facts, for economic laws have a wonderful way of asserting themselves in spite of accidental customs. If it were not so, building and town development must have been brought to a standstill long ago by our custom of raising nearly the whole of the revenue for local administration by means of rates, which are virtually a tax on the rent of buildings.

I propose, in considering town planning problems, to accept these matters of rating, ground rents, etc., much as we find them, and to try and consider what are the essentials in connexion with town development, and in what way the town's growth may be assisted by a proper extension plan. If we were planning a new town the matter would be less complicated. We could begin from first principles, consider what the town should be, and lay out our plans accordingly; but in ninety-nine cases out of 100 what we are called upon to do is to make a plan to provide for the extension of an existing town. Therefore the town-planner must first be sure that he thoroughly understands the life and needs of the community for whose extension he has to provide; the study of the existing town can hardly be too thorough if the best results are to be attained.

In Düsseldorf they have found in the past, as a result of too great extravagance in the width and number of their roads, that they have so increased the cost of the development of land that it is becoming less and less possible to build self-contained houses for people of moderate means within the city, and there has resulted a tendency for the people to be crowded into huge blocks of tenement and flat dwellings. This tendency has not gone nearly so far in Düsseldorf as it has in other German towns Berlin, for example—but they are anxious now to check the tendency, and hence the care devoted to the subject in the survey. It is very remarkable that our country, which has for a century and a half watched the wonderful economies and the great progress which have resulted from the application of proper organisation and foresight to the carrying on of great industrial concerns, is only now beginning to realise that there may be some need to apply similar principles of foresight and organisation to the development of our great industrial centres, our towns and cities. It is difficult to see how we can have imagined in the past that it was safe to leave our towns to grow haphazard, the owner of each bit of land not only free to develop it just as he liked, without any central control, but even powerless if he wished to effect anything outside his own immediate boundary. What wonder that a hopeless jumble has resulted? But for the few old country highways leading into the town matters would have been ten times worse; as it is, except where such highways have saved the situation, it is usually impossible to get a direct route within our towns from anywhere to anywhere. No provision whatever has been made for expansion; roads that must obviously at an early date need to be widened to accommodate growing traffic have been allowed to be lined on each side with property built up to the road line. Railways have been allowed to hem in the town without any effort having been made to forecast its development and provide for the necessary bridges and other requirements for expansion, thus throttling the town and its traffic in many directions. Cottage property has been allowed to spring up along the margins of railways and canals, factories and workshops have been dotted about wherever a bit of land could be obtained for the purpose, often dumped down to the ruin of some good residential district, and always involving much needless carting to and fro of the materials of industry, adding greatly to the cost of production, to the congestion of traffic, and to the expense of street-making, widening, and maintenance, thus directly crippling the efficiency of the industry, and by destroying the amenities of the homes of those engaged in the industry still further indirectly crippling this efficiency. Not only is the industrial life of the community hampered, but the cost of administration is increased, and this again tends to restrict the development of the town, and leads to the congestion of buildings upon the ground, to the creation of slums, the destruction alike of the health, comfort, and happiness of the people, and to the enormous increase of their death rate.

Remedies for Overcrowding.

Most of this confusion and loss to the community can be avoided by a town extension plan. It is true that no man can foresee exactly what the development of a town will be; but put these errors of judgment at their very worst and compare them with what happens now. Is the town likely to suffer severely in pocket or in any other way from having bought up a little open space at slightly more than agricultural value beyond what is actually necessary, or for having made a road a little wider than actual requirements at a time when the land would have cost little or nothing and was free from buildings? At any rate, compare this with the way in which the public now has to pay for every site for a school or other building it requires, for every strip of road widening, for every scrap of open space, playground or park, just because it does not look ahead and provide for development, but waits until the ground is covered with buildings and has reached almost its maximum value before it makes these provisions. But the town plan will not only provide for the want of future extension, but by the very fact of doing so will control and guide development along just those lines which will fall in with this provision, and, therefore, it is really possible by the combination of such reasonable foresight as a town plan can embody, with such control and guidance as those enforcing a town plan will exercise, to adjust the provision to the future needs with a very fair degree of accuracy. A town plan can assist industry by reserving definite areas for industrial purposes, by arranging for the provision adjacent to these areas of all the required facilities, railway carriage, water carriage, ample siding accommodation, space for needful warehouses, bonded stores, and finally for securing within easy access adequate areas upon which those engaged in the industries can live under circumstances which will make for health, amenity, and the greatest efficiency. This is being secured by the city plan in many places.

Our municipalities have only just been given town-planning powers. In many cases, as in Manchester, they have done much without those powers and we are considering what further can be done by the aid of town planning."

The lecturer then described what had been done in the towns of Frankfort, Crefeld, and Cologne by means of a city plan. "Let us contrast the growth of Cologne with what has taken place in Chicago, where a town of 2,000,000 people has been developed at such a rapid rate that some still living can remember when there was only a settlement of a few hundred people there. This town has grown on a simple gridiron plan, if such can rightly be called a plan, dividing up the land into rectangular building blocks of much the same size whether the land is wanted for

factories or shops, palaces, or cottages. At first no provision was made for open spaces, main wide roads were not at first thought of, and the result has been perhaps the greatest aggregation of disorganised units of population that have ever been brought together. Chicago, which contains within itself a wonderful amount of public spirit backed by true American energy, is now seeking at enormous cost to rectify these mistakes, and has, indeed, done great things already. It has secured a number of fine parks, recovered and preserved long stretches of lake front; it has made and planted miles of magnificent boulevards and avenues, "park ways" as they are called in America. You may ride in a motor hour after hour around Chicago, and the whole of the time be travelling along its park ways and through the parks and hardly leave them. This green girdle is, indeed, a wonderful creation. They have, too, bought here and there one or more building blocks, and they have laid them out as playgrounds for the children. Unfortunately, in the past they have allowed the building blocks to be so covered with buildings that there is not enough space for air or light to reach to the rooms, much less for any garden space in which the children could play. They have now set themselves the task of providing a playground of some sort within half a mile of every child's home in the city; and perhaps the most interesting point about these playgrounds is that they are becoming local civic centres. They are beginning to provide for Chicago that grouping and organisation of its mass of humanity which hitherto it has wanted. In connexion with these playgrounds a large building called a "field house" is usually built, containing gymnasia, refreshment-rooms, reading-rooms, baths, and swimming-baths, a concert and dance hall, and different rooms for the use of trade unions, friendly societies, and any other similar bodies requiring a meeting-place. The "field house," with the numerous activities centred there, is becoming the focus of the neighbourhood in which it exists, and the amorphous mass of humanity around it is beginning to take on a definite relation to the centre, is beginning to group itself, as particles of a chemical solution group themselves into a beautiful crystalline form about some central point of attraction.

Propriety of Plan.

There is no doubt that the town must represent the character of the social life of the people composing it, and that it should express by its form the social organisation upon which it is based. I venture to suggest that the ideal form of town to which we should aim will consist of a central nucleus surrounded by suburbs, each grouped around some subsidiary centre representing the common suburban life of the district, and the suburb in turn will consist of groups of dwellings, workshops, and what not, developing some co-operative activity either in connexion with the building and owning of the houses or in connexion with the common enjoyment of open spaces, playing-fields, and so forth. To emphasise this ideal development of the town, first of all each individual suburb should be provided with its suitable centre, around which should be located its local municipal or administrative buildings, places of worship, its educational, recreational, and social institutions, and not only should this centre or heart of each district give expression to its unity, leading naturally to the grouping of the district around and in relation to this centre, but between each of these suburbs there might well be reserved some belt of open space, parkland, woodland, agricultural or meadow land, which would at once define one suburb from another and keep the whole of the inhabitants in touch with ample open space.

We are dealing with the town extension plan, and it is perhaps time to leave the consideration of the ideal town extension and see how far Mr. Burns's Town Planning Bill will enable us to approach this ideal. We shall find that that is further than at first we think, and we shall find that the obstacles based on real economic difficulties are less than at first we should suppose. The definite powers given by the Act are not many, but they are far-reaching. The community is empowered, through its municipal council, to make a plan, laying down the lines upon which all land surrounding it not yet built upon, and likely in the future to be built upon, shall be developed. Such plan may define the direction, position, and width of roads. The scheme which accompanies the plan may provide for the making of any of these roads that are urgently required for the public need. Any by-laws or other statutory enactment may be varied by the town-planning scheme so far as may be necessary to its proper execution, with a view to securing proper sanitary conditions, amenity, and convenience. The scheme may make restrictions on the number of buildings which may be erected on each acre of ground and the height and character of those buildings, and may prescribe the space about buildings. Finally, land may be purchased for open spaces or other purposes in connexion with the town-planning scheme. If these powers are considered carefully it will be found that little of what I have been sketching as the ideal development of a growing town cannot be secured under one or other of these headings. One of the special functions of the Act is to empower the local authority to make agreements with the owners of land on any subject bearing upon its development. The local authority is put in a favourable position for making such agreement, because it has not only power to restrict within certain limits the use to which the owner may put his land, but it has the power very greatly to facilitate that development by the suitable laying out of roads, and by the modifying of many existing restrictive by-laws which have been made to suit other conditions of development.

Economic Problems.

Both builders and landowners have been very much disturbed by the powers given in the Town Planning Act to limit the number and character of the buildings which may be put upon each acre of ground. I think it can be shown that these fears are not justified, but, on the contrary, that the greater the number of houses crowded upon the land the less economical is the use being made of it, the higher rate must the occupier pay for every available yard of his plot, and the smaller will be the total return to the owners of land in increment value, due to building operations. Our overcrowding system of development is so uneconomical, it wastes so much of the land in roads, that actually it would be possible, giving the landlord exactly the same total return from every house that is built and paying exactly the same for the streets, to provide the plot of land of 261 sq. yds. for 8½d. per week in place of a plot of 83 sq. yds. which costs 8d. per week. You will be able to see that not only is there no real economic difficulty in reducing the overcrowding of houses upon the land, but there is equally no economic difficulty in providing all the open space that is desirable not only around the town but within the town; because, even from the point of view of the owner of land, very much the same increment value arises from the given population, whatever the exact arrangement of it, and if you reserve a belt of park two or three hundred yards wide between the town and the adjacent suburb it simply means that you have extended the area of land which benefits by building increment as much farther out as is represented by the land which you have reserved unbuilt upon nearer in.

One other objection to the wider distribution of the population may be raised, namely, that we shall so largely increase the size of our town as to add very greatly to the difficulties of locomotion. Here, again, the difficulty is much less than at first sight appears, for we find on examining towns and comparing the average total population per acre with the population per acre in the congested districts that, in many cases, it is not the average that is seriously wrong, but that there is acute local congestion, and town planning can provide for the better distribution of the population and the more economical use of land. Just as it will avoid overcrowding in some directions, it will avoid the useless waste of land which often takes place in other directions, because areas, otherwise available for dwellings, are ruined by adjacent factories, or because consi areas are constantly being left proper facilities of access. Not only the case, but, owing to the fact that t of a circle increases much more rapid the diameter (in proportion to the sq the diameter, in fact), as a town g constantly diminishing addition has made to its diameter to enable it to its population.

The Advantages of Forethough

We have been considering almost exc the practical utility and the economic of regulating our town development o lines than in the past; but the purpos this is to make of our towns dwellin more fitting for a race of beings who live by bread alone, but who requi mental culture and an outlet for t pression of spiritual aspirations. you want to erect a new municipal b or a new cathedral, having settl requirements, practical or hygienic, t building must serve, you call in the to give form to the building, that express by its beauty something more thing which throughout the ages eve of man has felt to be necessary to th pletion of his works; and so must it be city building. When the surveyor settled the requirements, and the eco and engineers have settled the possi then we, as our forefathers did, m in the man of imagination, the ar clothe these requirements in some be form. The Greeks and Romans did you may see from the beautiful rec of Ephesus and other of their cities mediæval builders succeeded also, tho quite different lines, as is evident in burg, Nuremberg, or any city where æval remains to any extent exist town planners of the Renaissance manner gave order and beauty t cities, and their works, as being ne our own time, we should study with care, such examples, for instance, be seen in Paris, Karlsruhe, Tur Copenhagen. Your Society of Ar has already made sketches for a p a Manchester suburb, which are, no known to many of you, showing the l of treatment, the careful considera the grouping of the buildings an placing on the ground, which must fo of the final stages of town planning town is to become once more a b place to dwell in, and it is as necess mental and spiritual health that man live in beautiful surroundings as it his bodily health that he should dwel sanitary conditions. Town planning calls for a great co-operative effort to in our cities worthy dwelling-plac our social life. The individual mu his reward for sometimes sacrifici immediate interests and predilections far wider opportunities which a co-or development would afford, and, abo might I say here, he must learn to his own smoke literally and metaphc The engineer and the surveyor willing to co-operate with the artist, him on sound and practical lines, but him the freest possible hand in dealin the forms of expression, and the a must cease to regard each build erects as a unit in itself of which make what he likes, and must learn sider it as a detail in the greater picture, and must accept as his fir the subordination of that detail to effect of ordered beauty which the must learn to require and appreciat each may in this way do his share the creation of a beautiful city."

THE IMPROVEMENT LONDON.

THE annual meeting of the Garde and Town Planning Association was Carpenters' Hall recently, Mr. Neville, the President, being in the c

The President approved the sugges Professor Stanley Jevons that a congress should be called at Cardiff to town planning and garden city devel

ll parts of the world now there came Association inquiries and requests for ce and advice with regard to all forms den cities, garden suburbs, town g, and any movement which had regard better housing of the working classes. Association was to do the work in the which it was called upon to do there increased financial assistance, and he e appealed to every member to ur during the year to obtain an al subscriber.

Cecil Harmsworth, M.P., the Chairman Council, in an address on "The Pro- f the Movement," said that the close Association's thirteenth year of exist- nd it housed in more commodious and premises than it had so far occupied. d matter for congratulation was that chworth Company was now beginning ge on to a dividend-paying basis. He d that at Letchworth there was already ulation of 6,000 and twenty-eight , while most of the works were in of enlargement. The health rate at rth was incomparably better than any town or even any health n the United Kingdom. There were portant differences between a garden d a garden suburb. Although they, Association, were deeply attached to den city ideal, they were very glad garden suburbs springing up all over intry. There were thirty-seven of ther in actual existence or in course notion at the present. During the re had been two town-planning tours. ng to Mr. Burns's Housing and Town g Act, he expressed the opinion that he record of recent legislation came examined in the future it would be niversally recognised that that was atest measure of legislation of our . return issued recently, which had ised up to date for the purposes of ting by Mr. Burns, showed that the overnment Board had given authority re schemes in ten cases; notices had ven to twelve local authorities; had been devised in many districts; e were also under consideration thirty- re schemes, most of which would edly come to fruition. If, by the of proper town-planning methods den city means, they could secure ousing for the people they would be ore than was possible by any other o bring about that social amelioration they were all looking.

Professor Adshead's Scheme.

sor S. Adshead then read a paper on nprovement of London," which was d by original lantern slides showing s that could most easily be altered.

history of the growth of London in ediate past is a tale of inventive n and suburban expansion, and that have occurred in the matter of g tell us of the assertion of lism and the collapse of unification. has been the havoc caused by the railways, not only throughout but also in London, fortunately trimental influence has been con- ry largely to the southern and sections; and, except for gross ral vandalisms which have been perpetrated in certain localities, the portion of London is still preserved an heirloom of artistic completeness. has a character and an individuality her own. Unlike Paris, she is not great formality; nor is she like dependent for her interest in what escribed as a monumental modernity; n, is she like New York, a city us in scale and a miracle of . Compared with Paris, she gains ntage in the majestic scale of her in the interminable interest of her ue beauty; compared with Vienna, esses in her monuments the interest nd great architectural purity; and with New York, she possesses a of noble compositions altogether and impossible in that democratic

wth of a town, whether it be little n a hamlet or a city of eight depends in its direction upon the quality and style of the architecture, upon the applications of the inventor, and upon the administrative organisations that prevail. The loss of traditional influence in the architecture, the confusion of styles, or rather the lack of any style, and the pronounced commercial aspect inseparable from all building enterprise, which has produced and is still producing so injurious an effect upon our streets to-day, is greatly to be deplored.

Important as has been the recent improvement in the educational systems which have been devised for the modern architect, its effect has yet to be felt. Old London, though beautiful, is fast becoming obsolete; we are at the commencement of a great period of rebuilding, and although Bloomsbury, a district of dignified mansions, must be rebuilt as a district of residential hotels, there is no need to exchange the refined and dignified simplicity of four-storied compositions for the restless pyrotechnic trivialities which are exhibited in these modern eight-storied hotels. It behoves those of us who are interested in the architecture of London to see to it that with increased size in building we get at the same time a real increase in dignity and scale.

Compared with New York, London is an immense village in point of scale. The scale of modern London will need to be increased. Selfridge's Store (the conception of an American architect), compared with Harrod's or the Russell Hotel, exemplifies what I mean.

Much interest attaches to the parks. The parks of London are peculiarly her own. Compared with the Tuileries Gardens in Paris, the Luxembourg Gardens, and the Bois de Boulogne, they are informal -great reservations planted with forest trees and laid out at intervals with fully developed treatments of landscape design. From time to time schemes are forthcoming for imposing upon them formal treatments such as are found to perfection in other cities amidst architecture of perfect symmetry, as at Versailles, at Nancy, and as at the Louvre.

Whilst I feel that our one formal avenue—the Mall—is still capable of being greatly improved by the introduction of more sculpture, and, perhaps, by converting its boundaries on the parks into sculptural ways, as the "Siege Allé" in Berlin; and whilst other borders of the parks might be greatly improved by laying them out with flower-beds of formal design, as along the eastern edge of Hyde Park and along the Broad Walk in Regent's Park, at the same time I feel that cutting and carving in a wholesale manner is a thing strongly to be condemned.

Perhaps greatest interest at the moment attaches to the results that will follow in connexion with the electrification of our railways, the amalgamation of railway systems induced by the competitive interest of the trams, and the effect which will ultimately follow when the movement of the population has settled down after the disturbing effect of the many new means of locomotion.

The present time is momentous, and all who are interested in the future amenities of London should bestir themselves and see to it that the best is done. This Garden Cities Association, which is particularly interested in the development of the suburbs, should see to the convenience of access and egress for suburban traffic.

Many schemes have been propounded for the improvement of our terminal railways, and a suggestion for taking Charing Cross and Cannon-street Stations across the river, strongly advocated by Mr. Burns, and graphically shown in the *Builder*, is worthy of consideration; but, whilst there is much to be said in favour of such a drastic change, I feel there is another scheme which would offer greater advantages at less cost.

Now that we can construct tube railways, in which run electrified trains, and which are not dependent upon light and ventilation, as in the old days of steam, why not hand over the underground railway, as from Victoria to Cannon-street Stations, to the South London suburban traffic, and construct, in a position much more convenient for local traffic, a tube for the District trains, which will pass where they were always required (and should originally have been), along Victoria-street, Whitehall, the Strand, Bridge-street, Queen Victoria-street, and so connect with its present route at Cannon-street.

Such a new route would be an enormous advantage to the District trains. Suburban traffic from Clapham Junction could then, instead of going into Waterloo, pass over Grosvenor Bridge at Victoria; it could dip into the old underground line; its first stop would be at Charing Cross; it would then stop at Cannon-street, and, by a new line from Cannon-street under Bishopsgate-street to Liverpool-street Station, it could be finally taken out along the East London line under the Thames; and so we should have important through stations along the north bank of the river accessible to all suburban trains from the south. Relieved of suburban traffic, old Charing Cross and Cannon-street Stations could be entirely done away with, together with their hideous bridges. Waterloo and London Bridge Stations could be reserved for the trunk, the mail trains, and the suburban traffic requiring to come into South London. Ultimately Charing Cross Bridge might be re-erected as a new thoroughfare from north to south.

With the destruction of Cannon-street railway bridge, why, then, go to the enormous expense of a new traffic bridge at St. Paul's? Why not utilise the Cannon-street site? It would do more to relieve London Bridge than in a position nearer St. Paul's; tram connexions could at equal cost pass over it through tunnels not only into Aldersgate-street, but also into Finsbury and Whitechapel, and a connexion by train might be made between London Bridge Station and Cannon street district to prevent congestion on the East London line under the Thames.

Distances in London have been halved since the days of the horse 'bus and the horse cab. If Cannon street and Charing Cross were sufficiently convenient in their day, London Bridge and Waterloo are now equally convenient with the motor 'bus and the taxi cab.

In the *Builder* it is suggested that the London, Chatham, and Dover line from Holborn should be taken underground and under the river. If this could be realised all the bridges in central London would disappear. What a glorious prospect! All dependent upon the annihilation of petty interests and upon amalgamation. The South London line should purchase the old Underground at the cost of a new section of tube for the Circle line. The benefits that they would thus derive from the improved facilities they would thus be able to provide for suburban residents in the south of London would be enormous.

I put this forward as a tentative suggestion of what might be done to improve London's railways at small cost and to get rid of the hideous bridges over the Thames.

London has recently constructed Kingsway, and it is yet early to calculate the benefits that are to be derived. Other new thoroughfares need yet to be constructed through the slums. An embankment needs continuing along the south bank. Many street widenings need taking in hand, and enormous areas of cottage property need rebuilding to modern conditions. But of all things most pressing at the moment is the treatment of the bridges and of the suburban lines."

The paper will be discussed at a future meeting.

CIVIC DESIGN NOTES.

Garden City, Montreal. A SCHEME promulgated by the Canadian Northern Railway Company embraces the planning and development of a garden city, for groups of detached and semi-detached villas, upon the island of Montreal between Back River and Outrement. The various properties required have been purchased, together with additional land to the west, which, it is anticipated, will be utilised for the erection of factories and the new yards of the railway company.

Portsmouth and Town Planning. AT a recent meeting of the Portsmouth and District Building Trades Association Mr. W. Rogers, architect, and an hon. member of the association, dealt with the subject of Town Planning. Our towns and cities, he said, had been built in a shapeless, go-as-you-please, planless way, with the result that we had slums and congested areas, physical and moral deterioration of the people, and making that statement he spoke more particularly in respect to Portsmouth to the time anterior to the passing of the Public Health Act.

Considering upon non-Utopian lines the recent proposals to adopt schemes for town planning the undeveloped land in Portsmouth, he observed that modern requirements demanded that the principal routes of the thoroughfare should be of ample width and that their direction was of the greatest import.

The lecturer gave some statistics as to the area of land available for town planning. The area of the county borough was 6,573 acres. Approximately there were already 2,890 acres built upon, and 1,733 acres devoted for public purposes (such as the Great Salterns, the Dockyard, the Asylum, the cemeteries). This left a total of 1,950 acres available for building, but of this total the War Office held 800 acres, and if this was deleted only 1,120 acres would be left to the town plan. It was estimated that 810 houses were being erected every year in Portsmouth. Accepting these figures and allowing forty-five houses per acre, 18 acres were built over in the year. Now if they worked under town planning, with a maximum of thirty houses per acre, allowing 1,000 houses annually, they would then be using up 33½ acres each year. Now, having 1,120 acres available, it would require little more than thirty-three years to develop the land, or, if the War Office land be included, it would take fifty-eight and a half years to build over the whole undeveloped land.

He declared that if no reduction of the price of land was made no considerable relaxation of by-laws, by allowing narrow footpaths to side roads, etc., could compensate the builder for the extra cost of land per house, and he could see no method which would enable detached or semi-detached houses to be built as cheaply as terrace houses. The average cost of land per foot frontage was 4*l*. 10s. A builder, buying 100 ft., built seven houses upon the land, and sold at 280*l*. each. Now, under town planning, if only allowed to build five houses, the builder must either buy his land for 126*l*. less or sell his houses for 305*l*. each. The question therefore was, Would the purchaser give the extra amount for the same accommodation as he had now? These were highly practical questions, and he commended them to the consideration of the Association.

The Saving of Kingston Vale.

AT a recent meeting of the London Committee of the Wimbledon and Putney Commons Extension Fund arrangements were made for personal appeals to representatives of the public spirit of the City to provide the balance necessary for carrying out the purpose of the fund. Probably 7,000*l*. will suffice. The Committee point out that the residents near the Common pay for the whole cost of acquisition and maintenance, whereas the other great open spaces of London were almost wholly acquired and are wholly maintained at the cost of the Corporation of London or of the metropolitan rates. It would have been reasonable, they contend, that London at large should have provided the extra sum necessary.

Edinburgh Improvement Projects.

FOR some time, says the *Scotsman*, there has been a growing feeling that the full value of the East Princes-street Gardens is not realised under the present arrangements. The gardens during the season, when the flowers are in bloom and the temperature is mild, can be enjoyed by those who have leisure to enter them; but the full possibilities of their situation are not taken advantage of in respect of the much larger number of persons who pass along Princes-street. The high railings which separate the gardens from the thoroughfare form an effective barrier, not only to free passage, but also in a large measure to the view. The proposal to remove the railings has been before the Town Council for some time; and a sub-committee of the Public Parks Committee has agreed upon a definite recommendation in regard to the subject. It is proposed to make a number of alterations on the laying-out of the East Princes-street Gardens with a view to the plateau being thrown open. The actual removal of the railings it is proposed to defer for a year, and in the meantime to increase the number of entrances, and to keep the gardens open until midnight. The experience so gained will enable the Town Council to come to a decision as to the complete removal of the railings. A large model of the gardens, showing the proposed alterations and the position of the new entrances, was placed before the Sub-Committee by Mr. M'Hattie, the Chief Gardener. A footpath is to be formed along the inside of the railings the full length of the gardens. Other arrangements are to be carried out. Another project discussed was the improvement and popularising of the Calton Hill. After consideration of various suggestions that have been made, it was remitted to the City Superintendent of Works, the City Road Surveyor, and the City Gardener to draw up a report with regard to the improvement of the Waterloo-place approach, the widening of the roads and footpaths, additional seats and their location, the improvement of the greens, the advisability of removing the railing round the National Monument, the selection of suitable sites for monuments, and the closing or better lighting of the Hill at night

The Housing Problem.

EARL GREY, speaking at the annual meeting of the York Health and Housing Reform Association, said he was too old a reformer to be so sanguine as to believe that we could abolish the slum, but he did believe that if the people of England were to determine that a ring fence should be built round existing slums, and that in all urban developments the slum should not be allowed to take root, we should do a great deal for the future prosperity and benefit of the country. The Dean of Lincoln said that the slum arose from a variety of causes, and was not going to be abolished by a fairy's wand. Nor could it be dealt with by one method alone. We should be obliged not merely to treat it as a housing question, but to go along all the lines of social improvement at the same time. We wanted more houses before we could shut up the bad ones that existed. A clearance scheme did not solve the question. Wise sanitary authorities would therefore have their town-planning and extension schemes before them when they contemplated closing slum property, for otherwise the closing of one slum would only create another. It was not enough to enforce sanitary laws; we must bring owners of small tenements to realise their responsibility.

The View from Richmond Hill.

UNDER the provisions of the Town Planning Act a public meeting was held on the 19th ult. at the District Council offices, Ham Common, to consider the proposal of the local authority to apply to the Local Government Board for sanction to a scheme designed to preserve the amenities of the district, and particularly the views from Richmond Hill and the river. Mr. A. R. Fowler, Chairman of the District Council, presided, and explained that the whole of the Parish of Ham and part of Petersham would be included in the scheme, which would therefore amply protect the view from Richmond Hill and also the view from the Thames. If the suggestion of the Twickenham District Council to get a new bridge built over the river from Eel Pie Island materialised, then the Ham Council would have to construct a connecting road from the bridge to the existing main road. Personally, he would rather retain the present rural character of the village, but he was afraid that would be impossible. Major D. P. Chapman elicited the fact that the scheme would not conflict with the proposals already made by Richmond and Twickenham, but would be promoted in harmony with them.

Newcastle-on-Tyne Town-Planning Scheme.

NEWCASTLE Corporation's application for permission to prepare a scheme of town planning for land known as Craghall Dene, situated within the city boundary, and partly in the urban district at Gosforth, formed the subject of a Local Government Board inquiry, conducted by Mr. Thomas Adams, at the Newcastle Town Hall. The City Engineer, Mr. Steele, presented statistics dealing with the development of the district. He said he saw signs of immediate building operations on the area included in the scheme, and the whole district was in such a part of Newcastle as was likely to be developed. He declined to commit himself to the belief that the development of the Gosforth portion of the estate was on such lines that it was not necessary to include it in this scheme, and he could not agree that the making of a road along the railway would dispose of the question of communication.

ETON CLOISTERS.

MR. H. E. LUXMOORE writes to th from Eton as to the discussion l about the removal of the old railings west of the Eton College Cloisters. He "It ought to be known that it is now to remove also the railings from th and east cloisters; solely on the grou it would 'look better' without th that they are additions to the structure. As this has been decid consideration and experiment, it seem to repeat arguments against it; no protest likely to prevent it. But yo possibly help to prevent further chang made to suit the ever-varying taste day, if you would allow those w strongly about it to advocate once m principle which we think ought to such cases. When work has been done by our forefathers to the best power with good material, the questi longer whether we 'like' it or not, become a part of history, not a 'm taste.' Practical needs may, of course reluctant alteration or removal; othe are bound to preserve and protect it, we are owners, and much more if, case of a public building or nationa ment, we are only trustees for futu In such a case private taste ought no weight, and least of all ought it to itself at the expense of the very tru which it administers. For indeed taste is nowadays too capricious t against history. Inigo Jones co Gothic; Wyatville restored it; Sir Scott condemned Georgian alteratio deplore Sir Gilbert Scott's, and t generation will often deplore ours."

Mr. A. C. Benson, writing from M College, Cambridge, in reference to M moore's letter says:—"The use of t "railings" in the controversy has c concealed from many old Etonians actually in progress. What are being are in no sense railings, but the screc their tall solid balusters of Sussex iron across the Cloister arches in 1725. nothing particular to see when these a away, nothing that you cannot perfe see through them and above them. cool and pretty place, that cloiste summer afternoon, with the glimpse little court and the green garth, laurels and quaint old pump; and taki the grille, two centuries old, so costl solid, which does not hide anyth interfere with anything, is just one annoying bits of fidgety restlessn inability to leave things alone, so c istic of active officialdom.

Eton, of all places in the world, mi learnt the lesson not to meddle w antiquities. In 1847 the splendid woodwork was ruthlessly torn dow Chapel—you can see a picture discarded organ-case, now at Rugeley Ralph Nevill's book, "Floreat Etona" was discovered that the stalls h erected over the XVth-century which were still visible, and in ve preservation, on the walls behind.

What did Eton taste proceed to de to destroy the greater part of these paintings, then to cover the rest some very monotonous and insipid stalls! My only terror is that the come when it will be proposed to remo in their turn. It is strange that cannot see that "taste" is the mo and unreliable thing in the world, the irrecoverable and irreplaceable that which is given to all costly, care solid work by age and weather, by tradition and association. Vandalism enough anywhere; but at Eton, where tion after generation of English boys, most impressionable years, get to lov wall and window and gable with an romantic affection, it is really too u to play tricks with the place in the futile archæology and private taste."

Mr. Benson has contributed an ar much the same effect in the colum contemporary, and both he and M moore give expression to opinions wh we believe, be endorsed by all who b the preservation of "work carefully our forefathers to the best of thei with good materials."

THE BUILDING TRADE.

ADE UNIONS AND THE MINIMUM WAGE.

view of the unfortunate strike of the miners, correspondents are writing to he Press pointing out to the coal- that, after all, the concession of mum wage is a comparatively small o demand and that the men can well sted to give a minimum return of in return for a minimum wage. This nt is as novel as it is unsound, and, er, it entirely loses sight of modern ial conditions.

ideal to be attained is not a mini- age with a minimum return, but an ely fair wage and a maximum return t fair wage. That is the ideal, and n employer employs but one or two s the ideal is more or less attained. evant is engaged at fair wages, and he gives satisfactory work in return sily dismissed and his place is taken ore worthy subject. But where large of men are employed and the trade intervene the position is totally dif- If a minimum wage be fixed, quite om the results attained, the employer neans of securing that each man will adequate return for his pay. The l of a single man—after even his from one working place to another—ted by the unions, and in past experi- s often been made the sole pretext strike. Under such conditions the on of a minimum wage deprives the r of any means of securing from mployee an adequate return for the aid to him. A correspondent in these recently pointed out that there was fication for the oft-repeated assertion e trade unions acted in restraint of limiting the number of bricks which man might lay in a day. In this ar instance, we believe that our corre- t was correct in stating that, at any vadays, no such rule exists, but a nimum wage for all, entirely irre- of capacity, zeal, or actual results, is precisely the same in principle as e suggested limit on output? It is ng down and a discouragement to e and capacity. Hitherto, supply and have had something to do with tes of wages; in certain industries bour is unorganised and workpeople nceless it has worked injustice, and Parliament has intervened to remedy . But in the case of the very best d trade in the world any interference employer and employed is to be ed, and the fixing of minimum or n wages would appear to be an im- y having regard to the complex s of commerce and the limit of ompetition.

ON MASTER BUILDERS' ASSOCIATION:

ANNUAL DINNER.

nnual dinner of the London Master Association was held on Thursday r in the Whitehall Rooms, Hôtel e, Charing Cross, Mr. G. Bird God- sident in the chair. There were esent, Mr. W. Edgar Horne, resident of the Surveyors' Insti- Mr. W. E. Riley, Superintending of the L.C.C.; Mr. James S. Holli- sident Institute of Builders; Col. rd Trollope, V.D.; Mr. F. Corben, London Association of Master ons; Mr. J. Arscott Bartrum, the Tylers' and Bricklayers' Com- d Messrs.

llen
ley
lford
nnan
bs
ch
rley
igwood
John Byford
H. Arthur Bartlett
J. C. Bourne
C. Blomfield
J. C. Broad
C. B. Broad
R. G. Bare
H. T. A. Chidrey
Horace A. Cunis
H. W. Cullum
F. C. Creak
G. S. Collins
J. W. Chessum
R. B. Chessum
Ben Carter
F. Dare Clapham
Stanley C. Clarke
Wm. Downs
G. Dean
T. S. Dangerfield
H. C. J. Edwards
F. M. Elgood
C. H. Edwards
C. Frankiss
H. Fairhead
J. Fitch
A. B. Falkner
W. J. Falkner
W. T. Faldo
A. Fry
Wm. Godson
F. J. Gayer
W. H. George
A. Reoch Grant
W. Garrett
John Garrett
A. F. Gibbs
T. Gibbons
Ed. Gracie
J. Gracie
H. S. Greenwood
M. G. Goslett
R. G. Goslett
H. A. Armytage Gate
F. Higgs
S. H. Hamp
Wm. Hammond
Leonard Horner
C. Stewart Harrison
W. Hasseldine
Hy. Holt
Thos. Hall
Bernard Holland
Ralph J. Holliday
E. Holtwell
R. P. Higgs
A. C. Finch Hill
Edmond J. Hill
W. Matthews Hill
C. W. Hall
A. B. Hayward
J. W. Herram
J. J. Joass
G. Thrale Jeli
G. R. Julian
A. T. Johnson
W. S. Johnson
H. J. Johnson
D. Palmer Jones
G. H. Jenkins
J. A. J. Keynes
G. Malcolm Kent
R. H. Kerr
Frank Keep
J. Wolfe King
F. Lown
J. E. Lawford
Walter Lawrence, jun.
H. W. Lansdown
C. W. Lester
T. A. Lewis
W. A. Lewis
W. J. S. Lawton
A. E. Lawford
C. E. Lawford
W. C. Lole
Frank May
J. N. May
E. C. P. Monson
Harry Monk
C. H. Mabey
Frederick Miller
J. C. S. Mummery
T. A. McIntyre
W. R. Manning
Ar. Norman
G. Perry Nash
Geo. Neal
Geo. Neal, jun.
Eustace Neville
B. E. Nightingale
Edwin C. Pinks
T. R. Plowman
N. Pratt
E. D. Pratt
C. R. Parker
G. H. Parker
Rashleigh Phipps
Joseph Randall
J. Rawlings
F. G. Rice
T. S. Rice
A. D. S. Rice
G. C. Rowe
A. H. Ryan
C. E. Roberts
Leonard C. Randall
W. Reynolds
R. M. Roe
C. C. Richardson
A. Howell Ridge
G. A. G. Robertson
J. W. Simpson
Arthur Smith
Harry Smith
E. J. Souster
E. D. Selway
G. Stegmann
A. J. Stokes
W. J. Styles
E. J. Sturdee
S. Scourse
W. Harvey Stringer
D. Smallwood
Harold B. Sanders
H. C. Smart
W. Shale
F. Sherrin
Joseph Sabey
Percy W. Sanker
D. Solomon
H. T. Taylor
J. Taylor
Clifford C. Trollope
Fred Thorne
Thos. Thorne
J. N. R. Vining
C. Woodward
F. J. Walton
H. W. Wigglesworth
D. Warrey
R. W. Whitehead
T. F. Waggett
F. E. Wallis
Hy. Wall
R. Woollaston
A. J. Wakeford
A. G. White
Isaac Young
R. Young
D. U. Youle
T. Costigan, Secretary,
And others.

The loyal toasts having been proposed and honoured,

Mr. James S. Holliday,

President of the Institute of Builders, proposed the toast of "The Architects and Surveyors." He said there had been great changes in the building trade and the profession of architecture during the last fifty years, and comparisons that were made at times were not always favourable. When the history of our time is written, however, our buildings will be found to compare favourably not only in architectural merit, but also in stability with those works of other periods. Sometimes we heard that work was not so well carried out, and if the public would have cheap and nasty articles, there would always be a supply; but if best buildings were wanted, experienced architects and builders would always be found to supply them. We heard of builders, and even architects, who were not fully educated. He supposed there were cases of the kind, but he thought there was a growing disposition to place too much importance on academical qualifications, and that was one of our present-day troubles. He was glad that the London builders were trying to reinstate the old apprenticeship system, for after a long experience in the trade he had come to the conclusion that one could not become proficient merely by attending classes. A practical basis was necessary. One of the great changes in the building trade was reinforced concrete. Just lately the L.C.C. had framed new rules and onerous conditions, and he was wondering what would be the next requirement. Having made some humorous observations as to possible requirements in regard to aviation, the speaker referred to the work of quantity surveyors, and coupled with the toast the names of Mr. Simpson and Mr. Horne.

Mr. J. W. Simpson,

in replying for the architects, said the craft of the builder was a very ancient and a very honourable one. The trade was one to which we were all proud to belong. He said "we," for the architect was by the very derivation of his title a master builder, and they were once all jacks of the same trade. He sometimes wished we were so still. Yet, despite their inevitable division into special groupings (a division which tends to split continually into sub-divisions, and these into mere details), the one contriving and designing the building proposed, and the other devoting its admirable administrative genius to its execution, they still, he was glad to say, kept in close touch and had very friendly relations. He had thought of claiming the description "the perfection of common sense" as appropriate to the art of building, but he remembered that an authority, "Joseph Vance," who, if he did not actually exist, was none the less very lifelike, said that "builders know nothing of buildin', and no need to neither." No one who visited one of our great modern buildings during its erection and observed the simple and admirable routine which had been brought to such perfection was likely to agree with Joseph Vance, and they would recollect that he himself did really know a great deal about building. Despite the alterations in the conditions of labour and the education of the workmen—some of which we regretted, and with others of which we sympathised—the work of our craftsmen was no whit behind that of earlier days when occasion was given to them to produce it. Time was of more value daily, and the finest work demanded both time and thought. It was by the close and kindly relations of the builder and the architect that time might be saved without detriment to the result of their joint labours.

Mr. W. Edgar Horne, M.P.,

in replying for the surveyors, first referred to the death of Mr. T. M. Rickman, F.S.A., one of the members of Council of the Surveyors' Institution, and said he was a man for whom everyone must have had the greatest respect. Mr. Holliday referred to the architect as the source of all their work, but he was nothing of the kind, whereas the client was, and the client was a person surveyors had to look after. Mr. Holliday also said that theoretical knowledge was all very well, but it had to be from a practical basis; practical basis translated meant client. At the end of last year he (the speaker) made some observations upon the growth of London. He was able to obtain some very interesting figures and facts, and he had come to the conclusion that London is not now growing at the rate at which it ought to. Very few of us recognise the enormous size of London, and every year there was a wastage of the buildings by their having outlived their usefulness, and that wastage had to be made good, and he believed it was just about made good. London was not growing, as a whole, as fast as it should, and we were not having the large improvements which we should have—the comprehensive designs which London was entitled to. At Budapest there were more fine buildings being put up than in London, and that was partly because the pressure of increased rates and taxes had been taken off speculators, clients, or capitalists who invested their money in new buildings, and it was important to London that capitalists should feel security when they put their money in bricks and mortar, and there was not that security felt now. London was the centre to which millions of people came every year to spend money, and it must be made desirable and convenient for them to do so, and that would be better for London. He believed it was

only by a liberal and forward policy of improvements and rebuilding, etc., that we could have a London which would be worthy of the city we are all so proud of.

Mr. Fred Higgs,
in proposing the toast of "The L.C.C. and Municipal Authorities," enumerated the various ways in which the many municipal authorities of London look after the citizens, and also to the relations of the builders with the various authorities. He thought there had been great improvement in municipal government in London during the last twenty years.

Mr. W. E. Riley,
Superintending Architect of the L.C.C., in reply, said of the two City Councils and the twenty-seven Borough Councils of the County of London he did not know much at first hand, but he had no doubt that the problems connected with the building trade with which they had to deal presented the same difficulties as those at Spring-gardens. One of the most important, if not the most important, of the many responsibilities devolving on the County Council and the local authorities was that of the erection and regulation of buildings. He was quite sure that all the councils and their officers were equally anxious to do what was fair so far as they could judge as between the builders and the ratepayers. As regards the London Building Acts, it was the constant endeavour of the London County Council to limit and amend these Acts in any way that modern requirements and recent improvements in building construction might demand. The County Council and municipal authorities not only required builders to know all about materials and construction, but expected them to know all about the laws which they had to administer. The builders' lot in London was "not a happy one," and any endeavour to ease his path was praiseworthy. The greater stringency of building codes in other large cities usually escaped attention when the fate of the London builder was depicted in gloomy tints. As to efforts which have recently been made to remove some of the restrictions which were felt to press hardly on building in London, in 1908 the County Council were able to obtain amendments of the London Building Act which removed the limit of cubical extent in buildings, and considerably relaxed the rules as to uniting buildings, and this relief was one which, he believed, had been much appreciated by building owners in the metropolis. In 1909 the Council secured a further amendment of the Building Acts to permit the erection of steel-framed buildings, and to enable regulations to be made with respect to buildings of reinforced concrete construction. These regulations would, it was hoped, shortly become part of the building code of London, and they had been drafted with the single object of informing a builder definitely as to where he stands. As regards the City and Borough Councils, their relations towards builders were more on the lines of inspection. But whatever duties were placed on the authorities bearing upon builders' work he was sure that all of them were only too anxious to do all that they could to administer their powers with as much regard as possible to builders' interests. The municipal authorities of London, in conjunction with builders, were occupied with big things. Large buildings of all kinds were being erected by the L.C.C. in every quarter of London, particularly for educational purposes. As regards the special and technical institutes which were springing up everywhere, not only did builders get work put in their way, but the very object of the institutes was to provide technical education for the rising generation.

Mr. F. M. Elgood,
in proposing the toast of "The London Master Builders' Association and its President," referred to the importance of the calling of the master builder and to the position of the Association. He also spoke of the Housing and Town Planning Act, which gave power to responsible authorities to relax building regulations without the formal necessity of going to Parliament. The Act had far-reaching possibilities, and, in regard to town planning, it was important to look into the future and to prepare comprehensive schemes. One of the most important works of the Association was in reference to Conciliation Boards, and it was greatly to the credit of the Association that in these days of labour unrest that there should have been such a long peace in the trade.

The President,
in reply, said the future of the trade seemed brighter. Trade had improved—there was plenty of room for it—but prices had not recovered, and was that not a great deal to do with themselves? Was not the fault that, having arrived at the sum of the tender, they took off a good discount? And he urged them to try and reduce that discount instead of increasing it. There was no need for the extreme competition which prevailed. During the past year it had been well with the Association, and there had been more additions to their ranks than for several years past, several important firms having thrown in their lot with the Association, thereby helping to bring about that unity which was so essential to the trade, and members would do well to push forward this work of organisation. Individual members could do much by trying to get those outside to join, and in this connexion he stated, as an illustration of the difficulties they had to contend with, that a well-known firm, after the advantages of unity had been specially pointed out, said, "We have talked about becoming members, but we understand there is likely to be trouble with the carpenters, and it may answer our purpose to accede to their wishes, and we should not be able to do so if we were members of the Association." As to labour unrest, in some parts of the country it had affected the building trade, but London so far had escaped; but probably all of them were aware that the Amalgamated Society of Carpenters and Joiners had given notice to terminate the rules which now exist, and they had put forward proposals, but, unfortunately, on to the proposed rules they had tacked on the Furnishing and Cabinet Trade Society, and that the Council could not accept, as cabinet-makers could not be regarded as part of the building trade. The Amalgamated Society proposed 1s. per hour for an eight-hour day; night gangs which, at the present time, are paid at the day rate of wages plus one penny per hour, they propose should be at time and a quarter. All overtime shall, in future, be paid for as double time, instead of time and a quarter, time and a half, and double time, and he was sure all must recognise that these propositions were most unreasonable. The building trade could not stand such proposals as that. What the Association agreed to would have to be accepted by the building owner, and architects and surveyors would agree that if any such proposals were agreed to the building trade would be crippled for a very long time to come. If they were to have trouble, they must be united; what the Council decided was for the best, and must be supported by all of them. The President then referred to other troubles the Association had had to face during the past year, such as the Insurance Bill and other legislation.

The last toast was "Our Guests," proposed by Col. Trollope and acknowledged by Mr. H. T. A. Chidgey, Q.S.A.

A CAMPAIGN AGAINST LABOUR TYRANNY.

IN view of the feeling in favour of the repeal or amendment of the Trade Disputes Act, 1906, the Council of the Liberty and Property Defence League invites the co-operation of all those who desire to safeguard the freedom of labour and the interests of the public against "peaceful persuasion" in a national demand for the alteration of the law. The Council of the League suggests that public petitions in terms similar to the resolutions adopted by the justices of Liverpool and other places should be placed for signature in all parts of the country, and these should be sent, when complete, to local members of Parliament for presentation in the House of Commons. The Council also suggests that wherever practicable public meetings should be held in support of an amendment of the law, and that the question should be raised at political meetings, at which either a member or a Parliamentary candidate is present. It is believed that by these means the true feeling of the country may be demonstrated and Parliament moved to action. Communications may be addressed to the offices of the League, 25, Victoria-street, Westminster.

THE PROVIDENT INSTITU OF BUILDERS' FORE AND CLERKS OF WOR

THE twenty-eighth annual dinner Institution was held on Saturday last Holborn Restaurant. The chair was t Sir Aston Webb, C.V.O., C.B., R.A., supported by Sir A. Brumwell Thom John Slater, F.R.I.B.A., Mr. G. C Mr. Thos Costigan, Mr. Alexander and Mr. Leonard Horner.

The loyal toast having been h

The Chairman,
in proposing the toast of the Provident tion of Builders' Foremen and Cl Works, said that it was a noble duty to support the Institution, and he wi had the silver tongue to draw the s and every bawbee from their pockets. thought that, as compared with past ye foremen and clerks of works were better salaries at the present day, they deserved more, and he hoped young men would join the Institution, ally those who were connected with th ing trade.

Mr. T. Costigan,
in reply, said that the Institution want all to be strong men to support their i Master builders and other employer know when their liabilities are at an e as the Secretary of the London Builders' Association, had received serious letters from old subscribers to they could not renew their subscription to the increased taxation which was sti put upon them.

Mr. F. J. Dove, in proposing the the "Architects and Surveyors," sa what was wanted among builders wa much what is called "trade unionis "combination."

Mr. John Slater and Mr. H. T. A. having replied,

The Chairman
proposed the toast of the "Builders a tractors," and in the course of his said that he understood the term "bu but why "contractors"? He much p the old style of "builder," and he was to say that during the whole of his c with builders he had never had any dispute with one of them. Every thought, knew the A B C of build architect, builder, and client; and he s that the builder was the middlema first qualifications of a builder sh "imagination," and he should also the gifts of organising, management, being able to say "No!" He tho were being over-legislated. We ough able to manage our own affairs, an already had the House of Lords in su he thought it would be a very good we could have the House of Comm suspension for a time.

Mr. Leon rd Horner,
in reply, referred to the most depress tion of the building trade and to sideration of the architects and surveyors to the builders, and he c help saying that the builders had the foremen and clerks of works for the which they had always shown.

The toast of "The Governors, Donors, Subscribers, and Visitors" been proposed by Mr. Alexander Rito replied to by Mr. T. Costigan and Mills Robbins.

Mr. G. Corderoy proposed "The Cha who, in response, said that it gave hi pleasure to be there, and he wished the tion and its work every success.

BUILDERS' CLERKS' BENEVO INSTITUTION.

THE annual general meeting of this tion took place on the 27th ult., Mr. W. Trollope, President, in the chair.

The Report and balance sheet were su to the donors and subscribers. They the income from donations, subscr dividends, etc., was about 780*l.*, and fr amount the sum of 758*l.* 15s. was annual pensions, and 5*l.* granted as ten relief. The late Mr. John Howard C 270*l.* to the Institution, which was for the purchase of a presentation Orphan Working School.

Mr. Howard Trollope was very thanked for his excellent services dur past year, and Mr. Dudley Bartlett, w inducted to the chair, received a hearty w

The Committee hopes to gain s support to make the receipts cover the e ture, and Mr. Dudley Bartlett is working hard to achieve this.

THE YORKSHIRE ERATION OF BUILDING TRADES' EMPLOYERS.

annual meeting of the Yorkshire tion of Building Trades' Employers was Hull on the 15th ult., when the Mayor (Alderman Feldman) gave a elcome in the absence, through illness, Mayor (Mr. T. Taylor). There were enty members present, including Mr. nsley (Hull), President; Councillor Mallinson (Huddersfield), Vice-Presi- Mr. W. T. Ledgard (Leeds), Vice-Presi Ir. T. E. Taylor (Bradford), Treasurer; an W. H. Jessop (Huddersfield), J. Dawson (Huddersfield), W. Sinclair rough), W. R. Thompson (Dewsbury), Rhodes (Leeds), Past-Presidents; Mr. dson, Secretary, and others.

man Feldman, in giving the members al welcome, said he noted with regret e Federation report took rather a view of the future. Might he offer a ds of encouragement by saying that gress of municipalities tended in a neasure to the extension of building s, and modern conditions rendered it ly essential that new buildings should e and take the places of the old ones. c, he thought they might with perfect ook forward to a bright and hopeful

ecretary reported that he had received teen towns forms of protest, containing atures, against the undue haste with he Insurance Bill had been rushed Parliament, contrary to the definite of the Chancellor of the Exchequer. White, Secretary of the National on, suggested that they should have otest backed by the Northern and ntres, and then forward it to the Executive for presentation.

as agreed to, after several members plained of the apathy shown by local ons. Mr. Lindley asked if it was sible to have a report upon the e Act, setting out in simple terms ions affecting the trade. The Presi lied that there are many books pub- n the subject, most of them good.

nference nominated the President as presentative on the National Health Commission. It was agreed to hold meeting at Huddersfield.

discussion took place on the question uctual referees, raised in connexion Huddersfield Corporation. Several pointed out that it would be advis- sign no agreement which did not a clause for the appointment of an nt arbitrator in place of the Borough

pon instructions, the Secretary stated had obtained an official copy of the ir wages clause of the West Riding ouncil, and, as was anticipated, it no condition that only trade union ld be employed.

dinner in the evening the President orted by the Lord Mayor of Leeds, r of Grimsby, the Sheriff of Hull n Brown), Mr. E. Bolton (President full Chamber of Commerce), Mr. ddison (President National Federa- Slate Merchants), and others. The ror of Leeds, replying to the toast of ests," submitted by Mr. Finch, said ng his experience, which extended y years, he had not known the build- so bad for so many consecutive e thought there were signs of a ast year, but through lack of con- the country and by reason of a mount of legislation, there was a He was, however, optimistic, and d the cloud was passing. He had re was a question looming ahead pelling non union men to join the l he would say was that if the position rsed and employers insisted upon only non-union men it would be nny.

ison proposed the Yorkshire Federa- ilding Trades' Employers, and, in the President said the trade's peace tened, and what might happen e next few months could be only l. The present state of trade cer- i not warrant any threatening n the part of labour. He was a ver in conciliation, but Conciliation d not worked exactly as they were Mr. Cheverton-Brown proposed the Trade of Hull, Mr. Edward Bolton eriff replying.

BATH MASTER BUILDERS' ASSOCIATION.

The annual dinner of the Bath Master Builders' Association was held on the 14th ult. at Fortt's Restaurant, the President (Mr. W. A. Sheppard) in the chair. Among the company were the Lord Mayor of Bristol (Mr. C. W. Wills), the Mayor of Bath (Mr. T. F. Plowman), Mr. Audley Perkins (President of the Bristol Master Builders' Association), Mr. E. F. Woodward (Vice-President, Bristol Master Builders' Association), Mr. J. Bertram Wills, Mr. C. Cowlin, Mr. E. J. Neale, and Mr. H. H. Lloyd (Bristol).

The Lord Mayor of Bristol proposed "The Mayor and Corporation of the City of Bath." The Mayor and Alderman Oliver replied.

The Mayor of Bath, on rising to give "The Bath Master Builders' Association," said the Association had the very laudable object in view of promoting conciliation, and, instead of being a party to resorting to the brutal expedient of strikes and lock-outs, did its best to bring masters and men together, and promote a condition of things more conducive to the welfare of both. He was glad to learn that the condition of the building trade during last year had shown a distinct improvement upon the previous year, and, as far as Bath was concerned, he could not help thinking that was attributable not to the Corporation but to private firms. One could not walk along the street without seeing how much had been done by the various firms of the city in the way of enlarging or improving.

The President, in his response, said questions of wages, time-clauses in public and other contracts, and all manner of questions affecting the building and contracting trades were constantly brought up for discussion, and dealt with as they thought best, and what had struck him while he had been in office was the kindly and sympathetic way in which all questions affecting wages were looked at and discussed by the Association. In these times of keen competition nothing could be given away, but all the questions of wages had been viewed most fairly and sympathetically by all members of the Association, and that spoke well for the future relations between masters and men.

The Vice-President (Mr. F. C. Chancellor) gave "The National and South Western Federation of Master Builders of Great Britain and Ireland," congratulating them upon the amount of active work they had been able to do.

Mr. James Wright (President of the National Federation), referring, in reply, to the labour unrest in the country, said he advised the members that it was better to look after their own forces and close up their own ranks and strengthen their own organisation, so as to be able to deal with labour difficulties as they arose all the more effectively. That was essential from his point of view, for the National Federation could not be strong unless their local associations were successful. During the three or four years the Federation had been very actively engaged in the interests of the members. One of the matters upon which they had been engaging was the National Conciliation Board. While he did not claim for it that it would settle everything, it was based on such sound and common sense principles that if employers and workmen would only be faithful to the principles upon which it was based, and loyal to the decisions arrived at, nothing but good could come out of the scheme for both workmen and employers. They had arranged an important Conference with the Board of Trade on the subject of the Insurance Act, especially in regard to that part concerning unemployment, which affected the building trade especially. Mr. White had found nineteen clauses in the second part of the Act which were very objectionable from their point of view, and which would be very irksome. But as a result of the Conference they got some distinct advantages in thirteen of these cases. One thing he was particularly entitled to claim their consideration for, viz., that the Federation was mainly instrumental in getting indentured apprentices exempted from that portion of the Act. Another clause was in reference to sympathetic strikes. The President of the Board of Trade had recognised on their representation that the clause was much too widely worded, and in consequence of what they said it had been decided that workmen out because of a sympathetic strike or lock-out could not claim unemployed benefit. They were now concerned with the Workmen's Compensation Act, the administration of which they considered very expensive, because for every 100*l.* that went to an injured man they had to pay 150*l.* premium. They were going to try and get the administration of the Act simplified, and it was suggested—and a number of unions were in sympathy with them—that the Government should supply a medical referee to sit with the County Court judge, and save present expenses which were incurred.

Mr. A. J. White, the Secretary of the National Federation, also replied, saying regretfully that he was afraid the building trade was not in for such a peaceful time as they had had. A strike had unfortunately started in a section of their trade at Bristol, that day, and in the present temper of the workmen it was quite possible that the whole of the trade would come out in sympathy.

Mr. C. H. Long proposed the toast of "The Architects, Engineers, and Surveyors."

Alderman T. B. Silcock acknowledged the compliment.

Mr. A. W. Wills gave "Kindred Associations, Hon. Members, and Visitors," and in doing so remarked that the day had passed when men endeavoured to carry on their trade as units. In the old days it was the practice with men engaged in the same trade to be at an enmity with other men similarly engaged, but now good feeling existed because they felt they had common interests. There were a number of members outside that Association who reaped the benefits of what those inside had done, and they did feel that those outside should do their proper share.

Mr. Audley Perkins, the President of the Bristol Master Builders' Association, whose name was coupled with the toast, spoke regretfully of the strike in Bristol, which had been forced upon them.

Mr. H. W. Matthews also replied.

GENERAL BUILDING NEWS.

NEW PREMISES, LONDON.

Messrs. Harisons & Crossfields' new premises in Great Tower-street have been erected from the designs of Mr. Edgar Stones, architect. The building is of nine floors with 200 rooms, all equipped with modern appliances, and is one of the first buildings to be erected with a steelwork skeleton cased in fireproof material. The builders were Messrs. Walter Lawrence & Son, of Finsbury.

BACON CURING ESTABLISHMENT, HITCHIN.

The preliminary arrangements in connexion with the formation of a bacon-curing establishment at Hitchin have been completed, and the plans and specifications for the new undertaking, which have been prepared by Mr. Loudon M. Douglas, F.R.S.E., of 3, Lauder-road, Edinburgh, who is Technical Adviser to the Society, are now ready, and will be issued forthwith, we are informed, to the various contractors who are desirous of tendering for the work of construction.

TRADE NEWS.

Under the direction of Mr. Alfred Bradburn, architect, Bristol, the "Boyle" system of ventilation (natural), embracing Boyle's latest patent "air-pump" ventilators and air inlets, has been applied to the theatre, Weston-super-Mare.

APPLICATIONS UNDER LONDON BUILDING ACTS, 1894 to 1909.

At Tuesday's meeting of the London County Council the following applications under the London Building Acts were dealt with. (The names of the applicants are given in parentheses):—

Lines of Frontage and Projections.

Bethnal Green, South-west.—External iron staircase at the Old Nichol-street Mission Schools, Club-row, Bethnal Green (Messrs. Walker & Harwood).—Consent.

Greenwich.—Erection of buildings next to Beaconsfield-road and Westcombe Park-road, Greenwich (Messrs. Davis & Emanuel for Mr. A. F. Yarrow and Mr. F. E. Elliot).—Consent.

Hackney, South.—Tower addition to St. Mary's Church, on the western side of Gainsborough-road, Hackney Wick (Rev. R. B. Pierse).—Consent.

Hackney, South.—Erection of a building on the northern side of Retreat-place, Hackney (Messrs. Matthews, Matthews, & Goodman for the trustees of Robinson's Retreat).—Consent.

Hampstead.—Erection of an illuminated sign upon an existing pier in front of No. 200, Finchley-road, Hampstead (Messrs. Barnett & Brotchie for Mr. E. Owers).—Refused.

Hampstead.—Addition to a glass-house at the Devonshire Nurseries on the north-eastern side of Haverstock-hill, Hampstead (Mr. S. C. Lathbridge for Mr. J. Russell).—Refused.

Kensington, South. Iron and glass porch in front of No. 50, Victoria-road, Kensington (Messrs. G. Godson & Sons for Mr. J. R. MacIsaac). –Consent.

Lewisham.—Erection of a building on the southern side of Codrington-hill, Lewisham, next to the eastern side of Brockley-view (Mr. A. W. Vidler).—Consent.

Marylebone, East.—Erection of greenhouses in the Zoological Gardens, Regent's Park, on the southern side of Albert-road, St. Marylebone (Mr. D. Seth Smith for the Zoological Society of London).—Consent.

Marylebone, East.—Casing in stone of the front walls of the Portland Hotel, Great Portland-street, St. Marylebone (Mr. F. T. Verity). –Consent.

Woolwich.—Retention of a greenhouse at No. 26, Shooter's-hill-gardens, Westmount-road, Woolwich, next to Elibank-road (Mr. W. H. Browning for Mr. F. W. Webb).—Consent.

Width of Way.

Finsbury, Central.—Water-closet addition at the rear of No. 350, St. John-street, Clerkenwell (Mr. W. J. Shields for the Brewers Company).—Consent.

Width of Way and Lines of Frontage.

Hackney, Central.†—Addition at Victoria Works, Lyme-grove, Hackney (Messrs. J. Hamilton & Son for Messrs. Abrahams & Son). —Refused.

Hackney, North.—Erection of a two-story addition to a building on the western side of Brunswick-place, Hackney (Messrs. J. D. Mathews & Sons for Messrs. H. E. Davenport, Ltd.).—Consent.

Lines of Frontage and Construction.

Dulwich.—Retention of a wood and glass covered way at No. 96, Grove-vale, Dulwich, abutting upon the northern side of Tintagel-crescent (Mr. F. Brooker for himself and the executors of the late Mr. J. M. Brooker).—Consent.

Hammersmith.—Building at the rear of a stable on the western side of No. 93, Goldhawk-road, Hammersmith, abutting upon the eastern side of The Grove (Dr. F. H. Alderson).—Consent.

Space at Rear.

Walworth.—Erection of additions to the South London Central Mission premises on the southern side of New Kent-road, Walworth (Mr. H. Macintosh).—Consent.

Formation of Streets.

Hackney, South.—Formation or laying-out of new streets for carriage traffic to lead out of the eastern side of Upper Clapton road, Hackney, and the adaptation of Cassimer-terrace as a street for carriage traffic (Messrs. J. Hamilton & Son for Messrs. O. & L. Chillingworth).—Consent.

Alteration of Buildings.

Paddington, South.—Additional story upon the rear addition of No. 3, Garway-road, Westbourne-grove (Messrs. Moore & Hunter for Messrs. Budd, Brodie, & Hart).—Consent.

Paddington, South.—Erection of a lavatory addition upon the roof of No. 153, Queen's-road, Bayswater (Messrs. John Belcher, R.A., and J. J. Joass). –Consent.

Cubical Extent.

Kensington, South.—Cubical extent in connexion with the erection of an addition to Imperial Court-buildings, Brompton-road, and Basil-street, Kensington (Mr. W. F. Harber).—Consent.

Norwood.—Erection of an addition to the premises of Messrs. Osborne & Young, Ltd., Coldharbour-lane, and Shakespeare-road, Norwood (Messrs. H. Wakeford & Sons for Messrs. Osborne & Young, Ltd.).—Consent.

Paddington, South.—Erection of a building upon a site abutting upon Queen's-road, Douglas-place, and Porchester-gardens, Paddington (Messrs. John Belcher, R.A., and J. J. Joass). –Consent.

Uniting of Buildings.

City of London.—Formation of openings at the basement and ground-floor levels between Nos. 26 and 30, Gresham-street and Nos. 8, 9, and 10, Mumford-court, City (Mr. W. H. Woodroffe).—Consent.

City of London.—Uniting of Nos. 19 and 21, Farringdon-avenue, City, by means of an opening in the basement (Mr. F. J. Harrington for Messrs. King & Jenkins).—Consent.

City of London.—Uniting of Nos. 44-6, Barbican, with No. 7, Bridgewater-street, City (Mr. G. Vickery for Mr. S. H. Weiler).—Consent.

City of London.—Uniting of Nos. 17 and 18, Bouverie-street, City, by means of an opening at the first-floor level (Messrs. Arthur Vigor, Ltd.).—Consent.

City of London.—Uniting of Nos. 4 and 4a, St. Dunstan's-alley, City, by means of openings at the first-floor level (Messrs. D. Watney & Sons for Messrs. Stephenson, Clarke, & Co.).—Consent.

Finsbury, Central.—Uniting of Nos. 18 and 19, Chiswell-street, Finsbury, by means of an opening at the third-floor level (Messrs. Freemantle & Fox for Messrs. H. & W. Greer, Ltd.).—Consent.

Marylebone, East.—Formation of a further opening in the party wall between Nos. 158 and 162, Oxford-street, St. Marylebone, and No. 2, Winsley-street, with an iron door on one side and a self-closing armoured door on the other side of such opening (Messrs. J. Belcher, R.A., and J. J. Joass).—Consent.

Strand.—Formation of an opening in the party wall between Nos. 124 and 126, Regent-street, at the first-floor level (Mr. W. Hammond for Dr. Jaeger's Sanitary Woollen System Company, Ltd.).—Consent.

Wandsworth.—Uniting of Nos. 250 and 252, Streatham High-road, Wandsworth (Mr. F. L. Poole for Messrs. Glyn, Jones, & Co.).—Consent.

The recommendation marked † is contrary to the views of the Metropolitan Borough Council concerned.

PROJECTED NEW BUILDINGS IN THE PROVINCES.*

BEDLINGTON.—Picture hall; Mr. T. E. Davidson, architect, 1, Eldon-square, Newcastle.

Carnarvon.—Infirmary (6,000*l.*); Mr. R. Ll. Jones, architect, 14, Market-street, Carnarvon.

Dumfries.—Picture theatre (3,000*l.*); Mr. G. A. Boswell, architect, 53, Bothwell-street, Glasgow.

Exeter.—Proposed hostel, Graslawn (5,500*l.*); Mr. T. Moulding, Surveyor, Town Hall, Exeter.

Guisborough. — Cottage homes; Messrs. Taylor & Minor, architects, Darlington.

Hyde.—Public hall (10,000*l.*), police buildings (5,000*l.*), extensions to baths (5,000*l.*); Mr. J. Diggle, Surveyor, Town Hall, Hyde.

Ilford.—Extension to South Park School (8,805*l.*); Mr. W. E. Davey, builder, 61, Victoria-avenue, Southend.

Lower Gordnal.—Picture hall, Redhall-road; Mr. G. F. Webb, architect, Wordsley.

Pixmore (Letchworth). — School (5,585*l.*); Messrs. Hacksley Brothers, builders, 1, Regent-street, Wellingborough.

Plymouth.—Almshouses (3,000*l.*); Mr. T. A. Wiblin, Old Town-street, Plymouth.

Portobello.—Town Hall (8,000*l.*); Mr. James A. Williamson, City Superintendent of Works, Town Hall, Edinburgh. Buildings, Nicholson-street; Mr. P. T. Marwick, architect, 43, York-place, Edinburgh.

Portsmouth. — Extensions to post office (20,000*l.*); Mr. F. J. Privett, builder, Playfair-road, Southsea.

Potten End.—Four houses (1,075*l.*); Mr. U. A. Smith, Surveyor, Herts County Council, Hatfield.

Quitland.—Additions to school (4,500*l.*); Messrs. Malcolm & Robertson, architects, Charing-cross, Grangemouth.

Richmond-on-Thames.—Extensions to swimming-baths (3,250*l.*); Mr. J. H. Brierley, Surveyor, Town Hall, Richmond.

Rochford (Essex).—Extensions to the Union; Mr. W. J. Wood, architect, 26, Alexandra-street, Southend-on-Sea.

Rosehearty (Aberdeenshire).—Masonic hall (2,125*l.*); Mr. S. F. Wilson, architect, Fraserburgh.

Runton.—Extensions to school (3,200*l.*); Mr. A. C. Denny, architect, 37, Church-street, Dumbarton.

St. Albans.—Six houses, Catherine-street (2,513*l.*); Mr. H. F. Mence, architect, St. Albans; Messrs. J. Hammond & Son, builders, St. Albans.

St. Austell.—Gymnasium at school; Mr. B. C. Andrew, architect, Biddicks-court, St. Austell.

Sherborne (Dorset).—Drill hall, etc.; Mr. F. T. Maltby, architect, South-street, Dorchester.

Sishowy.—School (7,000*l.*); Mr. John Bain. Architect, Shire Hall, Newport, Mon.

Skipton.—Warehouse; Mr. James Hartley, architect, Swadford-chambers, Skipton.

Southend. — Extensions to club-house (2,000*l.*); Secretary, Thorp Hall, Golf Club, Southend.

South Shields.—Picture hall; Mr. R. G. Smith, architect, Waterloo-chambers, South Shields.

Stafford.—Twenty houses; Mr. W. Plant, Surveyor, Town Hall, Stafford.

Stakeford.—School (4,709*l.*). Messrs. A. P. Pait, builders, Seaton Delaval.

Stepps.—Church; Mr. A. Bafour, ar 110, Mains street, Glasgow.

Stockport.—Police buildings; Messrs. & Brady, architects, Borough chambers, port. Hospital (20,000*l.*); Mr. W. H. architect, Paradise-street, Birmingham.

Strathpeffer.—Motor garage and (2,000*l.*); Mr. A. Mathieson, High Dingwall.

Sturminster Newton (Dorchester).— (2,130*l.*); Messrs. H. & J. Hardy. b Swanage.

Sturtevant Newton.—School (2,130*l.*); H. & J. Hardy, builders, Swanage.

Sunderland.—Picture hall; Mr. Fatkin, architect, 1, St. Nicholas-bu Newcastle.

Tibshelf.—Remodelling of schools at Colliery (3,850*l.*); Mr. E. W. Small, Se Education Committee, Derbyshire Council, Derby.

Torquay.—Alterations to fish stor covered fish market; Mr. H. A. Garre gineer, Town Hall, Torquay.

Tursdale.—School (4,000*l.*); Mr. W. worth, Architect, Shire Hall, Durham.

Uxbridge.—Alterations to school, road; Mr. H. G. Crothall, architect, tion Committee, Middlesex County Westminster, S.W.

Wellington (Salop).—Hospital (3,400 L. T. Moore, Raymond-buildings, Gray W.C. Additions and alterations to Princes-street (2,490*l.*); Mr. A. Roper, Wrekin-road, Wellington.

Willesborough.—Alterations and addi school (2,538*l.*); Messrs. J. Wood builders, Boughton Monchelsea.

Zetland.—Reconstruction of school (Messrs. Malcolm & Robertson, arc Grangemouth

* See also our list of Competitions, Contracts, etc., on another page.

LONDON COUNCILS.

Barking.—The Surveyor has been ins to prepare plans and estimates for with granite setts the macadamised of London-road. The quotation of the Flooring and Paving Company (1904) has been accepted for a supply of sectional jarrah wood-blocks 3 in. de paving the margin of the widened East-street, at 11s. per yard superficia Architect has been instructed to pre sketch plan for a block of six houses, be used as an administrative block following plans have been passed Young, fifteen houses, Bifrons street R. E. Goodey, five houses, Eldred-roa A. E. Martin, J.P., extensions to theatre, Ripple-road.

Battersea.—Kirtling-street and pa Alfriston-road and Cringle-street are made up and paved (the footpath artificial stone and the roadways with slag macadam) at an estimated total 2,270*l.* No objection is to be raised proposal of Messrs. J. & C. Bowyer, erect additions at the school in Wycliff also to the proposal of Messrs. J. A. J ward & Sons for the erection of a wa at the rear of No. 26, Falcon-road. A are to be carried out at Belmont Works road, for Price's Patent Candle Compa

Hackney.—The tender of Messrs. Whiter & Co., 89, Newington Butts, S been accepted at 3,740*l.* for the erecti branch library at Dalston. A plan h passed for Messrs. Kerridge & Shaw additions at the Hackney Union Im Crozier-terrace, Homerton.

Marylebone.—The Town Hall Comm the Council report that, in conjunctio Mr. Cooper, F.R.I.B.A., the architect ap by the Council in connexion with the of a new town hall, they had carefu sidered the arrangement of the accomm to be provided in the new building, come to the conclusion that the pla submitted for the acceptance of the adequately met the requirements. T of the building, if erected by these estimated by Mr. Cooper to be 61.9l Committee have, therefore, decided t the designs and plans of Mr. Cooper.

West Ham.—Plans and estimates su by the Engineer have been approved erection of baths in Oriental-road, Stra at a cost of 12,000*l.* Plans have been for Mr. P. K. Allen for the erecti warehouse at Messrs. A. Boake, Rob Co.'s premises, Carpenter's-road, Stratf plan has been lodged by Messrs. Ember & Co. for the erection of a cinema theatre, Barking-road.

BOOKS.

ombe Church: Architecturally Con-ed.

ier "Branscombe Church, Devon: ecturally Considered" (James G. n, Exeter) Miss Edith K. Prideaux ded one more to the long list of mono- on parish churches which continue to . It would be well if all were done he accuracy and painstaking thorough- hich marks this pamphlet. The writer vledges her indebtedness to previous tions, but points out that recent have brought fresh evidence to light history of the church. An examination fabric reveals four periods of building . Though there is evidence of a pre- st church, nothing of that period now ly remains, and we begin with XIIth Norman work, consisting of a short ith an eastern tower, standing possibly site of the earlier chancel. The XIIIth carried out considerable enlargement church, nearly doubling the nave in and adding transeptal chapels just f the tower and possibly a southern The XIVth century in its turn added chancel east of the tower, and "the entury did not pass without leaving k upon it, mainly, as usual, in the of windows; the large five-light ndow is a very fine specimen of its ft belongs to a date between 1458 and The church possesses a curious in what Dr. Charles Cox pronounces the earliest example of which we re in any English church of an outer to a post-Reformation Gallery." For discussion of the various questions by the structure and a description of gs and monuments we must refer the to Miss Prideaux's scholarly and nodest pages. The pamphlet contains n which the works of various periods erentiated by hatchings and thirty- hotographs. It is sold in aid of the gently required for necessary repairs.

ypieces and Ingle-Nooks. By. G. AN ROTHERY. Pp. 239, and forty- llustrations. (London: T. Werner e. 6s. net.)

ttle book appears as an addition to use Decoration Series, of which one on Ceilings has already been issued, while others on Staircases, Porchès, Windows, and Antiquities and Curios are promised. Mr. Rothery has evidently gone into his subject in a thorough manner, and, although the use to the professional reader may be questioned of this or indeed any monograph on features which certainly should be treated as parts of a whole, the earlier chapters, in which he discusses the origin and growth of the fireplace as we know it, are very interesting, inasmuch as they bring into the foreground aspects of the methods of the Ancients, which one is apt to pass over as trifling incidentals or matters to be taken for granted. How many people know that the first fireplaces, for instance, with flues of their own, were made in Norman times, and that hitherto smoke escaped only through a hypæthral opening or through doors and windows as best it might, with attendant discomforts, of which so many writers complain? Cheerless hot air—smoke-laden, too, it must have been often enough—and the fume-dispersing brazier sufficed the Greeks and the Romans; the latter a method that, in the shape of stoves, obtains for the most part to-day in all countries save our own. How much he takes for granted, an Englishman realises only when he goes abroad—to miss vital focus-point which an open fire supplies. And because the fireplace is the shrine of the domestic vestals, a chimneypiece the canopy of the altar of the home, it is or should be, the key feature of any room with any pretensions to having been designed. We do not think Mr. Rothery has sufficiently emphasised for us the essential æsthetic of chimneypiece design, which is that the fireplace should express both its quality of a part specifically fireproof, and, equally important, as fulfilling a function which carries it upward to the ceiling and beyond. He seems, if we are to judge from some modern examples he illustrates—notably one or two little brick designs by Mr. Winter Rose—to be aware of the first condition to forgetfulness of the second. A good test is that a chimneypiece cannot by the imaginary increase of its sides be thought of as a door lintel and jambs. However, it is a pleasing book, with many good illustrations, with a bibliography, and well indexed. We look forward to others of the series.

The House and its Equipment. Edited by LAWRENCE WEAVER. (London: Geo. Newnes, Ltd. 1911. 15s. net.)

THIS volume comprises a number of useful contributions reprinted from the pages of *Country Life*, covering a wide range of subjects and including a great number of excellent illustrations. Practical questions, such as water supply, sewage treatment, electrical installations, etc., are handled by experts in a manner that makes their general purport quite clear to either the professional man or the layman, while the scope of the book includes all kinds of useful information on the various æsthetic problems connected with the garden, the selection of furniture, etc. There is little in this compilation that would not be of value to one or another; if we venture on a criticism, it is to the effect that sufficient pains do not seem to have been taken to bring the series of articles into some sort of orderly sequence. The matter in itself is good and useful, but in this form of book one looks for some kind of continuity, and it does not suffice to throw a number of articles together in this way without regard to their natural sequence.

Artistic and Decorative Stencilling. By G. A. AUDSLEY and B. AUDSLEY. (G. Allen & Co. 4s. 6d.)

THE name of the authors of this work is well known in connexion with books on ornament and kindred subjects. The present treatise is successful in bringing forward the possibilities of stencilling, which, as an artistic craft, is handicapped by commercial associations. There is no reason why the repetition of a design, which is, of course, the object of the stencil, should not be allied with true decorative intention, and to this end use may be made of the manual before us. Japanese stencils should be studied as object lessons. The authors describe the materials and tools necessary, while the illustrations, some in colours, explain the subject further.

Pilgrim Life in the Middle Ages. By SIDNEY HEATH. With 43 Illustrations. (London: T. Fisher Unwin. Price 10s. 6d. net.)

THE pages of this work afford plenty of evidence of considerable research and selec-



Gothic Work, Milan.



English XVIIth-Century Chimneypiece from Bromley-by-Bow.

(From "Chimneypieces and Ingle-Nooks," by Mr. G. Cadogan Rothery.)

tion, and we can compliment the author upon the compilation of a very interesting volume. The book is "designed to serve and entertain the general reader who is interested in the religious pilgrimages of olden days," and in his 340 pages the author has collected a great deal of information of a general as well as an archæological and architectural character which will serve to make clear the character of pilgrim life in the Middle Ages. The book deals, among other things, with the history of pilgrims from Saxon times, pilgrim costumes, badges, and tokens, papal indulgences, holy wells, flagellants, anchorets and recluses, and shrines and relics.

Ornamental Cement Work. By OLIVER WHEATLEY. (Scott, Greenwood, & Son. 5s.) CEMENT as a medium for the expression of a sculptor's purpose has yet to be exploited. It can be worked easily and permanently, and the decorative uses to which it may be put by a capable craftsman should commend it for consideration. The author himself has carried out some ornamental figures and details in the Greenwich library for Mr. Sydney R. J. Smith, and as a sculptor familiar with all means of architectural decoration his explanations and suggestions with regard to cement may be read with profit.

The Fire Brigade Handbook: A Manual of the Organisation and Equipment of Fire Brigades, for the Use of Volunteer Fire men and Others. By JAMES COMPTON MERRYWEATHER. M.Inst.C.E. (London: Merritt & Hatcher, Ltd., 2, Grocers' Hall-court, Poultry, E.C. Second Edition.)

THE author of this work disclaims any intention of attempting to instruct professional firemen in the performance of their duty, but even to professional men the volume is of value, while to the volunteer fireman it should prove invaluable. It is full of useful hints and advice. It is interesting to note what the author says in the Preface to the second edition of the work, *i.e.*:—"It is a matter for congratulation to all concerned with fire protection that this important public duty is no longer neglected to the same extent that it was twenty-three years ago, and it is with much satisfaction that I am able to record the fact. As a consequence of the increase in the number of fire brigades in this country, and of the greater importance that is now attached to the question of fire protection, many improvements have been made in the appliances provided for the use of firemen. The most valuable is the application of motor power to the fire pump, escape, tender, and chemical engine." The author devotes a chapter to this class of fire appliance.

Pocket Notes and Remembrances for Sanitary Inspectors and all Engaged in Public Health Work. By J. T. COWDEROY. Fourth Edition, revised and enlarged. (London: The Sanitary Publishing Co., Ltd., Fetter-lane, E.C. Price 2s. net.)

THIS useful little book is by the Chief Sanitary Inspector of the Borough of Kidderminster, and it is not surprising to read that the third edition was disposed of in a few months. The object of the author has evidently been to compile a handy little work which can easily be carried in one's pocket, giving facts and information clearly and terseley put of special use to the Sanitary Inspector and those engaged in sanitary health work. The new matter includes Procedure under the Housing and Town Planning Act, Legal Points, and Inspection Regulations, etc. The book includes building terms and medical terms in frequent use.

THE ÆSTHETIC TREATMENT OF CONCRETE.

Mr. H. Shepherd writes in reference to a mistake in our report of his speech at the Concrete Institute (see our last issue, p. 213) as follows:—"What I said was that there was no reason why you should not take ferro-concrete and say this is the structural material on which we wish to put a covering, etc. It was done in the earliest example, I think, we have of Greek art, the Minoan work at 'Knossos,' where the palace walls, built of clay, were covered with plaster, on which figures were modelled. I was, of course, only speaking from memory."

SCIENCE EXAMINATIONS FOR 1911.

THE annual Report just issued by the Board of Education is not only useful for the guidance of students intending to enter for future examinations, but also furnishes information from which the reader may deduce conclusions as to the general proficiency of the candidates who were examined last year.

It appears that candidates are not being well taught in descriptive geometry, being somewhat lacking in knowledge of the fundamental principles, this conclusion being not altogether unexpected in view of recent reports on instruction in this branch of Practical Plane and Solid Geometry. It is satisfactory to note, however, that on the whole the work in both Stages 1 and 2 was satisfactory.

We regret to observe that in Stage 1 of Building Construction the tracings and sketches of details were poor, this class of work being one in which students might reasonably be expected to excel. It seems also that the use of scales is not being taught as it should be. In other respects considerable improvement was shown, particularly in practical knowledge. Candidates in Stage 2 also showed improvement, although the examination results brought to light considerable variations in the efficiency of tuition.

A gratifying feature is the generally satisfactory character of the results in all stages of Pure and Practical Mathematics, subjects which are more and more required in technical work every year.

Theoretical and Applied Mechanics seemed to present difficulties to candidates, a feature due in some cases to inadequate teaching and in others to lack of mental grasp. We regret to read under the head of Materials and Structures that "candidates often wrote lengthy answers without imparting any real information," evidently trying to conceal ignorance under a cloud of words; that "it is a very common fault to confuse internal stress with external forces"; that "the whole subject of shearing stress seems to be much neglected by teachers"; and that many of the answers to the numerical problems "showed that candidates were often sadly deficient in common sense."

These criticisms are rather scathing, and we trust they will not be justified next year.

The answers to a question on the reinforced concrete beam demonstrated undesirable lack of attention on the part of teachers to this form of construction, which should be understood by all students intending to become architects, engineers, or contractors.

Sound, Light, and Heat are subjects intimately associated with architecture, and for this reason it is to be regretted that only in some cases was improvement observed. The general results were either about the same or a little worse than those of preceding years.

As for the remaining subjects, of which only three or four have direct bearing on architectural practice, it may be said that the knowledge exhibited by candidates was encouraging, substantial improvement having been shown in some subjects and maintenance of previous standards in others. The examination in Hygiene was particularly satisfactory, and showed that much knowledge of practical value is being acquired.

The Report is a document which will certainly be appreciated as a guide by those concerned in the work of technical schools and classes recognised under the regulations of the Board of Education.

THE INSTITUTION OF MUNICIPAL ENGINEERS.

AT a meeting of this Institution, held at 4, Southampton-row, W.C., on February 24, a paper by Mr. A. Winter Gray, entitled "Superannuation and Security of Tenure: The National Association of Local Government Officers and Its Bill," was read. In the course of his paper the author says, in referring to the need of superannuation and security of tenure:—"The duties performed by a municipal engineer or surveyor are of a special nature, in many instances carried out under difficult circumstances, and in the face of considerable opposition and prejudice; it is therefore of the utmost importance that adequate protection in the shape of security of tenure should be afforded every officer whose unpleasant duty it is to initiate proceedings against offenders. It is a regrettable fact that, in numerous districts, the municipal engineer or surveyor holds his position at the caprice of political or personal considerations. This lamentable state of affairs is more marked in some of the smaller urban and rural districts, where the surveyors are at the mercy of men whose lack of education and knowledge precludes them from forming any conception (still less appreciation) of the value of the professional man's services. Generally speaking, the remuneration of municipal engineers compares unfavourably with that obtaining in other professions and commercial vocations, notwithstanding a correspondingly high standard of training, skill, and administrative ability is exacted. Invariably he is precluded from augmenting his income by supplementary effort, as the many calls upon his purse in maintaining a social position commensurate with the status and dignity of his office, and in numerous instances precludes the making of adequate provision for his own future and that of his dependents. For these reasons, and for others, the right of superannuation and security of tenure would appear to be incontestable. Only a few weeks ago attention was directed by a service journal to the case of a highways surveyor to an urban district council who was in receipt of the princely stipend of 22s. a week, and who, after considerable argument, was grudgingly granted an increase of 2s. per week, in order that the surveyor's salary might compare favourably with the weekly wage paid to the ordinary labourers.

It should be borne in mind that it is as much to the interest of the ratepayer as of the employé to establish a superannuation scheme. The latter. The officer in possession of a superannuation scheme experiences a sense of security in times of stress and sickness, and this reacts to the advantage of the service."

In regard to unfair competition, the author said:—"If the greatest publicity were given to discreditable cases, much good would result. In this connexion it may suffice to quote one of the latest glaring instances affecting the appointment of a municipal engineer, which reflected the greatest discredit upon the authority concerned.

In November last the council of an urban district in the county of Durham advertised for a surveyor, and received 199 applications for the post. A candidate who wrote for a copy of the duties of the vacant office was, at his request, furnished by the clerk with the names and addresses of the members of the council. The intending candidate, not unnaturally construed this action to be a broad hint to forward a copy of his application and testimonials to each of the members, which he did, and thereby incurred some expense. It was subsequently announced in the Press that the council in question had appointed a local builder as surveyor, in succession to his predecessor at a salary of 250*l.* per annum. The salary was, however, further increased by the fact that the individual appointed was a member of the council, and, as such, received copies of the applications and testimonials of those candidates who sent them to the members.

This is by no means an isolated case of irregularity in regard to the making of appointments."

THE ARCHITECTURAL ASSOCIATION:

THIRD SPRING VISIT.

British Museum.

ON February 17 a very large party of members paid a second visit to the galleries of the British Museum, by kind permission of Mr. J. J. Burnet. On the occasion of the previous visit, two years ago, the first stone of the main cornice had been placed in position; the building is now so far completed externally as to enable its effect to be judged, and the two main exhibition galleries are also in a condition to view, a very good idea of their ultimate effect. The long level lines of the front to Montague-place give a repose which is quite the right expression in a building of this character, and the refined Greek detail (Greek, with knowledge of all that has gone since

eful severity. More fortunate than f our London public buildings, this one properly seen and bears some relation surroundings, from which fact both mmensely. It is only to be hoped that vacant sites on either side of the axial ch are built on this advantage may ruthlessly sacrificed.

e time was devoted to a careful ıation of this front, and the sculptured flanking the central entrance were admired. These have been carved odels by Sir George Frampton, and are tly conventionalised and so perfectly e with the building that it was not ing to hear that they had practically ed unaltered since the original ½-in. levations; they are, in fact, "archi- l lions." Above the main cornice is surmounted by a lead-covered parapet ast enrichments from models by Mr. this work has been excellently done builder's plumber. In the clerk of office two coloured internal perspec- f the new main staircase were ex- showing the proposed treatment in nd white marble with bronze lift en- and painted barrel ceiling. The taircase was next ascended, at present ase only. The sub-ground floor con- public rooms, but the ground floor will eventually be used for museum s, though temporarily intended for orage. It consists of a "nave" and " separated by square piers and run- entire 380-ft. length of the building. ling is coffered with broad flat ribs, complete perspective from end to end n imposing vista. Above this gallery ezzanine for staff and students' use. ıe whole of the top floor is occupied eat top-lighted gallery, which, with galleries over the present north room (united to the extension by the rcase), will at once form a public part nuseum. The great gallery is effec- lanned with ante-rooms cut off by l screens at each end and lighted by skylights, these forming ultimately nexions to the projected further ns. The roof of the main gallery is sly constructed : steel trusses cased in supporting a continuous lantern- low which is a bold cove on either vered externally with asphalt, the the trusses appearing above simi- vered. Where exposed internally es are cased with wood panelling. A to carry a travelling platform for nce in cleaning the roof glazing is l through one end of the skylight that this may be run out of sight in use. The curb of this skylight the longest unbroken line to be seen nterior in London, but the transi- n the ceiling cove by a sort of is not particularly happy.

rty was conducted by Mr. Theodore isted by Messrs. Tait and Whitelaw, contractor, Mr. W. E. Blake, of , who was also present, gave much g information.

E LONDON COUNTY COUNCIL.

ual weekly meeting of the London ouncil was held on Tuesday in the Hall, Spring-gardens, S.W., Mr. E. hairman, presiding.

The Finance Committee recom- and it was agreed, that loans should to borough councils as follows :— 8,305*l.* for paving works and or electricity undertaking; Poplar, paving works.

RTION AND TRANSPORT IN LONDON.— eral Purposes Committee recom- hat a communication be addressed me Minister inquiring whether, as of the consideration given by his Government to the representations ncil in favour of the establishment fic Board for London on the lines in the Report of the Royal Com- ıe Government propose to introduce to give effect to such representa- e purpose of this proposed Traffic o have "some controlling authority the question of locomotion, so closely connected with the provision of housing accommodation, the control of the increasingly congested traffic of London, and other important problems should be referred, and that only such projects as might be approved by this Board should be allowed to be brought before Parliament. After some discussion the recommendation was agreed to.

ENLARGEMENT OF SCHOOL.—It is proposed to provide additional public elementary school accommodation for about 200 children by the enlargement of the Ecclesbourne-road School, Croydon.

IMPROVEMENTS.—Additional office accommodation is to be provided on the girls' floor of the Morden-terrace School, Greenwich, and certain wards at Colney Hatch Asylum are to be improved at an estimated cost of 4,000*l.*

LAW REPORTS.

KING'S BENCH DIVISION : DIVISIONAL COURT.
(Before Justices DARLING and BUCKNILL.)

Hope & Sons, Ltd. *v.* Goode : Building Owners or Contractors? Interesting Appeal.

THIS was an appeal raising a question whether building owners or contractors were liable for the payment of a claim by another firm for work done on the order of the architect, and was decided on Thursday, February 22. The appellants, Messrs. Hope & Sons, Ltd., builders and general contractors, of Lionel-street, Birmingham, asked to have set aside a judgment of the Birmingham County Court Judge.

Mr. Cave, Counsel appearing for the appellants, explained that the claim in the action was for 49*l.*, a small amount, but the question to be decided by the Court was of some importance. It appeared that in March, 1910, the trustees of a Wesleyan Chapel at Coventry (who were the respondents to the appeal) accepted a contract from Mr. Thomas Randall, a builder of Coventry, for alteration to the chapel. The appellants had nothing to do with the contract; but in July, 1910, they were approached by Mr. Crouch, an architect, and asked to tender for certain alterations to the heating apparatus. They quoted 35*l.*, and that offer was accepted, in addition to which other work was accepted at about 14*l.* When the work was completed the appellants received a certificate from the architect and applied to the trustees for payment. The claim was at once repudiated, and appellants told to apply for payment to Mr. Randall, who, it was said, was the contractor for the whole of the alterations. Application was made to Mr. Randall, but payment was refused, and a writ was issued. Then Mr. Randall filed his petition in bankruptcy. The appellants repeated their application to the chapel trustees for payment, but the money was not forthcoming, so action was brought. The County Court Judge held that by applying to Mr. Randall for payment the plaintiffs had set in motion a legal process which debarred them from claiming from the trustees. He gave judgment for the defendants on plaintiffs' claim for 35*l.* for work done to the heating apparatus, and allowed plaintiffs 14*l.* for other items. Counsel argued that the Judge was wrong in holding as he had, for there was no evidence to prove that the appellants had done anything which constituted a release to the defendants from the liability, and, as building owners, to pay the appellants.

Mr. Randall, it appeared, had received the 35*l.* from the trustees, as their agent for the payment of the appellants' claim, but had not paid it. Counsel submitted that that fact did not do away with the appellants' right to sue the trustees as principals.

For the respondents, Mr. Joy argued that the Judge's finding was correct. Although the appellants had not in so many words abandoned their right to claim from the trustees, and agreed to claim from Mr. Randall, they had done so by their conduct, for they were aware of the fact that the trustees had paid the money to Mr. Randall to be forwarded to appellants, yet they had delayed in applying for it.

Delivering his judgment, Mr. Justice Darling said it had been argued that by going to Mr. Randall the appellants had made a second contract with the trustees, which set aside the first contract and made plaintiffs creditors of Mr. Randall and not of the defendants. He came to the conclusion that that was not a substitution of one contract for another, and did not relieve the defendants of their liability to the appellants for the payment of the 35*l.* Therefore the County Court Judge was wrong in his judgment, and the appeal would be allowed with costs, and judgment entered for the appellants for the full amount of their claim.

Mr. Justice Bucknill concurred.

KING'S BENCH DIVISION.
(Before Mr. Justice PHILLIMORE.)

Liability of Builders and Employers : Allen *v.* London Guarantee and Accident Company, Ltd.

THIS action, of great importance to builders and contractors in regard to insurance against claims for compensation for personal injuries caused to people in accidents through the negligence of employees, was heard on February 20, when Mr. Morris Joseph Allen, builder and decorator, of Adelaide-road, Shepherd's Bush, London, proceeded against the London Guarantee and Accident Company, Ltd., of London, in regard to an alleged breach of agreement.

The defendant company denied liability. Mr. Colam appeared for the plaintiff, and the defendant company were represented by Mr. Clavell Salter, K.C., and Mr. Harris.

Opening the case for Mr. Allen, Counsel stated that Mr. Allen had a policy with the defendant company whereby he was indemnified for twelve months against all claims that he might be legally liable to pay as compensation for injuries caused to any person through any horse, or horse-drawn vehicle belonging to plaintiff, or in the charge of any authorised driver in the employment of the plaintiff.

On January 28, 1910, a driver employed by the plaintiff was in charge of a four-wheeled van at Vauxhall Bridge-road, Battersea, and as the result of an accident two men named Turner and Ridsdel were thrown to the ground and injured by the wheels of the van.

Eventually proceedings were taken by Turner and Ridsdel against Mr. Allen to recover compensation for their injuries. The defendant company, in accordance with the terms of the policy, gave instructions respecting the defence of the actions, which were heard before the Lord Chief Justice and a jury, with the result that Turner was awarded 200*l.* and costs, and Ridsdel 175*l.* and costs. The costs were taxed, and subsequently execution was put in on the plaintiff, who in order to save his goods had to pay a sum of about 243*l.*

After the trial of the action the defendant company forwarded to the solicitors to the plaintiff 375*l.*; but it was intimated afterwards that the odd sum of 75*l.* had been paid in mistake, as the total liability of the defendant company under the policy was 300*l.*

Mr. Colam proceeded to argue that as the defendant company had taken over the defence of the actions they could not now recover losses incurred in their efforts to evade liability. They made voluntary payments in order to get a benefit for themselves, viz., the escaping of liability altogether. In regard to the argument as to the liability being limited under the policy to 300*l.*, he submitted that it was for the defendant company to prove that these two claims arose out of "one accident" and "one occurrence."

Mr. Clavell Salter, K.C. (for the defendant company), argued that the policy fixed a limit of 300*l.* as to compensation, costs, charges, and all expenses.

Counsel called the men Kidsdel and Turner, who gave evidence as to the accident, after which his Lordship expressed the opinion that there was "one occurrence," out of which the accidents arose.

Mr. Clavell Salter, in further argument, contended that in no circumstances could more than 300*l.* be recovered. As to the 75*l.* paid in excess, the defendants would not press for the return of that.

Replying to Mr. Salter, Mr. Colam argued that if assured persons under these circumstances were liable to have large bills of costs run up against them without having any means of controlling them, such a contract of indemnity would constitute a burden rather than a benefit. The defendant company were not asked to go and fight the claims, and if they chose to adopt the course the plaintiff could not be held liable in regard to all their costs.

In delivering judgment, his Lordship stated that his view of the contract between the parties was that if the plaintiff defended an action he could not recover from the company more than 300*l.*; but if the company undertook litigation that required the assured to lend his name for the purpose of the litigation, then there arose a common law liability to pay the costs. The plaintiff consequently was entitled to judgment. There would be judgment for the plaintiff for 218*l.* 3s. 3d., with costs.

A stay of execution with a view to an appeal was granted to the defendants.

List of Competitions, Contracts, etc.

For some Contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) a**
advertised in this number: Competitions, iv.; Contracts, iv. vi. viii. x.; Public Appointments, xx.; Auction Sales, xxvii
Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do
bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will
made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.
The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing
submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while ev
endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Competitions.

MARCH 9. — **London, E.C.** — NEW OFFICES. - The Port of London Authority invite preliminary sketch designs for new head offices in Trinity-square, and for laying out remainder of land as a building site. See advertisement in issue of November 24 for further particulars.

MARCH 15. — **Drammen, Norway.**—RAILWAY-STATION.—Particulars from the Norges Statsbaner, Christiania.

MARCH 15. — **Prestatyn, North Wales.** — LAYING-OUT ESTATE.—Lord Aberconway and the Trustees of the Prestatyn Estate invite designs for laying-out of the estate Three premiums are offered. Particulars from 33, Henrietta-street, W.C. See advertisement in issue of January 5 for further particulars.

MARCH 16. — **Harrow.** — PUBLIC OFFICES.—The Harrow-on-the-Hill U.D.C. invite tenders for the enlargement of and alterations to their Public Offices. See advertisement in issue of January 5 for further particulars.

MARCH 25.—**Colchester.** SCHOOL.—Limited to architects practising in the borough.

MARCH 30. **Edinburgh.**—MEMORIAL TO KING EDWARD.—Limited. See Competition News, p. 151, February 9.

MARCH 31 **Manitoba, Canada.**—PARLIAMENT BUILDINGS.—The Government of Manitoba invite designs for the new Parliament buildings to be erected in the City of Winnipeg. See advertisement in issue of February 9 for further particulars.

APRIL 4.—**Portland.**—COUNCIL OFFICES.—The Portland U.D.C. invite competitive designs for Council Offices. Premiums of 50*l.* and 10*l.* are offered. See advertisement in issue of February 23 for further particulars.

APRIL 20.—**Birmingham.** —BLUE COAT SCHOOL. —Limited to local architects. Assessors, Mr. G. H. Hunt, F.R.I.B.A., and Mr. C. E. Bateman, F.R.I.B.A. Particulars from the Secretary, the Blue Coat School, Birmingham.

MAY 1—**Rhos Ruabon.**—PAIR OF WORKMEN'S COTTAGES.—Premiums of 10*l.* and 5*l.* Assessor, Mr. Raymond Unwin, F.R.I.B.A. Particulars from Mr. G. Meirion Griffiths, Rhos Ruabon.

MAY 1.—Society of Architects' Travelling Studentship. Design for a Town Hall. 25*l.* and medal.

MAY 1. — **Wombwell.**—SWIMMING BATHS.— The Wombwell U.D.C. invite designs in competition for public swimming baths, to be erected in Hough-lane, Wombwell, Yorkshire. Three prizes of the value of 40*l.*, 30*l.*, and 20*l.* respectively are offered for the designs placed first, second and third respectively by the assessor. See advertisement in issue of February 16 for further particulars.

JUNE 28.—**Hale, Cheshire.**—TOWN PLANNING SCHEME. —Premiums 50*l.* and 25*l.* Particulars from the Council Offices, Hale.

JULY 1.—**Dusseldorf.** — A plan for the extension of the City of Dusseldorf. Premiums of 1,000*l.* to 375*l.* Conditions on application to the Chief Burgomaster, Dusseldorf. A translation appears on page 365, September 29.

AUGUST 30. — SAXON SWELL PRIZE. — Fifty guineas; with medal, is offered for essay on a hospital subject. Particulars from the Sanitary Institute, 90, Buckingham Palace-road, S.W.

NO DATE.—**Pordanhill, Glasgow.**—PROPOSED TRAINING COLLEGE.—Limited to six firms, named in Competition News, December 1, page 635.

* NO DATE.—**Ormskirk.** - CLUB-HOUSE. Competitive plans are invited for proposed club-house for Ormskirk Golf Club. See advertisement in this issue for further particulars

NO DATE. — **Sheffield.** — CRIPPLES' HOME. — Limited to local architects. Mr. E. M. Gibbs, F.R.I.B.A., and Mr. F. E. P. Edwards, F.R.I.B.A., assessors.

NO DATE. — **Warrington.** — SCHOOL. — The Warrington Education Committee invite competitive plans for the erection of a public elementary school. See advertisement in issue of February 16 for further particulars.

Contracts.

BUILDING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

MARCH 2.—**Bedwas.**—PREMISES.—Erection of shop premises on the Newport-road, for the Llanbradach Co-operative Society, Ltd Plans and specifications seen, and quantities from Mr. Philip J. Jones, architect, Church-street, Pontypridd.

MARCH 2.—**Cleckheaton.**—SHOPS.—Erection of two shops, etc., Bradford-road. Plans seen, and quantities from Messrs. R. Castle & Son, architects, London City and Midland Bank-chambers, Cleckheaton.

MARCH 2.—**Moelfre.**—COTTAGES.—Erection of six cottages. Drawings and specifications with Mr. W. G. Williams, M.S.A., architect and surveyor, Bangor.

MARCH 2.—**Pitglassie.**—ADDITIONS.—For additions to dwelling-house, Mid Pitglassie, Auchterless. plans and specifications with Mr. W. L. Duncan, architect, Turriff.

MARCH 4.—**Aberkenfig.**—HOUSES.—Erection of twenty houses for the Pandy Estate Building Club No. 2. Plans and specifications with Mr. F. W. Burnett, architect, Tondu, near Bridgend.

MARCH 4.—**Bideford.**—CHURCH.—Erection of a United Methodist church, with a school hall, classrooms, etc. Plans and specification seen, and quantities, on deposit of 1*l.* 1s., from Mr. W. Beddoe Rees, architect, 3, Dumfries-place, Cardiff.

MARCH 4.—**Blackwood.**—HALL.—Erection of a new mission hall. Plans and specifications seen, and quantities, on deposit of 2*l.* 2s., from Mr. A. F. Webb, M.S.A., architect and surveyor, Blackwood.

MARCH 4.—**Bradford.**—WAREHOUSE, ETC.—Erection of shed, motor-house, and warehouse at Dumb Hill, Frizinghall. Drawings and general conditions of contract seen, and quantities and forms of tender from the City Architect, Town Hall, Bradford.

MARCH 4.—**Chepstow.**—STATION.—For erection of a police-station. Plans and specification with Mr. W. Tanner, F.S.I., County Surveyor. Quantities on deposit of 1*l.* 1s.

MARCH 4.—**Listowel.**—HOUSES.—Erection of thirty houses. Plans and specifications by Mr. J. O'Malley, B.E., Limerick.

MARCH 4. **Moretonhampstead.**—SCHOOLROOM. —For erection of a Sunday schoolroom. Plans and specifications with Mr. J. C. Beare, architect, 42, Devon-square, Newton Abbot.

MARCH 4.—**Torryburn.**—SCHOOL.—Erection of proposed new school. Plans and schedules from Mr. John Houston, architect, St. Margaret's-street, Dunfermline.

MARCH 5.—**Blackpool.**—SHOP, ETC.—Erection of a meter-testing shop and other buildings adjoining the present workshops in Hull and Sefton streets. Plans, specification, and conditions of contract seen, and quantities and form of tender from the architect, Mr. Herbert Wade, 27, Birley-street, Blackpool. Deposit of 2*l.* 2s.

MARCH 5.—**Brighton.** ADDITIONS.—For alterations and additions to the existing stewards' stand on the Brighton Race Ground, and erection of a club stand. Specification and form of tender at the Town Hall, Brighton, and the drawings with the Borough Surveyor, Town Hall, Brighton.

MARCH 5.—**Dowlais.**—SHOPS, ETC.—For erection of two shops, with offices and dwelling-house, in Union and Wind-street. Plans and specification seen, and quantities from Messrs. Johnson & Richards, architects, Merthyr Tydfil.

MARCH 5.—**Kirkham.**—HOUSE, ETC.—Erection of a workshop and house in Station-road. Plans, specification, and conditions of contract seen, and quantities and form of tender from the architect, Mr. C. J. Cross, Kirkham. Deposit of 2*l.* 2s.

MARCH 6.—**Blackwood.**—VILLAS.—Erection of twelve (or more) semi-detached villas, for the Blackwood Central Building Club. Plans and specifications with Mr. A. F. Webb, M.S.A., architect and surveyor, Blackwood.

MARCH 6.—**Great Yarmouth.**—STABLING.—For erection of stabling for twenty-six horses on the racecourse, South Denes. Plans and specifications seen, and quantities from Mr. J. W. Cockrill, M.Inst.C.E., Borough Surveyor, Town Hall, Great Yarmouth.

MARCH 6.—**Hayes.**—HOUSES, ETC.—For the laying out of the site, construction of roads, sewers, fences, etc., and the building of fifty-one houses at Elder's-field, Wood End-green, Hayes, Middlesex. Drawings, specification, and form of tender from Mr. D. C. Fiddler, M.S.E., the Engineer and Surveyor to the Council, at the Council Offices, Grange-road, Hayes, on deposit of 2*l.* 2s.

MARCH 6.—**Holmfirth.**—SHED, ETC.—For erection of a warping shed and offices at Deanhouse Mills. Plans and specifications seen, and quantities from Messrs. J. Barrowclough & Son, architects, Cross-roads, Holmfirth.

* MARCH 6.—**Lowestoft.**—SCHOOL.—The Lowestoft Education Committee invite tenders for erection of a school for about 430 children. See advertisement in this issue for further particulars.

MARCH 6.—**St. Austell.**—RESIDENCE, Erection of a new residence, garage, gree etc., at Truro-road. Drawings and speci with Mr. B. C. Andrew, M.S.A., a Biddicks-court, St. Austell.

MARCH 7.—**Ammanford.**—PREMISES.— of business premises at Quay-street. P specifications from Mr. David M.I.Mun.E., architect and surveyor, Amm

MARCH 7.—**Ballynacargy.**—RESIDEN erection of a dispensary and medical residence. Specification by Mr. P. architect, with Mr. L. Gavin, Clerk, Mu

MARCH 7. **Evenwood.**—HOUSE.—For of mine manager's house. Plans and tion with Mr. J. E. Chilton, architect chambers, Darlington.

MARCH 7.—**Mevagissey.**—MANSE.—For tion of present manse and erection of ne in Church-street. Drawings and speci with Mr. J. Kemble, Mevagissey, and lars from Messrs. F. C. Jury & Son, a and surveyors, "Tregarthan," Polt Austell.

MARCH 7. **St. Austell.**—PIGGERIES. tion of new piggeries at the Workhouse and specifications with the Master of th house.

MARCH 9.—**Arnside.**—CONVENIENCE.—F public convenience for ladies and ge Plans seen, and quantities, specificati information from Mr. A. W. M. A.M.Inst.C.E.I., 8, Beech-villas, Kendal

MARCH 9.—**Barnstaple.**—PULLING For pulling down the Red Cow pre junction of Castle-street and Holla Particulars from Mr. E. Y. Saunders, Borough Surveyor, The Strand, Barnsta

MARCH 9.—**Byers Green, etc.** -ADD For additions, alterations, and repairs t ing houses:—Bee Hive Inn, Fishburn; Inn, Byers Green; Marquis of Gran Byers Green. Plans and specification houses, Mr. T. H. Murray, architect veyor, Consett.

MARCH 9.—**Portsmouth.**—ALTERATIO alterations at Driver's Restaurant, 7 and burgh-road. Drawings and quantities A. E. Cogswell, architect, Prudential-b Portsmouth.

MARCH 9. — **Sithney.** — SCHOOL. — F Council school. Plans and specificati Mr. Sampson Hill, Architect to the Co Green Lane, Redruth.

MARCH 9.—**Wigmore.** -ADDITIONS.—F tions and alterations at the District Wigmore, West Bromwich. Plans, spec and conditions of contract seen, and tender, on deposit of 1*l.* 1s., from M Ward, Clerk, 22, Lombard-street Bromwich.

MARCH 12. — **Brentford.** — WAREHOU Great Western Railway invite tenders extension of a warehouse at Brentfor Middlesex. Plans and specification a forms of tender and quantities at the the Engineer at Paddington Station, L

MARCH 12.—**Cleckheaton.**—EXTENSION tion of extensions to motor engineerin Commercial Mills. Plans seen, and q from Messrs. Howarth & Howarth, a etc., Old Bank-chambers, Cleckheaton.

MARCH 12.—**Devon.**—STATION.—The Western Railway invite tenders for the of station buildings at Dawlish Warren Plans and specification seen, and forms and quantities obtained, at the GR Engineer at North-road, Plymouth, Stat

MARCH 12.—**Dublin.**—BAKERY.—Erect new bakery at the Richmond Asylum, gorman, Dublin. Plans, specifications, conditions of contract, by Mr. George A.R.C.S.I., M.Inst.C.E.I., engineer a tect, 1 and 2, Foster-place, Dublin.

* MARCH 12.—**West Ham.**—BUILDI West Ham B.C. invite tenders for a bu contain twelve slipper-baths, with wait etc., in Fen-street, Tidal Basin, E. S tisement in this issue for further partic

MARCH 13. — **St. Helens.** — CONSER Erection of a new conservatory at the Park. Particulars and site plan from M W. Bradley, M.Inst.C.E., the Borough Town Hall, St. Helens. Deposit of 1*l.*

MARCH 14.—**Littlehampton.**—STABL For erection of a block of stables and c also pair of workmen's cottages, with wallings and other works on the site of sewerage pumping station, north hampton Gasworks. Drawings, with tion, seen, and form of tender from the

BUILDING—*continued.*

e date given at the commencement of each graph is the latest date when the tender, or names of those willing to submit tenders, be sent in.

yor, Mr. H. Howard, M.S.A., Town Offices. hampton. Deposit of 1*l.* 1s.

MARCH 18.—**Ottershaw.** HOUSE FOR NURSES s Chertsey Guardians invite tenders for on of a house for nurses in the grounds e Workhouse at Ottershaw. See advertise- in this issue for further particulars.

CH 20.—**Leeds.**—SCHOOL.—Extension of the town Council School. Quantities and forms der at the Education Department (Archi- Section), Calverley-street, Leeds.

CH 26.—**Westbourne.**—SCHOOL.—Erection new elementary Council school. Plans, fication, and conditions of contract seen, and ities and forms of tender from Mr. n P. Roberts, A.R.I.B.A., County Educa- Architect, Thurloe House, High-street, hing. Deposit of 1*l.* 1s.

CH 28.—**Brentwood.**—ADDITIONS.—For tions and additions at the Asylum. Draw- specifications, conditions, and forms of con- at the Office of the County Architect, 73, -street, Chelmsford. Deposit of 5*l.* for ities to Mr. H. H. Gepp, Clerk to the ng Committee, 57, New-street, Chelmsford.

IL 1.—**Birmingham.**—BOILER-HOUSE, ETC.— rection of boiler-house, etc., at the electric ating station, Summer-lane. Quantities the quantity surveyors, Messrs Ewen r & Brother, Ruskin-chambers, Corpora- treet, Birmingham. Deposit of 2*l.* 2s.

DATE.—**Barrow-in-Furness.**—For erection detached house in Croslands Park. Plans and quantities from Messrs. Settle & lrit, A.R.I.B.A., Ulverston and Barrow-in- ss.

DATE.—**Bradford.**—RESIDENCE.—Erection of nce off Hollingwood-lane. Messrs. John s & Sons, architects, North-street, ley.

DATE.—**Bury.**—EXTENSIONS.—For erection extensions to bakery in Georgina-street. Hardman, architect, Agur-street, Bury.

DATE.—**Buxton.**—ALTERATIONS.—For pump- alterations. Mr. F. Langley, engineer and yor, Town Hall, Buxton. Deposit of 3*l.* 3s.

DATE.—**Doncaster.**—PREMISES.—For erec- of new business premises and offices in street. Architect, Mr. T. H. Johnson, 20, -place, Doncaster

DATE.—**Fort William.**—DAM, ETC.—For uction of a reinforced concrete dam, wall, luices on River Aylort. Mr. Mackintosh, Lic.R.I.B.A., Fort William, Scotland.

DATE.—**Girsby.**—HOUSE.—Erection of a icagage house at Girsby, near Darlington. s. Clark & Moscrop, FF.R.I.B.A., archi- Darlington.

DATE.—**Hitchin.**—BACON ESTABLISHMENT.— rection of a bacon-curing establishment, and specifications from Mr. L. M. Douglas, E., 3, Lauder-road, Edinburgh.

DATE.—**Isle of Man.**—ALTERATIONS.—For ions and additions to buildings at Peel, f Man. Quantities from Mr. S. Kemp, yor, 6, Princess-street, Manchester.

DATE.—**Middlesbrough.**—EXTENSION.—For ion to business premises, No. 44, Newport- Plans and specifications with Mr. Harry architect and surveyor, 123, Albert-road, sbrough.

DATE.—**Mullion.**—BUNGALOW.—Erection of galow on Lord Clifden's building estate, and specification with Mr. Arthur Gilbert, ct, 47, Market-street, Falmouth.

DATE.—**Peel (I. of M.).**—ADDITIONS, ETC. Co-operative Holidays Association invite s for alterations and additions to buildings l, Isle of Man. See advertisement in this or further particulars.

DATE.—**St. Ives.**—BAKERY.—Erection of a kery and alterations to existing premises. Townsend & Fordham, architects, orough.

DATE.—**Ton Pentre.**—HALL.—For rection of workmen's hall, Ton Pentre, Rhondda for the Maindy and Eastern Collieries en. Deposit of 3*l.* 3s. to Mr. W. D. , M.S.A., architect, 194, Ystrad-road, Rhondda.

GINEERING, IRON, AND STEEL.

H 4.—**Horncastle.**—BRIDGE.—For taking and rebuilding wooden cartbridge over t Dalderby. Specifications at the Council

H 6.—**Dublin.**—ALTERNATOR, ETC.—For in- on at Pigeon House generating station of kw. polyphase alternator and accessories. ation and form of tender from the City eal Engineer, Fleet-street, Dublin, on of 1*l.* 1s.

H 6.—**Sudbury.**—BRIDGE.—For construc- ferro-concrete bridge on the Hennebique system. Mr. A. Ainsworth Hunt, County Architect, 51 Abbeygate-street, Bury St. Edmunds.

MARCH 6.—**Swansea.**—PLANT, ETC.—For turbo-alternators and condensing plant. Specification and form of tender from the Borough Electrical Engineer, Mr. C. A. L. Prusmann, Electricity Department, Strand, Swansea. Deposit of 1*l.* 1s.

MARCH 7.—**Glasgow.**—PLANT, ETC.—For installing a filtration and aeration plant in Gorbals Baths. Particulars from the General Manager, Baths Department, 38, College-street, Glasgow.

MARCH 8.—**Ipswich.**—DOCK.—For construction of a small branch dock at Tovell's Wharf. Plans and specification seen, and form of tender from Mr E. Buckham, Borough Surveyor, Town Hall, Ipswich.

MARCH 8.—**London.**—INSTALLATION.—For electrical installation at the Victoria-embankment Gardens conveniences, for the London C.C. Drawings and specification, form of tender, etc., with the Chief Engineer of the Council, Mr. M. Fitzmaurice, C.M.G., County Hall, Spring-gadrens, S.W. Deposit of 10s.

MARCH 23.—**Southampton.**—HEATING, ETC.—For erection of heating and hot-water supply systems, etc., at Infirmary, Shirley Warren. Specification and drawings, on deposit of 2*l.* 2s., from Mr. A. J. Walden, Clerk to the Guardians, Clerk's Offices, the Workhouse, St. Mary-street, Southampton.

FURNITURE, PAINTING, MATERIALS, etc.

MARCH 2.—**Huddersfield.**—PAINTING.—For painting and cleaning the central and district police-stations. Specifications and forms of tender from the Chief Constable.

MARCH 4.—**Chatham.**—PAINTING.—For painting exterior of Glencoe-road Council schools. specification and form of tender at the Borough Surveyor's Office, Town Hall, Chatham.

MARCH 5.—**Greenwich.** PAINTING, ETC. For external pointing and repainting works to mortuary chapels at Shooter's Hill Cemetery. Specification and form of tender from the Borough Engineer and Surveyor, Town Hall, Greenwich.

MARCH 5.—**Sunderland.**—PAINTING.—For inside painting, etc., of reception-room, Council-chamber, and cloakroom, Town Hall. Specifications seen, and form of tender at the Borough Surveyor's Office, Town Hall.

MARCH 6.—**South Shields.**—STORES.—For the supply of engine-room stores, etc Conditions and specification from Mr. H. S. Ellis, A.M.Inst.E.E., A.M.Inst.M.E., Borough Electrical Engineer, Electric Supply Department, Mill Dam, South Shields.

MARCH 7.—**London.**—PAINTING.—For repairs, painting, whitewashing, etc., at the Newington Workhouse, Westmoreland-road, Walworth, S.E., and the Boyson-road Homes, S.E. Specification and form of tender from the Guardians' Architect, Mr. A. Saxon Snell, F.R.I.B.A., of 32, Southampton-buildings, Chancery-lane, W.C. Deposit of 10*l.*

MARCH 9.—**Barnstaple.** PAINTING.—For external painting of Rock Park lodge. Specification with Mr. E. Y. Saunders, M.R.S.I., Borough Surveyor, The Strand, Barnstaple.

* MARCH 11.—**Kensington.**—PETROL MOTORS.—The Kensington B.C. invite estimates, etc., for the provision of two petrol motors. See advertisement in this issue for further particulars.

MARCH 12.—**Norwich.**—PAINTING.—For painting works at the pavilion, the adjoining cottage, and ranger's house, on Mousehold Heath. Specification seen, and forms of tender from Mr. Arthur E. Collins, M.Inst.C.E., City Engineer, Guildhall, Norwich.

MARCH 13.—**Ashton-in-Makerfield.**—PAINTING.—For painting and decorating internally the several blocks of buildings at Isolation Hospital, Bryn-road. Specification and conditions from the Surveyor, Council Offices, Ashton-in-Makerfield.

MARCH 13.—**Herne Bay.**—PAINTING, ETC.—The Metropolitan Asylums Board invite tenders for cleaning and painting work at St. Anne's Home, Herne Bay, Kent. Specification by Mr. W. T. Hatch, M.Inst.C.E., M.I.Mech.E., Engineer-in-Chief, seen at the Office of the Board, Embankment, E.C. Deposit of 1*l.*

* MARCH 13.—**London.**—PAINTING, ETC.—The Metropolitan Asylums Board invite tenders for cleaning, painting, and repairing certain hospitals in the London district. See advertisement in this issue for further particulars.

* APRIL 2.—**Bethnal Green.**—PAINTING.—The Bethnal Green Guardians invite tenders for painting portion of the interior of the school, High-road, Leytonstone. See advertisement in this issue for further particulars.

ROADS, SANITARY AND WATER WORKS.

MARCH 2.—**Bargoed.**—ROAD.—For the formation of a road on the Gilfach Fargoed Fach Estate. Plans seen, and quantities from Mr. W. A. Rodger, architect, 7, Hanbury-road, Bargoed.

MARCH 2.—**Bolsover.**—MATERIALS.—For supply of road materials. Form of tender and conditions of contract from Mr. W. G. H. Browne, Surveyor, Council Offices, Bolsover.

MARCH 2—**Chesterton.**—GRANITE.—For supply of broken granite and slag. Forms of tender from the Surveyor, Mr. J. Dunn, Brunswick House, Cambridge.

MARCH 2.—**Guisborough.**—MATERIALS.—For the supply of whinstone, ordinary slag, and tarred slag. Particulars from Mr. R. H. Kilburn, surveyor, Guisborough.

MARCH 4.—**Ashington.**—ROAD METAL.—For supply of road metal. Mr. G. Beaty, Surveyor, Council-chambers, Ashington.

MARCH 4.—**Cudworth.**—GRANITE.—For the supply of granite and slag. Particulars and form of tender from Mr. W. T. Lynam, Surveyor, Council Offices, Cudworth.

MARCH 5. **Brentford.** PAVING.—For paving with granite setts Ferry-lane, Old Brentford Specification, conditions, and forms of tender from Mr. J. W. Croxford, Surveyor, Clifden House, Boston-road, Brentford.

MARCH 5.—**London.**—ROAD.—For kerbing, channelling, and metalling the roadways, and paving the footpaths with artificial stone, of Collingtree-road, Sydenham. Plan at the Town Hall, Catford (Surveyor's Department). Form of tender, general conditions, and specification, on deposit of 5s., from Mr. Edward Wright, Town Clerk, Town Hall, Catford, S.E.

MARCH 6.—**Barnsley.**—ROAD.—For draining, levelling, metalling, flagging, channelling, and completing of Wilkinson-street, Charles-street, and part of St. John's-road. Drawings and specifications seen, and forms of tender from Mr. J. H. Taylor, M.Inst.C.E., Borough Surveyor, Manor House Offices, Barnsley.

MARCH 6.—**Dallas.**—ROAD.—For widening and strengthening the Rhininver-road. Drawings and specification seen, and quantities from Mr. D. A. Hogg, Surveyor, 24, Academy-street, Elgin.

MARCH 6.—**Thornton.**—SEWERS.—For laying sewers in a portion of Bourne and Lawsons roads. Plans seen, and specification and quantities, on deposit of 1*l.*, to Mr. Henry Fenton, Surveyor to the Council, Council Offices, Thornton-le-Fylde, *vid* Preston.

MARCH 9. **Bakewell.**—SEWERAGE.—For construction of 9-in. stoneware pipe sewer, with manholes, etc., at Stanton-in-Peak. Plan, specification, etc., seen, and form of tender from the engineers, Messrs. Brady & Errington, Town Hall, Chapel-en-le-Frith. Deposit of 1*l.* 1s.

MARCH 9.—**Stanton.**—SEWAGE.—Construction of stoneware pipe sewer, with manholes, etc., at Stanton-in-Peak. Plan, specification, etc., seen, and Form of tender from engineers, Messrs. Brady & Errington, Town Hall, Chapel-en-le-Frith. Deposit of 1*l.* 1s.

MARCH 11.—**Eastbourne.**—CEMENT, ETC.—For supply of Portland cement, cast-iron goods, etc. Specifications seen, and forms of tender from Mr A. Ernest Prescott, Borough Surveyor, Town Hall, Eastbourne.

MARCH 11.—**Leighton Buzzard.**—MATERIALS.—For supply of granite, slag, sand, and gravel. Tender forms from the Surveyor, Mr. M. G. Gurney, Linslade, Leighton Buzzard.

MARCH 11.—**London.**—ROADS.—For making-up and paving Normanhurst-road, for the Wandsworth B.C. Specification and drawings seen, and forms of tender from the Borough Engineer, New Streets Department, 56 East-hill, Wandsworth, S.W. Deposit of 5*l.* 5s.

MARCH 11.—**Palfrey.**—STREETS.—For the remaking and completing of Port street, Palfrey. Plans and specification with the Borough Surveyor, Council House, Walsall.

* MARCH 15. **Manchester.**—MAIN DRAINAGE. The Rivers Committee of the Manchester Corporation invite tenders for the construction of main drainage work. See advertisement in this issue for further particulars.

MARCH 18.—**Raunds.**—SEWAGE.—For extensions to sewage-disposal works. Plans and specifications with Mr. Thomas Yorke, Surveyor to the Council.

MARCH 21.—**Wenlock.**—SEWAGE.—For laying and jointing 12-in. and 9-in. stoneware pipe sewers; also construction of liquefying tanks, bacteria beds, humus tank sludge beds, and other works. Drawings and specification seen, and quantities and form of tender from the engineers, Messrs Willcox & Raikes, 63, Temple-row, Birmingham, on deposit of 3*l.* 3s

* MARCH 23.—**Westmancote.**—SEWER.—The Tewkesbury R.D.C. invite tenders for laying sewer and construction of works at Westmancote, in the Parish of Bredon. See advertisement in this issue for further particulars.

NO DATE.—**Bingley.**—MACADAM.—For the macadamising of Crow Nest-road. Quantities from Mr. H. Bottomley, Surveyor, Town Hall, Bingley, Yorks.

Public Appointment.

Nature of Appointment.	By whom Advertised.	Salary.	Application to be in
OF WORKS	Camberwell Guardians	3*l.* 10s. weekly	Mar. 7

Auction Sales.

Nature and Place of Sale.	By whom Offered.	o
*BUILDING SITE, LONG ACRE, W.C.—At the Mart	Robins, Gore, & Mercer	M
*WOODWORKING MACHINERY—At 76, Orpingley-road, Finsbury Park	H. W. Smith	M
*DEALS, BATTENS, BOARDS, TIMBER, Etc.—Great Hall, Winchester House, E.C.	Churchill & Sim	M
*DECORATOR'S STOCK AND MATERIALS, EDGWARE-ROAD, N.—On the Premises	Joshua Baker, Cooke, & Standen	M
*FREEHOLD BUILDING LAND, HONOR OAK—At the Mart	Chesterton & Sons	M
*FREEHOLD BUILDING LAND—At the Mart	Eastman Bros.	M

FOREIGN AND COLONIAL.

Hotel, Norway.

Information has been received regarding a proposal to form a company for the construction in Norway of a large hotel. Particulars may be obtained by British contractors and manufacturers on application to the Commercial Intelligence Branch of the Board of Trade.

Building in Turkey.

There is a considerable amount of building likely to be done in Constantinople shortly (see *Board of Trade Journal* of August 3, 1911, pp. 211-12). The two large areas destroyed by the fires in Stamboul in July, 1911, must be rebuilt, and there are schemes for improving the town. Comparatively little of the building material used is brought from the United Kingdom.

PATENTS.

APPLICATIONS PUBLISHED.*

2,303 of 1911.—Frederick Adolphus Luppin and John Robert Haw: Door knobs.

2,808 of 1912.—Philip Charles Knightley Wolfe Murray and Joseph John Cartwright: Cooking-ranges and stoves.

2,840 of 1911.—Arthur Henry Barker: Independent fireplaces and stoves.

2,911 of 1911.—John Augustus Walton Ward and Elyard Atherstone Walmisley: Switch systems for electric lighting.

3,383 of 1911.—Napier Prentice: Electrical heating and cooking devices.

4,385 of 1911.—Isaac Shone: Sewerage systems.

9,851 of 1911.—James Slater & Co., Ltd., and Charles Reed Allensby: Flap ventilators or dampers.

12,475 of 1911.—Adolf Karger: Method of and means for the manufacture of paving stones.

16,286 of 1911.—Franz Louis Beckert: Mud grab or scoop for sinks, drain gullies, and the like.

17,023 of 1911.—Hans Woruda: Concrete work.

20,828 of 1911.—Ferdinand Eugene Colignon: Cooking-ranges.

26,212 of 1911.—James Farley: Means for supporting and maintaining drain pipes in position.

28,795 of 1911.—Edward Esender: Ventilators for windows.

TRADE CATALOGUE.

We have received from Messrs. T. & W. Farmiloe, Ltd., Rochester-row, Westminster, S.W., a catalogue of paints, colours, varnishes, distempers, etc., manufactured by them, in which they draw special attention to their "Nine Elms" pure paint, which they guarantee is manufactured from the finest materials. In referring to the excellence of this paint, Messrs. Farmiloe make the following observations, which will be endorsed by all paint users of experience:—"There are many lower priced paints on the market than 'Nine Elms,' but there is no doubt whatever that cheap paint is always expensive, as, apart from the poorness of the covering capacity, the work does not last and requires to be done over two or three times in the period that would only be taken once by the high grade article." We know that to our cost! The "Nine Elms" pure paint is supplied in white and in forty-eight art tints, while any other tint can be secured. The paint is made in four forms, *i.e.*, (1) Glossy, for finishing; for inside or outside use; (2) extra glossy, for finishing; especially suitable for outside work and for seaside places; (3) undercoating, or first coat; and (4) flat, for finishing flat or for undercoat for enamelling. The firm also supply the following "Nine Elms" brand materials, *i.e.*: —Greenhouse paint, pure pruning, white lead, super white patent driers, linseed oil putty, plastic putty, special white japan for decorators, ready-mixed paints, paints for ironwork, aluminium paint, water paint, ceilingite, liquid paint remover, wood preservative, decorators' and painters' soap, etc. As to their plastic putty, it is claimed that it is unaffected by damp, heat, or cold. "Coverite," a new rapid undercoating, enables two coats of paint to be applied in one day, and the firm's lustre paint is a paint that will keep its colour under unfavourable circumstances. There is nothing so disappointing to the skilled man as to find the paint that he has applied with care and discrimination change its colour for some apparently unknown reason. This is frequently caused by such adverse influences as sulphurous fumes and sewer gas. In many cases smoke and fog have been found sufficient to materially change the face of a paint, no matter how genuine the latter may be in its composition; but it is claimed that lustre paint will resist all atmospheric conditions and retain its colour and brilliancy of surface for any length of time. The catalogue mentions other goods supplied by the firm, including enamels, preservative paints, stains, dry colours, colours ground in oil, asbestos fireproof paints, varnishes, wood stains and oils, and many other specialities.

* All these applications are in the stage in which opposition to the grant of Patents upon them can be made.

PUBLISHER'S NOTICES.

Tel., 6113 Gerrard. Telegrams, "The Builder, London."

THE INDEX (with TITLE-PAGE) for VOLUME CI. (July to December, 1911) was given as a supplement with January 12.

CLOTH CASES for Binding the Numbers are now ready, price 2s. 6d. each; also

READING CASES (Cloth), with Strings, price 9d. each.

THE HUNDRED AND FIRST VOLUME of "The Builder" (bound), price Twelve Shillings and Sixpence, is now ready.

SUBSCRIBERS' VOLUMES, on being sent to the Office, will be bound at a cost of 3s. 6d. each.

CHARGES FOR ADVERTISEMENTS.

COMPETITIONS, CONTRACTS, ALL NOTICES ISSUED BY CORPORATE BODIES, COUNTY AND OTHER COUNCILS, PROSPECTUSES OF PUBLIC COMPANIES, SALES BY TENDER, LEGAL ANNOUNCEMENTS, etc., etc.

Six lines or under ..... 6s. 0d.
Each additional line ..... 1s. 0d.

SITUATIONS VACANT, PARTNERSHIPS, APPRENTICESHIPS, TRADE AND GENERAL ADVERTISEMENTS.

Six lines (about fifty words) or under ..... 4s. 6d.
Each additional line (about ten words) ..... 0s. 9d.

Terms for series of Trade advertisements, and for front page and other special positions, on application to the Publisher.

SITUATIONS WANTED (Single-handed—Labour only).

Four lines (about thirty words) or under ..... 2s. 6d.
Each additional line (about ten words) ..... 0s. 6d.

PREPAYMENT IS ABSOLUTELY NECESSARY.

** Stamps must not be sent; but all sums should be remitted by Postal Orders, payable to J. MORGAN, and addressed to the Publisher of "THE BUILDER," 4, Catherine Street, W.C.

Advertisements for the current week's issue are received up to ONE p.m. on THURSDAY, but "Classification" is impossible in the case of any which may reach the Office after TWELVE NOON on that day. Those intended for the Outside Wrapper should be in by TWELVE NOON on WEDNESDAY.

ALTERATIONS IN STANDING ADVERTISEMENTS or ORDERS TO DISCONTINUE same must reach the Office before TEN o'clock on WEDNESDAY MORNING.

The Publisher cannot be responsible for DRAWINGS, TESTIMONIALS, etc., left at the Office in reply to advertisements, and strongly recommends that of the latter COPIES ONLY should be sent.

ADVERTISERS in "THE BUILDER" may have *Replies addressed to the Office*, 4, Catherine Street, Strand, W.C., *free of charge*. Letters will be forwarded if addressed envelopes are sent, together with sufficient stamps to cover the postage. Unused stamps are returned to advertisers the week after publication.

N.B.—The Reply Boxes are not intended for trade lists, circulars, and the like, should these be received, they cannot (if noticed) be forwarded.

AN EDITION Printed on THIN PAPER, for FOREIGN and COLONIAL CIRCULATION, is issued every week.

READING CASES { NINEPENCE EACH. By post (carefully packed) 1s.

SOME RECENT SALES OF PROPERTY:

ESTATE EXCHANGE REPORT.

February 19.—By WAGSTAFF & SONS.

Highgate.—80 and 82, Dartmouth Park-hill, u.t. 64 yrs., g.r. 10l., y. and v.r. 22l. 12s.	£3L, 3 0
Wood Green.—31 and 33, Pellatt-gr., f., p	

February 20.—By DEBENHAM, TEWSON, RICHARDSON, & CO.

City.—2, Coleman-st, f.g.r. 525l., reversion in 53 yrs.	13,200
87 and 88A, Leadenhall st., f.g. rents 420l., reversion in 61¼ yrs.	10,500
Spitalfields.—Church-passage, freehold house,	700

By MARKS & BARLEY.

Pimlico.—Vauxhall Bridge-rd., Duchess of Clarence, p.h., and shop adjoining, f.g.r. 15l., reversion in 12 yrs.

By MAY & PHILPOT.

Bermondsey.—37, Cherry Garden st (s.), f., w.r. 44l. 4s.

Blackfriars.—3, 5, and 7, Surrey-row, f., w.r. 88l. 8s.

Brockley.—15 and 17, Salehurst-rd., u.t. 92 yrs., g.r. 7l. 10s., w.r. 59l. 16s.

Brixton.—20 and 21, Rumsey-rd., u.t. 69 yrs., g.r. 16l. 10s., y.r. 80l.

By GEO. GOULDSMITH, SON, & CO.

Belgravia.—Chesham-pl., Herbert House, u.t. 11 and 12 yrs., g.r. 45l. p

February 21.—EDWIN FOX, BOUSFIELD, BURNETTS, & BADDELEY.

Bloomsbury.—29 and 45, Tavistock-sq., u.t. 11¾ and 16¾ yrs., g.r. 55l., y.r. 270l.

Gordon-sq., l.g. rents 240l. 12s., u.t. 23 yrs., g.r. 156l. 10s., with reversion

New Cross.—26, Pepys-rd., u.t. 45¼ yrs., g.r. 10l., p.

By C. W. DAVIES & SON.

Wapping.—Old Gravel-la., Dock House b h., f., y.r. 60l.

16 and 18, Old Gravel-la. (s.), f., gross rental 72l.

Islington.—233 and 235, Liverpool-rd., f., p

By HOLCOMBE, BETTS, & WEST.

Soho.—181, Wardour-st. (s.), f., y.r. 152l. 2s. 9d.

Marylebone. 22, Lower Seymour-st., profit rental of 50l., u.t. 11 yrs.

By RUSHWORTH & BROWN.

Hounslow.—1, 3, 5, and 7, Albion-rd., f., w.r. 59l. 16s.

By WYATT & SON.

Pagham, Sussex.—Roslyn, The Hut, and The Cot, f.

Chichester, Sussex.—12, 13, and 14, George-st., f., w.r. 27l. 6s.

February 22.—By C. C. & T. MOORE.

Stratford.—82 and 84, The Broadway (s.), f., y.r. 280l.

Leytonstone. 47, 49, and 51, Lansdowne-rd., f., w.r. 70l. 4s.

58 and 60, Queen's-rd., u.t. 84 yrs., g.r. 11l., y.r. 64l.

By NEWSON & SHEPHARDS.

Islington.—Gerrard st., f.g.r. 18l. 18s., reversion in 21¼ yrs.

Gerrard-st., Gerrard Arms p.h., u.t. 21 yrs., g.r. 16l., y.r. 80l.

29, Clarence-st., 48, St. Peter's st. and stabling, u.t. 24½ yrs., g.r. 16l. 6s., y. and w.r. 166l.

15, Furlong-rd., u.t. 23¾ yrs., g.r. 2l., e.r. 52l.

Crouch End.—Bourne rd., f.g. rents 36l., reversion in 78 yrs.

Hampstead. 91, Haverstock-hill (s.), u.t. 53 yrs., g.r. 8l., y.r. 100l.

Acton. 8 and 10, Shakespeare-rd., f., w.r. 161l. 4s.

37 and 39, Birkbeck-rd., f., w.r. 127l. 8s.

28 and 30, Fletcher-rd., f., w.r. 93l. 12s.

By STIMSON & SONS.

Poplar.—1 to 16, South East-row, u.t. 68 yrs., g.r. 120l., w.r. 322l. 14s.

Walworth. 32, Montpelier-st., u.t. 70 yrs., g.r. 6l. 6s., w.r. 49l. 8s.

Herne Hill.—12, Hawarden-gr., u.t. 83½ yrs., g.r. 7l. 7s., e.r. 38l

Lambeth.—11, Italian walk, u.t. 53 yrs., g.r. 5l. 10s., p.

South Lambeth.—29, Guildford-rd., u.t. 30 yrs., g.r. 7l. 16s., w.r. 92l. 6s.

2, Devonshire-rd., f., w.r. 54l. 12s.

February 23. By JOHN H. BULMER.

Bermondsey.—87, Southwark Park-rd. (s.), u.t. 47¾ yrs., g.r. 7l. 6s., y.r. 45l.

By ROBERTSON & BARTON.

Harringay—9c, Mattison-rd., u.t. 83 yrs., g.r. 7l., e.r. 38l

Contractions used in these lists.—F.g.r. for f ground-rent; l.g.r. for leasehold ground-rent; i improved ground-rent; g.r. for ground-rent; r. f f. for freehold; c. for copyhold; l. for leasehold possession; e.r. for estimated rental; w.r. for rental; q.r. for quarterly rental; y.r. for yearly u.t. for unexpired term; p.a. for per annum; years; la. for lane; st. for street; rd. for road; square; pl. for place; ter. for terrace; cres. for c av. for avenue; gdns. for gardens; yd. for yard; grove; h. for house; p.h. for public-house offices; s. for shops; ct. for court.

TERMS OF SUBSCRIPTION.

"THE BUILDER" (Published Weekly) is supplied from the Office to residents in any part of the United at the prepaid rate of 12s. per annum, with delivery *Morning's Post* in London and its suburbs.

To Canada, post-free, 12s. 3d. per annum; and to all Europe, America, Australia, New Zealand, India, China etc., 13s. per annum.

Remittances (payable to J. MORGAN) should be add The Publisher of "THE BUILDER," 4, Catherine-street,

S CURRENT OF MATERIALS.

im in this list is to give, as far as possible, the ices of materials, not necessarily the lowest. nd quantity obviously affect prices—a fact ould be remembered by those who make use of mation.

BRICKS, &c.

	£ s. d.
Per 1000 Alongside, in River.	
ks	1 14 0
ocks for Facings	2 7 0

Per 1000, Delivered at Railway Depôt.

	£ s. d.		£ s. d.
.....	1 12 0	BestBluePressed	
areham		Staffordshire...	3 15 0
.....	3 12 0	Do. Bullnose.....	4 0 0
Pressed		Best Stourbridge	
Facing	5 0 0	Fire Bricks ...	4 0 0

RICKS—

hite,		Double Headers	13 17 6
nd Salt		One Side and two	
r'tch'rs	11 7 6	Ends	17 17 6
.....	10 17 6	Two Sides and	
illnose,		one End	18 17 6
n. Flats	14 17 6	Splays & Squints	16 7 6
etchers	16 17 6		

d Quality £1 10s. per 1000 less than best.

	s. d.	
nd Pit Sand	6	9 per yard, delivered.
Ballast	5 6	»
land Cement	31 0	per ton, »
nd Blue Lias Lime	19 0	» »

The cement or lime is exclusive of the ordinary charge for sacks.

e Lime ..... 13s. 0d. per yard delivered.
ge Fireclay in sacks 27s. 0d. per ton at rly dpt.

STONE.

Per Ft. Cube.

	s. d.
ONE—delivered on road waggons,	
rton Depôt	1 6½
elivered on road waggons, Nine Elms	
	1 8½

STONE (20 ft. average)—

	s. d.
Whitbed, delivered on road waggons,	
ington Depôt, Nine Elms Depôt, or	
o Wharf	2 3
Basebed, delivered on road waggons	
ington Depôt, Nine Elms Depôt, or	
o Wharf	2 4½

Ft. Cube, delivered at Railway Depôt.

	s. d.		s. d.
n blocks..	1 10	Closeburn Red	
ocks	1 6	Freestone	2 0
l in blocks	1 10	Red Mansfield	
Dale in		Freestone	2 4
.....	2 4	Talacre & Gwespyr	
ssell in		Stone	2 8
.....	2 3		

SE—*Robin Hood Quality.*

Ft. Cube, Delivered at Railway Depôt.	s. d.
andom blocks	2 10
Ft. Super., Delivered at Railway Depôt.	
two sides landings to sizes (under	
per.)	2 3
d two sides ditto, ditto	2 6
two sides slabs (random sizes)	0 11½
in. sawn one side slabs (random sizes)	0 7
in. ditto, ditto	0 6

AE—

Ft. Cube, Delivered at Railway Depôt.	
andom blocks	3 0
Ft. Super., Delivered at Railway Depôt.	
two sides landing to sizes (under 40 ft.	
	2 8
d two sides ditto	3 0
two sides slabs (random sizes)	1 2
aced random flags	0 5

SLATES.

Per 1000 of 1200 at Railway Depôt.

	£ s. d.		£ s. d.
t blue		In. In.	
.....	13 2 6	20×10 best Eur'ka	
uality		unfading green	15 17 6
.....	13 0 0	20×12 ditto	18 7 6
uality	13 17 6	18×10 ditto	13 5 0
.....	13 0 0	16×8 ditto	10 5 0
o	13 15 0	20×10 permanent	
.....	7 5 0	green	11 12 6
t blue		18×10 ditto	9 12 6
ao.....	12 12 6	16×8 ditto	6 12 6
.....	6 12 6		

TILES.

At Railway Depôt.

	s. d.		s. d.
red roof-		Best "Hartshill"	
1000)	42 0	brand, plain sand-	
d Valley		faced (per 1000) ...	50 0
doz.)	3 7	Do. pressed (per	
ley (per		1000)	47 6
.....	50 0	Do. Ornamental (per	
ental (per		1000)	50 0
.....	52 6	Hip (per doz.)...	4 0
d Valley		Valley (per doz.)	3 6
doz.)	4 0	Staffords. (Hanley	
bon red,		Reds or Brindled	
r brindled		(per 1000)	42 6
(per 1000)	57 6	Hand-made sand-	
ental (per		faced (per 1000)	45 0
.....	60 0	Hip (per doz.)...	4 0
r doz.)...	4 0	Valley (per doz.)	3 6
(per doz.)	3 0		

WOOD.

BUILDING WOOD.	At per standard. £ s. d.	£ s. d.
t 3 in. by 11 in. and 4 in.		
and 11 in.	14 0 0 ...	15 10 0
t 3 by 9	13 10 0 ...	14 10 0

WOOD (*Continued*).

BUILDING WOOD (*Continued*)—	At per standard. £ s. d.	£ s. d.
Battens: best 2½ in. by 7 in. and 8 in., and 3 in. by 7 in. and 8 in.	11 10 0 ...	12 10 0
Battens: best 2½ by 6 and 3 by 6...	0 10 0 ...	less than 7 in. and 8 in.
Deals: seconds	1 0 0	less than best.
Battens: seconds	0 10 0 »	»
2 in. by in. and 3 in. by 6 in. ...	9 10 0 ...	10 10 0
2 in. by 4½ in. and 2 in. by 5 in.	9 0 0 ...	10 0 0
Foreign Sawn Boards—		
1 in. and 1¼ in. by 7 in.	0 10 0	more than battens.
¾ in.	1 0 0	»
Fir timber: best middling Dantzig or Memel (average specification)	At per load of 50 ft. 5 0 0 ...	5 10 0
Seconds	4 10 0 ...	5 0 0
Small timber (8 in. to 10 in.) ...	3 17 6 ...	4 0 0
Small timber (6 in. to 8 in.).....	3 5 0 ...	3 10 0
Swedish balks	2 12 6 ...	3 0 0
Pitch-pine timber (20 ft. average)	5 5 0 ...	6 0 0

JOINERS' WOOD.	At per standard.	
White Sea: first yellow deals, 3 in. by 11 in.	24 10 0 ...	25 10 0
3 in. by 9 in.	22 10 0 ...	23 10 0
Battens, 2½ in. and 3 in. by 7 in.	17 0 0 ...	18 0 0
Second yellow deals, 3in. by 11in.	19 0 0 ...	20 0 0
» » 3 in. by 9 in.	18 0 0 ...	19 10 0
Battens, 2½ in. and 3in. by 7 in.	14 0 0 ...	15 0 0
Third yellow deals, 3 in. by 11 in. and 9 in.	14 0 0 ...	15 0 0
Battens, 2½ in. and 3 in. by 7 in.	11 10 0 ...	12 10 0
Petersburg: first yellow deals, 3 in. by 11 in.	21 10 0 ...	22 10 0
Do. 3 in. by 9 in.	18 10 0 ...	19 10 0
Battens	14 0 0 ...	15 0 0
Second yellow deals, 3 in. by 11 in	16 10 0 ...	17 10 0
Do. 3 in. by 9 in.	15 0 0 ...	16 0 0
Battens	11 10 0 ...	12 10 0
Third yellow deals, 3in. by 11 in.	13 10 0 ...	14 10 0
Do. 3 in. by 9 in.	13 0 0 ...	14 0 0
Battens	10 10 0 ...	11 0 0
White Sea and Petersburg—		
First white deals, 3 in. by 11 in.	15 0 0 ...	16 0 0
» » 3 in. by 9 in.	14 0 0 ...	14 10 0
Battens	11 10 0 ...	12 10 0
Second white deals, 3in. by 11in.	14 0 0 ...	15 0 0
» » 3 in. by 9 in.	13 0 0 ...	14 0 0
Battens	10 10 0 ...	11 0 0
Pitch-pine: deals	19 0 0 ...	21 0 0
Under 2 in. thick extra	0 10 0 ...	1 0 0
Yellow Pine—First, regular sizes	48 0 0	upwards.
Oddments	32 0 0	»
Seconds, regular sizes	33 0 0	»
Oddments	28 0 0	»
Kurai Pine—Planks per ft. cube.	0 4 6 ...	0 6 0
Danzig and Stettin Oak Logs— Large, per ft. cube	0 3 0 ...	0 3 9
Small » »	0 2 6 ...	0 2 6
Wainscot Oak Logs, per ft. cube	0 6 6 ...	0 8 0
Dry Wainscot Oak, per ft. sup. as inch	0 0 10 ...	0 1 0
¾ in. do. do.	0 0 8½ ...	—
Dry Mahogany—Honduras, Tabasco, per ft. super. as inch..	0 0 10 ...	0 1 1
Selected, Figury, per ft. super. as inch	0 1 6 ...	0 2 6
Dry Walnut, American, per ft. super. as inch	0 0 10 ...	0 1 0
Teak, per load	18 0 0 ...	22 0 0
American Whitewood planks, per ft. cube	0 5 0 ...	0 6 0

Prepared Flooring, etc.—	Per square.	
1 in. by 7 in. yellow, planed and shot	0 13 6 ...	0 17 0
1 in. by 7 in. yellow, planed and matched	0 14 0 ...	0 18 0
1¼ in. by 7 in. yellow, planed and matched	0 16 0 ...	1 0 0
1 in. by 7 in. white, planed and shot	0 12 0 ...	0 14 6
1 in. by 7 in. white, planed and matched	0 12 6 ...	0 15 0
1¼ in. by 7 in. white, planed and matched	0 15 0 ...	0 16 6
¾ in. by 7 in. yellow, matched and beaded or V-jointed brds.	0 11 0 ...	0 13 6
1 in. by 7 in. » »	0 14 0 ...	0 18 6
¾ in. by 7 in. white » »	0 10 0 ...	0 11 0
1 in. by 7 in. » »	0 12 9 ...	0 15 0

6 in. at 6d. to 9d. per square less than 7 in.

JOISTS, GIRDERS, &c.

	In London, or delivered Railway Vans, per ton. £ s. d.	£ s. d.
Rolled Steel Joists, ordinary sections	7 10 0 ...	8 0 0
Compound Girders, ordinary sections	9 10 0 ...	10 0 0
Steel Compound Stanchions	11 0 0 ...	12 0 0
Angles, Tees, and Channels, ordinary sections	9 10 0 ...	10 0 0
Fitch Plates	9 10 0 ...	9 10 0
Cast Iron Columns & Stanchions, including ordinary patterns ...	7 10 0 ...	8 10 0

METALS.

IRON—	Per ton, in London. £ s. d.	£ s. d.
Common Bars	9 0 0 ...	9 10 0
Staffordshire Crown Bars, good merchant quality	9 5 0 ...	9 15 0
Staffordshire "Marked Bars"	11 0 0 ...	—
Mild Steel Bars	9 5 0 ...	9 15 0
Hoop Iron, basis price	10 0 0 ...	—
» » Galvanised	17 10 0 ...	—
(*And upwards, according to size and gauge.*)		
Sheet Iron Black—		
Ordinary sizes to 20 g.	10 5 0 ...	—
» » 24 g.	11 5 0 ...	—
» » 26 g.	12 15 0 ...	—
Sheet Iron, Galvanised, flat, ordinary quality— Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15 10 0 ...	—
Ordinary sizes to 22 g. and 24g.	16 0 0 ...	—
» » 26 g.	17 0 0 ...	—
Sheet Iron, Galvanised, flat, best quality— Ordinary sizes to 20 g.	18 10 0 ...	—
» » 22 g. and 24 g.	19 0 0 ...	—
» » 26 g.	20 10 0 ...	—

METALS (*Continued*).

IRON (*Continued*)—	Per ton, in London. £ s. d.	£ s. d.
Galvanised Corrugated Sheets—		
Ordinary sizes, 6ft. to 8ft. 20 g.	15 0 0 ...	—
» » 22 g. and 24 g.	15 5 0 ...	—
» » 26 g.	16 15 0 ...	—
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	12 10 0 ...	—
Best Soft Steel Sheets, 2 g. & 24 g.	13 10 0 ...	—
» » 26 g.	15 10 0 ...	—
Cut Nails, 3 in. to 6 in.	11 0 0 ...	11 10 0
(Under 3 in., usual trade extras.)		

LEAD, &c.

	£ s. d.	
LEAD—Sheet, English, 4lb. and up	19 15 0 ...	—
Pipe in coils	20 5 0 ...	—
Soil pipe	23 5 0 ...	—
Compo pipe	23 5 0 ...	—
ZINC—Sheet—	In casks of 10 cwt.	
Vielle Montagne	33 10 0 ...	—
Silesian	33 5 0 ...	—

Zinc, in bundles, 1s. per cwt. extra.

COPPER—		
Strong Sheet	per lb. 0 1 0 ...	—
Thin »	» 0 1 1 ...	—
Copper nails	» 0 0 10 ...	—
Copper wire	» 0 0 10 ...	—
BRASS—		
Strong Sheet	» 0 0 11 ...	—
Thin	» 0 1 0 ...	—
TIN—English Ingots	» 0 1 11 ...	—
SOLDER—Plumbers'	» 0 0 8½ ...	—
Tinmen's	» 0 0 11 ...	—
Blowpipe	» 0 1 2 ...	—

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

15 oz. thirds	2½d.	26 oz. fourths	3½d.
» fourths	1½d.	32 oz. thirds	5d.
21 oz. thirds	3d.	» fourths	4½d.
» fourths	2½d.	Fluted Sheet, 15 oz.	3½d.
26 oz. thirds	4d.	» 21 oz.	4½d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

¼ Hartley's	2d.	Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white	3½d.
⅛ »	2½d.	Ditto, tinted	5d.
½ »	2½d.		

* Not less than three crates.

OILS, &c.

		£ s. d.
Raw Linseed Oil in pipes	per gallon	0 3 3
» » in barrels	»	0 3 4
» » in drums	»	0 3 6
Boiled » in barrels	»	0 3 6
» » in drums	»	0 3 8
Turpentine in barrels	»	0 2 11
» in drums	»	0 3 1
Genuine Ground English White Lead, per ton		26 10 0
Red Lead, Dry	»	23 5 0
Best Linseed Oil Putty	per cwt.	0 10 0
Stockholm Tar	per barrel	1 12 0

VARNISHES, &c.

	Per gallon. £ s. d.
Fine Pale Oak Varnish	0 8 0
Pale Copal Oak	0 10 6
Superfine Pale Elastic Oak	0 12 6
Fine Extra Hard Church Oak	0 10 0
Superfine Hard-drying Oak, for seats of Churches	0 14 6
Fine Elastic Carriage	0 12 0
Superfine Pale Elastic Carriage	0 16 0
Fine Pale Maple	0 10 0
Finest Pale Durable Copal	0 18 0
Extra Pale French Oil	1 1 0
Eggshell Flating Varnish	0 18 0
White Pale Enamel	1 4 0
Extra Pale Paper	0 12 0
Best Japan Gold Size	0 10 6
Best Black Japan	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Knotting	0 10 9
French and Brush Polish	0 10 6

TO CORRESPONDENTS.

NOTE.—All communications with respect to literary and artistic matters should be addressed to "THE EDITOR" (and not to my person by name); those relating to advertisements and other exclusively business matters should be addressed to "THE PUBLISHER," and not to the Editor.

All communications must be authenticated by the name and address of the sender, whether for publication or not. No notice can be taken of anonymous communications.

The responsibility of signed articles, letters, and papers read at meetings rests, of course, with the authors.

We cannot undertake to return rejected communications; and the Editor cannot be responsible for drawings, photographs, manuscripts, or other documents, or for models or samples sent to or left at this office, unless he has specially asked for them.

All drawings sent to or left at this office for consideration should bear the owner's name and address on either the face or back of the drawing. Delay and inconvenience may result from inattention to this.

Any commission to a contributor to write an article, or to execute or lend a drawing for publication, is given subject to the approval of the article or drawing, when received, by the Editor, who retains the right to reject it if unsatisfactory. The receipt by the author of a proof of an article in type does not necessarily imply its acceptance.

N.B.—Illustrations of the First Premiated Design in any important architectural competition will always be accepted for publication by the Editor, whether they have been formally asked for or not.

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than 10 a.m. on Thursday.* [N.B.—We cannot publish Tenders unless authenticated either by the architect or the building owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is stated, nor any list in which the lowest Tender is under 100*l.* unless in some exceptional cases and for special reasons.]

*Denotes *accepted.* †Denotes *provisionally accepted.*

BARGOED.—For erection of fifty houses, for Capel Building Club. Mr. Geo. Kenshole, M.S.A., architect, Bargoed :—

Lewis Bros.	£8,900 0	E. J. Davies & Co., Bargoed*	£8,175 0
J. Lloyd	8,600 0		
W. H. Lee	8,462 10		

BREAM.—For additional classrooms, Council school, for Gloucestershire Education Committee. Mr. R. S. Phillips, Architect to the Education Committee, Shire Hall, Gloucester.

W. G. Nelmes	£2,117 2 7	Collins & Godfrey	£1,419 0 0
A. S. Cooke	1,477 0 0	A C. Heard	1,399 0 0
R. Walters & Son	1,467 0 0	E. J. Flewelling	1,370 0 0
P. C. Cousins	1,435 19 0	Orchard & Peer, Stroud*	1,310 0 0

CARNARVON.—For the erection of new Infirmary at Carnarvon, for the Guardians of the Poor of the Carnarvon Union. Mr. Rowland Lloyd Jones, M.S.A., architect, 14, Market-street, Carnarvon

Evans & Prichard	£9,455 0 0	C. Griffiths	£7,467 0 0
H. Smith	8,670 0 0	B. Lumb	6,896 3 3
E. Jones & Son	8,209 14 0	Williams & Roberts	6,871 0 0
Jones Bros.	8,201 0 0	R. Jones, Tywrog Mills, Llanwnda, Carnavon*	6,848 13 0
R. & J. Williams	7,629 17 0		

FUNTINGDON.—For alterations and additions to the Council School, for the West Sussex Education Committee. Mr. Haydn P. Roberts, A.R.I.B.A., County Architect :—

E. Hill	£522 0 0	H. W. Wiggins, Emsworth*	£459 10 6
J. Tanner	517 5 0		
W. R. Smith	479 10 0		

GERRARD'S CROSS (Bucks).—For alterations and additions to "The Croft," Kingsway. Mr. Frank C. Spiller, architect and surveyor, 22, Cornwall-road, Bayswater, W. :—

Mattock & Parsons	£1,129 0	H. Brown	£996 10
E. H. Burgess	1,084 0	Street Bros	924 7
Whitman & Sons	1,000 0	F. Green, Gerrard's Cross*	810 0
Lovell & Son	1,629 10		

GRANGETOWN.—For erection of a public convenience in Clive-lane, for the Cardiff Corporation. Mr. W. Harper, M.Inst.C.E., City Engineer. Quantities by Engineer :—

D. Bryan	£239 6 5	W. Watts	£186 0 0
D. Davies & Sons	225 0 0	Tucker Bros.	170 9 2
Hatherly & Co.	207 19 0	C. W. & T. H. Melhuish, Cardiff‡	165 0 0
J. Oxenham	191 6 4		
Knox & Wells	190 15 10		

‡ Recommended for acceptance.

HEYBRIDGE.—For erection of a school. Mr. P. M. Beaumont, architect, 53, High-street, Maldon :—

C. Roper	£7,175 0 0	Davey & Armitage	£6,277 0 0
Grimwold & Sons	6,969 0 0	T. J. Bailey	6,055 0 0
H. J. Linzell	6,777 0 0	J. Rayner	5,992 13 0
J. & M. Patrick	6,682 0 0	J. Smith & Son	5,983 0 0
Hacksley Bros.	6,662 0 0	Hammond & Son	5,983 0 0
Potter & Son	6,625 0 0	S. E. Moss & Co.	5,959 11 5
Kidman Bros.	6,574 0 0	W. Gibson & Co	5,925 0 0
A. H. Fryd	6,480 0 0	Parren & Son*	5,850 0 0
Parkington & Son	6,405 0 0		

LONDON.—For painting exterior and interior of the Wilmot-street School, Bethnal Green, for the London County Council :—

Unsigned	£800	C. R. Price	£587
G. Barker	628	W. Bailey	585
Kilby & Gayford, Ltd.	601	F. & T. Thorne	570
C. Wall, Ltd.	590	H. C. Horswill	520

LONDON.—For erecting and furnishing three iron buildings on the Sawley-road site, Hammersmith, for the London County Council :

W. R. & A. Hide	£3,598‡	Humphreys, Ltd.	£2,757
E. C. & J. Keay, Ltd.	2,908	J. Harrison & Co.	2,176
Wire-wove Roofing Co.	2,858	W. Bain & Co., Ltd.	1,535§
W. Harbrow	2,787	Triggs & Co.	1,390‡

‡ Foundations, offices, drainage, fences, etc.
§ Main buildings only.

LONDON.—For providing and fixing a complete low-pressure hot-water heating apparatus at the Lyham-road School, Norwood, for the London County Council :

B. Harlow & Son	£1,123	W. G. Cannon & Sons, Ltd	£879
J. Wontner-Smith, Gray, & Co.	1,048	Brightside Foundry and Engineering Co., Ltd.	815
J. Grundy, Ltd.	997	Palowkar & Sons	823
C. P. Kinnell & Co., Ltd.	960	Cannon & Hefford	793

[The Architect's estimate, comparable with the tenders, is £845.]

LONDON.—For painting interior and exterior of the New-road School, Clapham, for the London County Council :—

R. S. Ronald	£650	Rice & Son	£532
Lathey Bros.	585	Triggs & Co.	524
J. R. Sims	583		

LONDON.—For painting exterior and interior of the Lyndhurst-grove School, Dulwich, for the London County Council :—

W. Read	£653	Holliday & Greenwood, Ltd.	£539
W. V. Goad	629		
H. King & Son	555		

LONDON. For provision and erection of fencing at Southbury-road, Enfield, for the Metropolitan Water Board :—

Hill & Smith	£113 16 7	Rowell & Co.	£85 3 4

LONDON.—For painting exterior and cleaning interior of the Rolls-road School, Camberwell, for the London County Council :—

G. Parker & Sons	£635	Spiers & Pond, Ltd.	£549
C. F. Kearley	610	W. Bailey	545
R. A. Lowe & Co.	562		

READING.—For erection of new headquarters for Scattered Homes, Russell-street. Mr. W. Roland Howell, F.R.I.B.A., architect, Reading, and 18, Percy-street, W. :—

Teogood	£3,675	Robinson	£3,065
B. Batten	3,325	Margetts	3,018
McC. Fitt	3,187	Bell & Son	2,996
Webber	3,150	R. Curtis, Redlands-road, Reading‡	2,964
F. Newberry	3,089		
G. S. Lewis & Bro.	3,070		

‡ Recommended for acceptance.

WALPOLE ST. ANDREW.—For erection of semi-detached cottages. Mr. H. T. Tilson, architect, King's Lynn :—

H. W. Reeder	£482 9 2	H. Rilett	£
Dye & Allen	468 0 0	Johnson & Son,	
Ashby & Co., Ltd.	475 0 0	Tilney S. Laurence*	
G. Clarke	448 1 7		
Hall & Lawson	442 0 0	Barnes & Co., Ltd.	

WATFORD.—For erection of a new bakery between Brixton-road and branch railway to St. for the Watford Co-operative Society. Mr. Syme, F.R.I.B.A., architect, Watford :—

H. Young & Sons	£3,824 0	Clifford & Gough	£
Ensor & Ward	3,562 0	Clark Bros	
Bracey & Clark	3,516 0	W. King & Sons	
W. Wilkins & Sons	3,409 10	W. Payne, Leavesden, near Watford*	
J. L. Tyler	3,392 0		
D. Eames	3,362 0		

Ham Hill Stone.
Doulting Stone.
Portland Stone.
The Ham Hill and Doulting Stone Co., L
(incorporating the Ham Hill Stone Co. and C. Trask
The Doulting Stone Co.).
Norton, Stoke-under-Ham, Somers
London Agent :—Mr. E. A. Willi
16, Craven-street, Strand.

Asphalte.—The Seyssel and Metallic Asphalte Co. (Mr. H. Glenn), Office, 42, P E.C.—The best and cheapest materials fo courses, railway arches, warehouse floo roofs, stables, cow-sheds and milk-rooms, aries, tun-rooms, and terraces. Asphalt tractors to Forth Bridge Co. T.N. 2644 Ce

SPRAGUE & CO.'S, Ltd.,
"INK-PHOTO" PROCESS,
4 & 5, East Harding-street,
Fetter-lane,

Telephone: DALST
OGILVIE & CO., Many years c with the late W. H. LASCELLE of Bunhill R
Amhurst Works, **DALSTON LANE,**
EXPERTS IN HIGH-CLASS JOINER
ALTERATIONS AND DECORATIONS. ES

ASPHALTE
For Horizontal & Vertical Damp Cou
For Flat Roofs, Basements, & other

The best materials and workmanship are supp
THE
French Asphalte
Whose name and address should be inserted specifications.
For estimates, quotations, and all informa apply at the Offices of the Company,
5, LAURENCE POUNTNEY HI
CANNON STREET, E.C.

J. J. ETRIDGE, Jr.
SLATE MERCHANTS. LTD.
EXPERTS IN
SLATING, TILING.
BEST WORK ONLY.
Telephone 2685 Wall, or write—
BETHNAL GREEN SLATE WORKS,
BETHNAL GREEN, LONDON, E.

EWART'S
Cures in 19 cases out of 20.
"EMPEROR"
Write to-day for Illustrated Catalogue Free to
EWART & SON Ltd.,
346-350, Euston Road, London, N.W.
Established 1834.
Telephone: 2570 North.
SMOKE-CURE

THE BUILDER

VOL. CII. No. 3805. MARCH 8, 1912.

CONTENTS.

PAGE

ES AT WEST EALING FOR THE LONDON
TY AND WESTMINSTER BANK 259
AL COMPETITIONS 259
XT-BOOK (WITH ILLUSTRATIONS) 260
. 262
REINDEER" INN, BANBURY (WITH ILLUS
ON)..... 263
TERS' HALL LECTURE (WITH ILLUSTRATION) 263
RIAL UNREST 265
ARK CATHEDRAL (WITH ILLUSTRATION) 265
STOBER AND HIS ATTITUDE TOWARD OLD
. 266
HAM COUNCIL HOUSE EXTENSION (WITH
TRATION) 267
CTURAL SOCIETIES . . 268
L NEWS 268
PONDENCE . . 269
AL SUMMARY 270
GS 270
TION NEWS . 270
ERING SOCIETIES 270
O ILLUSTRATIONS 270
EARS AGO 270

PAGE

MONTHLY REVIEW OF CONSTRUCTION:—
THE LONDON OPERA HOUSE.—I. (WITH ILLUSTRATIONS) 271
NEW SYSTEM OF REINFORCED BRICK FLOORING (WITH DIAGRAMS) 272
NEW OFFICES FOR THE METROPOLITAN RAILWAY (WITH DIAGRAM) 273
VENTILATION . 273
NOTES 274

THE BUILDING TRADE:—
MANCHESTER BUILDING TRADES EXHIBITION 275
MONTGOMERY'S BUILDING TRADES EXHIBITION . . 276
LONDON MASTER BUILDERS' ASSOCIATION 276
PORTSMOUTH MASTER BUILDERS' ASSOCIATION 276
TECHNICAL SCHOOLS AND THE TRADES 277
WATER BOARD CHARGES 277
LIVERPOOL MASTER BUILDERS' ASSOCIATION 277
GENERAL BUILDING NEWS . . 277
APPLICATIONS UNDER LONDON BUILDING ACTS, 1894 TO 1909 278
PROJECTED NEW BUILDINGS IN THE PROVINCES 278

PAGE

A SCHEME OF DECORATION (WITH ILLUSTRATION) 279
HOSPITAL COMPETITIONS 279
BOOKS (WITH ILLUSTRATIONS) 281
THE LONDON COUNTY COUNCIL 282
LEGAL COLUMN 282
LAW REPORTS . . 282
FOREIGN AND COLONIAL . . . 283
OBITUARY 283
LIST OF COMPETITIONS, CONTRACTS, ETC., OPEN . . . 284
PATENTS 285
SOME RECENT SALES . . 286
PRICES CURRENT . . 286
TENDERS . . 287

Illustrations.

THE LONDON OPERA HOUSE, KINGSWAY. MR. BERTIE CREWE, ARCHITECT.

ILLUSTRATIONS OF LECTURE ON "MEDIÆVAL SCULPTURE," BY MR. W. H. BIDLAKE, M.A., AT CARPENTERS' HALL.



Premises at West Ealing for the London County and Westminster Bank.

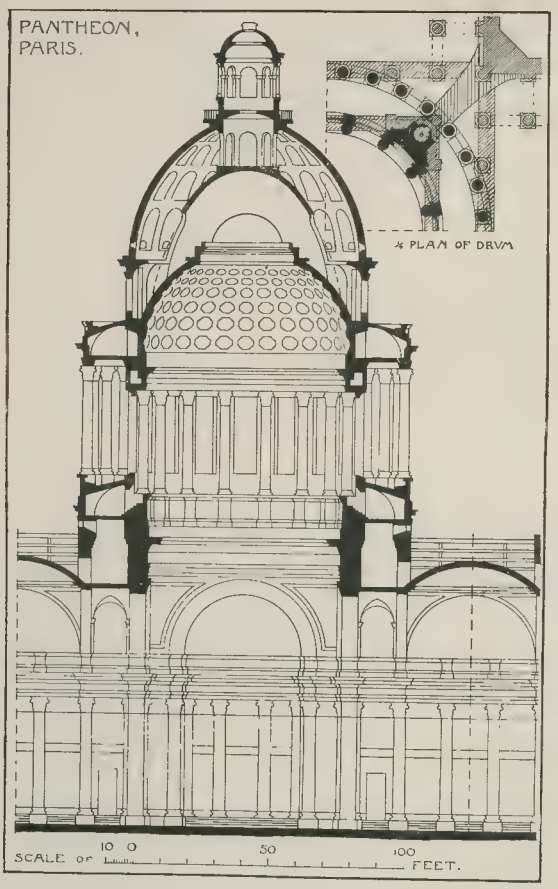
Messrs. Hall-Jones and Erskine S. Cummings, A.R.I.B.A., Architects.

[This building, the design for which was exhibited in last year's Academy, is in course of erection. It is faced externally with Fareham red bricks with Portland stone dressings, the base being of Aberdeen grey granite. Internally the walls of the banking hall and the manager's room are panelled to a height of 9 ft. 6 in. The ceiling is modelled in fibrous plaster, and the floor of public space is executed in marble. The general contractor is Mr. Walter Dickens, of Ealing.]

HOSPITAL COMPETITIONS.

WHEN a responsible journal such as the *Hospital*, representing, we presume, the opinion of al administrators, makes such re- on the conduct of hospital com- ons as we quote in another column eliberate opinion can hardly be d by those responsible for the nt method of conducting them. entirely agree with the *Hospital* the question is a very grave one, no class of building perhaps is it so absolutely vital to the health of the nation that the best talent in the architectural profession should be at its service. From the professional point of view the question is hardly less grave, for it is of the first importance that the method of conducting public competitions should be such as to inspire confidence in the public that this object has been attained.

We are not for the moment concerned with the criticism of the Hastings competition, put forward by the *Hospital* as the latest illustration of its remarks, neither are we concerned to defend the present system of appointing a single assessor for public competitions. It is a system that, as far as we know, does not generally obtain in any other civilised country, is, we think, condemned in this one by a majority of the more enlightened among the architects, is admitted by the Institute to be unsatisfactory in large competitions, is not adopted by it in its



(From Professor Simpson's "A History of Architectural Development." Longmans & Co.)

own students' competitions, yet is still sanctioned by it in all others for reasons which, we suppose, are satisfactory, at any rate, to itself.

But although we may not be altogether satisfied with the present system of assessing either hospital or any other class of competition, and are inclined to the opinion that if a proper application of the jury system had always been in force any such mistakes as are here alleged would be less likely to occur, we see no reason to anticipate any startling improvement from the proposal put forward by the *Hospital* that a "competent hospital expert" should be associated with the assessor. We are aware that in France and other countries where the jury system obtains it is customary to include one or more hospital administrators or medical men, and that the system is said to work satisfactorily, but that is not the same thing as associating a hospital expert with a single hospital architect. If, however, a jury on which hospital managers were represented would inspire more public confidence in the award, that alone would be an argument in its favour.

Although something is to be said for our contemporary's proposal, there is little to be said for the reasons it gives for it. A modern hospital, like other buildings of a technical nature, may be many-sided; but to say that no architect by himself has the knowledge to enable him to judge it as regards its administration and requirements is to make a statement that, whichever way it is read, needs some thing more than mere assertion. If it is meant as a general statement that no architect can ever have this knowledge it is manifestly absurd, as without knowledge no one could design eith hospital or anything else; but means that as a matter of fact none o architects who at the present momen designing hospitals happen to possess knowledge it is a statement which hope, and we venture to believe, i way represents the facts. In e event we presume that the "Fello the Royal Institute of British Archi of great experience and position" whose knowledge the *Hospital* itself sufficient confidence to ask him examine and report on the Hast designs is the exception that proves rule.

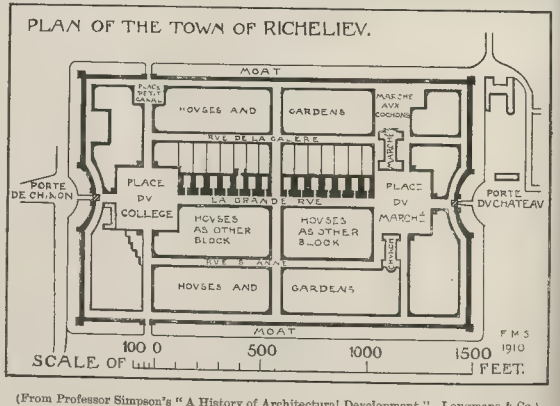
In spite of the element of truth in suggestion that hospital architects not always be in touch with the l results of medical research most a tects, we think, would be inclined say that hospital competitions ne strengthening up rather on the archi tural than the technical side, and there is already a tendency to a them on technical details upon w even hospital experts may differ. If tendency is to be accentuated by a ciating hospital experts in the award certainly would be necessary to c teract it by the inclusion of one or t architects of general knowledge and w outlook capable of viewing the sub from a detached architectural sta point.

As for the panel of experienced ar tects, competent on their merits to as assessors, it is generally underst that the Institute possesses such a and, presumably, makes use of it.

THE TEXT-BOOK.*

CONTINUING his historical sea Professor Simpson in this volu explains that to extend its sc beyond the three count named would either have und curtailed the proper treatment the subject or would have swel the book to unreasonable proportio On perusal it becomes clear t the author is amply justified in t contention; only by the exercise of utmost restraint and by every effort

* "A History of Architectural Developme Vol. III. "The Renaissance in Italy, France, England." By Professor F. M. Simpson, F.R.I.B (London Longmans. Green, & Co. 1911. 8vo. 21s. n



(From Professor Simpson's "A History of Architectural Development." Longmans & Co.)

direction of compression is it possible
ring a general view of Renaissance
tecture within the limits of a text-

deed we are not at all sure that it is
to make the attempt. For the pur-
s of the student such a rapid survey
less educational value than a more
ugh investigation of some special
lopment limited in time and place.
reply may be made that a general
of the relative importance of all
architectural developments must
rasped as a foundation for more
ate study, but we are inclined to
t the soundness of this view. Granted
ecessity for the historical text-book,
ne before us is excellent in its way;
vers the widest possible range of
cts within its specified limits, and
e same time finds space for quite a
er of critical disquisitions on the
and wherefores of the architectural
cteristics of the different schools
periods.
ne the less, it is impossible to avoid
rtain feeling of irritation with the
ant change of scene. Just as the
r is beginning to get interested, he
rforce, "moved on" by reason of
ecessity of covering so extensive an
between the two covers of a con-
ntly proportioned volume.
will be understood that this criti-
is not aimed at Professor Simpson's
which achieves its purpose admir-
but we are entitled to question
ner the almost universally approved
od of the comprehensive text-book
sound one from the educational
point. We do question this,
y in view of the consideration that
ccumulation of unrelated facts is
ttle educational value. In his
ers on the development of Renais-
churches and on the construction of
the author gives comparative
s of real value to the student,
e should have welcomed a treatment
on these lines for the other sections
e book. Here and there we see,
l, a reflection of this method, but the
alisations and extended outlook
lered essential in a text-book cut
these essays and prevent their
ng a complete and conclusive form.
later Renaissance in France seems
ffer most from the compression
able in a work on this basis, but,
ourse, the two important books
ly published on the French
ssance provoke unconscious com-
ns which cannot be fairly made.
h Professor Simpson has treated
e somewhat briefly, we are glad to
ise that this is in no way due to a
f appreciation of the merits of its
ecture, as will be seen from the
aph closing this portion of his

—

e François premier buildings are well
to most English students, but the later
es in France have hardly received the
on they deserve. In some respects they
re valuable to us than Italian buildings.
re more recent; their materials more
e ours; the requirements of their day
little from our requirements now.
ey present such variety. They form a
in themselves. To advise careful study
is not to recommend neglect of either
buildings or our own. Opportunities
lying all are now easy, and time ought
found for all. Attention should also
n to modern work in France. Notwith-

standing the political upheavals the country has experienced, her architectural traditions have remained unbroken for centuries. They have been assailed and opposed by Viollet-le-Duc and a few others, but have emerged triumphant. The École des Beaux-Arts has preserved them, nurtured them, and passed them on from one generation of students to another. To this cause is largely due the excellence of the work of the present day. It may occasionally be dull, but it is never bad; and its best excels the best of any country in Europe."

Coming to England, we again feel the pressure due to the demand for condensation. Might not the crude beginnings of the Renaissance in Elizabethan and Jacobean periods have been dealt with in a brief introduction, leaving the space so economised for a fuller treatment of the more refined work of the XVIIIth century? After Blenheim we get but little, although a short supplementary chapter is devoted to the varied and conflicting ideals of the XIXth century.

The work of the brothers Adam is not illustrated, which is to be regretted, as this work may be regarded as the most distinctively national of all the developments of the Renaissance style in England. True, the no less characteristic Louis Quinze is equally ignored; so, were it not for this last chapter, we should have assumed that it was the intention to bring the work to a close early in the XVIIIth century, the date at which the jurisdiction of our Royal Commission on ancient buildings ceases. We would not accuse Professor Simpson of regarding all more recent work as unworthy of notice, his view being, more probably, that it does not come within the period covered by the term "Renaissance." Be that as it may, is it not of greater value to the student as an illustration of carefully studied design and accomplished technique than the tentative efforts of the period of transition from Gothic to classic detail?

Possibly we may have a further volume dealing with the XVIIIth and XIXth centuries, as these are assuredly worthy to be included in the curriculum of any school of architecture.



From a Drawing by Mr. Leslie Wilkinson.

(From Professor Simpson's "A History of Architectural Development." Longmans & Co.)

C

NOTES.

The Associates and the R.I.B.A.

THE proposal to give equal representation to the Associates of the Institute of Architects not being strongly supported at the meeting on Monday, and failing to convince the meeting, the justice of the case seems to be met by an undertaking that the Council would consider the matter and report to the general body, which will then have a further opportunity to discuss it. As we have already pointed out, the present position of affairs is a source of weakness. If matters are allowed to drift in what appears to be their present direction, the future may show us a house divided against itself, and so reduced to impotence. This is a danger which can hardly escape the notice of the Council. When considering the question of representation, the present constitution of the Associate class, the general trend of their apparent policy, and its effect on the future of the Institute will no doubt be borne in mind. Considering the importance of the issues involved and the necessity that when taking its next step forward towards Registration and the unity of the profession the Institute should be in a position to do so as a united body without fear of opposition on a side issue from a class of its members who as individuals may agree with its proposals on their merits, it might perhaps be thought desirable to appoint a strong and representative Committee to inquire into the whole question and endeavour to come to some solution which would be equally acceptable to all classes. The position created by the examination has to be faced, and the sooner it is faced the better.

The Attitude of the Associates.

WE publish in another column an interesting letter from Mr. W. S. Purchon, which adds further proof to our suggestion, that the examination is at the root of the difficulty. That the Associateship indicates something perfectly clear and definite, while the Fellowship does not, is no doubt true at the present moment; but if the Associates passed in as a matter of routine, the Fellowship would soon mean something just as definite: the qualification of an Associate plus seven years of actual practice. While, however, the Associates retain their present attitude it is difficult to see how this desirable result can be obtained except by alteration of the constitution of the Institute. To this end the suggestions put forward by Mr. Purchon seem to point, and we think they are well worthy of consideration.

Publication of Speeches in the R.I.B.A. *Journal*.

ALTHOUGH there is something to be said for the proposal that a complete Report of all speeches delivered at business meetings of the Institute should be published in the *Journal*, it is probable that the course ultimately adopted of leaving a wide discretion to the Chairman will meet with general approval. No doubt it is, as a rule, desirable that the views of any member should be accessible to all the members. Particularly is this the case when these views happen to be opposed to those held by the majority or by the governing body for the time being. In the unlikely—we might almost say inconceivable event of their improper suppression, a direct injustice might be done to the individual, and an indirect injury might, in consequence, be inflicted on the Institute; but if every indiscretion or lapse from good taste, short of libel, that was uttered at a meeting was reported intact in the *Journal* far greater harm might result. Evidently it is a case in which someone's discretion must be trusted, and, judging by some recent remarks which might well be considered objectionable by the members society in negotiation with the Inst the meeting was well advised in pref to trust to the discretion of the Cha rather than to that of each or ever of the members.

The Lady Architect Again.

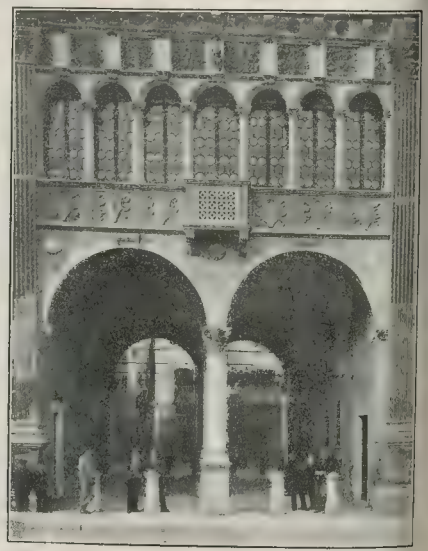
THE lady architect, h a perfectly rational normal character, doe gain by the way in her case is presented to the public the *Daily Chronicle* the topic was with a few days ago in some d paragraphs which are sometimes amu but which one hesitates to believe appeal to the emancipated of the se here one finds, besides facts usually and obvious, other things which di a lamentable want of knowledge o actual facts of life.

"Her sense of the beautiful will sav from 'cheap nastiness,' and from incongr of colour and design. Her own home-tra will teach her how to combine comfort, cl ness, and convenience. She will know to put the coalhouse, the larder, and th stove so as to save the housewife all po inconvenience. She will make the kitche veniently near the dining-room, and ye near enough for the family to be dist in the event of Mary Jane having 'e She will have plenty of dry cupboards, boards with shelves and cupboards wit She will not have windows that stifle or require wedging, or that are difficult or gerous to clean, or rooms so shaped that are impossible to furnish tastefully. Sh see to it that 'domestic upheavals' pr the minimum amount of bad temper an comfort, that water-pipes do not burst, and the whole house is well warmed even i coldest weather. Her natural tact and perceptions will help her to understand clients' wishes and to carry them out faith Her sense of humour will go far to sav from the loneliness of having so little profes companionship in her own sex."

In this comprehensive bid for patro the lady architect does not omit th evitable claim to intuitive genius, adds also a monopoly of the humo sense—surely a sign of the advan



Palazzo Pandolfini, Florence.
(From Professor Simpson's "A History of Architectural Development," Longmans & Co.)



Prigioni, Brescia.

. But she does fail to acknowledge weak points in all such eloquent ges that the mere male architect t (if he wishes) altogether avoid— intimate knowledge of domestic nience which the training of the architect in office and technical l so admirably inculcates. In spite general decadence of the male sex, verage architect is fortunate enough married, and if lack of means or tunity prevents such a consumma- there is always an alternative no man of experience can lightly ard, and that is no less a personage the lady client! If architects still the feminine tendency to make the a mere agglomeration of cupboards utensils, they have nevertheless ssed other professions in gladly ing open their institutions and ies to the lady architect herself. etition grows keener and keener year, but the pioneer will not y affect the stability of the pro- unless she is prepared to take seriously and face male competition own merits.

The apshire ciation chitects.

Our readers will be interested to know that at a meeting of representative architects of Hampshire, held at Southampn the 2nd inst., it was decided to h Hampshire Association of Archi- on the lines of those affiliated R.I.B.A. Mr. R. F. Chisholm, B.A., presided. Draft rules were ered and passed, also declarations signed by members, Associates, and ted craftsmen. Sir William Portal, .S.A., was elected President, and . C. H. Nisbett, A.R.I.B.A., Vice- ent and Chairman of Committee; t. M. Lucas was elected Hon. ary and Treasurer, with Mr. Ingal- nders assisting. We welcome the ociety, and hope it will have a long eful career.

HE "REINDEER" INN, BANBURY.

UEY, on the Cherwell, in the county ord, is placed in the centre of one of st fertile districts of the country. erly it had several flourishing indus- ut these gradually declined and dis- d to vanishing point, and it is feared e beautiful and picturesque buildings are the same fate.

e is much to interest the archæologist tist in this once important market notwithstanding the destruction of so nteresting records of the past. The ul church, one of the largest in the was ruthlessly destroyed to make r a classic temple built in 1793. A of the period runs :—

"Dirty Banbury's proud people
Built a church without a steeple."

ttle stood two sieges during the Civil one of many weeks' duration, in nder the brave ancestor of Lord Saye le of Broughton Castle, when the h was relieved after all their horses en eaten.

e Cross" was destroyed long ago by ritans, but a later generation replaced structure designed in the early days Gothic revival.

e interesting old houses and inns the nspicuous is the picturesque hostelry, eindeer," which was always worth a Banbury. This interesting building, gable and fine stone mullioned win- as built in 1624.

n there is a beautiful room (called be Room) with fine oak panelling. It has a very elaborate, and probably unique, plaster ceiling of intricate design; at a great expense a copy of this was made for the Victoria and Albert Museum.

It is unfortunate that the Town Council had not powers to purchase the "Reindeer" and preserve it to the town, or that it could not be bought and taken over by the Society for the Preservation of Ancient Buildings, and be thus kept in this country instead of being transported to America as appears to be contemplated.

THE CARPENTERS' HALL LECTURES:

MEDIÆVAL SCULPTURE.

The fifth of the present series of Carpenters' Hall lectures on Arts Connected with Building was delivered on the 21st ult. by Mr. W. H. Bidlake, M.A., whose subject was "Mediæval Sculpture"—to the end of the XIIIth century.

Mr. Bidlake, who showed a fine collection of lantern slides, said he proposed to speak of sculpture as a decorative art, and to consider it in relation to the building of which it was the noblest ornament. Twice in the world's history had decorative sculpture been truly great. The Greeks of the Vth century B.C. and, nearly 2,000 years later, the French of the XIIIth century A.D. realised the harmony of sculpture and architecture.

Having compared briefly the two ages and surveyed the circumstances which gave rise to Gothic art, the lecturer mentioned some of the disasters which overtook the Western Roman Empire from the IVth century. Proceeding, he said it was difficult for us nowadays to realise the paralysing dread with which the advent of the year 1000 was regarded or to measure the full extent of the relief when it was passed. As a direct result, a great wave of exaltation and religious enthusiasm swept over Western Europe, the Church rapidly rose to the height of her power, the monastic Orders to the limit of their influence. It was in these days that mediæval sculpture was born. We could not have art without feeling. Art is the expression of the stirring of the spirit's inner depths. The routine designing and mechanical execution of our modern commercial workshops was not art at all, and never could be until its whole spirit and method changed.

In Byzantium the arts after the temporary eclipse of the iconoclastic controversy of the VIIIth century, which was a reaction against the worship of images in churches, and which indirectly led to the immigration of Byzantine artists into the West, recovered themselves and reached their fullest development during the great Macedonian and Comneni dynasties of the Xth and XIth centuries. It was just at this time that the soil of the West lay fallow for the seed, and the art which in due time sprang up had been called Romanesque art. Romanesque art, and especially Romanesque sculpture, was of very mixed origin, and from the character of the surroundings or external influence one trait predominated in one locality, another in another. In the South of France, and especially in the district between Limoges and Toulouse, the Byzantine element asserted itself. Byzantine influence was even more manifest in the art of Western Germany. Occasionally the Norse element asserted itself, especially in Herefordshire, as at Shobdon and Kilpeck, in the myth of Fafni the dragon.



The "Reindeer" Inn, Banbury.
From a Drawing by Mr. S. Aveling.

Barbaric, too, was the overladen and unrestrained ornament which characterised our late Norman style, as in the west front of Iffley, which was akin to the decoration of a Maori canoe-paddle. It was the element of the grotesque, often interwoven with the foliage of the capitals that was so characteristic of Romanesque stone carving. The style was exhibiting a most extraordinary energy and displaying an unbounded spirit of experiment and invention. It was a living style. It was yearly freeing itself from the conventions and mannerisms of its Byzantine swathing and acquiring a language of its own. If our art to-day was not venturing, experimenting, and advancing, if it was content with reproducing forms from which the spirit had fled, then it was a dead art, but a dead art practised in the living present was a contradiction in terms.

A survey of the origins of Romanesque art would be incomplete without reference to the Saracenic influence in the South of France, which spread from Spain and the Mediterranean. The civilisation of the Arab conquerors of Spain was in advance of that of Europe, and amongst them both the sciences and arts were more developed. Indeed it was from the Arabs that Europe received that spirit of scientific inquiry that began to work like a ferment in men's minds, notwithstanding all the efforts of the Church to suppress it.

In the larger figure sculpture of the XIIth century Byzantine mannerism was very apparent. The figures were rigid and immobile, and the drapery was either stiff and jewelled, or indicated by parallel grooves cut over the modelling of the figure without the slightest pretence of the study of drapery or appreciation of its capabilities of expression. In other cases it was studied not so much in relation to the figure as to produce a decorative effect, and the hem was often doubled and pleated in a manner strangely reminiscent of archaic and still more of archaistic Greek. Besides the school of Arles in the South, there existed a quite distinct school in the south-west of France, of great originality, and characterised by the dramatic expression of its figure sculpture, the almost volcanic energy of its tearing beasts and a strongly decorative feeling, as one may see in the great doorway at Moissac. How great a contrast to this expression of southern energy was presented in the North by the placid figures of the royal doors in the west front of the Cathedral of Chartres. The statuesque nobility of these figures as well as the gravity and sweetness of the expression which play over their faces compelled our admiration. Who that had seen them did not love them?

There was no division of labour in those days, such as there is now. The sculptor did not belong to a caste apart with a private studio and an aristocratic connexion. He was fellow-workman with the mason. He was called the "imager," and could probably take a hand in any kind of stonework that came his way; perhaps, too, in much other kind of work the bane of the modern division of labour is that one man designs and another executes, so that the one lacks the pleasure of executing his idea and the other the pleasure of inventing his work. Still, the question obtruded itself, Was the sculptor the imager going too far in making his figures, as at Chartres, so very attenuated? Recognising that they were placed on the door shafts and that it was desirable that he should bring his figure design into harmony with its architectural setting had he not sacrificed too much? Granted, too, that the total effect was splendidly decorative, could not the same effect have been produced without such sacrifice of the proportion of the human figure? There was here a singular parallel in classic Greek art. On the south side of the temple of Athena, known as the Erectheion, at Athens, there was the famous caryatid portico, in which entablature was borne by draped female fig in place of columns. As the figures act carried the weight, it was even more esse that they should be in harmony with the a tecture than was the case with the Cha figures. It was inconceivable that a G sculptor should sacrifice the beauties of hu proportion under any exigency. Nor did in this instance. He made his figures epitome of strong, vigorous womanhood, features calm and dignified, the weight thr on one limb, he expressed in the vertical of the drapery, which challenged compar with the flutings of the columns of the neighb ing portico, and the neck which might other suggest by its temerity the overpowering we of its burden, he strengthened and suppo by massive coils of hair. Triumphantly had solved the difficulty; no whit of hu beauty had he sacrificed, yet his stately figu in perfect line with the temple architec made light of the burden that was imp upon them.

The problem of the Chartres figures was to be solved in due course, in the west por of Rheims. For the present, in the Romanes schools the decorative treatment of the sculp and its subordination to the architecture the paramount consideration, and we h bear this aim in view in measuring the suc of their achievement. The full realisation sculpture, as sculpture on the one hand, its due subordination to the architecture the building which it decorated on the ot can with difficulty be reconciled.

As the XIIth century advanced the Rom esque sculptors in general seemed to have s their wild oats of decorative unrestraint, as it drew to a close and the architectural s changed to Gothic, in response to a more sk construction and disposition of material, t restraint became manifest without which no could be truly great. The change could be studied in England. In England during Romanesque period little sculpture of any w was done, the west door of Rochester Cathe being the best example, as it was the e example of sculptured figures arranged in jambs after the manner which had also become so common in France. Meanw magnificent progress had been made in the of building, and nowhere in France had ca drals been erected on a grander scale than th which formed the churches of the great Be dictine monasteries of Durham, Ely, Pe borough, and Norwich. The Benedic monasteries of Western Europe had rende splendid service to the arts, which, but for t patronage and asylum might have perishe the anarchy of the Dark Ages. It was to Cistercian Order of reformed Benedict that we in England owe the introduction of th new ideas in Romanesque building wh resulted in the development of Gothic. new departure which might be studied in ruins of many of the Yorkshire Abbeys, c sisted in something more than the introduc of the pointed arch. A new spirit breathe their architecture, a wholesome spirit of restra

The severe rules of the Order forbade decoration of sculptured figures, and a similar, though more extended, prohibition the Koran obliged the Arabs to evolve t characteristic ornament, so the restrictio their case diverted their attention from fi sculpture to the adornment, the articulat of their building of capitals, bosses, and st thus giving piquancy and accent t construction. Laying aside the Romanes acanthus and the Norman cushion capital, t evolved a treatment of foliage capital not the direct study of plant form, but by expres the principle of plant growth, and that i manner perfectly suited to the material in w it was carved. Indeed it would be difficul find a better example of design growing ou the distinctive treatment of the material.

As to the figure sculpture of the Eng and especially of the French schools of XIIIth century, the disposition of the sculp on the cathedral façades was quite differen the two countries. In France it peopled great triple portals and stretched overhea an unbroken line of kings or ancestors of Ch In England, on the other hand, the west d were comparatively insignificant, and the sc ture, where there was such, was arrange niches, row upon row, across the west front at Lincoln, where it had disappeared, or I field, where it had been restored. At W it was fitted into the architectural framew



Glastonbury.

was the finest XIIIth-century figure
ure we possess, albeit some would attribute
slender grounds, and, notwithstanding
nglish character, to Italian artists. The
ty of pose, the serenity of expression, the
d drapery arranged in severe folds to
nise with the architectural setting of
ss and shaft, all combined to make this
ry unrivalled in English XIIIth-century
The relief carving of this period was also
nt. In the place of the beautiful scroll-
of similar character to the carved capitals,
filled the spandrils of the wall arcade
stminster Abbey or Stone Church, the
rils of the arcade of the retro-choir of
ster were carved early in the century
gure subjects, while towards the end of the
n century was executed the well-known
of angel musicians filling the spandrils
triforium of the retro-choir of Lincoln
had given this part of the cathedral the
the Angel Choir.
all the figures were of equal merit, but
st reach the high-water mark of English
re in pose, treatment of drapery, &c.
France, and more especially in the great
rals of the district round Paris, which
lled the Ile de France, the sculptor was
ontent to subordinate himself to the
ct and his greater power entitled him
r expression.
r the overthrow of the English power
nce by Philip Augustus and the expulsion
armies from Normandy, a great outburst
ding activity resulted in and around the
, synchronising with the period when
architecture and sculpture was rapidly
to the zenith of its achievement, and
to this district, therefore, that we must
r its greatest triumphs.
art of the time appealed to the
de; they understood it, they rejoiced
he creators of it were their own fathers
ns, the Craftsmen and the "imagers."
is public appreciation reacted on the
s and spurred them to their best. That
y French architecture and sculpture of
IIIth century was truly great. The
or lower portions of the great French
ys were usually decorated with panels
allions, or arcading intended to instruct
ple in Bible history or guide them in
duct of life. These subjects were often
y contrasted so as to form a subtle
on the two sides of the door similar
balance of subject to be found in the
nts of the Parthenon. Thus the old
ent saints are contrasted with those of
w, the Church with the Synagogue,
virgins with the foolish ones, the vices
e virtues, the signs of the Zodiac and
urs of the year.
and realistic as these reliefs were, and
no doubt as their sculptors were, we
ot be misled into thinking that on that
they excel as sculpture. Indeed, it
the function of sculpture either to tell
r preach moralities, and just in propor-
a sculptor sets himself to do either he
risk of sacrificing his work as sculpture.
therefore, not to these reliefs, but to the
in the round which decorate the door
that we must turn for the French
's greatest attainment. At Amiens,
ecially at Rheims, the sculpture was
ighest quality, and nearly approaches
ancient Greece, both in expression,
of pose, truthfulness in rendering the
nd in the design of the drapery which,
er treated in the stiff, conventional
the earlier work, now expressed the
hich it clothes, as well as the nature of
rial of which it was made. The statues
ns no longer stood in severe isolation,
grouped together to represent episodes
fe of the Virgin to whom the cathedral
icated, and this grouping was subtly
by a slight inclination of pose or
of gaze which again reminded us of
ment sculpture of the Parthenon, in the
dication of relationship of one figure
er, or to the central group. On the
nb of the central door were two figures
Greek in their technique, which
to suggest that their sculptor must
n some original Greek work.

NEW CLUB, BLYTH.

w premises of the Duke of Welling-
kmen's Social Club have been erected
of about 2,600*l.* from the designs of
Goulding, architect, Blyth. The con-
were Messrs. Robson & Waddle.

INDUSTRIAL UNREST.

HAVING regard to the period of industrial unrest through which we are passing, and the dislocation of trade consequent thereon, which affects all classes of the community, it may not be unprofitable to glance for one moment at the statistics for the past year.

Last year was one of increasing prosperity, and in the past experience has been that years of increasing prosperity are marked by industrial peace. Yet what was the history of last year? An article, entitled "Employment, Wages, Prices, and Disputes in 1911," in the *Board of Trade Labour Gazette* for January commences with these ominous words:—"The good employment which was very general in 1911 was discounted to some extent by industrial unrest."

In the first place, let us see what were the results of this industrial unrest; 931,050 workpeople were involved in disputes which commenced in the year—the largest number recorded in the statistics of the Department. Fortunately, the disputes were not of long duration, but, nevertheless, they represented a loss in working days of 10,247,100; excluding agricultural labourers, this means a loss of about one working day per head of the industrial population, and 9 per cent. of that population were involved in disputes. What is the money loss of this kind of industrial warfare? If each person earned but 2s. 6d. a day, we have here a useless loss of 1,280,887*l.*

The year was one in which the rise in rates of wages which commenced in 1910 was continued, the net result being an increase of 25,927*l.* per week, and it surely is a significant fact that this increase in the rate of wages totals 1,248,204*l.* for the year, or 32,683*l.* less than the sum lost by disputes, computing that loss on the low rate of wage of 2s. 6d. The figures given above relate to rates of wages only, not to the sums paid in wages, and it may be assumed that some at least of the disputes were entered into to gain an increased rate of pay. If that be so, what has been the result of the industrial unrest in this connexion? The result, as shown above, is that the increased rates of wages obtained have been more than lost to the industrial population by profitless disputes. If it be urged that lack of employment is the excuse for industrial unrest, and that the figures relating to rates of wages have no bearing upon those earning no wages, the statistics again afford a complete answer to such a contention, as the figures relating to the 800,000 members of trade unions show that the mean percentage of unemployment fell to 3 per cent., as compared with 4·7 per cent. in 1910, 7·7 per cent. in 1909, and 7·8 per cent. in 1908.

At a time of industrial crisis these figures are surely worthy of the consideration of all classes. The loss to the labouring population by these continued strikes can be demonstrated, as above, by figures, but the loss to the employers and the loss to the nation cannot be ascertained, nor are the effects of each strike limited to the period during which it continues. Work and capital leave the country, possibly for good and all, and in too many cases whilst we are engaged in fighting over shadowy principles the substance of our trade is going abroad. As we pointed out recently, one of the reasons put forward for industrial unrest is the rise in the cost of living, and we dealt with some of the causes of this rise. We need not recapitulate here, but we may refer to some of the statistics relating to retail prices, as they fail to show any serious crisis calling for immediate drastic measures. The retail prices for food in 1911 showed a decline on the whole of 0·5 per cent. as compared with 1910, and for the first nine months of the year they were lower than in 1909 and 1908. The long drought caused a rise in certain commodities, but this rise was not continued, and such articles as bread, bacon, and oatmeal showed a heavy decline. The statistics for London show no serious rise in the twenty-three principal articles of food in the last four years.

The causes of labour unrest cannot be wholly traced to this cause, although the rise in the necessaries of life taken over a long period has something to do with it. The causes are complex: increased ideas as to the standard of luxury necessary to existence prevalent amongst all classes; higher education amongst the working classes, which engenders a natural feeling of restlessness; increased taxation and rating; and, lastly, mistaken ideas as to the nature of wealth. These latter cannot be better exemplified than by quoting a sentence contained in a letter recently written to the *Times* by a leading Socialist:—"I think it should be generally recognised that the wage-earners in many departments are not only discontented with their standard of life . . . but many of them are beginning to ask why they should be condemned to toil all their days for a very poor remuneration and very small enjoyment of existence, when, with the present power of man over Nature, wealth might be made as plentiful as water, and all who do useful work during a few hours in the day might have a really pleasurable time."

Many of the above causes deserve careful consideration, others condemnation, but the statistics which we have quoted, at any rate, show that internecine industrial warfare carried on by means of lock-outs and strikes is fatal to the interests of the nation, and we may point out that the remedy lies not in measures of the type of the Trade Disputes Act or the Eight Hours in Mines Act, or in fixed minimum wage, but rather in the direction of co-partnership, co-operation, and conciliation.

SOUTHWARK CATHEDRAL.

THE opening on February 13 by the Lord Mayor of the new bridge and gates which will now form the main approach to the cathedral marked also the completion of the restoration of certain parts of the building itself.

Externally, the bridge and the wall and railing surrounding the cathedral is what is most apparent of the work just finished. The new railings and gates are of wrought-iron and simple in design, and replace those put up about eighty years ago, which were of rather an elaborate Gothic design, but, being light and of cast-iron, had become irreparably broken.

The bridge is of Portland stone, the paving and steps being of granite. The style adopted is Gothic of the Decorated period. The four large shields on the parapet of the bridge carry the arms of the Province of Canterbury, the Cathedral and Diocese of Southwark, and of the Parish Church of Southwark (St. Saviour and St. Thomas). Four small shields on the gate piers bear the arms of the four bishops under whom works of restoration and rebuilding of the church have in recent times been accomplished.

The work on the cathedral itself was chiefly confined to the tower, and a very great deal of strengthening and replacing of decayed stonework has been found necessary.

The greater part of the external facing and other features dated from about 1820-30, when Mr. Gwilt, the architect, carried out extensive rebuilding work at the church. The facing in many places consisted of inferior stones, very thin on bed, all of which had to be cut out and replaced.

On the north-east angle the turret staircase originally existed to the top of the tower; this was done away with presumably when the present pinnacles were erected. The inner face of the old turret stairs was disclosed during the present work, and, the more modern angle stones not having been properly bonded in, this corner was found to be particularly weak, and a considerable amount of rebuilding necessary. The new stone used on the tower is Chilmark.

In connexion with Mr. Gwilt's work it is perhaps worth mentioning the extent to which he made use of cast-iron. The tower is at two levels, elaborately (and effectively) bound round with cast-iron bands made in lengths which join with a kind of dovetail joint. They are of heavy section, the larger one being about 6 in by 3 in. solid. They were bedded under the surface and found to be in excellent condition.

The trusses of the choir roof are all of cast-iron, and, besides window frames, the louvres of the belfry windows and even flashings to the copper roofs are in the same material. The trusses and ties are all stamped with the date and the architect's name.

Internally, immediately above the present ceiling an arcaded stage of late Decorated date, which was found walled up, with the



Southwark Cathedral New Approach from London Bridge from South-West.

mouldings much mutilated, has been opened out and repaired.

The ringing chamber above has been refitted. The bells and frame have been very thoroughly overhauled, rehung, and repaired by Messrs. Mears & Stainbank, who also recast the tenor bell, weighing about 53 cwt.

The timbers carrying the bell frame and the tower roof had to some extent perished, and a considerable amount of work was done in repairs and renewal.

The ceiling under the bells (now the ceiling of the ringing chamber) was found to be partially original, of late Decorated date, consisting of oak ribs dividing the ceiling into panels, with finely-carved bosses at the intersections, all bearing traces of decoration. This ceiling was doubtless that originally seen from the floor of the church, whence there would therefore have been visible, above the level of the present tower ceiling, a blank arcaded stage and a lantern stage consisting of the present lower range of windows, an additional 35 ft. in height, or about 105 ft. from the nave floor. Other work lately accomplished consists in repairs to the buttresses and pinnacles of the choir, relaying of gutters to the choir, aisles, and Lady Chapel, and new glazing in the choir clearstory windows.

Excavations for the new bridge and boundary walls to the south-east of the cathedral brought to light several fragments of pottery and some tesselated pavement of Roman times. The latter was at a depth of about 10 ft. below the surface.

The general contractors for the work were Messrs. Dove Bros., of Islington, and Mr. R. Searle has been acting as clerk of works. The architects are Messrs. J. Oldrid Scott & Son, of Dean's-yard, Westminster, S.W.

"ONE AND ALL GARDENING."

The seventeenth issue of this interesting annual (edited by Mr. E. Owen Greening) contains articles on shore gardens, grass walks, etc., and the Editor in an opening article develops a plan for converting the horticultural societies throughout the kingdom into "missionaries" of gardening, to teach and help artisans, cottagers, and others; to promote allotments, home gardens, and the cultivation of vacant lands, and otherwise to aid in converting Britain into a "garden land." The annual can be had from the Agricultural and Horticultural Association.

THE RESTORER AND HIS ATTITUDE TOWARD OLD WORK.

At the third meeting of the session of the Edinburgh Architectural Association, held on January 28, Mr. William Davidson, Vice-President, delivered a lecture on "The Restorer and His Attitude toward Old Work." The chair was occupied by Mr. J. B. Dunn, F.R.I.B.A., President.

Mr. Davidson, who dealt mainly with ecclesiastical restorations, opened his lecture by dividing restorers, generally, into four classes, viz.: Historical, Antiquarian, Æsthetic, and Ritualistic. The attitude of each was described. The lecturer stated that for the ideal restoration all four standpoints must be considered, and, while a profound reverence and veneration must be felt for all existing beautiful old work, it must be remembered that a church must be suitable for its purpose as a place of worship, and not considered merely as a sanctified museum, utility, comfort, and beautiful composition being absolutely imperative. The architect should not make the restoration an opportunity for the display and glorification of his own personality at the expense of the history of the building, but at the same time a sentimental zeal for the work of the dead should not prevent him from creating a beautiful and perfect unity where such was possible.

Mr. Davidson referred to the recent intervention of "Antiquarian" and "Protection Societies," and maintained that the craze for preserving past history if carried to its logical conclusion would lead to a dead stop in the architectural history of old buildings which, if occupied for their original purpose, still had a living history. He admitted, however, that in the case of unused ruins, such as Holyrood, Linlithgow, Melrose, Fountains, Kirkstall, etc., it was better, generally speaking, if they were only carefully preserved and not restored. He stated that we also have a history to record which is, as a rule, more beautiful than much of the XVIIth, XVIIIth, and XIXth centuries' history.

Many views were shown of restorations by Sir Gilbert Scott, and Messrs. Bodley, Oldrid Scott, Temple Moore, Micklethwaite, Weir, Carôe, and others, which were analysed and criticised. These consisted mainly of abbeys and parish churches, and illustrated various methods of restoring stonework, woodwork, glass, etc. Additions to buildings, such as chapels, vestries, towe and the introduction of organs and furniture were dealt with in detail, and merits and faults of various systems discuss The principles and practice of the Society the Protection of Ancient Buildings were fu treated upon, and, while the lecturer spoke the highest terms of their work, which h saved to us many priceless gems of mediæval a he considered that they ignored the æsthe side of the question too much. Their "r repeat-of-old-detail" policy had destroyed scale, proportion, and beauty of many fine churches. The introduction of plain bloc instead of repeating old moulded work in wo and stone brought in a new scale, which many cases destroyed the unity.

Many examples of the work of the Protecti Society's able architect, Mr. William Ws were shown, and Mr. Davidson spoke the highest terms of much of Mr. Wei work, which always showed such a profou knowledge of the subject and such reveren for the beauty of old work. If the Societ principles, however, were carried to t logical conclusion, it appeared to the lectu that, as original old work must eventual sooner or later, disappear, no copy of it wou then exist. Mr. Davidson maintained that t work of the best craftsmen of to-day in sto wood, plaster, glass, etc. (with the exception the decorative artist), quite equalled that of t XVth century, and he believed that with o present general tendency to return to fi constructive principles the day was rapid dawning when, by the help of decorative a applied art, architecture would again becom the glory and pride of our country, as it had be in mediæval times. In speaking of additio to old buildings, the lecturer agreed that th should not be merely copies of existing pa of the building. They should speak th history unmistakably, but the great feature be noted was that if the scale of the origin work was good, it should be carried out in t new work. Examples from the Cathedrals Florence and Chartres were shown to illustra this point. The restoring of hammer-bea roofs and rood-screens was shown by fi examples from Norfolk and Suffolk. In spea ing of restoring glass, some excellent exampl were shown from Chartres, Winchester, Yor Norwich, etc. He agreed that no new gla should be introduced among old. Bett a small panel of old kaleidoscopic fragmer

the centre of plain old Dutch square or mond panes, as was so beautifully done Mr. King, of Norwich, under the super- on of Mr. Weir, at the east window of St. er's, Hungate, Norwich, than any attempt omplete the design. In speaking of painting, re-painting especially was such a personal k that any attempt to restore it rendered bsolutely worthless, even when done by the st sympathetic and able of artists. In ely geometric or floral work it might be done ly successfully, as was seen at the chancel of Southwold, which, though repainted e (he believed), still retained much of the liæval feeling. Figure wall painting, such South Burlingham, Potter Heigham, etc., the work on the rood-screens, should never any account be touched up or restored, but fully treated for preservation by an expert ey showed signs of decay. The rebuilding he Campanile at Venice was referred to as ece of misplaced sentimentality.

n concluding his lecture, Mr. Davidson ed that no hard-and-fast rule could be wn up for the guidance of the restorer, but must possess a profound knowledge of old k, the uses of various types of plan, a ough grasp of the evolution of design, a deep rence for all beautiful old things, and be d with unbounded enthusiasm for each k entrusted to his care—an enthusiasm ch leads to a non-personal view of each vidual problem, and which will be more ous to preserve any real beauty of bygone rs than make its destruction an excuse for display of his own personality and ability, which will not at the same time sacrifice a ious opportunity for a mere sentimental for the work of the dead.

t the close of the lecture a keen discussion c place, in which Mr. John Watson, .I.B.A., Mr. J. B. Dunn, F.R.I.B.A., Mr. es Gillespie, Mr. W. Stewart Morton, and rs took an active part.

hearty vote of thanks was accorded to Davidson for his able, analytical, and lucid tment of the subject.

he lecture was illustrated by 100 lantern s of English, French, and Italian cathedrals, lish abbeys, and parish churches.

BIRMINGHAM COUNCIL HOUSE EXTENSION.

N the 22nd ult. the architects of the Bir- gham Council House extension, Messrs. V. Ashley & Winton Newman, of London, plied to members of the Birmingham hitectural Association, at a meeting in the hange Buildings, some particulars of their k at the Council House. Mr. C. E. Bateman sident of the Association) occupied the r.

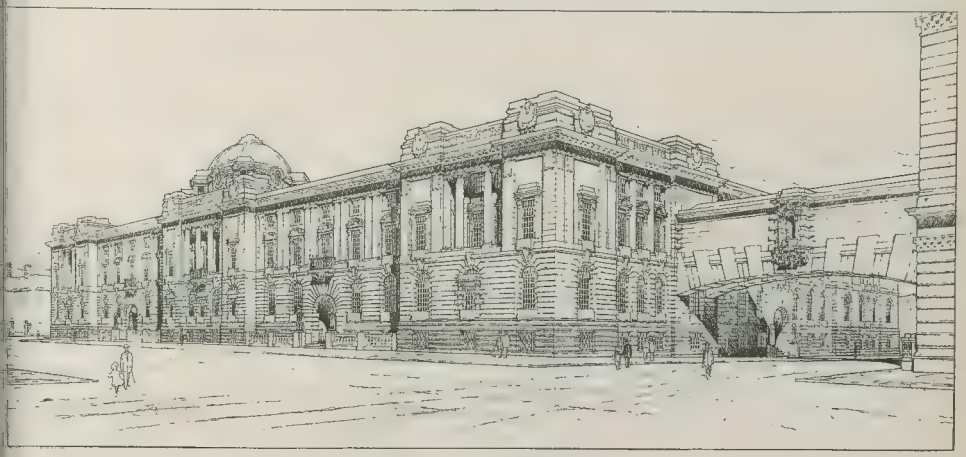
r. Ashley, during the course of his paper, said as interesting to note that the plans in the nd competition had been very little altered. site was practically four-square. On the east, or Margaret-street, front was the Education Department, consisting of four floors of innumerable offices; on the south, or Edmund-street, front and in the interior of the site was the Gas Department; and on the west, or Congreve-street, front, including three floors, were the offices of the Health and Tramways Departments, both of which had already outgrown their new quarters since the extension of the city. On the first floor over the Gas Department were the new picture galleries, and on the second floor of Congreve-street the Natural History Museums, both approached from the present Round Room over the new bridge across Edmund-street. The completion of the extension on the north side was now in hand, and would give further accommodation for the Tramways, Health, and Gas Departments, including, in addition, further picture galleries and museums for casts on the upper floors, with a special entrance devoted, as it were, to the Feeney galleries. Each of these departments was self-contained, each had its own main entrance and staircase, and at the same time there was easy access between the departments.

There was very little genuine reinforced concrete construction, but he was tempted to believe that buildings of this nature were not entirely suitable to this method of building owing to the alterations required from time to time. Reinforced concrete in floors and roofs was of necessity monolithic, and while it was no difficult thing to cut out a beam with an R.S.J. in it, it seemed to him another matter to cut about reinforced work with the same ease. Externally on the street frontages the buildings were faced to the upper ground-floor level with Aberdeen granite, heavily rusticated with Darley Dale stone for the remainder of the facades. This was instead of Portland stone, which they tried very hard to be permitted to use. The Margaret-street porch was the only place where there was any Portland stone. In the semi-domed porches to Congreve-street and Edmund-street, Hopton Wood stone, with Greek Cippollino marble columns and bronze caps and bases, had been used. The courtyards internally were faced with white glazed bricks, with salt glazed dadoes and bands, etc., accentuating the features. This glazed brickwork—after more than usual trouble and difficulties—had turned out exceptionally well. It would be difficult, he thought, to come across so uniform and good a quality of brick as they would see there. The granite and stone work also exhibited good craftsmanship and material, the general contractors tackling this part of the work very well, also the plumbing both externally and inside the building.

Internally the finishings were of a very simple character—a little interest had been given to the entrance staircases and to the committee-rooms, and one or two of the larger offices, but in the main they had to remember that the building was an office building. In addition to oak and maple batten and block floors, they had made extensive use of linoleum as a floor covering—particularly in the footways to the art galleries and in the panels in the corridors with marble surrounds. The walls and ceilings generally were plastered, and some of the rooms and staircases were panelled out in this material, with certain parts enriched, while oak panelling had been adopted in the committee suites of the Gas and Education departments. The lower part of the Gas Department entrance hall and the dadoes to the main staircases to the other departments had marble linings, echaillon bands, and alabaster fillings to the latter and Hopton Wood stone to the former. The principal staircases also had echaillon treads, risers, and strings. The art galleries were lighted by day on what might be described as the ceiling light principle as against the lantern light. This system was not adopted until exhaustive inquiries and research had been made. Further, they would realise the lantern light presented considerable difficulties of construction, added to which they had very much involved the problem of heating and ventilation. The heating of the building was by low-pressure hot water mechanically circulated—a very simple and trustworthy method. The ventilation was generally for the offices by means of extracts in the rooms into ducts over the corridors, with upcast shafts at intervals, finishing at the top with fan chambers. The art galleries had the glass of the ceiling lights slightly raised on fillets and extract fans in the gables exhaust from the roof spaces. The only downward ventilation was in the large gas office, where a large extract fan adjoined the base of the chimneystack, the foul air being forced up around the smoke flue from the boilers.

As to the difficulties, or hindrances, attending modern building methods, it seemed to him one difficulty was the want of pulling together as it were, at times, of the many apparently inevitable sub-contractors. Too often they did not care one whit for their neighbours, and to blame the other man always appeared to be sufficient excuse. A capable foreman or superintendent could help to obviate a good deal of the friction, but he was often too occupied with looking after his own firm's particular interest, which was not always identical with that of the sub-contractor, whose lot on the job was not always a happy one. Again, another difficulty was that resulting from the necessity of obtaining competitive estimates for every sort and kind of thing. This did not conduce to good work—estimates were cut too fine, with the result that the contractor was unwilling to make the slightest alteration, or improvement, except with the most extravagant claim for extras. All this entailed great trouble and expenditure of time on the part of the architects, which might be employed far more profitably in striving to perfect their work.

Mr. Whitworth Wallis proposed a vote of thanks, and said, as to the bridge in Edmund-street, that the disciples of Ruskin were down on it, and all sorts of criticisms had been passed



Birmingham Municipal Buildings Extension.
Messrs. Ashley & Winton Newman, Architects.

on that part of the structure. Personally, however, he did not care at all what the bridge was outside so long as it was beautiful within, and he could assure them that they had in it one of the most charming entrances to any art gallery he was acquainted with.—Mr. Thornley, of Liverpool, seconded. The motion having been carried, Mr. Newman replied, and defended the bridge as supplying a stone connexion between the old and the new buildings.

ARCHITECTURAL SOCIETIES.

The Leeds and Yorkshire Architectural Society.

A general meeting of the Society was held on Thursday, February 22, the President, Mr. Sydney D. Kitson, in the chair.

The feature of the evening was an exhibition of drawings from the Liverpool School of Architecture, and Professor C. H. Reilly, M.A., A.R.I.B.A., gave an informal lecture on the methods of the school.

The large number of students and members present indicated the considerable interest taken in their work, and the debate which followed the lecture concluded a very interesting and successful meeting.

York and Yorkshire Architectural Society: William Etty, R.A., 1787-1849.

On February 28, before this Society, Mr. G. W. Milburn, of York, read an interesting paper on the "Life and Work of William Etty, R.A., 1787-1849." Mr. A. B. Burleigh, Lic.R.I.B.A., being in the chair. In the course of his remarks he said:—

"In this lovely old city of York, with its memories and associations, the mind is led backward two thousand years, linking together the Early Britons, Romans, Danes, Saxons, Normans, and citizens of to-day. Landmarks, fine buildings, and written records of men and manners have been left to us. Illustrious characters, such as Agricola, Heidrian, Constantine, St. Paulinus, St. Wilfrid, and Alcium for learning; whilst for art the names of Flaxman and Etty stand out conspicuously. Imagine to yourselves York without its William Etty, whose name and beautiful pictures are known and appreciated by every lover of choice and artistic work. His fine style of flesh painting is unsurpassed, whose noble conceptions are of the highest order of merit, and not, I think, unworthy of rank with the greatest masters of antiquity. Such a youth was the son of a York miller, a working printer on a newspaper, a Royal Academician, living a blameless life, who grew to be a kind and gentle old man, and an amicable and generous teacher of York art students. The exquisite sweetness of his expression, his firm and resolute chin, the feature which appears to balance the thought which his mind had conceived; his nose, the born artist's nose gracefully arched and strong, clearly defined—the Napoleonic nose, which adds so much beauty and character to the face; his dark-blue eyes, nestling under the projecting brows, in softened violet-tinted shadows, luminous and bright, watchful and steady eyes.

In speaking of his pictures, Etty was thirty-four years of age when Napoleon died, 1821, and the death of such a mighty military genius would appeal to a sensitive nature like Etty's, and in all probability the outcome of his thoughts was the picture of "The Combat," or "Mercy Pleading for the Vanquished." This ranked as the noblest of Etty's productions, a painting that would do credit to any country; one of the finest of historical talent that the English school had yet produced for accurate drawing and beautiful colouring. From his youth he always thought to be an artist. After serving his apprenticeship as printer on the *Hull Pacquet*, he went to London to stay with his uncle, and later was a student at the Royal Academy schools, and eventually under Sir Thomas Lawrence. He thought long over his pictures, but executed them quickly. He succeeded John Flaxman as R.A. in 1828. He would generally spend the first and second evenings in making a charcoal outline, then go over the sketch with ordinary pen and ink, and then commence to paint. The York School of Design was founded by Etty (and one of the first provincial schools, 1842). It commenced in the Hospitium in St. Mary's Abbey ground, York. Among his first pupils was the family of the Moores. It was a custom of William Etty to take a female Torso, place it in a convenient position, draw it for the students, then add other limbs to complete the figure, and show them how to drape it. He died at York in his sixty-third year. Whilst painting in Venice a Professor came up, and, after looking at Etty's picture, said, "Were I to prick the canvas it would bleed."

At the conclusion of the paper a hearty vote of thanks was proposed by Mr. J. Windass and seconded by Mr. Harold E. Henderson.

Glasgow Architectural Craftsmen's Society.

At a meeting of the Technical College Architectural Craftsmen's Society, Mr. James S. Boyd presiding, Mr. James Muir lectured on the management of Building Contracts. The lecturer stated that a business and architectural training was absolutely necessary to the contractor who was entrusted with difficult and costly work. Thus he would be enabled to give satisfaction to his client and earn profit for himself. The lecturer also dealt with the terms laid down in schedules in adjustment of claims for extras, etc., and stated that no contract of any kind gave satisfaction unless the utmost harmony was maintained between the contractor and those who superintend the works.

A paper was read on the 29th ult. before the Society by Mr. Robert Moon on "Various Timbers and their Practical Uses." The lecturer referred to the rapidity with which supplies of the timbers presently in use were being exhausted, and confined himself mainly to the woods of the future which must come from the giant forests of Western America. These, with the opening of the Panama Canal, should be placed on the British market in greater quantities and at lower rates.

Architectural Association of Ireland.

A general meeting of this Association was held recently in the Lecture Hall, 15, South Frederick-lane. The President, Mr. Page L. Dickens, M.R.I.A.I. occupied the chair. Mr. Connor O'Brien read an interesting paper, entitled "The Development of a National Style of Gothic Architecture in Ireland," which was illustrated by numerous photographs and lantern views of the principal ecclesiastical buildings erected in Ireland between the XIIth and XIVth centuries. Mr. Connor O'Brien found a precedent for the development of a national Gothic style in the work done in Ireland during the XIIIth and XIVth centuries, when great originality of design and independence of treatment were shown by the Irish builders. The lecturer also called attention to the excellent carving and workmanship to be found in many of the tombs and memorials to the dead in our abbeys.

In proposing a vote of thanks to the lecturer, Mr. R. M. Butler, M.R.I.A.I., suggested as an explanation of the great difference in detail and treatment often to be found in buildings of the same period in Ireland that many of these buildings owed their erection to the English colonists, and so naturally differ in their details and mouldings from those built by the Irish people.

Mr. Geo. L. O'Connor briefly seconded the vote of thanks, which was supported by Mr. P. J. Lynch, M.R.I.A.I., and Professor Scott.

GENERAL NEWS.

Professional Announcement.

Mr. Drinkwater Butt, F.R.P.S., architect and studio specialist, has removed to No. 2, Margravine Studios, Baron's Court, W.

Mr. Pierpont Morgan's Collection.

As was provisionally announced on February 2, the silversmith's work forming part of the collections lent by Mr. Pierpont Morgan to the Victoria and Albert Museum is the second portion of that collection being withdrawn.

The Galilee Chapel at Durham.

The Council of the Durham College have, it is stated, been warned by the Dean and Chapter of Durham Cathedral that the condition of the Galilee Chapel is such as to render its use unsafe, and the daily services will be held in the nave of the Cathedral.

Peabody Buildings.

From the forty-seventh annual Report of the Governors of the Peabody Donation Fund we read that the surplus income for the year, from rents and interest, was 43,551*l.* 17s. 5d as shown by the accounts, this return bei 2·53 per cent. on the capital of the Fun against 2·36 per cent. last year. The ni blocks of self-contained tenement buildin at Camberwell-green have been complete and are fully occupied. Good progress h been made with the twelve blocks of se contained tenement buildings at Lillie-roa Fulham. It is hoped they will be rea for occupation early in the summer. Buil ing operations will be commenced at t Vauxhall Bridge-road site in February a at the Walworth site in the autumn. Co sheds have been erected on thirteen of t estates, and the amount of coal sold to t tenants, at 1s. per cwt., during the ye was 2,581 tons. At the end of the year t Governors had provided for the artisan a labouring poor of London 14,312 rooms, i cluding those occupied by the superinte dents and porters, besides laundries a lavatories. These rooms comprised 6,0 separate dwellings—viz., 300 cottages of fi rooms, eighteen tenements of five roo (superintendents' quarters), 129 tenements four rooms, 1,952 of three rooms, 2,658 two rooms, 954 of one room, and nine sho with seventy-one rooms attached. The arch tect to the company is Mr. Victor Wilkin Adelphi, W.C.

The East End Dwellings Company.

In submitting the report and accounts the twenty-ninth ordinary general meeti of the East End Dwellings Company t directors state that the rents received in 191 without taking into account Hastings Hous and the Victoria Park-square Estate (o property), were 36,593*l.* 16s. 1d., as again 36,098*l.* 13s. 3d. in the previous yea Hastings Houses, which were acquired August, 1910, show excellent results and we completely occupied at the end of the year, were also Stafford Houses, Thornhill House and the Globe-road Cottage Estate. T letting of the block buildings in and ne Victoria Park-square somewhat improved, t unlet tenements on December 31 being fift nine against seventy-two at the end of 191 Including 646*l.* 8s. 9d. brought forward fro 1910, the profit and loss account shows credit balance of 13,541*l.* 16s. 7d. Out this sum 3,000*l.* (as against 2,000*l.* for 191 has been carried to reserve, which now amoun to 59,000*l.*, and interim dividends for the fi half of 1911, at the rate of 4*l.* and 5*l.* per ce per annum on the preference and ordina shares respectively, have been paid. The dire tors now recommend a similar distribution f the half-year ending December 31, 1911. Afte allowing for these dividends, and also f directors' and auditor's fees, a balance 836*l.* 0s. 7d. will remain to be carried forwar

Property Sales.

Recent sales comprise "Kelston," Nethe hall-gardens, South Hampstead, which w built after Mr. R. Norman Shaw's desig for the late Edwin Long, R.A., and ha been purchased by Sir Edward Elgar, O.M. No. 26, Park-lane, erected for the late M Alfred Beit in 1895-6 from the designs o the late Colonel Eustace Balfour and Mr Thackeray Turner; and Burford Priory Oxfordshire, bought by Mr. E. J. Hornima L.C.C., which is depicted by Waller in hi picture of "The Empty Saddle." Th Priory represents the St. John's Priory appurtenant to the wealthy Abbey of Blac Canons, at Eynsham, dedicated to the Virgi and SS. Peter and Paul, and founded in o about 1170 by William, Duke of Gloucester Edward Harman built, shortly after it Dissolution, the house which Sir Lawrenc Tanfield, Chief Baron of the Exchequer 1607, bequeathed, with the manor, to hi grandson Lucius Carey, Viscount Falkland who fell at Newbury, having previously sold the estate to Speaker Lenthal; Lentha enlarged the house and built the chapel Colonel B. de Sales La Terriere made many improvements and restorations; in the gar den is a fine Jacobean summer-house, and a the Home Farm are Kitts' Quarries, whic supplied some stone for the interiors o Westminster Abbey and St. Paul's. Amongs the properties recently placed in the marke are Weavers' Hall, Basinghall-street, rebuil in 1856 for the Company, and now let in suites of offices at an aggregate rental o

03*l.* 10s. per annum; "Belmont," Mill l, Vicar's Hill, Lymington, Hants, and 33, Bedford-square, W.C., built and orated originally by the brothers Adam; Rougement Estate, Exeter, embracing tions of the old castle moat and city walls; ir Drummond, Perthshire, 7,425 acres, a for some centuries past of a branch of house of Drummond; and Ancaster se, Richmond-hill, having a main front- of 200 yds., close to the Park gates (1798), ch, originally a shooting-box of the Duke Ancaster, was given by George III. to Lionel Dayrell.

Woman and the Cold House.

nder this heading the *Ironmonger* for uary 27 makes some comments on the espondence in the Press on the subject of houses, concluding with the following arks:—"The outstanding point about the espondence is the interest evinced by nen in the question and the total absence any reference to our ancient friend the erful British fire.' Time was when we ght our architects might learn to reciate the advantages of central heating the home. We even dared to hope that would lend their aid to convert the nenfolk, but now the tables seem likely be turned. The scant attention given by architectural profession to Mr. Barker's nt. lectures, which were addressed par- larly to them, the marked preference they lay as a class towards plumbers as dis- uished from hot-water fitters, and the eral neglect of the problem of warming he 'Home and House' books which have such a feature of the publishing trade ng recent years, almost lead us to despair ny improvement in that quarter. Those can influence public opinion might do se than try to capture the Press which eals especially to women. Make the sewives of this country believe they can money, spare their servants work, and erve the decorations of their rooms by sting upon a better system of warming that now in common use, and they will and such a system. Then the architects have to obey."

London Institution, Finsbury-circus.

a "Note" on December 8 we adverted the contemplated adaptation of the uises of the London Institution for pur- s of a School of Oriental Languages, gave a short historical account of the itution and its buildings. A formulated me has been since approved by the ernment, and the Board of Proprietors unanimously adopted a Report to be d to the general body of proprietors members. Subject to the passing of a ial Act of Parliament, the scheme pro- s for the establishment of "The London itution for Oriental Languages," by l charter, and under the control of a n governing body; the transfer of the hold property and effects, and discon- ance of the existing circulating library; grants from Government of from 20,000*l.* 5,000*l.* for repairs, improvements, and tional buildings, and for an annual me, towards which the Government ave ed to contribute 4,000*l.* per annum. essor F. M. Simpson has prepared plans altering the premises, at a cost of some 00*l.*, in furtherance of these proposals.

University Buildings, Belfast.

he authorities have resolved to proceed with with the enlargement, at an esti- d cost of some 10,000*l.*, of the Queen's versity Library, after designs by Mr. H. Lynn, R.H.A., of Belfast, Architect he University. Mr. Lynn made the plans designs for the additions to the students' n block and to the medical school, and the new south block, as well as for the hall and rifle range, Queen's University, which tenders, to an aggregate sum of ly 35,000*l.*, were accepted in July of last

CORRESPONDENCE.

The Associates and the R.I.B.A.

R,—Your article, "The Associates and R.I.B.A.," induces me to submit the wing statements:—

Many Associates desire to remain Asso- s because the title indicates something which is perfectly clear and definite. They have passed an examination in architecture. This examination may be feeble, and parts of it may be absurd, still, Associateship indicates definitely and clearly that an examination in architecture conducted by a Royal Institute has been passed.

(2) Fellowship may, some day, indicate something just as clear and definite and something far more important than the passing of an examination, but at present it does not. It indicates all kinds of interesting things, but nothing clear and definite.

(3) The Associate who has qualified for Fellowship by having been engaged as a principal for seven years knows that at any time, should it be to his interest to do so, he may become a Fellow, and for this reason, and for those given in (1) and (2), he remains an Associate.

(4) When the Institute tackles the question of architectural education and examination seriously it will discover—what it discovered in part long ago—that while the present examinations for Associateship can be made vastly sounder and improved in many directions, they can contain nothing to which a great learned society should refer to as "advanced work."

(5) It may then be thought advisable to make the doing of some "advanced work" necessary before an Associate who has already "shown himself to be possessed of a solid groundwork of knowledge" may proceed to a Fellowship.

It is not possible in a letter to deal in detail with the nature of this "advanced work." It should be something more than "having been engaged in practice as a principal for seven years"—in fact, as suggested in your article, it should be possible for a man to become a Fellow without having engaged in practice.

The following may be suggested as types of "advanced work":—

(*a*) The designing and carrying out of buildings which can reasonably be considered to add to the beauty of one or more of our villages, towns, or cities.

(*b*) The investigation of some of the scientific problems which are inseparable from architecture.

(*c*) The doing of work which will add to our knowledge or understanding of the architecture of the past or which will enable us to grasp more clearly the elusive quality of beauty in architecture.

(6) If such a scheme as that I have indicated were carried out in the right spirit, in the course of, say, twenty to thirty years, it would be decidedly worth while for an Associate to strive for the Fellowship, for then the letters F.R.I.B.A. would be as valuable to the architect as the letters F.R.S. are to a scientist.

And, I suppose, being known as F.R.S. is, to the scientist, almost as good as being known by his surname alone, which is, after all, the greatest distinction it is possible for a community to give to one of its members. W. S. PURCHON.

Padbury *v.* Holliday, Ltd.

SIR,—The letter of your correspondent, Mr. F. J. Gayer, has again opened up the differences between the contractor and the sub-contractor.

Your correspondent suggests that a proper contract between the parties is necessary. That is agreed; but the original contract should form the basis of agreement. Is the contract he wishes to put in force the one issued by the Institute of Builders, which stipulates that the contractor shall be judge of the specialists' manufactures with power of rejection and with other clauses placing him in the grip of the contractor, finally providing that the contract shall override the principal contract and referring dispute to the arbitrament of the President of the Institute of Builders or someone appointed by him? No, Sir. The sub-contractor prefers that the architect shall hold the balances fairly against all parties, and rightly objects to being placed at the absolute mercy of the contractor who may be, and often is, more or less of a financial corporation, squeezing and greedy for discounts, or, as is sometimes the case, men without means trading on advances due to the sub-contractor.

Sub-contractors, in the vast majority of cases, have, by business enterprise, laborious study of the special manufactures in which they are interested, and at an enormous expense in the development of a high standard of perfection, rightly come to the front. To them, and to the appreciation of their efforts by the architectural profession (whose ideas they so readily carry out), is due the wonderful improvements in modern building which makes for comfort and economy. Take, for example, reinforced concrete, constructional ironwork, heating, sanitation, ventilation, and like matters. How many of the improvements have been brought about by builders?

A glance at the advertising pages of this journal will at once show that building specialists are a real live force, of standing and credit, and it is not likely that they will consent to be placed under the heel of the contractor.

In many buildings of the best description where a client employs his own labour, under the directions of an architect, and a general contractor is dispensed with entirely, the work proceeds smoothly; the client gets good value too, as the specialist can quote his best prices—with no margin for discounts and uncertainty of payment—and the work is properly carried out to the satisfaction of everyone.

These are days of organisation, and it is time that sub-contractors formed an association for the protection of their interests.

SUB-CONTRACTOR.

Thames Flooding.

SIR,—Whether flooding in the upper reaches of the Thames is preventable in normal years is obviously a question for engineers. The Thames Conservancy have complete data for the rainfall over the area drained by the river, and the volume of water passing down per second can be easily gauged at the weirs. Were the numerous artificial barriers in the form of locks and weirs, intended to retard the flow, thrown open, the Thames would become an impetuous torrent, as when its extensive beds of gravel were forming, instead of a navigable river. By manipulating the barriers scientifically it would seem that floods should become impossible. Alternatively to raise the banks where they are exceptionally low, dredging the material in part from the river bed, would present no vast difficulty or cost, and have been long since carried out had the Thames been an Indian or Egyptian river. In the meantime each township might reasonably follow the example of Windsor and places below Teddington, and protect themselves. The Town Council of Maidenhead, however, allow an overflow from Cookham to pour into the low-lying quarters of the town, which are inhabited by the poor, whose tenements are submerged annually, bringing unspeakable misery for the time on them, with hopelessly insanitary conditions. A second torrent pours over the tow-path above Boulter's lock, at a point where it is exceptionally low, and devastates the gardens of Maidenhead Court, Wray Park-avenue, etc., for nearly a mile before it re-enters the river near the bridge. Year after year the town is held up as an object-lesson by the London Press in a manner most damaging to its residential repute, and it might be thought that self-interest, if nothing higher, would induce the leading tradesmen on the Council to set about a remedy; the more so as it would involve a relatively small outlay. The required embankments are, in fact, by no means extensive or costly. But their discussions, as reported, are inconclusive and abortive, and for years have had no practical results, and no wonder! One Councillor's dictum is that "they knew perfectly well that all the wise men on earth would never keep out the water from Maidenhead as long as the present levels exist," while another objected to any embanking "for the reason of the inconvenience it was likely to cause to the people residing at Bourne End." It is a strange state of things that "Aldermen" and "Councillors" should be found within half-an-hour of the metropolis, in these Board School days, discussing so serious, but really so simple a matter in such a spirit. A trip to Holland, or even to the Nore or the East-end, would afford ample object-lessons as to the value of embankments. Further comment is unnecessary, but it is evident that some higher authority should exist, capable of bringing these gentlemen to a sense of their obligations. J. STARKIE GARDNER.

EDITORIAL SUMMARY.

Our leading article, "Hospital Competitions," deals with an article in the last issue of our contemporary, the *Hospital*, as to Hospital Competitions in general and the recent East Sussex, Hastings, competition in particular. We quote at length from our contemporary on another page (p. 279).

"The Text-Book" is the title of a second article (p. 260). It is a review of Professor F. M. Simpson's recent work on "A History of Architectural Development: Vol. III.—the Renaissance in Italy."

In "Notes" Column (p. 262) will be found comments on: "The Lady Architect Again"; "Associates and the R.I.B.A."; "The Attitude of the Associates"; "The Hampshire Association of Architects"; "Publication of Speeches in the R.I.B.A. *Journal*."

An illustrated report of the lecture at Carpenters' Hall by Mr. W. H. Bidlake, M.A., on "Mediæval Sculpture" appears on p. 263.

"Industrial Unrest" is the title of an article on p. 265.

Some notes on the opening up of Southwark Cathedral are given on p. 265, together with an illustration.

An abstract of a lecture on "The Restorer and his Attitude toward Old Work" is given on p. 266.

Some notes on the Birmingham Council Chamber Extension will be found on p. 267.

Architectural Societies (p. 268) include: "Glasgow Architectural Craftsmen's Society"; "Architectural Association of Ireland"; "York and Yorkshire Architectural Society"; "Leeds and Yorkshire Architectural Society."

In Correspondence columns (p. 269) will be found letters on: "The Associates and the R.I.B.A."; "Thames Flooding"; "Padbury *v.* Holliday, Ltd."

The Monthly Illustrated Review of Construction (p. 271) contains: "The London Opera House"; "A New System of Reinforced Brick Flooring"; "New Offices for the Metropolitan Railway"; "Ventilation"; and Notes.

The Building Trade Section (p. 275) includes: "Manchester Building Trades' Exhibition"; "London Master Builders' Association"; "Portsmouth Master Builders' Association"; "Projected New Buildings in the Provinces"; "Applications under the London Building Acts," etc.

Book Notices (p. 231) include: "Baroque Architecture and Sculpture in Italy"; "Old Houses of Shrewsbury"; "Our Homeland Churches and How to Study Them"; "The Year's Art"; "The Antiquary," etc.

In Legal Column (p. 282) will be found some observations on: "Workmen's Compensation" and "London Drainage By-Laws."

In Law Reports (p. 282) will be found: "John Aird & Co. *v.* The Corporation of Bristol."

MEETINGS.

FRIDAY, MARCH 8.

Royal Sanitary Institute.—Provincial sessional meeting, Municipal School of Technology, Sackville-street, Manchester. (1) Discussions: "The Application of the Housing and Town Planning Act to the Redevelopment of Suburban Areas now in Process of Transition," to be opened by Mr. F. W. Platt, building surveyor, Salford; (2) "The Quantity of Water Available from Upland Drainage Areas," to be opened by Professor J. Radcliffe, M.Sc.Tech. The chair will be taken at 7.30 p.m. by Mr. H. Percy Boulnois, M.Inst.C.E., Chairman of the Council of the Institute.

Leicester and Leicestershire Society of Architects.—Mr. Walter Gilbert on "Metalwork." Lantern illustrations. 8 p.m.

Royal Academy of Arts.—Mr. A. P. Laurie, M.A., D.Sc., on "The Chemistry of Building Stones and Cements." 8 p.m.

Royal Sanitary Institute.—Mr. Edward Willis, Assoc.M.Inst.C.E., F.S.I., on "Building Materials." 7 p.m.

SATURDAY, MARCH 9.

Royal Sanitary Institute.—Members meet at St. Margaret's Church, Prestwich, at 1.45 p.m., and proceed to inspect the new service reservoir at Heaton Park, under the guidance of the resident engineer. 3 p.m.—The party will proceed to the new lake to inspect the works.

Royal Institution.—Professor Sir J. J. Thomson, M.A., LL.D., D.Sc., F.R.S., on "Molecular Physics"—III. 3 p.m.

Builders' Clerks' Benevolent Institution.—Theatrical performance at the Royal Court Theatre, Sloane-square, by the "Strolling Players" Dramatic Society, in aid of the funds of the Institution.

MONDAY, MARCH 11.

Architectural Association.—Mr. C. C Brewer and Mr. C. A. Daubney on "American Architecture." 7.30 p.m.

The Surveyors' Institution.—8 p.m.

Royal Sanitary Institute.—Mr. H. Phillips Fletcher on "Building Sites and Local Physical Conditions." 7 p.m.

Institute of Sanitary Engineers.—Mr. Percival M. Fraser on "The Modern Home." 8 p.m.

The Incorporated Clerks of Works' Association (Carpenters' Hall, London-wall).—Paper by Mr. H. Fincham on "Canterbury Cathedral." 8 p.m.

TUESDAY, MARCH 12

Royal Sanitary Institute (90, Buckingham Palace-road).—Mr. R. Herzfeld, Ph.D., on "Combined Hot-Water and Electricity Supply for Private Houses." The chair will be taken at 8 p.m. by Sir William Emerson, F.R.I.B.A.

Northampton Polytechnic Institute (Illuminating Engineering).—Mr. Val. H. Mackinney on "The Practical Use of Metallic Filament Glow Lamps." 7.30 p.m.

The Institution of Civil Engineers.—Discussion on "Roller and Ball Bearings" and "The Testing of Anti friction Bearing Metals," by Professor John Goodman, M.Inst.C.E. Papers on "The Main Drainage of Glasgow," by Alexander Beith McDonald and Gotfred Midgley Taylor, MM.Inst.C.E.; "The Construction of the Glasgow Main-Drainage Works," by William Cecil Easton, B.Sc. M.Inst.C.E.; "Glasgow Main Drainage: The Mechanical Equipment of the Western Works and of the Kinning Park Pumping-Station," by David Home Morton, M.Inst.C.E. 8 p.m.

WEDNESDAY, MARCH 13.

Carpenters' Hall, London-wall (Lectures on Arts Connected with Building).—Mr. W. Curtis Green on "Roofs and Roofing." 7.45 p.m.

Royal Society of Arts.—Professor Ernest A. Gardner, M.A., on "Greek Sculpture." 8 p.m.

Royal Sanitary Institute.—Mr. H. Phillips Fletcher on "Building Construction and Sanitary Planning." 7 p.m.

Edinburgh Architectural Association.—Mr. F. C. Eeles on "The Gothic Chancel." 8 p.m.

THURSDAY, MARCH 14.

Carpenters' Hall, London-wall.—Mr. A. G. Temple, F.S.A., on "J. M. W. Turner, R.A." 8 p.m.

Society of Antiquaries. 8.30 p.m.

The Concrete Institute.—Discussion on the Interim Report of the Tests Standing Committee of the Concrete Institute on "The Testing of Concrete, Reinforced Concrete and Materials Employed Therein." 8 p.m.

FRIDAY, MARCH 15.

Institution of Mechanical Engineers.—Dr. Rudolf Diesel on "The Diesel Oil Engine." 8 p.m.

Royal Sanitary Institute.—Mr. H. Phillips Fletcher on "Ventilation, Warming, and Lighting." 7 p.m.

Glasgow Architectural Craftsmen's Society (Technical College).—Mr. A. H. Purdie on "Some Practical Considerations on the Measuring and Valuing of Mason and Brickwork."

South Western Polytechnic Institute, Chelsea.—Sir David Gill, K.C.B., F.R.S., will present prizes and certificates to students of Evening Classes and Day College. 8 p.m. (Laboratories and workshops open to public inspection at 9.15 p.m.)

COMPETITION NEWS.

Oakwood-avenue Council School, Warrington.

Members and Licentiates of the Royal Institute of British Architects are asked not to take part in this competition because the conditions are not in accordance with the published regulations of the Royal Institute for architectural competitions.

Blackwood Hall.

Members and Licentiates of the Royal Institute of British Architects are asked not to take part in this competition because the conditions are not in accordance with the published regulations of the Royal Institute for architectural competitions.

Town Planning in Huddersfield.

Mr. W. P. Raynor, J.P., has addressed a letter to the Chairman of the Housing and Town Planning Committee of the Huddersfield Corporation stating that he is authorised to pay over 100*l.* to be devoted to acquiring by open competition a scheme of planning and housing applicable to the local needs. The matter is under the consideration of a sub-committee.

ENGINEERING SOCIETIES.

The Society of Engineers.

The Council of the Society of Engineers (Incorporated) may award in 1912 two premiums of books or instruments to the value of 8*l.* and 4*l.* 4s., as first and second prizes respectively, for approved essays on the subject "How to Improve the Status of Engineers as Engineering, with Special Reference to Consulting Engineers." The Council reserve the right to withhold either or both of the premiums if the essays received are not of the required standard of merit. The competition is open to all, but application for detailed particulars should be made to the Secretary before entering. The last date for receiving essays is Friday, May 31.

The Junior Institution of Engineers.

A booklet has been issued by this Institution dealing with "Its Origin and Aims." In the paragraph dealing with the inception of the Institution it is interesting to note that the Society came into being at the works of the late firm of Messrs. Maudsley, Sons, & Field, London, in 1884. Amongst the officers, Presidents, and Vice-Presidents the names of many famous men can be noticed in the list that is given. Mention is made also of honorary members, one of whom generally gives a lecture each year, many of the discourses thus delivered having merited and obtained world-wide renown. The rooms are kept open on Friday evenings during the months of October to May inclusive, in order that the weekly periodicals can be perused and social intercourse promoted. In connexion with each Friday evening the opportunity is taken for the discussion of various subjects in a very informal sort of way. A copy of the booklet may be obtained free on application to the Secretary, 39, Victoria-street, Westminster, London, S.W.

BOOKS RECEIVED.

AMATEUR JOINERY IN THE HOME. By G. A. Audsley, LL.D., and B. Audsley. (London: Geo. Allen. 4s. 6d. net.)

BYWAYS IN BRITISH ARCHÆOLOGY. By Walter Johnson, F.G.S. (London: Cambridge University Press. 10s. 6d. net.)

SMALL WATER SUPPLIES. By F. Noel Taylor. (London: B. T. Batsford. 6s. net.)

ILLUSTRATIONS.

The London Opera House.

THIS imposing building in Kingsway is illustrated by two of our plates and is described partially in the article beginning on p. 271, where other illustrations will be found.

Mediæval Sculpture.

THESE illustrations are given in connexion with the lecture by Mr. W. H. Bidlake, M.A., on "Mediæval Sculpture" at Carpenters' Hall, a report of which appears on another page.

FIFTY YEARS AGO.

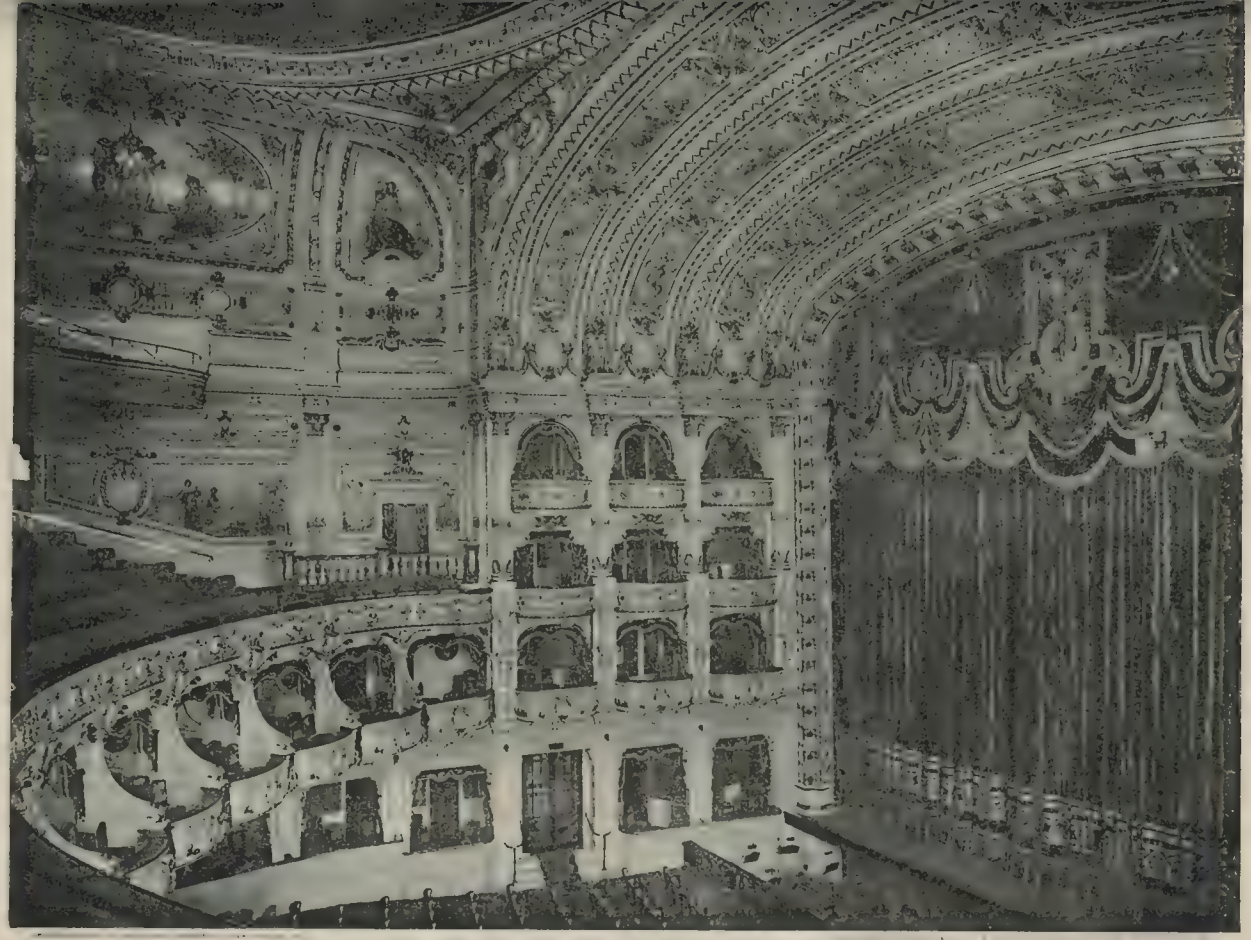
From the *Builder* of March 8, 1862.

American Liberality.

WE learn that Mr. Peabody, the well-known American banker in England, being about to quit the country with a large fortune realised here, has decided on erecting a number of houses for the working classes who through the innumerable improvements in the metropolis, have been rendered almost homeless. For this purpose he gives a hundred thousand pounds, and also undertakes to pay the first year's interest of the money—five thousand pounds.







THE LONDON OPERA HOUSE, KINGSWAY.—Mr. Bertie Crewe, Architect.



THE LONDON OPERA HOUSE, KINGSWAY: GRAND CIRCLE FOYER.—Mr. Bertie Crewe, Architect.

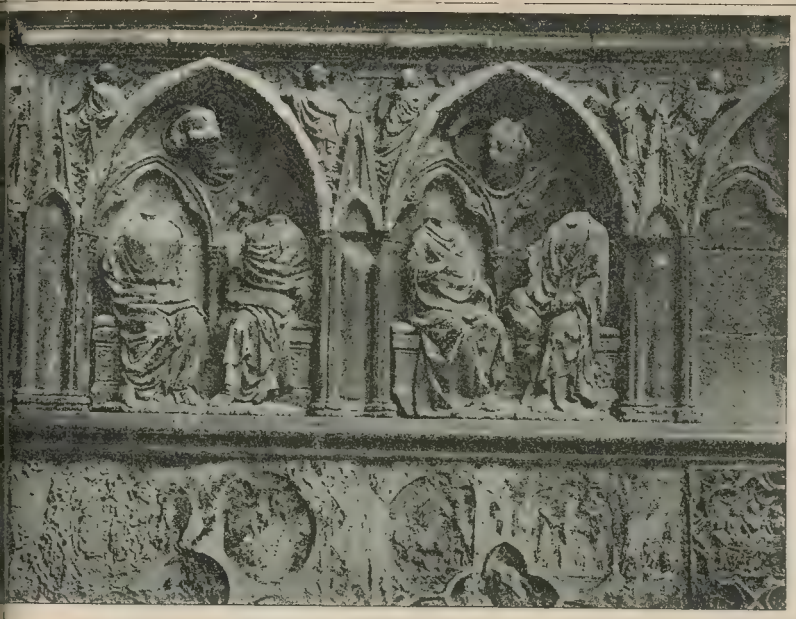


MOISSAC CLOISTER

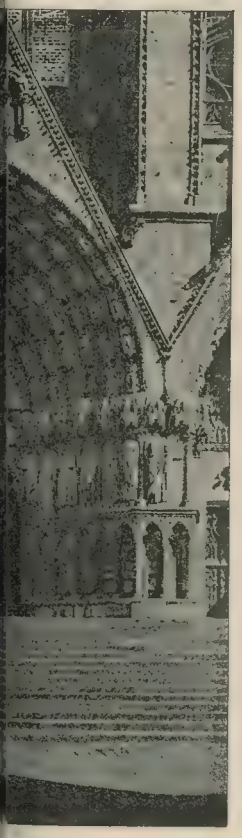


MOISSAC.





AUXERRE.





KILPECK.

INK PHOTO BRAGUE & Co LTD 4 & 5, EAST HARDING STREET FETTER LANE E.C.

VAL SCULPTURE," AT CARPENTERS' HALL.

MONTHLY REVIEW · *of* · CONSTRUCTION.



The Stalls Saloon.

THE LONDON OPERA HOUSE.—I.

GENERAL DESCRIPTION.

UATED near the southern end of Kingsway, the new opera house built for Mr. scar Hammerstein from the architecesigns of Mr. Bertie Crewe stands sland site with frontages of 264 ft. to y, 120 ft. to Portugal-street, 37 ft. to -street, and 90 ft. to Sardinia-street, art of the building abuts on the of the Strand Board of Guardians. lection of the site, covering an area of 5,000 sq. ft., indicates due appreciation ct that an important theatre or opera ould be placed so as to be readily e from all sides. Every advantage has en of the four street frontages in arrangntrance and exit doors. The house can ied in three minutes, and hundreds nges can be accommodated in the ing streets.

terior of the building is treated somethe French Renaissance style, the main eing divided into two stories, each 0 ft. high. The lower story is heavily d, and the lines of the upper story are by coupled Corinthian pilasters, the capitals having square volutes. A t feature of this façade is a central 9 ft. high.

ingsway elevation, as well as return s of 50 ft. on Portugal-street and street, are based on a plinth of n grey granite rising to the height of e pavement level, supplied and worked s. A. & F. Manuelle, of 57, Gracereet, E.C. The corresponding façades ortland stone from the Coombefield of the Bath and Portland Stone Firms, Bath. More than 60,000 cubic ft. of tone were supplied by the company, he blocks weighing upwards of 8 tons

maining façades of the building are cherry-red facing-bricks with stone string courses, and cornice. These pplied by Messrs. T. Lawrence & Sons, hell, are made from a bright-coloured fil among the Bagshot sands, and giving int by which they are characterised. he main cornice on the Kingsway front twelve statues have been placed under the direction of the sculptor, Mr. Thomas Rudge, of Clapham. At one end of the building a group of three figures represents "Melody," while at the other end "Harmony" is similarly represented. The central figures are about 14 ft. high, and the weight of each group is fully 40 tons. Over the central window there are two seated figures representing "Inspiration" and "Composition," and four other single statues denoting "Comedy," "Tragedy," "Song," and "Dance," are disposed at suitable intervals on the cornice. These statues weigh about 15 tons each, some of them comprising two and others three blocks of stone.

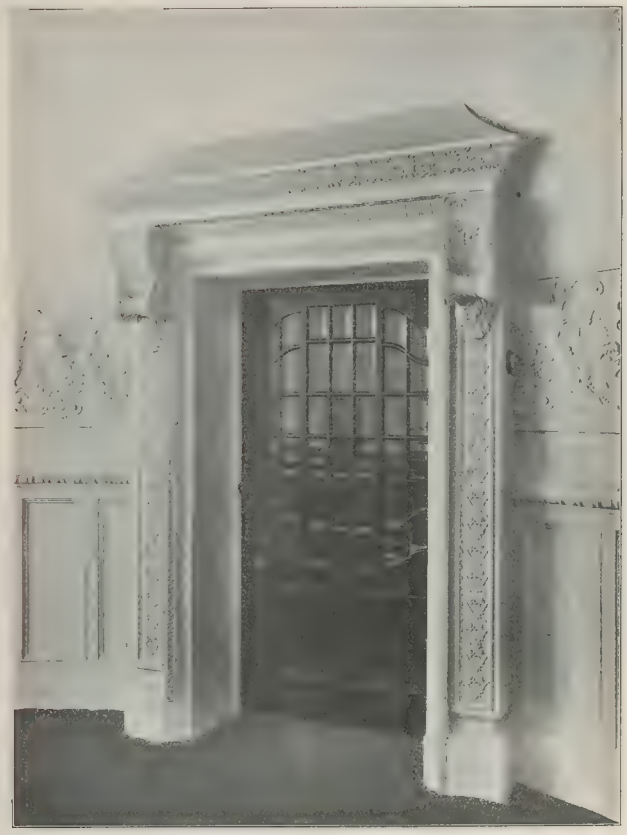
An auxiliary structural feature of the Kingsway front is the wrought-iron glazed verandah extending over the street pavement for the shelter of persons entering or leaving the building.

From the foregoing particulars the reader will be able to gather a general idea of the structural aspect of the exterior, and from the accompanying illustrations to form an opinion of its architectural merit.

The main entrance is at the south end of the Kingsway front, a flight of marble mosaic steps leading thence to the vestibule and booking offices. The entrance vestibule has an arched imitation stone coffered ceiling to match the stone arch outside. Over the door a large panel is covered by an oil painting of Pan attended by maidens. The entrance hall, arranged as a lounge, measures 60 ft. long by 30 ft. wide by 21 ft. high, and is surmounted by a peristyle of Corinthian columns supporting a heavily-beamed and coffered ceiling. The walls are handsomely panelled in plaster, the panels being decorated by medallions representing eminent musical composers. From the entrance hall two marble staircases lead down to the stalls on the floor below, and a marble-panelled stairway gives access to the grand circle and galleries.

The interior of the house may be considered as divided into three portions:—(A) Comprising entrance hall, stairways, corridors, saloons, and other accommodation for the public on several floors; (B) the auditorium, including the stalls, box tier, grand circle, lower gallery, and upper gallery; and (C) consisting of the stage, scenery dock, dressing-rooms and accommodation for the management, staff, and artistes.

In part (A) on the floor below the street level are the foyer and saloon attached to the stalls and boxes on either side of them, and approached by the staircase already mentioned. The stalls saloon has a series of eighteen Grecian columns with heavy cornices and panelled walls, and doorways in the same style. On the ground floor similar accommodation is provided in connexion with the boxes on the first tier, while a private entrance has been arranged for the Royal box. This box is constructed with sliding partitions so that its dimensions can be varied as required. The walls are panelled in silk, with gilt medallions at the crown of the panels, having miniatures of paintings in the Watteau style. The crush hall for the box tier has a cove strap pattern ceiling extending across the whole width of the building; the cornice is a very effective piece of work, and the walls are divided up into panels by pilasters. On the grand circle level a lounge, foyer, and saloon are to be found, the last being an oval-shaped chamber with a domed and coffered ceiling, having fine ornamental frieze and the centre heavily enriched with fruit in plaster. The Grecian doorways constitute an excellent example of plaster work. Above the circle foyer are the lower and upper gallery saloons. All the apartments mentioned, as well as the corridors, stairways, and other accommodation, have been designed with much care for the comfort and, above all, the safety of the public, and in these respects the new opera house will quite bear comparison with the best examples of French theatre architects. The circle is heavily moulded with a large oval; the walls are panelled with cupid drops at intervals; there is also an above with Corinthian columns and ornamental niches. The decorative work, as described above, in the vestibule, entrance hall, crush hall for box tier, stalls saloon, grand circle and circle saloon was executed by Messrs. John Tanner & Son, of Liverpool, and 45, Horseferry-road, Westminster, S.W.



The Domed Saloon (Doorway to Exit Corridor).

The auditorium proper is 85 ft. wide by about 100 ft. long, the length varying on the different circles. Below the street level the space available is devoted entirely to stalls and eight private boxes on either side; the floor sloping upward from the orchestra at such inclination that the occupants on every row of seats have an unobstructed view of the stage. At the entrance level there is a semicircular tier of private boxes, each with a retiring-room, including the Royal box and suite of apartments placed at the O.P. side of the proscenium in order that direct access may be obtained from the Royal entrance on Kingsway. Two other ranges of private boxes are situated on the same level, one on each side of the auditorium.

Above the box tier is the grand circle, with fourteen tiers of seats and eight boxes at the sides; the lower gallery with eleven t seats and six boxes; and the upper galle eleven tiers of seats.

The auditorium is constructed enti fire-resisting materials. The circles ar are of steelwork and concrete; all doors hardwood, self-closing and smoke-proo the proscenium opening is fitted with a curtain, built of steel and asbestos, w case of fire will be lowered and autom flooded with water. As additional precs an automatically-opening lantern light h provided in order to draw away heated smoke from the stage in the event of fire hydrants and other fire-fighting appliance been placed in every part of the buildin

The auditorium is unusually comfo every seat throughout the house being a fa no columns obstruct the view of spectato the sight lines have been carefully s Promenades have been entirely avoided auditorium proper, and enclosing wall been erected behind the circle and galleries prove the acoustics of the house and to p the audience from being disturbed by from the adjoining portion of the bu The total capacity of the house is which compares favourably with the accommodation of other buildings of th class in the metropolis.

The proscenium arch is 45 ft. wide by high, with a funnel-shaped profile inten throw out sound, and the auditorium is s by a rather flat, elliptical ceiling. Al are readily accessible, and the doors are full width of the corridors into which the

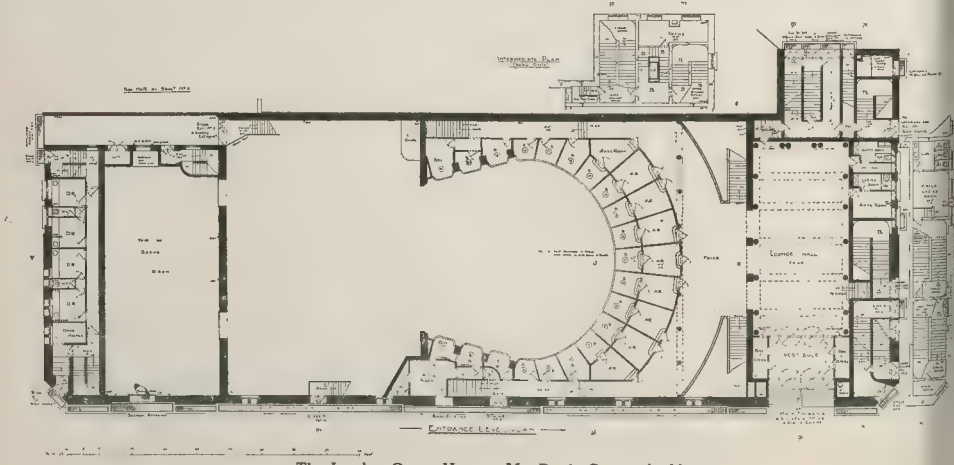
The stage is 84 ft. wide by 60 ft. deep, s distance from front to back can be increa nearly 100 ft. in case of need by throwin the partition closing the front of the s dock situated immediately behind the proper. In the same part of the buildi situated dressing, chorus, and other roo well lighted and having access to the op for ventilation purposes.

From the structural point of view the L Opera House is essentially a masonry bu in which steel has been largely used in th of framing for floors, circles, and roofs steel construction, as well as the electric heating and ventilation, and other install present features of interest to which att will be directed in our next issue.

NEW SYSTEM OF REIN FORCED BRICK FLOORI

AS HITHERTO constructed reinforced floors consist of separate panels placed be and supported by rolled steel girder joists, the reinforcement consisting of strip embedded in the vertical joints, are made with Portland cement m Numerous floors have been so built perfect success from the standpoin strength, stability, and resistance to vib sound, and heat.

An improvement recently introduced

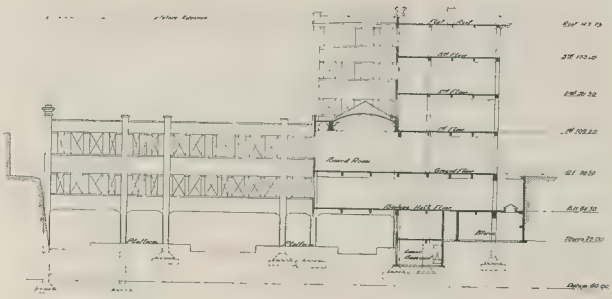


The London Opera House. Mr. Bertie Crewe, Architect.

Patent Fire-Resisting Flooring Syndi-
bodies a form of design where the
rders and joists and the reinforced
or panels, instead of acting separately,
bined so as to act together, the steel
resistance to tension and the rein-
rickwork withstanding compression.
dvantage gained by this arrangement
the rolled-steel members are very
naller than would be the case if they
mployed in the customary manner.
considerable saving can be effected in
of steel, and at the same time the
tion beam is far more rigid and offers
resistance to fire than the girder or
steel alone, even if the latter is pro-
by fire-resisting casing of the usual

1 to 4 illustrate typical forms of
flooring. By Figs. 1 and 3 it will
that an ordinary I-beam is embedded
b of a T-beam with curved haunches,
and flange of the beam consisting
porous bricks with closed ends, and
ete which is filled in between and
he bricks, except in the case of the
om bricks placed around the lower
the embedded I-beam. The soffit of
is completed by porous brick tiles
flush ceiling with brick face, which
eft exposed in industrial buildings or
in buildings where decoration is

2 and 4 are sections of the beams
the other two drawings, but are
rough the transverse joints, these
width sufficient to permit the floor
be adequately reinforced by round
the ends of these rods to be carried
anchored in the haunched web of
m formed.
ch as floors composed entirely of
brick have already proved their
for withstanding heavy loading with
afety, it is evident that the floor
strated by Figs. 1 and 3 must be
nger in consequence of the wider
d the mass of concrete around the
Moreover, their resistance is in-
by the application of transverse
ent in addition to the longitudinal
ent used in brick floors of the
type. Consequently the floor slab
capable of being designed so as to
an efficient flange to, the T-beam
d in the sections, and it may be
at, if necessary, compression rein-
can be introduced into the web and
the construction.
new type of beam is based on the
eral principles governing the design
ced concrete beams, it is easy to
claim made for the economy of the
on team by the ordinary formulæ.
olled steel joists intended to act
ncement can be built up with the
chions as integral portions of the
eel framework, and, being securely
position, they are firmly secured,
at each end, but at intermediate



Section B—B.

Metropolitan Railway New Offices, Baker-street, W.

points where main girders and joists are connected. Therefore the system of reinforcing members constitute a working platform capable of supporting the moulds and centring for constructing the beams and floor slabs. The reinforcement is not exposed to the risk of accidental displacement, as sometimes happens in the case of reinforced concrete, and the system of rolled-steel joists, in virtue of its load-bearing capacity, is capable of supporting the dead weight of the brick and concrete afterwards added, and moderate working loads in addition, without waiting for the concrete to set.

NEW OFFICES FOR THE METROPOLITAN RAILWAY.

The Metropolitan Railway Company recently placed in competition a certain number of engineering firms specialising in the design of reinforced concrete structures, for the new offices which the company intend to erect on the site of the Baker-street Station. Messrs. Edmond Coignet, Ltd., of Victoria-street, Westminster, have been selected for the preparation of the working drawings, and the work is to be executed on their system under the control of Mr. W. Willox, M.Inst.C.E., Chief Engineer of the Metropolitan Railway Company.

The principal dimensions of this large building, which is to be constructed entirely in reinforced concrete, are as follows:—The total length of the front elevation will be 140 ft., and the height, measured from the foundations to the roof, will be approximately 90 ft. The back portion of the structure will have two wings, measuring respectively 111 ft. in length by 38 ft. in width, and 100 ft. by 43 ft. for the smaller wing, the latter being connected to an existing building by a footbridge 82 ft. in span, 12 ft. wide, and with a height of 15 ft.

A retaining wall in reinforced concrete, of a length of 152 ft., will run parallel to the front elevation. The total length of the retaining wall, including the returns, will be 212 ft., the height being 24 ft.

The walls of the building are to be entirely in reinforced concrete of a thickness of 6 in., and for the principal elevation the wall is to be faced with brickwork.

The building will be composed of a lower basement, basement, booking-hall floor, ground floor, first, second, and third floors, and a flat roof. The superloads, up to the first floor included, are to be 150 lb. per square foot, the second and third being 90 lb. per square foot, and the roof 40 lb. per square foot.

The total superficial area of floors and roof in reinforced concrete will be approximately 65,000 sq. ft.

VENTILATION.

At a meeting of the Royal Society of Arts on the 7th ult. a paper on the "Influence of Ozone in Ventilation," by Dr. Leonard Hill, F.R.S., and Dr. Martin Flack, M.A., was read.

The authors said that the good effects which resulted from efficient ventilation and open-air treatment, though generally supposed to be due to the chemical purity of the air, were due really to the movement, coolness, relative humidity of the air, and the ceaseless variation of these qualities. The ventilating engineer had hitherto followed a great illusion in thinking that the main object to be attained was chemical purity of the air. The heating engineer had sought after an equally great illusion in striving to obtain a uniform summer temperature. The ventilating and heating engineers should aim primarily at giving air which was cool and of proper relative humidity, and which moved so as to vary the cutaneous state of the body. Comfort and

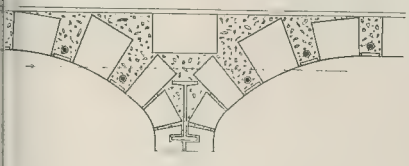


FIG. 1. *Section thro' Brickwork*

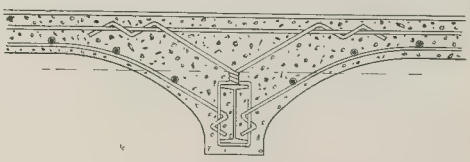


FIG. 2. *Section thro' Concrete Joint*

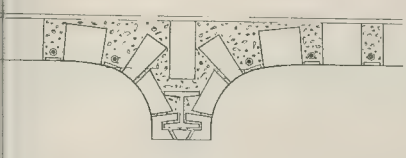


FIG. 3. *Section thro' Brickwork*

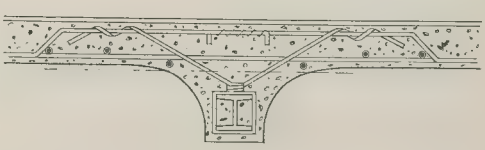


FIG. 4. *Section thro' Concrete Joint*

New System of Reinforced Brick Floor.

discomfort in crowded rooms and shut-up places depended, not on the chemical purity of the air, but to a minor degree on the influence of the smell of the air on the olfactory sense, and, to a vast degree, on the influence of the temperature and relative humidity, and the variations of these qualities of the air, which acted on the great field of cutaneous sensibility. The chemical purity of the air might be considered from three points of view—the concentration of carbon dioxide, the concentration of oxygen, and the supposed presence of organic poison exhaled by the breath.

Owing to the fact that a percentage of carbon dioxide exceeding a very few parts per 1,000 was not legally permissible in factories, it was commonly supposed that any greater excess acted as a poison. The truth of the matter was quite otherwise, for whatever the percentage of carbon dioxide in the atmosphere might be, that in the pulmonary air was kept constant at about 5 per cent. of an atmosphere by the action of the respiratory centre. It was impossible that any excess of the gas should enter the body even in breathing the air of the worst-ventilated room, in which the percentage of carbon dioxide assuredly did not rise above 0·5 or at the outside 1 per cent.

The oxygen in the worst-ventilated theatre, schoolroom, or chapel was never lessened by more than 1 per cent. of an atmosphere, but all the evidence went to show that only when oxygen was lowered below a pressure of 14 to 15 per cent. of an atmosphere did signs of oxygen want arise. A diminution of 1 per cent. of an atmosphere had not the slightest effect on health or comfort.

As to the general principles which ought to control the practice of the heating and ventilating engineer, the old English methods of open fire and open window had very much to recommend them. By the open fire air was kept moving and cool air was brought in; the heating was by radiation, and uniformity of the conditions of temperature in the room was prevented. On the other hand, the impulsion of hot air into a room was the most objectionable of all the systems employed. A cool air and radiant heat were the ideal; the hot air system gave neither. In cold weather the heated air became excessively dry; the vigour and health of children in America had been seriously undermined by the impulsion of hot "desert air" into the schools.

In the concluding part of their paper the authors discussed the uses of ozone in ventilation, basing their remarks on experiments carried out with an ozonising apparatus put at their disposal by the Ozonair Company. They stated that by the smell concentrations of ozone of far less than one part in a million could be detected, and the gas should be present in the air for continuous breathing in concentrations not greater than that scarcely perceptible to the smell. Concentrations of even one part in a million were too irritative. Very weak concentrations, barely perceptible to the smell, had no ill effects, but destroyed the effect of unpleasant smells and gave a certain tang or quality to stuffy air which relieved its uniformity. It was in this respect that ozone had its use. There existed in modern conditions of life so many trade shops, tube railways, cold meat stores, etc., where the employees were exposed to a persistent, uniform, and depressing smell. The air in many buildings was made to smell by the heating appliance used. The addition of ozone took away the smell and relieved the monotony of such air, and as the Ozonair apparatus could, by the turning of a switch, be put in or out of use, the uniformity of the atmospheric conditions could thus be frequently changed. The ozone, no doubt, exerted its effect both on the cutaneous and respiratory nerves. They thought that the addition of ozonised air to the Central London Railway had improved the conditions, the unpleasant characteristic smell of the tube being diminished, and the monotonous quality of the air improved.

CONSTRUCTION NOTES.

The Road. SIR JOHN H. A. MACDONALD read a paper before the members of the Royal Institution on the 16th ult. on "The Road: Past, Present, and Future." He said that the problem of the future was to find the best mode by which a road could be constructed which would not have its surface broken by traffic and would make transit easier both for passengers and goods, and should neither form puddle holes nor exude mud to clog the vehicles and to form thick dust when the weather was dry; in short, that there should be no loose material from the road, except the small quantity caused by surface wear, which it was found was but trifling when a sound crust had been rolled in. It might seem extravagant to say that in another decade the main roads would have become practically mudless, dustless, and smooth ways, but if any one had prophesied on the first day of the new century that before twelve years had passed there would be more than 200,000 motor vehicles upon the roads of Great Britain, and that of the 500,000 horses in London 420,000 would have disappeared from the streets, the presumptuous prophet who said such impious things would have been considered fit only for Hanwell or Colney Hatch. Considering what was to be the road of the future, the question, "What shall be the weight-bearing crust?" was one of vast importance, and this was engaging the attention of the advisers to the Road Board. One thing was now universally recognised—that the road of the future should be a truly bound road, in which whatever kind of stone was used that stone should be held together by some pitchy or bituminous material so that it should be indeed a crust and not something which had no real cohesion, and into which Macadam's enemy, the water, could make its way whenever water fell. Roads formed as regards the crust in this way were now common. Many could be seen in Kent and other counties near London, and stretches were being laid throughout the kingdom. Would it not be well to endeavour to provide an elastic skin or carpet to lie between the vehicle and the bearing crust? That question was also engaging attention. A material to be used for an elastic carpet for the road crust must have a viscous liquid quality. Research had been made with pitch and with bitumen, and the conclusion had been reached that pitch would not give satisfactory results, but bitumen would do so. It was expected that with such material laid on the top of the main road crust and integrated with it a valuable road protection would be supplied, so that the road crust would be practically permanent, the upper protecting sheet being re-made up and re-laid as required. To fulfil the ideas of providing a partially elastic carpet which would carry out the silencing of the rolling noise of vehicles and reducing shock, the engineers at the Road Board had already decided on experimental roads which would consist of a strong road crust intended to carry the weight of the traffic, and on this to superpose the renewable carpet.

The New London Dock. THE Port of London Authority has received, through the Prime Minister, an intimation that the King has consented to cut the first sod of the new dock about to be constructed south of the Royal Albert Dock. It is stated that the estimated cost of the scheme for the building of the new dock is nearly 2,500,000*l.*, and the work will occupy some years. The length of the dock will be 4,600 ft., so that there will be a quay length of 9,200 ft. The width at the eastern end will be 700 ft. and at the western end 500 ft. There will be a depth of 38 ft. of water, and the area of water in the dock will be 65 acres. The land on which the new works are to be carried out was bought some ten years ago.

The Necessity for Standardisation. SIR JOHN MCCALL, Agent-General for Tasmania, presided at a recent meeting of the Institute of Sanitary Engineers, when the Presidential address was delivered by Mr. A. J. Martin, who has been re-elected President of the Institute. Mr. Martin said that the historian of the next generation would have to put on record how the greatest commercial nation in the world, fighting for dear life against a swarm of keen competitors, persisted in handicapping itself with an antiquated and cumbrous system of weights and measures totally different from that employed by the rest of the world, and containing such gems as that 30¼ square yards make one rod, pole, or perch. The most striking case probably of expense and inconvenience caused by the absence of a recognised standard had occurred in connexion with railway gauges. Undeterred by our experience, Ceylon, and Australia had committed selves to a policy of mixed gauges, and, or later, would have to rectify their m The employment of standards involv application of systematic tests, whic given rise to a new profession, that testing engineer. The rigorous test applied to all kinds of engineering materi led to a vast improvement in their reliability, and uniformity. The stand the qualification of the engineer had un a notable evolution. Local authoriti begun to take a more enlightened view duties, and the office of the District S to-day was far from being a sinecu regarded it as a reproach to British sense that men utterly devoid of engi qualifications should be free to undertak of the gravest import to the life and h the community. In the absence of a working standard of professional com local authorities requiring the services engineer not infrequently advertis competitive schemes. The weak point competition system was that it merely the scheme, while it afforded no criticism competence or honesty of the ma Association of Consulting Engineers, wh been recently formed, met a long-felt bringing together engineers who were petent in their respective lines. He that local authorities should be able to the offices of the Local Government B register of all engineers who had carr works of the kind they had in view specified time.

Engineering Features of the Royal Liver Building, Liverpool. BEFORE the Liverpool sity Engineering Socie A. E. Culley, A.M.I recently read a paper, "Some Engineering of the Royal Liver B Liverpool." By the a series of lantern slides Mr. Culley d the progress of the edifice, which is of re concrete construction throughout. explained that by using this material as 25 per cent. in the cost of the was saved. Dealing next with the wa Culley stated that these were made of the thickness of which varied from 3 in. and owing to the fact that the building the frame type the walls were able to be at several different floor levels simultan Finally, the internal arrangements wer with, such as the lift accommodation, the heating system, and the clock.

Standard Heads for Small Screws. THE standardisation screws and screw hea first considered by the neering Standards Committee on Screw and Limit Gauges, and finally by sub-committee appointed in July, 190 report now issued was prepared after ex evidence had been obtained from the chief facturers and users of small screws country, and contains recommendatio the dimensions of countersunk, instr round, cheese, and filister heads for Association screws of sizes 0 to 14 and saw cuts in the same. The report co with a sheet of illustrations and a standard proportions.

The British Fire Prevention Committee's Fire Tests. THE British Fire Pre Committee's testing tions last week compris tests on a series of openings glazed with "C lite" glazing, no pa glazing exceeding 4 ft. super., and twelve being under test for varying periods o minutes and ninety minutes, under the mittee's standards. There were furthe with two reinforced concrete doors m the Committee for experimental pu and submitted for the Committee's st two-and-a-half hours' high-temperatu test. Here, again, work that had never been under official examination was observation. In both cases the resu the tests will be published shortly.

THE BUILDING TRADE.

ANCHESTER BUILDING 'RADES EXHIBITION.

E seventh Manchester Building Trades Exhibition, organised by Mr. W. Cawood, was opened by the Lord of Manchester at the City Hall on y. The Exhibition is under the patron- the Manchester, Salford, and Building Trades Employers' Asso- Manchester and District Branch l Registration of Plumbers, the Insti- Plumbers, Ltd., and others. The Ex- includes a series of town-planning , which will be of special interest to chitects. Diagrams of the proposed ns of the Royal Exchange in the Bill Parliament, together with new ideas how that scheme could be improved also shown, as well as the long-dis- nlargement of the railway-station. following are some notes on the :

and No. 69 the Acme Patent Ladder y, of Summerley-street, Earlsfield, S.W., show extension ladders of all ions, and also their automatic folding n steps and automatic trap-door fire

ands Nos. 65 and 66 Messrs. W. R. & Co., Ltd., of Horwich, manu- s of porcelain-enamelled fireclay and ware—comprising baths, lavatories, closets, sinks, etc.—show their stone- oes, gullies, and fittings, etc.

and No. 74 the Gelatinous White y, Ltd., Harewood Wharf, Norwood Southall, show their gelatinous Filocol, which is a distemper for eilings and inside walls. It does not peel; it is sanitary, and gives a ng odour to the room where it is t can be had in powder or paste, and as a substitute for whitewash.

and No. 89 Messrs. Kirchner & Co., and 25, Tabernacle-street, London, hibit their woodworking machinery, g a heavy tenoning machine, with bottom scribing spindles, specially for builders and contractors; a rising table saw-bench, with moulder and slot mortiser, suitable riety of work; a heavy rising table h; patent overhand planing and machine, with tables 8 ft. long; avy panel planing and thicknessing ; universal sharpening machine: spindle moulding and recessing with top arm which can be swung of the way when not required; Ideal" band sawing machine, with utside ring oiling bearings; new e" type four-cutter planing and machine; combined over and under and various other machines.

ands Nos. 16 and 17 Messrs. C. H. hite & Son, Grand Surrey Canal, , London, S.E., show their " ceiling whitewash distemper in rm. The material has been intro- supersede the wasteful and objec- methods inseparable from home-made sh. The distemper will readily mix y dry colour, producing suitable n wall and frieze decoration at a cost.

ands Nos. 27 and 28 the Saxon Cement Company, Ltd., Cam- show examples of the raw material arry, of raw material after drying, d marl ready for burning, and also of raw material ready for kilns, of clinker from continuous and ilns, of clinker after preliminary and of finished Saxon cement.

and No. 44 Messrs. F. McNeill & b's-buildings, Bunhill-row, London, d also Manchester and Salford, show phalt roofing felt, sarking felt, us hair felt, inodorous felt, patent phalt damp-proof course, fibrous damp course, pure Trinidad bitumen urse, dry hair felt, fibrous plaster leeting, "Combinite" roofing, etc., and several other of the firm's well-known specialities.

At Stand No. 63 Messrs. C. Jennings & Co., timber merchants, joinery manufacturers, and general woodworkers, Pennywell-road, Bristol, show an example of their fretwork arches with balustrading above. Special attention is directed to the specimens of oak and ash plywood. Other exhibits include two windows, one illustrating the firm's P.T.O. fittings, and the other Miller's B.C. system. Doors are shown in a variety of designs, also balusters round turned, square cut, and fretsawn, and newels, and other examples of their manufactures. The firm's patent geyser is shown, and there will be demonstrations of its working at frequent intervals; and also mouldings, electric light casings, and picture rails in great variety, and Smokcure chimney-pots. Messrs. Jennings are exhibiting a four-fold brass-jointed souvenir rule and a new fully illustrated catalogue.

The Patent Rapid Scaffold Tie Company, Ltd., 124, Victoria-street, Westminster, S.W., have erected a scaffold at their stand (No. 60), showing the well-known Scaffixer scaffold lashings. Demonstrations are given at intervals showing the speed, strength, and efficiency of these lashings.

Messrs. W. B. Haigh & Co., Ltd., Globe Iron Works, Oldham, are exhibiting their patent combination chain and hollow chisel mortising machines, etc.

Messrs. Shaw & Carter, Ltd., 10, Edgbaston-street, Birmingham, are showing the following :—Patent cloakroom fittings for elementary and secondary schools, patent revolving boot-racks, "Shawcar" patent umbrella holders for schools, single and double rail hat and coat racks, hat and coat racks heated by hot water for schools, "Shawcar" patent ball-bearing mortise and rim locks, "Shawcar" patent ball-bearing axle pulleys, "Simpil" patent axle pulleys for use in sashes, doing away with cords, weights, and boxings, "Shawcar" self-closing door hinges, to act without springs, new and improved designs of bronze metal and brass lock furniture and door fittings, for public buildings, schools, private houses, etc.

An interesting feature of the stand of Messrs. G. Brady & Co., Engineers and Lift Makers, Pott-street, Ancoats, Manchester, is a new patented type of electric service lift, working, to raise loads up to 56 lb. The novelty of this lift is that steel tapes are used instead of wire or hemp rope. It can be operated either by push buttons or hand rope control, and is capable of making 1,000 journeys at a cost of 1d. for current consumption (at 2d. per unit). An electric cathead is also shown, suitable for builders, and is designed for handwork and rough usage. A patent hand-power service, or dinner lift, is shown complete and working, to raise a load of 56 lb. It is noiseless and self-sustaining, the brake acting automatically, so that the cage is sustained at any point immediately the hand rope is released. A hand-power goods' lift gear to raise a load of 10 cwt. is shown. This is also noiseless and self-sustaining, and of similar construction to the service lift, but fitted with spur gearing. A revolving shutter is also shown. These shutters are for car entrances; as they coil at the top they are out of the way, and are easily operated, being usually balanced on spring rollers. Large shutters are worked by gearing.

Messrs. Cakebread, Robey, & Co., of Caroba Works, Wood Green, London, N., are exhibiting at Stand No. 70 a selection of their specialities of drain and tube clearing machines. Among their patent locking joint devices for preventing rods being left in a drain or becoming disconnected in use is their "Ferret" lockfast joint, of which they have supplied his Majesty's Government with over 200,000 ft. during the last few years. This joint has also been largely exported. They also show the "Magnet" lockfast joint, which obtained a bronze medal at the Health Exhibition at Brighton, 1910, of the Royal Sanitary Institute. This joint is made of cast brass, and has no rivets or pins of any kind, and has no spring to get out of order. This firm also exhibits several patterns of smoke machines, and among these we notice the "Standard" smoke machine, which obtained a bronze medal at the exhibition at Belfast last year of the Royal Sanitary Institute. One of the features of this machine is its portability, as it only weighs 14 lb., and the size is only 12 in. by 7 in. by 9½ in. high. The features of the patent drain plug exhibited by the firm is its easy action, owing to a wheel carriage revolving between the thumb-screw and top plate. Among other goods exhibited are drain testing bags, suction pumps, clearing obstacle rods for pruning trees, etc., also Sutton's patent lead collars, which can be fixed to existing work without removing pipe from nozzle of water-closet basin. Another exhibit is Steven's patent barrel lock, which can be fixed with 1-in. centre bit in a few minutes. It is very strong and reliable, and there are no delicate working parts.

Messrs. Stothert & Pitt, Ltd., Engineers, London and Bath, show their "Smith" mixer on skids fitted with feeding hopper and stand and driven by an electric motor. This machine is used very largely for mixing both concrete and tar macadam. The mixer has a capacity of 6 cubic ft. mixed material per batch. The firm also show the "Victoria" concrete mixer, with special feeding arrangement, water tank, and driven by an electric motor; the whole plant is mounted on a truck with road wheels and swivelling fore-carriage. The capacity of this mixer is 6 cubic ft. per batch mixed material. "Smith Hand Concrete Mixer" is also mounted on wheels and complete with charging platform. The capacity of this mixer is 3 cubic ft. mixed material.

At Stand No. 56, Vulcanite, Ltd., of Westinghouse-road, Trafford Park, Manchester, and of Belfast, London, etc., show a model brick building with a flat roof laid out as a miniature roof garden, the roof being constructed of joists and 1-in. T and G boards covered with patent Vulcanite roofing. Messrs. Vulcanite, Ltd., who are the patentees of this roofing, have covered roofs measuring in the aggregate upwards of 4,000,000 super. yds., including hotels, villas, works, and public buildings in the United Kingdom, the colonies, America, and other countries, and they claim that their patent Vulcanite roofing is a perfect covering for flat roofs of wood or concrete construction, inasmuch as it is absolutely waterproof and fireproof, and is not affected by expansion and contraction, vibration, or settlement of the building. The exhibit also includes a water tank, which is formed of 9-in. brick walls, the bottom and sides being lined with Vulcanite, and afterwards bricked in with white glazed bricks. In order to demonstrate the waterproof qualities of the Vulcanite ordinary mortar only has been used and an opening has been left in the glazed brick lining leaving a portion of the Vulcanite exposed. Another feature of the exhibit is "Bituna" pure bitumen dampcourse. This material, which is being specified by nearly all the leading architects for foundations, subways, arches, etc., is guaranteed to be made of pure Trinidad bitumen with no admixture of coal-tar or coal-tar pitch. A section of a brick wall is shown standing in water with a course of "Bituna" about 6 in. above the water level. Underneath the dampcourse the bricks are soaking wet, whilst they are perfectly dry above. Messrs. Vulcanite, Ltd., are also exhibiting Vulcanite and Rexilite dampcourses for foundations, etc.; Leatherite, Vulcanite, asphalt, and Rexilite roofing for sloping and circular roofs; Vulcanite bitumen and Vulcanite waterproof sheetings for underlining slates, tiles, etc.; and a model building covered with Rexilite.

The specialities Messrs. D. Anderson & Sons, Ltd., are exhibiting are as follows :—Their "Rok" roofing has been recently put on the market, after exhaustive and successful trials in India and other countries where the

conditions are far more severe than in England. In South Africa the South African Union officials have passed it as meeting all their requirements of a roofing felt, and have given permission for its use in contracts to be executed for them. At home it has recently been used for roofing buildings for the Great Southern and Western Railway of Ireland, at Limerick, and many other buildings. The firm are also showing their Stoniflex felt, which is well-known as a capital felt for roofing buildings, and also for sarking and lining purposes. Another new article they are showing is their "Zerolite" insulating paper for insulating cold stores and lining purposes. They are also drawing the attention of architects and others to the bitumen sheeting, made from pure Trinidad bitumen, which they are supplying for reservoirs, tanks, etc., and their pure bitumen dampcourse for walls. Rolls of their bituminous hair felt, which is coming greatly into favour for sound deafening and sarking purposes, are on show. This article is an improvement on the ordinary hair felt for this purpose, as it is vermin proof. Fencing treated with Sideroleum wood preservative is shown. It is also used for half timber work, sheds, etc. It is both a preservative and gives a pleasing appearance, being of a nut-brown shade. The firm also show a range of galvanised sheets coated with their "Sideroslhen" anti-corrosive paints in various shades, which they commend to architects' attention as paint for galvanised iron.

The Interoven Stove Company, 78A, Great Queen-street, W.C., are showing their well-known stove. The "Interoven" may be used as a sitting-room grate, presenting exactly the normal appearance, while a simple movement converts it into an efficient cooking-range, equal in its cooking capacity to a 36-in. kitchener. The hot-plate provides room for four large saucepans, two of one gallon and two of three pint capacity. The high-pressure circulating boiler can be heated when the oven or the open fire is in use, ensuring a continual supply of hot water. It can be cleaned or removed without any part of the stove being unscrewed or unset. Hot-water tanks of up to thirty-five gallon capacity can be fitted. All flues are of iron, thus reducing cost of setting to a minimum. It can be fitted in any ordinary room, opening 14 in. deep if without boiler, or with boiler by cutting chase in wall for boiler flue 2 in. deep by 5 in. wide by 20 in. high. It is fitted with a blower, the hot-plate acting as this very useful addition to an open fire-grate. The oven and all working parts can be removed and replaced without the use of tools. The flues and chimney can be easily cleaned by lifting out oven.

The exhibit of the Art Metal Construction Company, Ltd., and Roneo, Ltd., includes steel doors, steel desks, and steel furniture. The manufacture of steel furniture, doors, partitions, desks, etc., was originally developed in the United States. The Roneo, Ltd., have been acting as selling agents for the eastern hemisphere for some time, but recently the Art Metal Construction Company, Ltd., has been formed, and a factory is now being erected at Silvertown for the purpose of turning out this work in England. The door exhibited was tested by the British Fire Prevention Committee on December 13 for a period of two hours. An official report is now being prepared. One has only to look at the door to be convinced of the manner in which it went through this severe test. In this exhibit are shown doors panelled in various styles, and though the architect's design can be followed, protection against fire is maintained. Steel counters, screens, and dividing partitions are shown, as well as the more complicated roll-top desks, vertical letter files, and cases with roller curtain. The exhibit includes library shelving and strong-room shelving. The finish of the steel work is excellent, and we understand that the material is made of a special grade of steel, free from scale and imperfections. It is treated to three coats of best stoved japan, with the result that it will not chip or scale, and will withstand any moist climate. A steel door exhibited is finished in grained mahogany, the graining being very well done.

The Val de Travers Asphalte Paving Company, Ltd., 92, Market-street, Manchester, are exhibiting the following models:—Tank lined with asphalt, asphalt covering to concrete roof, valley gutter lined with asphalt, stable, vertical plate work, covering of casemate, sewer and entry, powder magazine floor and vertical sides, sanitary manger, bridge covered with asphalt, asphalt underlay for parquet flooring, horizontal dampcourse, and bituminous concrete block to absorb vibration of machinery. They show samples of compressed asphalt cut up from various streets after many years' wear, natural rock asphalt as mined, powder, and slabs hydraulically compressed, and of various sizes and thicknesses. They also show rock asphalt mastic for paving, granited, and in two lays for roofs, etc. Val de Travers asphalt blocks are also shown, Pyrimont Seyssel asphalt blocks, "Matrix" in barrels and sample tins, acid resisting asphalt paving, Bridport grit, refined Trinidad bitumen, and refined Venezuelan bitumen.

The Beaver Company, of Ottawa, Canada, and Buffalo, New York, who have established themselves in the United Kingdom with the object of developing their substitute for lathe, plaster, and wallpaper, are exhibiting at Stand No. 73A. Beaver Board is a finished wall-board that takes the place of both lathe and plaster and makes the use of wallpaper unnecessary. It is made entirely of selected woods, reduced to fibrous form and pressed into panels of various sizes with a uniform thickness of a scant $\frac{3}{32}$ of an inch. It has a mat or pebbled surface, adapted to tinting or painting in any colour-scheme. It is very light, and yet tough and strong. In manufacture the wood fibres are crossed, ensuring the maximum resistance to sound, cold, or heat. The material is uninjured, it is claimed, by shocks, strains, and vibrations that often bring plastered ceilings down, and it will not crack, chip, or deteriorate with age.

MONTGOMERY'S BUILDING TRADES EXHIBITION.

THERE must be considerable activity in the building trades at Manchester, judging from the fact that not only is there the exhibition of building materials, etc., now being held in the City Hall, but that a Building Trades Exhibition, arranged by Mr. H. Greville Montgomery, is to be held at Rusholme from March 9 to March 23. The offices of the Exhibition are at 27, Brazenose-street, Manchester.

LONDON MASTER BUILDERS' ASSOCIATION.

THE fortieth annual general meeting of the London Master Builders' Association was held in the Council Chamber, Koh i-Noor House, Kingsway, W.C., on February 29. The President (Mr. G. Bird Godson) presided, and afterwards Mr. James S. Holliday (the newly-appointed President).

The following officers and members to fill up rota vacancies on the Executive Council were elected for the coming year:—

President: Mr. James S. Holliday (Messrs. Holliday & Greenwood, Ltd.).

Senior Vice-President: Mr. Walter Lawrence, jun. (Messrs. Walter Lawrence & Son).

Junior Vice-President: Mr. W. F. Wallis, J.P. (Messrs. G. E. Wallis & Sons, Ltd.).

Treasurer: Mr. Edmond J. Hill (Messrs. Higgs & Hill, Ltd.).

Council: Mr. C. E. Allen (Messrs. Allen & Co., Pimlico); Mr. F. J. Gayer (Messrs. E. A. Roome & Co.); Mr. R. J. Holliday (Messrs. Holliday & Greenwood, Ltd.); Mr. F. M. May (Messrs. Holland & Hannen & Cubitts, Ltd.); Mr. F. G. Minter; Mr. W. J. Renshaw; Mr. Howell J. Williams, J.P., L.C.C. (Messrs. H. J. Williams, Ltd.); Mr. Hy. Wall (Messrs. Chas. Wall, Ltd.); Mr. Walter Wood (Messrs. F. & F. J. Wood).

Honorary Auditor: Mr. E. S. Blake (Messrs. W. E. Blake, Ltd.).

A hearty vote of thanks was given to Mr. G. Bird Godson for the able and assiduous manner in which he had discharged the duties of President during the past year.

The Trade Disputes Act (1906) was considered, and the meeting desired unanimously to lodge a petition against the said Act in the House of Commons.

Instructions were given to secure the signatures of all the members of the Association, and they are earnestly requested to do so.

The fortieth annual Report was pres
and approved, and also the audited acc
From the annual Report we take
following:—

"During the past year there has be
improvement in the building trade, b
abnormally keen competition which pr
renders it difficult to carry on busine
anything like profitable lines.

The Institute of Builders formulated a
ments to Clauses 20 and 28 of the A
Contract, together with a new form of co
for sub-contractors. These proposals were
before this Association and were appr
Further steps in the matter are now
taken.

The National Insurance Bill has been
fully considered in co-operation with
bodies. The Council is glad to recognise
public attention is being drawn to the
abuse of the Trades Disputes Act (1906),
they are associating themselves with
bodies in pressing upon the Government
action to put an end to the abuses ex
under the Act. Careful attention has
given to several other Bills before, or
brought before, Parliament, and they
been referred to the Employers' Parliame
Council. The Council takes this opport
of thanking Mr. William Shepherd and
Benjamin I. Greenwood for their servic
the trade as members of the Executive
mittee of the Employers' Parliame
Council.

Mr. F. G. Rice was appointed represent
of this Association on the Home Office De
mental Committee appointed to co
matters relating to the dangers arising
the use of lead in painting, to collect evid
and to report thereon. The Committee
pointed has held many protracted meet
and the building trade is under great ob
tions to Mr. Rice for the interest, atte
and ability which he has devoted to
subject.

The labourers applied for the formul
of a Working Rule Agreement, but the Co
could not consent to the proposal. The Co
declined to consider an application fo
increase of wages to smiths and hammer
as there was no Working Rule Agree
between their societies and this Associa
Six months' notice of the termination
June 8, 1912, of the present Working
Agreement between this Association and
Amalgamated Society of Carpenters
Joiners was received. A copy of a new W
ing Rule Agreement was also received, bu
Council of this Association could not acce
as it was proposed and signed jointly b
Amalgamated Society of Carpenters
Joiners and by the Furnishing and Cab
Makers' Societies, the latter not being a
nised branch of the building trade.

Amongst other matters the Council
given careful attention to the following:
1. Suggestions from the Quantity Surve
Association as to items to be embodied in
preliminary bills of quantities.
2. A movement on the part of organ
workmen to obtain permission to us
Labour Exchanges for other purposes
those for which they were originally intend

PORTSMOUTH MASTER BUILDERS' ASSOCIATION

THE annual dinner of the Borough of P
mouth and District Master Builders'
Building Trades Association was held in
Mayor's Banqueting-room of the Town
recently. Councillor A. E. Porter (Presid
of the Association) in the chair, and t
supporting him included Messrs F. H
(Vice-President of the National Federation
Building Trades Employers), F. Woo
(Secretary of the Southern Counties Fed
tion), J. Harding (Vice-President of the P
mouth Association), F. B. Roskell (Secre
of the Portsmouth Association), etc.

After the loyal toasts had been
honoured, Mr. S. Salter submitted "
Mayor and Corporation," and Councillor E
Main responded. He said there was one di
tion in which, in his opinion, the Corpora
should not interfere with the builders,
that was in attempting to regulate their
tracts with their employees. Whatever
done in connexion with the Town Cou
contracts, he thought they had no right
interfere with builders' contracts with t
men. In the Corporation they endeavoure
so frame their contracts as to make them
all round, both for employer and emplo
But when it came to those outside the C
poration they had no right to interfere.
was the last person in the world to say
they should not pay the working classes
adequate wage, because it enabled the

in better houses, and in the long run ne was the better off; but he thought the ers could be well left to deal with mployees, without any interference from uncil.

cillor Ash proposed "The Portsmouth istrict Master Builders' and Building Association." Some people thought sociation existed merely to fight the but that was not so. Its object was to everything run smoothly, by inducing ster builders to "toe the line" and unison in dealing with their men.

President replied, and said the Asso- was not only forty years old, but its rship numbered eighty, which was very onsidering the circumstances of the They hoped, however, to augment that , and to induce all master builders in trict to join. Co-operation was in the he men were teaching them that, and only too evident that unless the masters ed they would have to go under. The tion was not formed to fight the men, order that by co-operating one with the and working in unison, they might things to go on the more smoothly. thout unity the employers would not be do anything, nor would they be able their aims carried out. The men's were endeavouring to get all the em- to join the unions. That was their im, and that was really the object in on the fair wages clause in the There could be no other reason for the existing clause for ensuring fair all Corporation contracts was quite nt for all honest builders. As an tion they were always ready to meet in remedying just grievances. Up to sent time they had got on very well e men, and had fought their battles a manner that both sides were satisfied. now many years since the Portsmouth had had any friction with their men, hough they had some trouble with the rs at the present time, he hoped it e settled amicably.

illor G. F. Smith submitted "The l Federation and Kindred Associa-

F. Higgs replied on behalf of the l Association, and spoke at some length advantages of organisation, not merely ing the combinations among the men, for dealing with the Government, with ouncils and other public bodies, who d to get the better of builders. Com- was also useful in preventing undue tion among the members of the trade. F. Woolley replied on behalf of the n Counties Federation.

Vosper, as President of the newly- Portsmouth Engineering and Allied Association, also replied. He dealt e fair wages clause, and asked why chandlers, tailors, and other trades not be compelled to hang up their wages as well as the building trades. ther toasts were "The President" id by Mr. Crockerell and acknowledged cillor Porter) and "The Visitors and tembers."

HNICAL SCHOOLS AND THE TRADES.

ineteenth annual general meeting of ciation of Technical Institutions was the 20th ult., at the Goldsmiths' Hall, ne, E.C. Sir George H. Kenrick (Bir-) was unanimously elected President Association for the ensuing year, and Presidential address on the subject, We Teach Trades-?" said the amount actually taught at the present time was all compared with the total instruction As soon as an occupation had been upon by a former scholar of an ele- school there was, and there ought demand for more information about than could be obtained in an ordinary factory. If they were doing their far from discouraging this demand, uld do all in their power to foster it. seless to expect discoveries in science plied to industries unless they had who would make it their business to hese discoveries and explain them to g people who were learning the trade. as there a time in which employers loyees were so completely syndicated were now. For the purpose of giving ning best suited to the trade, every uld form its own Education Com- d give it plenty of money and plenty tion. In these circumstances, he every local authority would do its forward the movement, and he could not but believe that the Board of Education would second those efforts with equal zeal.

Mr. W. M. Gardner, Principal of the Technical College, Bradford, maintained that it was impossible in these days for a lad to learn his trade properly in works. They were getting further away from such conditions by specialisation, and if the young man did not learn his trade at a technical school, he never learned it at all; he became a mere machine, knowing only a portion of the work.

WATER BOARD CHARGES.

At Westminster County Court on the 21st ult., the Metropolitan Water Board claimed 11*l.* 15s. 3d. water rate against Messrs. Evans, Wadham, & Co., Gray's Inn-square. The claim was based upon sect. 8 of the Board's Charges Act. The defendants had offices occupying two floors, and used the Board's water on both, although the only supply was a draw tap on one floor. The Board claimed the rate based upon the rateable value for both floors.

Mr. Norman Barraclough, of the defendant firm, urged that there was no supply to the floor now sued for, and that he was entitled to draw a glass of water on the floor where the tap was and take it to another part of the premises to drink without being liable to pay water rate for the place where he drank it as well as for the part of the premises where the tap was.

In a second case Messrs. Russell, Woollven, & Co., of Clifton-street, E.C., were sued for 5*l.* 8s., and Mr. F. T. Villiers Bayly, Counsel for the defendants, raised a similar question as to the premises being separate tenements.

Judge Woodfall said he had not to consider whether there was any hardship, and he must find for the Board in both cases with costs.

LIVERPOOL MASTER BUILDERS' ASSOCIATION.

The annual dinner of the Liverpool Master Builders' Association was held on the 27th ult. at the Hotel St. George. The President, Mr. Thomas M'Hugh, presided, and among others present were Messrs. James Storrs (Chairman of the National Board of Conciliation for the Building Trades), Thomas Woolfenden, Arnold Thornley, W. P. Horsburgh, Joseph Parry, J. T. Alexander, and T. R. Hutchins, and Professor Reilly. Proposing the "National Federation of Building Trade Employers," Mr. R. A. Costain said serious disputes in the building trade had been very exceptional. During the past few years a strike had been practically unknown, and they were quite safe in saying that that was due to the organisation of the employers on the one hand and the men on the other. That day a question had been asked in Parliament as to the wages paid by a certain Liverpool firm carrying out Government work. If that firm had been a member of the Liverpool Master Builders' Association it would not have been necessary to ask a question in Parliament. An inquiry at the office of the Association would have elicited all the information required. They paid satisfactory wages and attracted competent artisans to their service, and, if in nothing else, in that fact their existence was abundantly justified. The toast was responded to by Mr. Storrs and Mr. Woolfenden (President of the Lancashire and Cheshire Federation).

GENERAL BUILDING NEWS.

ENLARGEMENT OF CHAPEL ACCOMMODATION, EXETER DIOCESAN TRAINING COLLEGE.

Following the enlargement of the administrative and teaching accommodation of the college buildings, the enlargement of the chapel has been for some time under the anxious consideration of the authorities. Originally intended for accommodating sixty students, this has now been practically doubled. Owing to the restricted space available for the enlargement of the building, it was only possible to carry it in an eastward direction. Two new bays have been added, and at the west end an organ loft has been constructed, to receive the organ, which originally stood at the ground level and blocked the entrance in the sacred edifice. The seating arrangements originally faced south and north, according to a general arrangement in collegiate chapels. This has now been altered and the whole of the seats face eastward. Provision has been made at the west end for stalls for the clergy, staff, and tutors, and behind the same, under the organ loft, are two enclosures for visitors. The building has been carried out in South Devon lime stone, picked on the face, with dressed quoins of the same material, and the angles and buttresses, box ground stone being used for the windows and the dressings. The interior fittings are of oak throughout, and the floor of the nave portion, wood-blocks, laid level throughout. The sacrarium portion is laid with polished slabs of black and white marble, laid diagonally. The contract for the work has been carried out by Messrs. George Setter & Son, the amount of their contract being 816*l.* 16s.; the electric lighting by Messrs. Hubber & Son; the heating on the low-pressure system by Messrs. Wippell Brothers & Row; the stained glass and glazing generally by Messrs. Drake, of the Cathedral-yard; and Messrs. Hele & Co. reconstructed the organ in the new loft. The architect for the extension of the college buildings, and also for the chapel enlargement, is Mr. James Jerman. F.R.I.B.A., Official Architect to the Exeter Diocesan Board of Education, and the clerk of the works has been Mr. E. H. Palmer.

NEW BUILDINGS IN LONDON.

Proposed enlargement of Isolation Hospital, Barnet, N. (3,000*l.*); Secretary, Isolation Hospital, Barnet. Alterations to St. James's Infirmary, Wandsworth, S.W. (570*l.*); Messrs. Dewsett & Jenkins, builders, Sunny Hill-road, Wandsworth, S.W. School, Vicarage-lane, East Ham, E. (7,280*l.*); Mr. J. W. Jerram, builder, Crown Works, Boundary-road, East Ham, E. Buildings, Southampton-buildings, Holborn, W.C.; Messrs. Holliday & Greenwood, Ltd., builders, Brixton, S.W. Buildings for Messrs. Burberry's (outfitters, etc.), Haymarket, W.; Messrs. Prestige & Co., builders, 119, Grosvenor-road, S.W. Extensions of premises for the Civil Service Co-operative Society, 25, Haymarket, W. Extensions of offices of Norwich Union Insurance Company, 51 and 52, Fleet-street, E.C. Rebuilding shops and offices, etc., Gresham-street, E.C.; Messrs. W. Cubitt & Co., builders, 258, Gray's Inn-road, W.C. Rebuilding shops, showrooms, etc., St. Paul's-churchyard, E.C.; Mr. C. F. Yearsley, builder, 4, Great Marlborough-street. W. Post-office, East Ham, E.; Messrs. Chessum & Sons, builders, 7a, South-place, E.C. Offices, Westminster, S.W.; Mr. J. H. Clarke, architect, 102, Bishopsgate-street, E.C. Hay's Wharf and dock premises, Thames-street, E.C.; Mr. W. Matts, architect, Birkbeck Bank-chambers, Holborn, E.C. Mineral water factory at Schweppes, Ltd., Vauxhall, S.W.; Mr. A. F. Briggs, architect, 9, Queen Victoria-street, E.C. Additions to Cowper-street Schools and Institute, E.C.; Mr. H. C. Clarke, architect, 102, Bishopsgate-street, E.C. Proposed additions to mental hospital, Croydon (35,000*l.*); Mr. G. F. Carter, Engineer, Town Hall, Croydon.

NEW PUBLIC HALL, EARL'S COLNE.

This hall is being erected at a cost of about 2,215*l.* from the designs of Mr. P. M. Beaumont, A.M.Inst.C.E., of Maldon. The building will be erected of red bricks, and includes a large main hall, 55 ft. by 33 ft. The contractors for the work are Messrs. Pudney & Son, of Colne Engaine.

TRADE NEWS.

The Workhouse Infirmary, Newton Abbot, is being supplied with Shorland's double-fronted patent Manchester stoves with descending smoke flues and patent Manchester grates, by Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester.—The New Hospital, Devizes, is being supplied with the firm's warm-air ventilating patent Manchester grates.

The "Boyle" system of ventilation (natural), embracing Boyle's latest patent "air-pump" ventilators and air-inlets, has been applied to Penrhos New School, Ystradgynlais.

The Beaver Company of Ottawa, Canada, and Buffalo, New York, have recently established themselves in the United Kingdom with an object of developing their substitute for lathe, plaster, and wallpaper. Beaver Board is made entirely of selected woods, pressed up into sheets of various width and lengths. It lends itself to decorative schemes, is guaranteed not to crack or warp, and will stand a strain of 500 lb. pressure on a 16-in. span. With Beaver Board cracked ceilings and warping walls are, it is claimed, entirely obviated. An additional recommendation is the fact that Beaver Board improves with age, and, as years go on, the panels become harder and harder, outlasting all other wall and ceiling preparations. Skilled labour is not absolutely necessary for the fitting-up of the material, and it can be put up without dirt, litter, or inconvenience. Particulars can be had from Messrs. H. W. Peabody & Co. (Beaver Board Department, Mr. R. A. Wilson, manager), 16, Eastcheap, E.C.

Owing to the expiration of lease of their premises at 4 and 5, East Harding-street, Fetter-lane, E.C., Messrs. Sprague & Co., Ltd., lithographers, have removed to Nos. 69 and 70, Dean-street, Soho, W.

SALE OF BUILDERS' STOCK, PLANT, ETC.

Messrs. J. T. Skelding & Holland inform us that they are holding a six days' sale at "The Maltings," Fishpool-street, St. Albans, commencing on Tuesday, March 12, of builders' and contractors' stock, plant, and machinery. Among the articles to be put up are two portable engines, four mortar mills, a well-seasoned stock of timber, steel joists, stanchions, etc., scaffold materials, carts, barrows, harness, etc. This sale is in connexion with the dissolution of partnership—*re* Messrs. C. Miskin & Sons—Miskin *v.* Carter.

APPLICATIONS UNDER LONDON BUILDING ACTS, 1894 to 1909.

AT Tuesday's meeting of the London County Council the following applications under the London Building Acts were dealt with. (The names of the applicants are given in parentheses):—

Lines of Frontage and Projections.

Clapham.—Erection of buildings next to the western side of Park-hill, the southern side of Abbeville-road, and the eastern side of Briarwood-road, Clapham (Messrs. H. F. Buchan & Co.).—Consent.

Finsbury, Central.—Erection of one-story shops in front of Nos. 20, 21, and 22, White Conduit-street, Islington (Messrs. Watson & Thorp for Mr. P. Bendell).—Consent.

Fulham.—Projecting steps at the side of a building on the eastern side of Wandsworth Bridge-road, Fulham, next to Broughton-road approach (Mr. W. L. Griffiths).—Refused.

Islington, South.—One-story addition at the rear of No. 62, Barnsbury-street, Islington, abutting upon the eastern side of Thornhill-road (Messrs. Lovegrove & Papworth for the "Win-it" Motor Works).—Refused.

Islington, East.—Erection of a building on the northern side of Essex-road, Islington (Mr. T. W. Smith for Messrs. W. Danemann and F. C. Hine).—Consent.

St. George, Hanover-square.—Addition to the existing oriel window at No. 7, Balfour-place, next to Mount-street, St. George, Hanover-square (Messrs. Balfour & Turner for Major E. H. Brassey).—Consent.

St. Pancras, South.—Wood and glass porch in front of No. 52, Liverpool-street, King's-cross (Messrs. D. J. Chattell & Sons for Hertford Hotels, Ltd.).—Refused.

Strand.—Projecting sign in front of No. 405, Strand (The Brilliant Sign Company, Ltd.).—Consent.

Strand.—Wood and glass showcases at the Spaten Restaurant, Piccadilly-circus and Shaftesbury-avenue (Mr. C. Masey for Mrs. R. Freeman).—Consent.

Wandsworth.—Porches and wooden bay-windows to houses on both sides of a new road leading out of the south-eastern side of Upper Tooting-road and a house on the north-western side of Ravenfield-road, Tooting (Messrs. Swain & Selley).—Consent.

Width of Way.

Holborn.—Erection of a building on the southern side of Alfred-mews, Tottenham Court-road (Mr. G. Vernon for Minerva, Ltd.). Consent.

Holborn.—Extension of covered way over entrance to Robin Hood-yard, Holborn, from Leather-lane (Mr. J. Sawyer for Mr. A. W. Gamage, Ltd.).—Consent.

Islington, North.†—Addition at the rear of Nos. 490 and 492, Holloway-road, Islington (Mr. C. T. Lee for the London County and Westminster Bank, Ltd.).—Refused.

Lewisham.—Open shed at the rear of buildings on the northern side of Houston-road, Forest-hill (Messrs. J. Carter & Co.).—Consent.

St. George.—Erection of an addition to Meeting House-buildings, Meeting House-alley, Stepney (Mr. C. R. Price for Messrs. E. B. Dive & Co.).—Consent.

Lines of Frontage and Space at Rear.

Wandsworth.—Erection of buildings on the south-western side of Mitcham-road, Tooting, between the "Horse and Groom" public-house and No. 20 (Mr. E. R. Weaver for Messrs. Browning & Hiller).—Consent.

Width of Way and Height of Building.

Holborn.—Erection of buildings abutting upon Brooke street, Fox-court, and Holborn-buildings, London (Mr. F. Schooling for the Prudential Assurance Company, Ltd.).—Consent.

Lines of Frontage and Construction.

Battersea.—Temporary coffee-stall in front of No. 75, Falcon-road, Battersea (Mr. E. S. Walker).—Consent.

Clapham.—Showcase erected in front of No. 110, Clapham Park-road, Wandsworth (Mr. A. E. Peacock).—Refused.

Hackney, Central.—Showcases of a temporary character in front of No. 90A, Southgate-road, Hackney (Mr. W. J. Mason).—Consent.

Hampstead.—Wood and iron shed and greenhouse at No. 6, Briardale-gardens, Hampstead, abutting upon Clorane-gardens (Mr. R. B. B. Wimbush).—Consent.

Wandsworth.†—Temporary motor-house at the rear of No. 163, Mitcham-lane, Streatham, next to the south-western side of Fernthorpe-road (Messrs. J. H. Jenkin & Co. for Dr. Constable).—Consent.

Wandsworth.—Wood and iron motor shed at "Laurel Bank," Upper Tooting Park (Messrs. Jones Brothers for Mr. L. H. Nott).—Refused.

Width of Way, Lines of Frontage, and Construction.

Lewisham.—Wooden shop in front of No. 72, Ladywell-road, Lewisham (Mr. J. Nicholson).—Consent.

Wandsworth.—Retention of a water-closet and coal store at Roehampton House, on the eastern side of Roehampton-lane, Putney (Mr. W. J. Parker for Mr. A. M. Grenfell).—Consent.

Wandsworth.—Tool shed of a temporary character at Roehampton House, on the eastern side or Roehampton-lane, Putney (Mr. W. J. Parker for Mr. A. M. Grenfell).—Consent.

Lines of Frontage, Deviation from Certified Plans and Projections.

Marylebone, West.—Addition to the Florence Nightingale Hospital for Gentlewomen, Lissongrove. St. Marylebone (Mr. C. W. Ferrier for the Trustees of the Florence Nightingale Hospital for Gentlewomen).—Consent.

Space at Rear.

Deptford.—Erection of buildings upon land known as the "Show Yard," Deptford High-street (Mr. C. Cain).—Consent.

Kennington.—Erection of a building upon the site of Nos. 79, 80, and 81, Albert-embankment, Vauxhall, with an irregular open space at the rear (Messrs. Goodwyn & Sons for Messrs. Harvey & Thompson, Ltd.).—Consent.

Separation and Alteration of Buildings.

Paddington, South.—One-story shop at No. 40, Queen's-road, Bayswater (Messrs. Veale & Gibbs).—Consent.

Formation of Streets.

Brixton.—Formation or laying-out of a street for carriage traffic to lead out of the southern side of Acre-lane, Brixton (Mr. H. B. Michell). Refused.

Wandsworth.—Formation or laying-out of a new street for carriage traffic to lead from Nightingale-lane to Temperley-road, Balham (Messrs. E. Evans & Sons for Mr. E. Evans).—Consent.

Wandsworth.—Formation or laying-out of three streets for carriage traffic upon a site on the eastern side of Valley-road, Streatham (Mr. E. B. P'Anson for the South London and Streatham Estates, Ltd.).—Refused.

Cubical Extent.

Hammersmith.—Additional cubical extent in respect of a proposed bakery addition at the premises of Messrs. J. Lyons & Co., Ltd., Cadby Hall, Kensington (Messrs. Holman & Goodrham).—Consent.

Woolwich.—Erection of a building exceeding 250,000 cubic ft. in extent to abut upon the eastern side of Harden's-manorway and the northern side of Westfield-street, Woolwich (Messrs. Siemens Brothers & Co., Ltd.).—Consent.

Woolwich.—Erection of a building upon a site abutting upon the southern side of Greenlane and the western side of Henley-road, Woolwich (Mr. B. Dawson).—Consent.

Uniting of Buildings.

City of London.—Opening at the first-floor level between No. 17, Bread-street-hill and No. 202, Upper Thames-street, City (Mr. G. H. Greatbach).—Consent.

City of London.—Doors of fire-resisting hardwood and glazing in lieu of iron doors to certain openings in the division wall of a proposed building on the site of Nos. 8-11, Paternoster-row, City (Mr. R. Angell).—Refused.

Finsbury, East.—Uniting of Nos. 6 and 7, Charterhouse-buildings, Goswell-road, Finsbury (Mr. P. B. Tubbs for Mr. H. T. Tubbs).—Consent.

Westminster.—Opening at the first-floor between Nos. 7 and 8, St. Matthew's-s Westminster (Mr. F. Whittlesea for Governors of the Greycoat Hospital).—Co

The recommendations marked † are co to the views of the Metropolitan Bo Councils concerned.

PROJECTED NEW BUILDIN IN THE PROVINCES.*

ABERDEEN.—Additions, headquarters, Field Artillery (2,300*l.*); Mr. A. H McKinnon, 245, Union-street, Aber Premises, Union-street, for Y.M.C.A. (2,0 Messrs. Sutherland & George, architect Crown-street, Aberdeen. Premises for M Milne Brothers (2,000*l.*); Mr. W. E. G architect, 11A, Dee-street, Aberdeen. Ri Recreation Institute (7,000*l.*); Messrs. A. Milne, 136, Wellington street, Glasgow

Cathcart.—Hall (2,000*l.*); Messrs. McW nell & Rogerson, architects, 58, West Re street, Glasgow.

Dumbarton.—Additions to combination house (2,700*l.*); Mr. A. C. Denny, arch 37, Church-street, Dumbarton.

Dunfermline. — Additions to ga (7,000*l.*); Mr. W. R. Maxwell, Surveyor, Hall, Dunfermline.

Durham. — Ladies' lavatories and veniences; Mr. J. T. Pegge, Surveyor, Hall, Durham.

Edinburgh.—Territorial drill hall, mont-crescent (7,000*l.*); Mr. T. Duncan R architect, 28, Rutland-street, Edinburgh. tensions to works of Messrs. R. Laidl Sons, Ltd.; Messrs. J. R. & E. R. Pea architects, 92, Hanover-street, Edinb Baths at Craglieth Poorhouse (2,000*l.*); R. M. Cameron, architect, 53, Great street, Edinburgh. Extensions to wor Messrs. J. H. Smith, Ltd., chemists (2,2 Mr. R. R. Grive, Washington-lane, Edinb Buildings, Castle-street (1,800*l.*); M Peddie & Forbes Smith, 8, Albyn-place, burgh.

Folkestone.—The following plans have passed:—Eight houses, Shorncliffe-station for Mr. W. Davis, architect and bu Additions to garage, rear of Shellons-s for the Folkestone and Sandgate Motor pany; Mr. A. R. Bowles, architect; Mr. Simpson, builder. Additions to Castle Castle-road, Sandgate, for Mr. A. A. Ben Mr. A. B. Bowles, architect; Mr. O. builder.

Langside (Glasgow). — Picture th (2,200*l.*); Mr Henry Dewar, architect, St. Vincent street, Glasgow.

Libberton.—School for Libberton Board (5,000*l.*); Messrs. Traill & Ste architects, 38, High-street, Lanark.

Paisley.—Extensions to works of Mc McCullum Leighpark (2,000*l.*); Messrs Craig, Barr, & Cook, architects, 15, St. Jam place, Paisley. Restoration of abbey (30,0 Mr. P. McGregor Chalmers, architect, Bath-street, Glasgow.

Perth.—Premises for Messrs. John Dew Sons, Ltd.; Mr. H. E. Clifford, arch 225, St. Vincent-street, Glasgow. Letters parcels building, H.M. Office Office of W Edinburgh. Bonded store (30,000*l.*); W. H. E. Clifford, architect, 225, St. Vin street, Glasgow.

Poole.—Fish market (950*l.*): Mr. S. J. man, Surveyor, Town Hall, Poole.

Portsmouth.—Isolation hospital at L Asylum (15,000*l.*); Mr. J. E. Ruke, Prude buildings, Portsmouth.

Redruth.—Museum for the Royal Instit of Cornwall; Mr. Sampson Hill, arch Green-lanes, Redruth.

Rodbourne Chiney.—School; Mr. R. Powell, Surveyor, County Hall, Trowbr Wilts.

Sheffield.—Enlargement of school. Ham ton-street (400 extra places); Mr. G Baxter, Secretary, Education Committee, Hall, Sheffield. Alterations to the borough Depôt; Mr. F. E. P. Edwards, Architect, Town Hall, Sheffield. Offices, at Penistone-road New Depôt (4,930*l.*); M G. Longden & Son, Ltd., builders, Parkw road Works, Neepsend, Sheffield.

Swindon.—Buildings (1,385*l.*); Mr. A Taylor, architect, New Bond-street, Bath; A. J. Colborne, builder, Swindon.

Teignmouth. — Electric theatre; M Thornley, Rooke, & Barron, architects, Crescent, Plymouth.

Watford.—Bakery, Brixton-road (3,120*l.*) the Watford Co-operative Society; Mr. W Syme, architect, 58A, Vicarage-road, Watf Mr. William Payne, builder, Leavesden, Watford.

* See also our list of Competitions, Contr etc., on another page



An Interior, Talbot-square, Hyde Park.
Mr. Francis H. Bulmer, A.R.I.B.A., Architect.

CHEME OF DECORATION.

illustrate a reconstruction, by Mr. Francis ulmer, of the dining-room at No. 15, -square, Hyde Park, W., a typical ian town house. The splay so often off to make room for the stairs in the hall smaller type of house, and which leaves om so painfully lacking in symmetry, ken advantage of and repeated on the ce side, the space in the angle being l in the manner shown, *i.e.*, a cupboard t. The cone and arched recess were in se to an idea of the owner of making the rd a permanent fixture with service lift , access being by means of a vertical , the panel under the cone space for this being taken out of the room in the rear, sed as a cloakroom.

panelling is in whitewood painted with covered with dark-red canvas, the door, e, and sideboard of dark Spanish any, executed by Messrs. J. Garvin, of en; the plaster cornice and elipse were ers. Jackson, of Rathbone-place, Oxford- W.

SPITAL COMPETITIONS.

ur leading article this week we refer e remarks which appear in the issue ch 2 of our contemporary the *Hospital* rence to competitions for hospitals, and lly as to the recent competition for the Sussex Hospital, Hastings. We con- the matter of sufficient importance to at length from our contemporary.

e have often urged," says the *Hospital*, in this country there is at present no te system for securing the selection by ition of the best plans submitted, much providing hospital committees with a tee that the new hospital when erected thoroughly up-to-date, modern, and complete in every department. One practical reform which the architectural profession should insist upon, so far as the Royal Institute of British Architects is concerned, is the selection of a panel of experienced architects, competent on their merits to act as assessors. Another is that the selection should never be left to the decision of one assessor, whoever he may be, for the reason that a modern hospital is many-sided and that no architect by himself has the knowledge to enable him to judge which out of many plans, so far as the administration and requirements of a modern hospital are concerned, is in fact the best. An architect may, if he is conscientious, knowledgeable, experienced, and thorough, rightly be called upon to decide most points concerned with buildings, as such, which appertain to the professional work of an architect. For all the rest it is essential that there shall be associated with him a competent hospital expert who is admittedly an authority on the many technical and administrative matters which must materially affect a just and satisfactory decision as to the respective merits of a number of plans for a new hospital submitted in competition.

The causes of failure which have been apparent in the selection of plans in more than one recent competition in this country are every one of them due to absence of thoroughness on the part of the assessor, or to a want of thoroughness or of knowledge, or of practical hospital experience, or of a judicial mind to enable him first thoroughly to master and appraise all the conditions of competition and to disqualify every plan which does not comply with them. When a Committee instructs the assessor to draw his conditions to include a hospital of a given number of beds not to exceed the maximum sum, such assessor is bound by his instructions, and should disqualify all competitors who submit plans the estimated cost of which exceeds the amount fixed for the guidance of every competitor.

This question is a very grave one, and its gravity increases with every competition. . . . .

By way of illustration we publish this week criticisms on the awards in the most recent competition, in which no fewer than fifty-two sets of plans were submitted for adjudication and selection. As the immediate question affects primarily architects as a body, we have asked a Fellow of the Royal Institute of British Architects of great experience and position to study the whole of the plans submitted, to compare them with the plans selected, and to give our readers the benefit of the results he has arrived at. This special Report is the first of the two articles which follow. The second communication has been sent to us spontaneously by another Fellow of the Royal Institute of British Architects, who has had considerable practical experience in hospital construction and hospital competitions of all kinds."

In the course of the special Report on the East Sussex Hospital, Hastings, the writer says :—

"The site on which the new buildings are to be erected is about 4 acres in extent, and, while an excellent one in point of position and aspect, is a peculiarly difficult one to deal with on account of the levels. In shape it is roughly triangular, and along the whole of its south boundary abuts upon a public road. The general surface of the ground abutting on the road varies from about 7 ft. at the east end to 20 ft. at the west end above the level of the footpath, and the site itself has a fall of about 60 ft. from west to east, and from north to south is approximately level. Crossing the site about midway in its

length is a bank with a fall of about 7 ft. The subsoil is sandstone rock. It will be seen, therefore, that the main difficulty lies in the treatment of the levels, both of buildings and approach roads, and, on economical grounds, the avoidance of excavation in the rock as much as possible. When it is further taken into consideration that the Committee fixed the sum of 35,000*l.* (roughly 350*l.* per bed) as the total cost of an up-to-date hospital, the thought naturally occurs to us that neither the Committee nor the assessor realised at all the difficulties which competitors were asked to solve. The amount fixed as a maximum is inadequate enough if the site had been a dead level, but it is hopelessly insufficient for a building on such a site as this.

The hospital is to be for 102 beds, with provision for future extension. No information, however, is given as to the size of this future extension; in fact, in answer to a question put by a competitor, the assessor says, "Design only for specified buildings, with room for future extension." A more inept reply could hardly have been made. It should have been quite possible to decide upon some figure for the ultimate number of beds on the site, and clear directions ought to have been given on this point. . . .

The limit of cubic space (the far more important question of floor area is not mentioned) is fixed at 1,400 for all wards except those for children, which is fixed at 1,000 ft. The schedule of instructions is a long one, and while in some instances it goes into minute details, in others it is drawn so carelessly as to give rise to an inordinately long list of questions by competitors in order to elucidate the meaning. Points which ought to have been settled definitely have been left open, while others on which competitors should have been allowed a free hand are rigidly fixed. For example, information is sought as to the numbers respectively of sisters, nurses, and probationers, the requirements including separate sitting-rooms for each of these classes. The only information vouchsafed is that there would be about seven sisters, and that a common room for nurses and probationers would be accepted. Surely it should not be beyond the power of the authorities to say exactly how many sisters would be required!

A curious requirement in the schedule is for "patients' boxrooms," and on a competitor asking for what purpose these are required the answer is given, "Lumber-rooms, etc."! The question is asked whether the nurses' water closet in the ward block may be in the sanitary tower, and the answer is, "Not desirable." Why not desirable in the name of common sense? Appended to the schedule is a list of recommendations by the Committee, most of which would have been better omitted altogether. The impression left in our mind after reading the schedule and the questions by competitors, with the assessor's replies, is that the whole scheme has been carelessly drawn up and shows in many instances a lamentable lack of knowledge on the part of their adviser.

When we come to examine the plans we are at a complete loss to understand how any assessor with any knowledge of hospital planning could have arrived at such a decision as has been given in this case. Of the three premiated plans, Nos. 1 and 2 ought not to have been placed in the first half-dozen, and No. 3 is superior to the other two in almost every point. The designs as a whole are, it must be confessed, disappointing; comparatively few of the competitors have made any attempt to construct their roads economically, and many have been led into the error of multiplying entrances to get over the difficulties of gradients.

In the design placed first the road leading to the mortuary has a slope of 1 in 3 as calculated from the figured levels, although the elevation shows a nearly level approach. The road to the out-patient department has a slope of 1 in 4·7, and that to the main administration block a slope of 1 in 5. Needless to say that such gradients are wholly impossible for wheeled traffic and quite steep for foot traffic. These points alone ought to have disqualified the design.

Turning to the plans, we find the out-patient department and the dispensary placed at a level 16 ft. below the ward corridor, the only connexion between the two being by two long flights of stairs within a covered way. All medicines, etc., therefore, served from the dispensary for the wards would have to be carried up these stairs, as there is no lift and no possibility of arranging one.

The ward pavilions are so planned that when the future extension is carried out the eye wards and two of the two-bed wards must be destroyed. The eye wards, instead of being grouped together with a common operation-room, are placed one with the male, the other with the female wards, and two operation-theatres are provided. On the ground floor no sanitary provision is made for the eye wards and the two small wards, the only offices being at the extreme end of the large wards. The same remark applies to the first floor, where are wards for four and two patients with no sanitary accommodation, except that at the south end of large ward. Influenced, we presume, by the absurd answer to the question as to the position of nurses' water-closet, the author has arranged these offices off the main corridor—about the most inappropriate position he could have chosen.

In many respects the design placed second is superior to that placed first, but here again the difficulty of levels is not dealt with in a satisfactory way. The design placed third is, as we have said, distinctly superior to the other two. The planning of the roads is carefully worked out with due regard to the levels of the site. In point of general planning the design shows much greater knowledge of the subject than either Nos. 1 or 2.

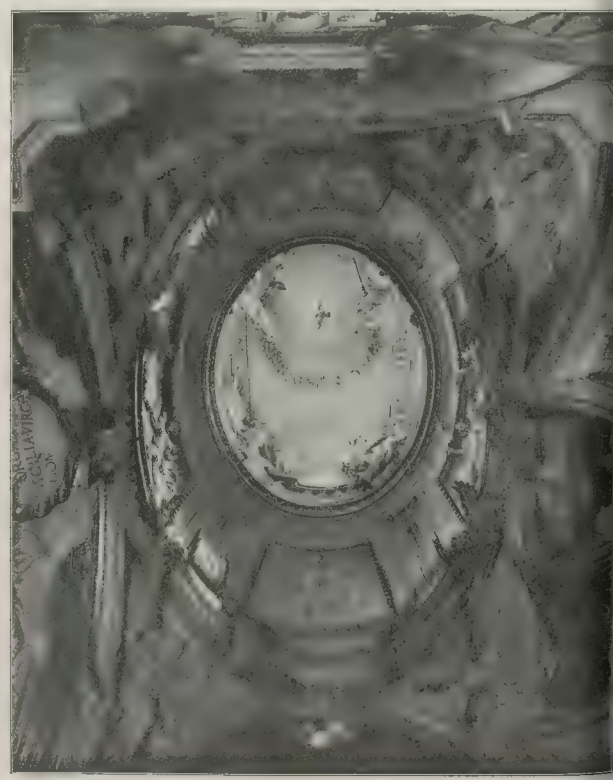
The out-patient department is not well arranged, the author having apparently thought more of getting a good hall for concerts and large meetings than of the convenient working of the department. This is perhaps the weakest part of the plan, which is on the whole a good one.'

In the second contribution to our con
porary, the writer says :—

"The competition for the East Su
Hospital has proved to be a difficult prob
for the competitors, few of whom seem
have solved the perplexities of the site
indeed, they have realised what it invol
The assessor must have also been em
rassed, as the selected design ignores
difficulties and solution of levels.

The site, ideal in itself, is on the hei
with a bird's-eye prospect of the sea, situ
in a pine wood. The only approach is
the main road to Ore, which has a s
gradient, and the frontage is about 700
long on a perpendicular bank of stone
loam. This bank is about 8 ft. above the
at the lower end and over 20 ft. at the up
the site falling in three terraces. The p
lem was, therefore, to get from a road
of steep gradient to the top of the site,
secondly, when there to conquer a grad
steeper than that to the roadway bene
dropping together 40 ft. The third prob
was to place the buildings in the
economical way with serviceable and e
levels and to procure easy access with a
mum of roadmaking on an expensive site

The beautiful site by its inaccessibility
long been on the market as unsuitable
development. Naturally, it would do f
hospital, and it would have done provi
that a suitable design had been selec
That this has been the case we have g
reason to doubt. The assessor's condit
show a lack of knowledge both of the site
the application of the conditions thereto
being assumed that the site was level.
an examination of the selected design
clear that the difficulties have been ign
and this has not been recognised by
assessor. The cost was stipulated as
an essential in the selection, 35,000*l.* being
sum that the committee would have a



Rome, S. Carlo a' Catinari. Cappella di S. Cecilia (c. 1685). By Antonio Gherardi.
(From Dr. Ricci's "Baroque Architecture and Sculpture in Italy." Heinemann.)

The selected design is about 7,000*l.* the sum fixed as essential in the selec- I believe that with care a much lower might be reached."

may add that the first premiated design ed in the *Builder* for February 16, e second and third in our last issue, 1.

BOOKS.

Baroque Architecture and Sculpture in Italy. By Corrado Ricci. (William Heinemann. 4to. 25s.)

A quality of imagination is especially necessary in estimating the real artistic value and scope of the work of this period, whether it be shown in symmetrical drawings to measurement or in picturesque photographs such as this volume contains.

Where it needs the stereoscopic camera to reproduce at all faithfully romantic effect of the receding columns, the receding planes, and the mingled perspective of terrace upon terrace and chiaroscuro of intricate forms which the architectural fancy of the ingenious Jesuit artists of the late XVIIth and early XVIIIth century produced. Perhaps the art of Mr. Alinari in his portrayal of the examples of this period is the best record to which we can turn, and many of us who have seen the palaces of Baroque Italy, with which he has been so largely occupied recently, have further stimulated to a study of much that we have been schooled to ignore or dislike. Much in the same way that we discover unsuspected beauties in such a period as the Victorian, for example, we are beginning to enjoy the methods of what we call the afterglow of the Renaissance. Bernini now ranks with the immortals, and, in manner, the expression of the temperament of his period in other mediums than ours has now come within our range of understanding.

We can imagine the exclamation of the architect at the above statement, but the remains that the student of a generation ago would have been advised to abstain as from poison from a study of many of the best examples contained in this volume. Genoa, with its streets of palaces that might line Pall Mall itself and yet be habitable, has now become as well known and appreciated as Florence in her earlier period, and we are certainly the gainers. The plasticity of the forms employed in the Baroque has shown us that practically any internal arrangement which has the quality of orderliness can be treated externally as a work of art in the traditions of the classic manner, and not the least important lesson which we have digested from our wanderings in these lands neglected of our fathers is the one that mouldings and details have their relation to the building they adorn as much as to the classic sources from which they are derived. Perhaps in no other period, except in the later French Gothic, have they been so intelligently and consciously employed.

The dangers of an unintelligent adaptation of this manner are too apparent for discussion, but we may mention that many a façade seen in sharp perspective in, say, one of the narrow streets of old Venice would come as a surprise when seen in full elevation, and we might easily regret with all the contempt of the complacent purist a motive that its real purpose was an inspiration. For those, however, to whom it is necessary to explain everything we do not commend this volume; the plagiarist will find it entirely after his own heart, but he will be left further removed from the principles of true design than ever, and, however much we may deplore the alterations which may result, we must at the same time remember that no influence so powerful as that exercised by the Baroque can work entirely from good. Great powers are to be wielded only successfully by corresponding individualities.

The Old Houses of Shrewsbury: Their History and Associations. By H. E. Forrest. (Shrewsbury: Wilding & Son, Ltd. 1s. net.)

This little work is not an ordinary local guide to a town, though the author admits that it is issued with the hope of adding to the attractions of Shrewsbury; it is, though a small book of under one hundred pages, the kind of work which should induce the townsfolk to take a loving and intelligent interest in the houses in their midst, that being another, and a very worthy one, of the author's hopes. An endeavour has been made to give a succinct account of the interesting old buildings of Shrewsbury, "partly by collating all available data regarding them and partly by careful study and comparison of the structures themselves." It is a useful little work, containing some excellent photographic reproductions.

Our Homeland Churches, and How To Study Them. By Sidney Heath. With Illustrations from Drawings by J. R. Leathart and others, and from photographs. (London: The Homeland Association, Ltd., Chandos-chambers, 15, Bedford-street, Strand, W.C. Size 5½ in. by 4¼ in. Cloth, 2s. 6d. net.)

This book was originally issued as one of the Homeland Handbooks, and has been out of print for some time. In preparing a new edition opportunity has been taken to remodel, to considerably extend, and to reillustrate the volume, while it has been thought desirable to transfer it to the handier form of the Homeland Pocket Books. A new feature is a series of architectural details by Mr. J. R. Leathart, and the glossary has been expanded to three times its original length. The work is a clear and simple introduction to the study of the churches of the homeland on their architectural side, and the author traces the history and development of English church architecture in a useful way. He has produced a handy little volume, which should do much to promote an intelligent and growing interest in our churches.

The Year's Art, 1912. Compiled by A. C. R. Carter. (London: Hutchinson & Co., Paternoster-row. 5s. net.)

The present edition of "The Year's Art" is the thirty-third annual issue of a very



Caprarola, near Rome, Palazzo Farnese. Stairway of XVIIth Century.
(From Dr. Ricci's "Baroque Architecture and Sculpture in Italy." Heinemann.)

useful work, which is described as "a concise epitome of all matters relating to the arts of painting, sculpture, engraving, and architecture, and to schools of design, which have occurred during the year 1911, together with information respecting the events of the year." The art events of the year are chronicled, and the information is easily found. The work contains several full-page illustrations.

The Antiquary. Volume XLVII. (London: Elliot Stock, Paternoster-row, E.C. Price 7s. 6d.)

THIS is the volume from January to December, 1911, of a valued magazine devoted to the study of the past. Each monthly issue of our contemporary contains a number of interesting notes and also articles and illustrations of an archæological and historical character, while articles on old castles, churches, etc., not infrequently occur in its pages. The volume is bound in an attractive manner, and we are glad to call attention to the forty-seventh volume of an admirable magazine.

Kœmmerer's Practical and Theoretical Letter-Book. Edited by ARTHUR SEYMOUR JENNINGS. With 140 plates and text. (London: The Trade Papers and Publishing Company, Ltd., 365, Birkbeck Bank-chambers, High Holborn, W.C. Price 30s. complete.)

IN this work the experienced craftsman will find much of a useful and suggestive nature, while for the student there are many helpful hints as to spacing and construction of letters, both in the text and plates. The book is also published in sections at 4s. 6d. each, which is a great convenience for those who would find no use for the foreign alphabets included in the complete edition.

Country Life. Volume XXX. (London: 20, Tavistock-street, Covent Garden, W.C.)

THIS is the volume of our contemporary for July to December, 1911, and a glance at its contents shows it to be an attractive volume. It contains many readable articles and a large number of admirable illustrations, including a good many architectural and decorative as well as nature subjects. The work is excellently printed, and makes an interesting volume.

Copyright Law and the Copyright Act, 1911. By HENRY HURRELL. (Waterlow & Sons. 3s. 6d.)

THE new Copyright Act comes into force on July 1, and architecture is included. Those who build would do well to study the clauses with which they are specially concerned, and the opportunity is given in Mr. Hurrell's book, which, besides the Act, observations upon copyright generally, a table of cases and a translation of the revised Convention of Berne, 1908, contains a treatise on French Copyright Law, by M. Maurice Théry. Many different opinions have been expressed on the desirability of creating copyright in architecture. Sir R. S. Lorimer, Mr. Ernest Newton, Mr. Voysey, Mr. Horder, Mr. Kitson, Mr. Quennell are among those who have decided against the benefit to be obtained from copyright. But the Royal Institute of British Architects gave official support to the scheme, and the result will be watched closely. If in practice plagiarism can be checked without retarding architectural evolution the new provisions of the Act will prove the wisdom of the promoters of the new legislation.

THE LONDON COUNTY COUNCIL.

THE usual weekly meeting of the London County Council was held on Tuesday in the County Hall, Spring-gardens, S.W., Mr. E. White, Chairman, presiding.

LOANS.—Loans are to be made to borough councils as follows:—Chelsea, 5,300*l.* for paving works; St. Pancras, 3,355*l.* for a housing scheme; Shoreditch, 3,480*l.* for re-paving works; and Stepney, 10,250*l.* for electricity mains.

NEW SCHOOLS.—In a report of the Education Committee it was stated that it is proposed to erect new schools as follows:—Clapham-common, for 800 children; Nine Elms, for 1,000 children; Clapham Junction, for 1,300 children; Battersea Park, for 1,500 children; Norwood, Acre-lane, for 1,000 children; Greenwich, for 500 children; Sydenham, for 500 children; Marylebone, for 500 children; Paddington, for 400 children; Bayswater, for 500 children; Balham, for 1,000 children; and St. Ann's-hill, Wandsworth, for 1,000 children.

It is also proposed to erect a new Roman Catholic school at Limehouse to provide accommodation for forty mentally defective and forty physically defective children.

THEATRES, ETC.—The following drawings have been approved by the Theatres and Music Halls Committee:—Imperial Hotel, Russell-square—electric lighting and heating arrangements in extension; 396, Mile End-road—arrangement of a portion of the entrance vestibule as a waiting space; Queen's Hall, High-street, Peckham—erection of an electrically illuminated outside sign; Wesleyan Methodist Hall, Westminster—installation of a switchboard in connexion with the secondary system of the lighting.

LEGAL COLUMN.

Workmen's Compensation.

The Court of Appeal in the case of Godwin *v.* The Lords Commissioners of the Admiralty have had to consider a question under the Workmen's Compensation Acts of some complexity. A bricklayer employed in the Portsmouth Dockyard sustained an injury to his hand, which subsequently necessitated the amputation of a finger. It appeared that under the Workmen's Compensation Act, 1897, a scheme in substitution of the Act had been certified by the Registrar of Friendly Societies and subscribed to by the workman, which, on the passing of the Workmen's Compensation Act, 1906, was recertified by the Registrar of Friendly Societies, and the point in dispute was whether this scheme was in force so as to bind the workman, or whether he could claim the ordinary compensation in an arbitration. Under sect. 3 of the Act of 1897 the Registrar had to certify whether the scheme "is on the whole not less favourable to the general body of the workmen and their dependants than the provisions of the Act." The Act of 1906, sect. 3, contains a new condition, as the Registrar must certify that the scheme contains scales of compensation not less favourable than those in the Act, and also that a majority of the workmen ascertained by ballot are in favour of the scheme, and there are further restrictions, such as that no scheme shall be certified which makes subscription to a scheme the condition of living.

It was contended on the part of the workman, who had subscribed to the scheme when recertified, that the scheme was invalid because no ballot of the workmen had been taken on the recertification of the scheme. The majority of the Court held that where a scheme is recertified under sect. 15 of the Act of 1906 there is no justification in insisting on a fresh ballot; but Lord Justice Fletcher Moulton dissented from this view, and, having regard to the terms of sub-sects. 3 of sect. 15, there is much to be said in favour of the opinion he expressed. This sub-section provides:—"The Registrar shall recertify any such scheme," *i.e.*, a scheme under the Act of 1897, "if it is proved to his satisfaction that the scheme conforms, or has been so modified as to conform, with the provisions of this Act as to schemes."

It is a great pity that the Legislature should have used language so ambiguous on a point of such importance.

London Drainage By-Laws.

In our Law Reports recently we reported a case heard before a London Police Magistrate in which the Chairman of the London County Council was summoned for having soil pipes within the house constructed of iron instead of drawn lead, as required by the London County Council by-laws. There was also a summons for having failed to deposit plans, and in respect of this latter summons a nominal penalty was imposed. As regards the other summons, the learned magistrate dismissed it on the ground that the Council had not convinced him that the whole pipe was within the house. This decision strikes us as somewhat curious, because we cannot see in the by-laws that there is any question of the whole pipe being within the house. Pipes inside buildings are very properly disallowed, but in the case of existing buildings the by-law provides an exception "when it s necessary to construct such soil pipe the building," in which case its constru prescribed. The by-law following also with connexions of lead pipes with iron To us it seems that an ordinary ind construing the by-law would see th part of a soil pipe within the house m constructed of drawn lead, and th ultimate destination outside the hou nothing to do with the construction pipe within the house, although it m jointed with an iron pipe outside. case under discussion the pipe, partly within the house and partly w was all of iron, and if any effect is given to the by-laws this would clearl to have been an infringement.

LAW REPORTS.

COURT OF APPEAL.

(Before Lords Justices VAUGHAN WI FARWELL, and KENNEDY.)

Action by Contractors against Bris Corporation:

John Aird & Co. *v.* The Corporation of

IN this case the defendants appeale an order of Mr. Justice Scrutton in Cha who, affirming the order of Master Mac refused to stay the action and to re matters in difference between the par the defendants' engineer, Mr. William son Squire, the arbitrator named contract.

Sir R. Finlay, K.C., Mr. Gore Browne and Mr. Inskip, appeared for the appe and Sir A. Cripps, K.C., Mr. Upjohn and Mr. L. Macassey, for the respond

Sir Robert Finlay said that the acti brought by the plaintiffs, the well-know tractors, against the Bristol Corporat recover 171,215*l.* for work and labou and materials provided in connexion w construction of an additional dock an works at Avonmouth, and damages for of contract. The contract involved very work. It was not a lump sum co Attached to it was a schedule of pric the contractors were to be paid in acco with that schedule. The total price wh plaintiffs ultimately claimed was 1,9 They had been paid in accordance w certificates of the Engineer the sum of a mately 1,753,000*l.*, and the action was to recover the balance. The contract co the following clause:—

"If, and whenever, any doubt, disp difference shall arise or happen, during the progress of, or after the com of the works, touching or concerning the or any of them, or of their cost, or to the quantities, qualities, prices, des or manner of work done or executed be done or executed by the contractor the quantity or quality of the material employed therein, or in respect of an tions, omissions, alterations, or de made to, in, or from the works, or a of them, or touching or concerning the ing or intention of this specification, o schedule of quantities and prices or a thereof, or of any drawings, instructi directions referred to in the said specif or which may be furnished or given the progress of the works, or touching cerning any certificate, order, or award may have been made by the Engineer anywise whatsoever relating to the int the Corporation or of the contractor premises, then and in every case such dispute, or difference shall from time be referred to and be settled and dec the Engineer, who shall be competent upon the subject matter of such doubt, or difference, with or without formal r or notice to the contractor or the Corp and who shall judge, decide, order, an mine thereon, and that, whether the be then existing, or completed, or dete and who shall have full power and au to correct and amend any errors or inac in this specification or in the sche quantities and prices, or in any cer order, or award made in pursuance and to the Engineer shall also be refe final determination of any sum or a balance of money to be paid to or from the contractor by the Corpora respect of the works, or any part the of any matter arising under or in co with the contract. Any matter not above as being subject to the final dec the Engineer, and which may become of dispute between the contractor

ration, shall, if so agreed between the
s, be referred for decision to the Con-
g Engineers, or failing agreement, to an
ator to be appointed by the Board of
."

Robert Finlay, continuing, said that the
of the claim in the present case fell within
ms of the first part of that arbitration
as it gave rise to matters which were
sly stated to be matters to be determined
. Squire, who had acted in the matter
contract for the Corporation. The
which had been paid by the Corpora
o the contractors were in accordance
ae Engineer's final certificate. Plaintiffs
d to referring the dispute to Mr. Squire,
the affidavits they set out a number
sons in support of that objection. The
ns which he would cite to the
laid down that there was no valid
on whatever to the inforcement of such
bitration clause as that to say that it
the Engineer arbitrator in matters in
to which he had himself played a very
rable part. The advantages of making
bitrator were obvious. He was familiar
ll matters relating to the contract, and
ld be most expensive to have to begin
o before a gentleman who was not
ut with the matters in dispute. There
legal objection to the Engineer acting
itrator, because in his certificates he
ken views which, as arbitrator, he would
ed upon to review. Upon Mr. Squire's
ional honour the parties had by the
t decided to rely in case of dispute, and
a gentleman of the highest standard
profession. In not one single point had
laintiffs succeeded in taking the case
the ordinary rule laid down by the
ties.

learned Counsel read the affidavit of
wn Clerk of Bristol, solicitor to the
nts, who said that the following
arose on the plaintiffs' claim:—
uestions as to the sufficiency or accuracy
contract drawings, and as to payment
k involved through the rectification of
gs, and as to the non-delivery of the
the works:
isputes as to the meaning of the con-
of contract as to the date at which a
te of completion of the works should
en issued, and as to the withholding of
m monies:
isputes as to the alterations of, or addi-
, or substitution of the contract works,
to the payment of the same and for
pieces of work done, and for materials
by the plaintiffs in course of the
n of the contract work.
hese, Counsel contended, were matters
t was quite competent for the Engineer
with as arbitrator.
earned Counsel then read the affidavit
M. R. Aird, a partner in the plaintiffs'
hich let out six heads, upon which the
f damages was based.
Upjohn said he was prepared to with-
ur of those heads, leaving only two, as
—
laintiffs' claim damages for the failure
aid drawings to represent the nature
work to be executed under the contract
ided by Clause 6 of the said condition
act:
laintiffs claim damages in respect of the
ice and refusal of the Engineer to con-
e elements affecting the cost of addi-
work under the said contract, for the
of settling the price to be paid to the
s for the additional work.
Finlay said Mr. Aird, in his affidavit,
ed that the Engineer had, subsequent
agreement, acted in relation to the
s perversely, unfairly, and unreason-
ntrary to the provisions of the con-
of contract, and that if he acted as
r he would be called upon to adjudi-
his own contract. If misconduct on
of the Engineer had been established
be quite another thing; but it had
shown that he was an unfit person to
. It was unfortunate that charges
n made against the Engineer which
t be supported.
pjohn: We say that the Engineer con-
he Consulting Engineers, thus in a
ting as arbitrator without giving us
ortunity of putting forward our views
matter under discussion. That is a
owever, in respect of which we shall
e to establish any legal damage, and
be dealt with in this action.
Cripps said they made no aspersions
Squire's honour. All they said was
was not a proper person to act as
r.
rned Counsel, on behalf of respondents,
d that the discretion of the Master
and learned Judge below ought not to be interfered with. He submitted that the authorities showed that there were no limits to the cases as to which a judge might exercise his discretion by refusing to stay proceedings, and they further made it clear that where facts arose subsequent to the making of a contract which rendered it unlikely that the appointed tribunal would deal impartially with the dispute an application to stay an independent action ought not to be granted.

At the conclusion of the arguments of Counsel on the 26th ult.,

Lord Justice Vaughan Williams, in delivering judgment, said he was very glad to find that it was not alleged on behalf of the respondents that it was always necessary to show there was misconduct in the sense of involving *mens rea* if it was desired to interfere with the exercise of the arbitrator's powers. In the present case many charges had been made against the Engineer, charges which certainly did involve *mens rea*, and which really imputed moral misconduct to him. Those charges ought not to have been made, and Sir Alfred Cripps had said that he regretted very much that they had been made, and he accepted the position that there was no ground whatsoever for making these charges against the Engineer involving moral misconduct on his part.

He (the Lord Justice) would show what consequences must follow from the fact of such charges having been made. He was not going to say anything inconsistent with the judgment of Lord Justice Bowen in the case of Jackson *v.* The Barry Railway Company. He recognised the full authority of that case, and he did not think that, although certain passages in subsequent judgments had been relied upon as suggesting that that judgment of Lord Justice Bowen should be qualified, it was intended so to do. The principal case which had been relied on by the appellants was G. Freeman & Sons *v.* Chester Rural District Council, and it was suggested that some observations of the Master of the Rolls in his short judgment had in some way modified the judgment of Lord Justice Bowen. He quite understood the arguments that had been put forward, but he did not think those words were intended to have the effect for which the appellants contended. He (the Lord Justice) would act on what had been laid down by Lord Justice Bowen.

In the present case there was one very peculiar circumstance, and that was that of all the matters which had been alleged against the Engineer there were really only two of any substance. As regarded these, they did not arise out of the original agreement between the parties; they did not fall within the schedule of prices where the price paid depended on the original schedule. The affidavits stated that specific agreements had been entered into, and that the Engineer had departed from them. In such a case it was true to say that, in so far as the Engineer differed from the statement that agreements had been entered into and actually denied it, he was really acting as arbitrator in his own case. The question, therefore, to be determined was whether the Engineer had in fact entered into these agreements, and whether he had departed from them. In his judgment there was a strong *prima facie* case made as to the existence of these agreements, as well as a *prima facie* case of a departure from them. He would not go into the details, because the action would have to go on, and it was not desirable at that stage to discuss the evidence. Putting it shortly, he was of opinion that in these two matters it was not desirable that the Engineer should act as arbitrator. In these circumstances, therefore, the appeal failed. As to what ought to happen by reason of these imputations against the Engineer being unnecessarily and unjustly introduced in the affidavits, he thought that the costs below, so far as they had been increased by the charges of moral misconduct against the Engineer, should be borne by the contractors. He thought it was very necessary to mark how strongly the Court thought these charges ought not to have been made. As regarded the costs in the Court of Appeal, he thought they ought to be costs in the cause.

Lord Justice Farwell and Lord Justice Kennedy delivered judgments to the same effect.

FOREIGN AND COLONIAL.

Hotel, Brazil.

Information has been received regarding a proposal to erect a first-class hotel at a seaside resort in Brazil. The construction of a pier similar to those at English bathing resorts is also under consideration. Further particulars may be obtained by British contractors and manufacturers on application to the Commercial Intelligence Branch of the Board of Trade, 73, Basinghall-street, London, E.C.

Building Work, Austria-Hungary.

According to the *Zentral Anzeiger* (Vienna) of February 22, the municipal authorities of Kolozsvár (Hungary) propose to arrange for the carrying out of a number of important works during 1912, including the following:—The erection of schools and other buildings, 1,440,000 kronen; sewerage works extension, 300,000 kronen; enlargement of artificial ice works, 40,000 kronen; street paving, 500,000 kronen; electric works extension, 705,000 kronen; the construction of a market hall, together with city lodging-house, 1,180,000 kronen; erection of workmen's dwellings, 500,000 kronen; fire-station, 200,000 kronen.

OBITUARY.

Mr. G. E. Pritchett, F.S.A.

We much regret to record the death of Mr. George Edward Pritchett, F.S.A., of Oak Hall, Bishop's Stortford. According to the *Hertfordshire Mercury*, the deceased gentleman was the fifth and last surviving son of the Rev. C. R. Pritchett, Rector of Hallingbury from 1835 to 1849. He was born at the Charterhouse, London, where his father was Reader from 1809 to 1835, on June 14, 1824, and he was consequently in his eighty-eighth year. He married in 1864 Sophia Amelia, daughter of the late Rev. W. Gibbs Barker, who predeceased him, leaving three sons and two daughters. Mr. Pritchett was educated at Charterhouse, as were all his sons, and as the oldest Old Carthusian he was present at the recent tercentenary banquet at the Charterhouse. His connexion with the Charterhouse was maintained for fifty years, during which period he was architect and surveyor to the Charterhouse estates, comprising chiefly churches and farms in the counties of Essex, Cambs, and Hunts. He commenced practice as an architect in North-street, Bishop's Stortford, in 1849, and later he had London offices in Lombard-street and Spring-gardens. For some time he was a Lieutenant in the Artillery Company of the old West Essex Yeomanry Cavalry. Mr. Pritchett was also a Fellow of the Society of Antiquaries, a Fellow of the Royal Institute of British Architects, a member of the Council of the Essex Archæological Society, a member of the Essex Field Club, the Röntgen Society, etc. As an architect he was chiefly concerned with ecclesiastical buildings, and among churches, schools, and rectories in Hertfordshire which testify to his work are St. Michael's, Bishop's Stortford, All Saints, Hockerill, Furneaux Pelham, Stocking Pelham, Albury (chancel), Great Hadham, Eastwick, Hoddesdon, Widford, Allen's Green, Hitchin, Sawbridgeworth, and High Wych (church, vicarage, schools, and curatage). In Essex, Suffolk, Cambs, and Hunts there are many other of his works. The Saunder's Memorial in the Chapel of Charterhouse was also his work. He lived to see the schools he built at Harlow and Epping celebrate their fiftieth anniversary, and the completion in December last of Therfield Church, near Royston, the plans for which he drew thirty-nine years ago. Mr. Pritchett built Oak Hall, Bishop's Stortford, in the early sixties. It took three years to complete, and is filled with a valuable collection of local antiquities and curios. The funeral of the deceased took place in Little Hallingbury Churchyard.

EAST LONDON, SOUTH AFRICA.

One of the most promising areas in South Africa is the district surrounding the port of East London. The opportunities which await manufacturers and others are set forth in a book of information and statistics compiled under the joint direction of the East London Municipality and the General Manager of the South African Railways. The book, which bears the title "East London: Commercial Resources and Industrial Possibilities," gives the railway and water rates, particulars of the local markets, the price of labour, full electric light and power, etc., and details regarding the various openings which exist for the establishment of new industries. The book may be obtained gratis on application to The High Commissioner for the Union of South Africa, 32, Victoria-street, S.W.

List of Competitions, Contracts, etc.

For some Contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) ar advertised in this number:** Competitions, iv.; Contracts, iv. vi. viii. x.; Public Appointment, xviii.; Auction Sales, xxiv Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do n bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will b made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while eve endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Competitions.

MARCH 9. — **London, E.C.** — NEW OFFICES.—The Port of London Authority invite preliminary sketch designs for new head offices in Trinity-square, and for laying out remainder of land as a building site. See advertisement in issue of November 24 for further particulars.

MARCH 15. — **Drammen, Norway.**—RAILWAY-STATION.—Particulars from the Norges Statsbaner, Christiania.

MARCH 15. — **Prestatyn, North Wales.** — LAYING-OUT ESTATE.—Lord Aberconway and the Trustees of the Prestatyn Estate invite designs for laying-out of the estate Three premiums are offered. Particulars from 33, Henrietta-street, W.C. See advertisement in issue of January 5 for further particulars.

MARCH 16. — **Harrow.** — PUBLIC OFFICES.—The Harrow-on-the-Hill U.D.C. invite tenders for the enlargement of and alterations to their Public Offices. See advertisement in issue of January 5 for further particulars.

MARCH 25.—**Colchester.** SCHOOL.—Limited to architects practising in the borough.

MARCH 30.—**Edinburgh.**—MEMORIAL TO KING EDWARD.—Limited. See Competition News, p. 151, February 9.

MARCH 31.—**Manitoba, Canada.**—PARLIAMENT BUILDINGS.—The Government of Manitoba invite designs for the new Parliament buildings to be erected in the City of Winnipeg. See advertisement in issue of February 9 for further particulars.

APRIL 4.—**Portland.**—COUNCIL OFFICES.—The Portland U.D.C. invite competitive designs for Council Offices. Premiums of 50*l.* and 10*l.* are offered. See advertisement in issue of February 23 for further particulars.

APRIL 20.—**Birmingham.**—BLUE COAT SCHOOL.—Limited to local architects. Assessors, Mr. G. H. Hunt, F.R.I.B.A., and Mr. C. E. Bateman, F.R.I.B.A. Particulars from the Secretary, the Blue Coat School, Birmingham.

MAY 1.—**Rhos Ruabon.**—PAIR OF WORKMEN'S COTTAGES.—Premiums of 10*l.* and 5*l.* Assessor, Mr. Raymond Unwin, F.R.I.B.A. Particulars from Mr. G. Meirion Griffiths, Rhos Ruabon.

MAY 1. — **Wombwell.**—SWIMMING BATHS.—The Wombwell U.D.C. invite designs in competition for public swimming baths, to be erected in Hough-lane, Wombwell, Yorkshire. Three prizes of the value of 40*l.*, 30*l.*, and 20*l.* respectively are offered for the designs placed first, second and third respectively, by the assessor. See advertisement in issue of February 16 for further particulars.

* MAY 15.—**Portland.**—COUNCIL OFFICES.—The Portland U.D.C. invite competitive designs and plans for Council Offices. See advertisement in this issue for further particulars.

JUNE 28. — **Hale, Cheshire.**—TOWN PLANNING SCHEME.—Premiums 50*l.* and 25*l.* Particulars from the Council Offices, Hale.

JUNE 30.—**Padiham.**—TOWN HALL, BATHS, ETC.—Premiums 40*l.* and 20*l.* Particulars from Mr. J. Gregson, A.M.Inst.C.E., Surveyor's Office, Padiham.

JULY 1. — **Dusseldorf.** — A plan for the extension of the City of Dusseldorf. Premiums of 1,000*l.* to 375*l.* Conditions on application to the Chief Burgomaster, Dusseldorf. A translation appeared on page 365, September 29.

AUGUST 30. — SAXON SNELL PRIZE. — Fifty guineas; with medal, is offered for essay on a hospital subject. Particulars from the Sanitary Institute, 90, Buckingham Palace-road, S.W.

NO DATE. — **Cardiff.** — FOOTBALL STANDS —Premiums 30*l.*, 20*l.*, and 10*l.* Particulars from Mr. C. S. Arthur, 53, Queen-street, Cardiff.

NO DATE.—**Jordanhill, Glasgow.**—PROPOSED TRAINING COLLEGE.—Limited to six firms, named in Competition News, December 1, page 635.

NO DATE. — **Ormskirk.** — CLUB-HOUSE.—Competitive plans are invited for proposed club-house for Ormskirk Golf Club. See advertisement in issue of March 1 for further particulars.

NO DATE. — **Sheffield.** — CRIPPLES' HOME. — Limited to local architects. Mr. E. M. Gibbs, F.R.I.B.A., and Mr. F. E. P. Edwards, F.R.I.B.A., assessors.

NO DATE. — **Warrington.** — SCHOOL. — The Warrington Education Committee invite competitive plans for the erection of a public elementary school. See advertisement in issue of February 16 for further particulars.

Contracts.

BUILDING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

MARCH 8. — **Gwernydomen.** — COTTAGE.—Erection of a cottage and set of farm buildings. Plans and specification seen, and quantities from Mr. W. E. R. Allen, Deputy-Clerk of the County Council, Glamorgan C.C. Offices, Westgate-street, Cardiff.

MARCH 8.—**Linthorpe.**—HOUSES.—Erecting five dwelling-houses in Roman-road. Messrs. Moore & Archibald, architects, Prudential-chambers, Albert-road, Middlesbrough.

MARCH 9.—**Shafton.**—SCHOOL.—For erection of Shafton new school. Plans seen, and specifications, with quantities, from the Education Architect, County Hall, Wakefield. Deposit of 1*l.*

MARCH 11. — **Blackwood.**—HOUSES.—For completion of twelve houses in course of erection, for the Gladstone Building Club. Plans and specifications with Mr. R. Simmonds, architect, High-street, Blackwood.

MARCH 11. — **Blaengarw.**—HALL.—Erection of a mission hall. Plans and specifications seen, and quantities from Mr. J. Cook Rees, M.S.A., Parade-chambers, Neath.

MARCH 11. — **Halifax.** — SHELTERS.—Erection of two open-air shelters at the Bermeside Convalescent Home and School. Plans and specifications seen, and forms of tender from the Borough Engineer.

MARCH 11. — **Stacksteads.**—BUILDINGS.—Construction of headquarter buildings at Stacksteads, for the accommodation of "H" Company, 5th Battalion East Lancashire Regiment. Quantities and forms of tender from Mr. A. Brocklehurst, architect and surveyor, St. James's-chambers, Waterfoot, on deposit of 1*l.*

MARCH 12. — **Bradford.** — WORKHOUSE.—Erection of a workhouse at Daisy-hill. Quantities from Mr. F. Holland, Architect to the Board, 22, Manor-row, Bradford. Deposit of 1*l.* 1s.

MARCH 12.—**London.**—BATHS.—Erection of a building to contain twelve slipper-baths, with waiting-room, etc., in Fen-street, Tidal Basin. Specification, form of tender, and particulars from Mr. John G. Morley, Borough Engineer, Town Hall, West Ham, E. Deposit of 1*l.*

MARCH 12. — **Staffordshire.** — OFFICES.—The Great Western Railway invite tenders for the erection of two small offices in the Midland Railway Company's Goods Yards at Wednesfield and Willenhall. Plans and specification seen, and forms of tender and quantities at the office of the Engineer at Wolverhampton Station.

MARCH 13. — **Bishop Auckland.** — MORTUARY, ETC. — For erection of a new mortuary and a children's shelter at the Workhouse. Particulars and form of tender from Mr. F. H. Livesay, architect, Bishop Auckland.

MARCH 13.—**Dover.**—REPAIRS, ETC.—For works and repairs to the Duke of York's School. Conditions of contract, form of tender, and particulars at H.M. Office of Works, etc., Storey's-gate, S.W. Deposit of 1*l.*

MARCH 13.—**Hull.** -GREENHOUSE.—For erection of a greenhouse at the East Park. Forms of tender and particulars from Mr. A. E. White, M.Inst.C.E., City Engineer, Town Hall, Hull.

MARCH 13.—**Pontypridd.**—LABOUR EXCHANGE.—Erection of a Labour Exchange in Mill-street. Drawings and specifications seen, and quantities, on deposit of 2*l.* 2s., from Messrs. Arthur Ll. Thomas & Gomer S. Morgan, architects and surveyors, Church-street-chambers, Pontypridd.

MARCH 14.—**Batley.**—VILLA.—For erection of a proposed villa, St. Mary's-avenue. Plans, specifications, and quantities from Mr. Wm. F. Cave, architect and surveyor, Market-street, Heckmondwike, Yorks.

MARCH 14.—**Birmingham.**—ADDITIONS.—Additions and alterations to the Council House, Victoria-square. Drawings and specifications seen, and quantities and form of tender at the Estates Department, the Council House, Birmingham. Deposit of 3*l.* 3s.

MARCH 14.—**Garstang.**—CHAPEL.—For erection of new Wesleyan Chapel, Catterall-lane, near Garstang. Quantities, on deposit of 10s., from Mr. Fred Howorth, architect and surveyor, 6, Cannon-street, Preston.

MARCH 14. — **Rochdale.**—CHAPEL.—Erection of chapel at the Workhouse. Plans, specification, and conditions of contract with Mr. Clough, architect, Butts-avenue, Rochdale

MARCH 15.—**Fixby.**—BUNGALOW.—For e of a bungalow at Fixby, Yorks. Quantitie Mr. N. Culley, architect, 13, John W street, Huddersfield.

MARCH 15. — **Salop.**—COTTAGES, ETC.—F tion of two new cottages, two sets of ne buildings; alterations, additions, and rep one existing homestead, at Acton Round. specifications, and forms of tender at the the County Land Agent, Mr. Wm. T. College-hill, Shrewsbury. Deposit of 1*l.*

MARCH 16. — **Barnstaple.**—ALTERATIONS alterations at the Ashleigh-road elem schools. Particulars from Mr. E. Y. Sa P.A.S.I., Borough Surveyor, The Strand, staple.

MARCH 16. — **Nevern.** — REBUILDING.—R building Glasdir bach, Nevern, Pem Plans and specifications with Mr. L. Lic.R.I.B.A., architect and surveyor, Car

MARCH 16.—**Stroud.**—WALLS, ETC.—Erec boundary and retaining walls and other w land adjoining Castle-street Council Drawings and specification with Mr. Phillips, architect, Shire Hall, Gloucester posit of 1*l.* 1s.

MARCH 18.—**Chertsey.**—HOUSE.—Erectio house for nurses on a site in the grounds Workhouse at Ottershaw. Drawings Clerk's Office, 80, Guildford-street, Ch Forms of tender, specification, and quanti deposit of 1*l.*

MARCH 18.—**Cork.**—HOUSES.—For erectio terrace of seven houses on the Wester Plans and specifications with Messrs. W. & Son, architects, 28, South-mall, Cork.

* MARCH 18. — **Cowes.** — DRILL HALL County of Southampton Territorial Force ciation invite tenders for erection of a dri See advertisement in this issue for furthe ticulars.

MARCH 18.—**Dungannon.**—OFFICE.—The Northern Railway Company (Ireland) invi ders for the construction of a goods o Dungannon Station. The drawing and cation at the Engineer's Offices at Dubl Belfast, and forms of tender from Mr. T rison, Secretary, Secretary's Office, Amiens Terminus, Dublin. Deposit of 1*l.* 1s

MARCH 18.—**Kettering.**—HALL.—Erectio corn market hall in Cattle Market. specification, quantities, etc., from the Co Surveyor, Market-place, Kettering, on dep 1*l.* 1s.

* MARCH 18. — **Lewes.** — SCHOOL. — The Sussex Education Committee invite tende new secondary school for girls. See adv ment in this issue for further particulars.

MARCH 19.—**Rotherham.**—TANK.—For e of an elevated water tank in connexion w Boston service reservoir. Specification and from the Borough Engineer, Town Hall, R ham.

MARCH 20. — **Hastings.** — ALTERATIONS alterations at the Hastings Workhouse Infi Drawings and specification with Messrs. & Son, 1B, Havelock-road, Hastings

MARCH 20. — **Rotherham.** — WALL, ETC.— tion of a ferro-concrete retaining wall al the River Don at Millgate, from Jail Br the Corporation slaughterhouse, and cavating and removing the sand bank fr river bed. Drawings seen, and specif forms of tender, quantities, and particular Mr. E. B. Martin, A.M.Inst.C.E., B Engineer, Town Hall, Rotherham. Depo 1*l.* 1s.

MARCH 21. — **Ferryhill.** — INSTITUTE.—E of an institute at Dean Bank. Plans see quantities from Mr. John H. Nicholls, a 18, Fawcett-street, Sunderland

* MARCH 21.—**London, E.**—EXTENSIONS Mile End Old Town Guardians invite for extension to boiler-house, etc., at Work Bancroft-road, Mile End, E. See advert in this issue for further particulars.

MARCH 25. — **Bristol.** — HOUSE.—For co tion of a dockmaster's house, Portishead Specification, etc., and drawings, on dep 3*l.*, from Mr. W. W. Squire, Engineer, Engi Office, Cumberland-road, Bristol.

MARCH 26. — **Nuneaton.**—HALL, ETC.—E of a dining-hall and kitchen at the Work Mr. H. Quick, architect, Market-place, Nu Deposit of 1*l.* 1s.

MARCH 26. — **Oldham.**—EXTENSION.—Fo tion of an extension of the existing To and Municipal Buildings. Plans see quantities and forms of tender from the

BUILDING—*continued.*

date given at the commencement of each
ıph is the latest date when the tender, or
nes, of those willing to submit tenders,
e sent in.

Messrs. Taylor & Simister, 29, Queen-Oldham. Deposit of 1*l.* 1s.

RCH 26. — **Sheffield.**—PURIFYING HOUSE.—irectors of Sheffield United Gas Company tenders for erection of a brick and stone ng house. See advertisement in this issue ther particulars.

RCH 26.—**Walthamstow.**—ADDITIONS, ETC., HOOL.—The Walthamstow Education Com- invite tenders for alterations and addi- o Marsh-street Boys' School. See adver- it in this issue for further particulars.

RCH 27. — **Chelmsford.** — THIRTY-EIGHT NGS.—The Chelmsford T.C. invite tenders ction of thirty-eight working-class dwell- five blocks See advertisement in this r further particulars.

1.—**Birmingham.**—BOILER-HOUSE, ETC.— ction of boiler-house, etc., at the electric ing station, Summer-lane. Quantities .be quantity surveyors, Messrs Ewen & Brother, Ruskin-chambers, Corpora- eet, Birmingham. Deposit of 2*l.* 2s.

IL 1. — **S. Farnborough.**—OFFICES. —The ry of State for War invites tenders for of offices (steel framing, brickwork, and east) at the Army Aircraft Factory, South rough. See advertisement in this issue her particulars.

IL 1.—**Tidworth.**—OFFICERS' QUARTERS.— retary of State for War invites tenders tion of eight officers' quarters in one block orth, Hants. See advertisement in this r further particulars

DATE. — **Lowestoft.**— SCHOOL.—Erection of ch School, near Christ Church. Deposit 2s. to Mr. R. Beattie Nicholson, Town Town Hall, Lowestoft.

DATE.—**Menston.** HOUSES.—Erection of a f houses in Clarence-drive. Messrs. & Collinson, architects, Exchange-build- radford.

DATE. **York.** - HOME — Erection of 's home, in the grounds of the Union use, Haxby-road, York. Drawings and tions by Mr. J. H. Morton, F.R.I.B.A., astern Bank-chambers, South Shields, 7, Westgate-road, Newcastle-on-Tyne. ies and form of tender on deposit of

INEERING, IRON, AND STEEL.

8 **London.** INSTALLATION. For elec- nstallation at the Victoria-embankment conveniences, for the London C.C. s and specification, form of tender, etc., with the Chief Engineer of the Council, Mr. M. Fitzmaurice, C.M.G., County Hall, Spring-gadrens, S.W. Deposit of 10s.

MARCH 9. — **Downpatrick.**—WALLS, ETC.—For rebuilding and repairing sea walls on the No. 263 Quintin Bay and No. 264 Slanes Roads, at Millin Bay and Cloughey Corner. Specifications at the County Surveyor's Office, Downpatrick.

MARCH 13.—**Manchester.**—CONVERTERS, ETC.—Erection of motor converters or rotary converters and static transformers. Specifications and forms of tender from Mr. F. E. Hughes, Secretary, Electricity Department, Town Hall, Manchester. Deposit of 2*l.* 2s. Particulars and information from Mr. S. L. Pearce, Chief Electrical Engineer, Dickinson-street, Manchester.

MARCH 19. — **Belfast.** — BRIDGE.—The Great Northern Railway Company (Ireland) invite tenders for the construction of a bridge, with brick abutments and steel superstructure, under main lines, near Belfast. Drawings at the Engineer's Offices at Dublin and Belfast, and drawings, form of tender, specification, and quantities from Mr. T. Morrison, Secretary, Secretary's Office, Amiens-street Terminus, Dublin. Deposit of 2*l.* 2s.

★ MARCH 19.—**Isleworth.**—PIPE SUBWAYS. The Brentford Guardians invite tenders for extension of existing pipe subways. See advertisement in this issue for further particulars.

FURNITURE, PAINTING, MATERIALS, etc.

MARCH 11.—**Liskeard.**—PAINTING, ETC.—For redecoration of the Town Hall and approaches, and sundry repairs; for sundry repairs and painting and papering house in Higher Lux-street. Specifications seen, and particulars from the Borough Surveyor.

MARCH 13.—**Ashton-in-Makerfield.**—PAINTING. —For painting and decorating internally the several blocks of buildings at Isolation Hospital, Bryn-road. Specification and conditions from the Surveyor, Council Offices, Ashton-in-Makerfield.

MARCH 13. — **Twickenham.** — PAINTING, ETC. - For cleaning, distempering, and painting the Free Public Library, Garfield-road. Particulars and form of tender from Mr. Fred W. Pearce, F.S.I., Surveyor to the Council, Town Hall, Twickenham.

MARCH 15.—**Merthyr Tydfil.**—PAINTING.—For colouring and painting interior of the intermediate school. Particulars from the Deputy-Surveyor, Town Hall.

★ MARCH 18. — **Kensington.** — CARTAGE.—The Kensington B.C. invites tenders for removal of clinker refuse and also for purchase of screened clinker refuse, etc. See advertisement in this issue for further particulars.

MARCH 20.—**Oxford.**—PAINTING.—For painting work at the Corporation cemeteries. Specification from the City Engineer, Town Hall, Oxford, on deposit of 10s.

MARCH 25.—**Heywood.**—PAINTING.—For painting the Public Baths, Fox-street. Specification and form of tender from Mr. Jas. B. Nuttall, Borough Surveyor, on deposit of 10s.

APRIL 2. — **London.**—PAINTING.—For painting, etc., a portion of the interior of schools, High-road, Leytonstone. Forms of tender and specification, on deposit of 1*l.* 1s., from Mr. D. Thomas, Clerk to the Board, Bishops-road, Victoria Park, N.E.

NO DATE. — **Walsall.**—PAINTING.—For internal and external painting, etc., at the Walsall and District Hospital. Specification and particulars from Messrs. Bailey & McConnal, architects, Kingscourt, Walsall. Deposit of 1*l.* 1s.

ROADS, SANITARY AND WATER WORKS.

★ MARCH 13.—**Holborn.**—PAVING WORKS.—The Holborn B.C. invite tenders for carrying out paving works in the borough. See advertisement in this issue for further particulars

MARCH 13. — **Twickenham.** — STREETS.—For paving, kerbing, channelling, and making good streets. Plans and specifications seen, and quantities and forms of tender from Mr. Fred W. Pearce, F.S.I., Surveyor to the Council, Town Hall, Twickenham. Deposit of 1*l.* 1s.

MARCH 18. — **Easington.** — PAVING, ETC.—For the paving, etc., of the private street known as Back Woods-terrace, Murton Colliery. General conditions and specification from Mr. Gilbert Waterhouse, Surveyor, Easington, Castle Eden. Deposit of 2*l.*

MARCH 20. — **Wycombe.** — SEWAGE.—For construction of detritus tanks, percolating filters, humus tanks, sand filters, storm-water tanks, and other appurtenant works at the Sewage Farm, Wendover. Drawings and specification seen, and quantities and form of tender on deposit of 3*l.* 3s. to Mr B. L. Reynolds, Clerk to the Council, 12, Easton-street, High Wycombe.

MARCH 21. — **Naburn.** — SEWERAGE.—For construction of works of sewage disposal at Naburn, near York. Plans, specification, quantities, etc., on deposit of 3*l.*, from Mr. F. W. Spurr, City Engineer, Guildhall, York.

MARCH 21.—**Wenlock.**—SEWAGE.—For laying and jointing 12-in. and 9-in. stoneware pipe sewers; also construction of liquefying tanks, bacteria beds, humus tank sludge beds, and other works. Drawings and specification seen, and quantities and form of tender from the engineers, Messrs Willcox & Raikes, 63, Temple-row, Birmingham, on deposit of 3*l.* 3s

Auction Sales.

Nature and Place of Sale.	By whom Offered.	Date of Sale.
ERS' AND CONTRACTORS' PLANT, ETC.—On the Premises	J. T. Skelding	Mar. 12
ULTURAL BUILDERS' STOCK-IN-TRADE—On the Premises	Relph & Sons	Mar. 14
DE PAP RHANG NGS MERCHANT, 13, HIGH HO BORN, W.C. On the Prems.	H. W. Smith	Mar. 14
OLD BRICKFIELD—At King's Arms Hotel, Christchurch	H. A. Wooff	Mar. 18
OLD MANUFACTURING LAND—At the Mart	Green & Son	Mar. 21
OLD BUILDING LAND—At the Mart	Eastman Bros.	Mar. 22
AND HOP, ST. PANCRAS—At the Mart	Rutley, Son, & Vine	April 2
S, SHOPS, ETC.—At the Mart	Rutley, Son, & Vine	April 2

PATENTS.

APPLICATIONS PUBLISHED *

f 1911.—John Ware: Elevator or hoist and fall electric light fittings and

f 1911.—Herbert Read: Device for ng damage to sun-blinds in windy

f 1911.—Ernest Carl Hemmer and Pagenstecher: Paints and the like.

f 1911.—Frank Mintoft: Device for floors, windows, and other surfaces.

f 1911.—William Stewart Mason and Jarvis Mason: Window-holders for ashes.

f 1911.—Gordon Sharpe: Dust pans or

f 1911.—Ernest Hitchen: Apparatus ving the smoke test to drains, soil- d sanitary fittings.

f 1911.—Richard Joskolla: Folding walls.

f 1911.—Wilhelm Graaff: Method and r extinguishing fires.

f 1911.—James Holt: Syphon-flushing

1911.—William Ernest Cato Liebert: doors and the like.

ese applications are in the stage in position to the grant of Patents upon be made.

10,035 of 1911.—Jonas Lister Rodger: Bottom tile for sewage-tanks and the like.

10,662 of 1911.—George James Webb: Devices for cleaning or removing obstructions in pipes, tubes, and the like.

11,070 of 1911.—James Hill & Co., Ltd., and Harold Tomkins: Opening and closing apparatus for fanlights, skylights, and the like.

11,395 of 1911.—William Henry Partridge: Fastenings for tightly-fitting doors and the like.

12,296 of 1911.—Angelo Vacani Dismore: Roller blinds.

14,399 of 1911.—Maurice Edward Denny and Alexander Porterfield: Weather-tight sliding-windows.

14,915 of 1911.—Harry August Stickman: Reinforcement for concrete and the like.

22,557 of 1911.—John William Ewart: Ventilating-shaft tops.

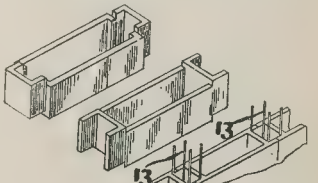
23,968 of 1911.—Jack Albert James Cadby: Sash frames and sashes and appliances relating to sashes and sash-frames.

24,489 of 1911.—Wilhelm Lehmuth: Devices for automatically unbolting doors at predetermined times.

SELECTED PATENTS.

22,795 of 1910.—Harold Merrylees and Merrylees & Co., Ltd.: Hollow building-blocks.

This relates to interlocking hollow blocks for floors or walls, which are shaped as shown, and are made from sawdust, magnesia, and a solution of magnesium chloride. An intimate mixture of 30 per cent. of sawdust and 70 per cent. of magnesia is added to the magnesium chloride solution, until the resulting mixture is plastic. A hollow wall with reinforcing-rods



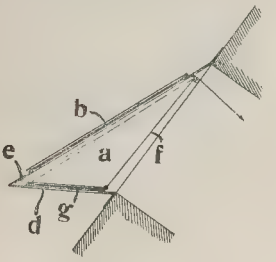
22,795 of 1910.

13 may be formed from such blocks, the blocks being formed with the whole of the upper and lower edges respectively in line, instead of with offset portions.

22,879 of 1910.—Friedrich Hahn: Windows.

This relates to windows through which, when open, rain or snow cannot enter, and which can be fitted in walls or roofs at any inclination, and consists in the provision of a wedge-shaped frame *a*, the lower end *d* of which is

inclined or horizontal and is fitted with an inwardly-opening window *g*; this is pivoted

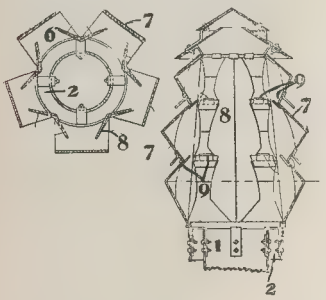


22,879 of 1910.

at *e* to the frame *a*, is opened by a cord *f*, and closes by its own weight. The side *b* of the frame *a* is glazed.

23,698 of 1910.—John Law Garsed: Chimney and ventilating shaft tops.

This relates to the top of a shaft 1, which is surrounded by a ring, thus forming an annular passage 2. Secured to the ring are two sets of plates 7 and 8, connected together at the top, the whole thus forming a somewhat tapering structure. The plates are of shallow V-section, and are so spaced as to



23,698 of 1910.

leave vertical slots 6, which are shielded by the plates 7. The plates 7 are of zigzag vertical section, and are joined at their inner bends to the plates 8, thus dividing the vertical slots 6 into series of vertical apertures. Shielded apertures 9 are provided in the downwardly facing limbs of the plates 7. One or more convex covers complete the top.

SOME RECENT SALES OF PROPERTY:

ESTATE EXCHANGE REPORT.

February 22.—By WINTERTON & SONS.

Kingsbury, Warwick. Grange Farm, 45 a. 1 r. 7 p., f. £2,520

February 23. -By EARL & LAWRENCE.

Wellingore, Lincs.—Freehold farm, 159 a. 1 r. 33 p. 5,310

February 26.—By VERYARD & YATES.

Charlton. -Nadine-st., f.g. rents 11l., reversion in 85 yrs. 220

Lewisham. Albacore-cres., f.g.r. 6l., reversion in 88 yrs. 118

New Cross. 59, Amersham-rd., u.t. 20 yrs., g.r. 4 ., e.r. 36l. 128

By MASON, SONS, & KELK.

Hatcliffe, Lincs.—Hatcliffe Farm, 405 a. 1 r. 12 p., f. 9,000

Grathorpe, Lincs. Pasture land, 46a. 1 r. 6 p., f. 2,825

February 27.—By DRIVER, JONAS, & CO.

Oxford st., 85, Wigmore-st. (s.), f., y.r. 315l. 5,100

Greenwich.—10 to 22 (even), Trafalgar-rd. (s.), f., w.r. 105l 410

Westminster. -19 and 20, Medway st., f., w.r. 106l. 12s. 625

By C. GERRETT & CO.

South Norwood.—12, 14, and 16, St. John's-rd. and builder's yard, f., w.r. 90l 16s. 680

Suffolk rd., plot of land, f. 100

130 and 132, Portland rd. (s.), f., y.r. 55l 685

Portland-rd., f.g.r. 8l. 8s., reversion in 68 yrs. 195

Holland-rd., plot of land, f 75

By HAMPTON & SONS.

Kensington.—Aubrey-rd., f.g. rents 30l., reversion in 29 yrs. 1,380

By PETTY & SON.

Leytonstone.—184, Hainault-rd., u.t. 65 yrs., g.r. 6l., y.r. 28l. £155

By FREDERICK WARMAN.

Harringay. -96, 98, and 100, Seymour rd.. u.t 84 yrs., g.r. 21l., y.r. 96l 750

Highbury. 27, Aubert Park, u.t. 84½ yrs , g.r. 10l., y.r. 54l. 351

Tottenham. 520, West Green rd., u.t. 20 yrs., g.r. 11l., p. 300

Barnsbury.—32, Dornda-st., f., p... 150

By RUTLEY, SON, & VINE.

Camden Town. 32, Rochester-rd., u.t. 31 yrs . g.r. 5l., y.r. 40l 325

Holloway. -7, Crayford-rd., u.t. 40 yrs., g.r. 6l., y.r. 38l. 370

By J. W. FLORANCE, FOSTER, & BARBER.

Ladywood, Warwick. Sherborne-st., Rose b h., u.t. 33 yrs., g.r. 6l. 2s. 6d., y.r 45l 850

Lozells, Warwick. Wheeler st., Belle Vue Tavern, f., y.r. 150l. 2,750

Balsall Heath, Worcester. — Dymoke-st., Princess of Wales p.h., f., y.r. 50l. 900

Winson Green, Warwick Lansdowne-st., Oak Tavern, f., y.r. 50l. 925

Smethwick, Staffs. Windmill-la., Windmill Inn, f.g.r. 3l. 15s., reversion in 38 yrs. ; also eight houses adjoining, f., y.r. 143l 1,250

Birmingham, Warwick Dartmouth-st., building site, f. 3,500

By J. C. PLATT.

Shepherd's Bush.—104 and 106, Becklow-rd., f , w.r 70l. 4s. 540

Hammersmith. 27 and 29, Lochaline-st., u.t. 91 yrs., g.r. 12l., w.r 88l. 8s. 655

February 28.—By DANIEL SMITH, SON, & OAKLEY.

South Lambeth.—Fentiman-rd., etc., c.g. rents 591l 14s., reversion in 8¼ to 26¼ yrs. ; also 121, Dorset-rd., c., y.r. 25l. 25,800

By DYER, SON, & HILTON.

Silvertown.—26 to 50 (even), Kempton-st., u.t. 65 yrs., g.r. 50l., w.r. 270l. 8s. 455

By FOSTER & CRANFIELD.

Islington.—Sudeley st., f.g.r. 5l., reversion in 74 yrs. 170

7, Church st., f , y.r. 40l. 380

King Henry's-walk. f.g. rents 26l. 2s., reversion in 10 yrs 785

Chelsea.—Ovington st., f g.r. 6l., reversion in 19 yrs. 225

Hammersmith.—Chapel-st., f.g.r. 17l. 10s., reversion in 2 yrs 770

By HENRY HOLMES & CO.

Soho.—17, Manette st. (s.), f., y.r. 60l. 1,325

Paddington. 13, Star-st , u.t. 9 yrs., g.r. nil , e.r. 55l 140

South Lambeth. 10, 11, 12, and 13, Belmore-st., f , w.r 124l. 16s. 35

Bethnal Green. -Cephas-st., plot of land, f 350

By ROBERT TIDEY & SON.

Hoxton. 36, Pitfield-st. (s.), f., y.r. 70l. 800

By ERNEST R OXBORROW.

Ipswich, Suffolk.—31 and 33, Croft-st . f., w.r. 26l. 263

28 and 30, Little Croft-st., f., w.r. 23l 2s. 203

65 to 71 (odd), Woodhouse-st., f., w.r. 42l. 5s. 315

2, 4, and 6, Alfred-st., f , w.r. 28l. 7s. 6d 195

26 and 28, Crabbe-st., f., w.r. 36l. 8s. 125

11, Rendlesham-rd., f., w.r. 13l. 134

By MADDISON, MILES, & MADDISON.

Bradwell, Suffolk.—Poplar Farm, 42 acres, f.... 1,280

Yarmouth-rd., two cottages, f. 275

House and 3 a. 2 r. 35 p., f. 285

Gorleston, Suffolk 70, Church-rd., f. 285

February 29. By JOHN G. DEAN & CO.

Balham.—8 to 13, The Limes, f., g.r. 204l. 2s . 1,650

Clapton.—37, Nightingale-rd , u.t. 47 yrs., g r 10l., e r. 45l. 350

By FRANK JOLLY & JAMES RIEBOLDS.

Tottenham. 370, High-rd (s.), f., y.r. 36l 325

By VENTOM, BULL, & COOPER.

West Norwood.—Thurlow Park-rd., f.g. rents 10l., reversion in 52 yrs. 20

Sutton, Surrey.—Elm-villas, f.g. rents 10l., reversion in 54 yrs. 205

Camberwell.—Elfin-rd., f.g.r. 20l. 5s., reversion in 51 yrs 370

Croydon.—Wortley rd., f g. rents 8l., reversion in 54 yrs. 175

Lee Baring-rd., etc., f.g. rents 67l. 4s., reversion in 48 yrs 1,280

Notting Hill. All Saints-rd., f.g r. 10l., reversion in 49 yrs 245

Shepherd's Bush.—Melina-rd., f.g.r. 6l., reversion in 40 yrs 142

Lambeth.—Church-st., f.g.r. 10l. 10s., reversion in 9 yrs. 400

Enfield. Nazg's Head-rd., f.g. rents 110l , reversion in 86 yrs 1,100

Sydenham.—Elderton-rd., f.g. rents 74l., reversion in 54 yrs. 1,290

Peckham.—Stav ley-rd, f.g. rents 12l. 12s , reversion in 32 and 28 yrs. 305

Battersea. -Wayland-rd , f g. rents 30l., reversion in 54 and 58 yrs. 515

Crouch End.—The Grove, f.g rents 90l., reversion in 55 and 49 yrs 1,670

Brixton.—1 and 22, Wingmore-rd , f., y., and w.r. 60l . also f.g.r. 4l. 10s., reversion in 50 yrs. 550

Twickenham.—Huggard-rd , l.g. rents 37l., u.t. 55 yrs., g.r. nil, with reversion 535

Holloway.—Tufnell Park rd., l.g.r. 9l , u t. 52 yrs., g r. 5s. 135

Finsbury Park. -340, Green-las, and l.g.r. 7l. 10s., u.t. 86½ yrs., g r. 9l., y.r. 45l. .. 300

Pimlico.—Belgrave-rd., l.g.r. 20l., u.t. 15 yrs., g r. 1s. 240

Teddington. 27, Stanley-rd., f , w.r. 32l. 200

Islington.—6, Kingsbury-rd., f., w.r. 40l. . 250

Campbell rd., f.g. rents 12l. 12s., reversion in 55 yrs. 250

Chiswick.—Wellesley rd., f.g.r. 5l. 10s., reversion in 54 yrs 4

Notting Hill. Ackiam-rd., f.g. rents 24l., reversion in 54 yrs. ..... .

Ramsgate. -Pieton-rd., f.g. rents 8l. 10s., reversion in 67 and 99 yrs. ..... .

March 1.—By C. RAWLEY CROSS & CO.

Notting Hill.—11, Barandon-st., u.t. 53 yrs., g.r. 8l , w.r. 39l. .. ..

By ALEX PHILLIPS.

Brondesbury. 12, 14, 16, 18, 24, 25, 27, 29, 33, and 77, Torbay-rd., u.t. 71½ yrs., g.r. 50l., y.r. 96l. 3,

Contractions used in these lists.—F.g.r. for freeh ground-rent; l.g.r. for leasehold ground-rent; i.g.r. improved ground-rent; g.r. for ground-rent; r. for re f. for freehold; c. for copyhold; l. for leasehold; p. possession; e.r. for estimated rental; w.r. for wee rental; q.r. for quarterly rental; y.r. for yearly rent u.t. for unexpired term; p.a. for per annum; yrs. years; la. for lane; st. for street; rd. for road; sq. square; pl. for place; ter. for terrace; cres. for cresce av. for avenue; gdns. for gardens; yd. for yard; gr. grove; b.h. for beerhouse; p.h. for public-house; o. offices; s. for shops; ct. for court.

TO CORRESPONDENTS.

NOTE.—All communications with respect to liter and artistic matters should be addressed to "T EDITOR" (and not to any person by name); th relating to advertisements and other exclusiv business matters should be addressed to "T PUBLISHER," and *not* to the Editor.

All communications must be authenticated by name and address of the sender, whether for publi tion or not. No notice can be taken of anonym communications.

The responsibility of signed articles, letters, papers read at meetings rests, of course, with t authors.

We cannot undertake to return rejected comm cations; and the Editor cannot be responsible drawings, photographs, manuscripts, or other do ments, or for models or samples, sent to or left at t office, unless he has specially asked for them.

All drawings sent to or left at this office for c sideration should bear the owner's name and addr on either the face or back of the drawing. Delay inconvenience may result from inattention to this.

Any communication to a contributor to write an arti or to execute or lend a drawing for publication, is gi subject to the approval of the article or drawing, wh received, by the Editor, who retains the right to rej it if unsatisfactory. The receipt by the author proof of an article in type does not necessarily imply acceptance.

N.B.—Illustrations of the First Premiated Design any important architectural competition will always accepted for publication by the Editor, whether t have been formally asked for or not.

PRICES CURRENT OF MATERIAL

*** Our aim in this list is to give, as far as possible, *average* prices of materials, not necessarily the low Quality and quantity obviously affect prices—a which should be remembered by those who make us this information.

BRICKS, &c.

Per 1000 Alongside, in River. £ s

Best Stocks 1 14

Picked Stocks for Facings 2

Per 1000, Delivered at Railway Depôt.

	£ s. d.		£ s
Flettons	1 12 0	Best Blue Pressed Staffordshire ..	3 13
Best Fareham Red	3 12 0	Do. Bullnose	4 6
Best Red Pressed Ruabon Facing	5 0 0	Best Stourbridge Fire Bricks ...	4 6

GLAZED BRICKS—

Best White, Ivory, and Salt Glzd. Str'tch'rs	11 7 6	Double Headers	13 1
		One Side and two Ends	17 1
Headers	10 17 6	Two Sides and one End	18 1
Quoins, Bullnose, and ¼ in. Flats	14 17 6	Splays & Squints	16
D'ble Stretchers	16 17 6		

Second Quality £1 10s. per 1000 less than best.

	s. d.	
Thames and Pit Sand	6	9 per yard, delive
Thames Ballast	5	6 " "
Best Portland Cement	31	0 per ton,
Best Ground Blue Lias Lime	19	0 "

NOTE—The cement or lime is exclusive of ordinary charge for sacks.

Grey Stone Lime ..... 13s. 0d. per yard delive
Stourbridge Fireclay in sacks 27s. 0d. per ton at rly

STONE.

Per Ft. Cube.

BATH STONE—delivered on road waggons, Paddington Depôt 1

Do. do. delivered on road waggons, Nine Elms Depôt 1

PORTLAND STONE (20 ft. average)—

Brown Whitbed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf 2

White Basebed, delivered on road waggons Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf 2

Per Ft. Cube, delivered at Railway Depôt.

	s. d.		s
Ancaster in blocks..	1 10	Closeburn Red Freestone	2
Beer in blocks	1 6		
Greenshill in blocks	1 10	Red Mansfield Freestone	2
Darley Dale in blocks	2 4	Talacre & Gwespyr Stone	2
Red Corsehill in blocks	2 3		

STONE (*Continued*).

ER STONE—*Robin Hood Quality.*

	s.	d.
Per Ft. Cube, Delivered at Railway Depôt.		
ppled random blocks	2	10
Per Ft. Super., Delivered at Railway Depôt.		
n. sawn two sides landings to sizes (under 60 t. super.)	2	3
n. rubbed two sides ditto, ditto	2	6
n. sawn two sides slabs (random sizes)	0	11½
n. to 2½ in. sawn one side slabs (random sizes)	0	7
n. to 2 in. ditto, ditto	0	6

ED YORK—

	s.	d.
Per Ft. Cube, Delivered at Railway Depôt.		
ppled random blocks	3	0
Per Ft. Super., Delivered at Railway Depôt.		
n. sawn two sides landing to sizes (under 60 ft. super.)	2	8
n. rubbed two sides ditto	3	0
n. sawn two sides slabs (random sizes)	1	2
n. self-faced random flags	0	5

SLATES.

Per 1000 of 1200 at Railway Depôt.

In.	£	s.	d.	In. In.	£	s.	d.
10 best blue				20×10 best Eur'ka			
ngor	13	2	6	unfading green	15	17	6
12 ditto	13	17	6	20×12 ditto	18	7	6
10 1st quality				18×10 ditto	13	5	0
itto	13	0	0	16×8 ditto	10	5	0
12 ditto	13	15	0	20×10 permanent			
8 ditto	7	5	0	green	11	12	6
10 best blue				18×10 ditto	9	12	6
rtmadoc	12	12	6	16×8 ditto	6	12	6
8 ditto	6	12	6				

TILES.

At Railway Depôt.

	s.	d.		s.	d.
t plain red roof-			Best "Hartshill"		
ng (per 1000)	42	0	brand, plain sand-		
Hip and Valley			faced (per 1000)	50	0
(per doz.)	3	7	Do. pressed (per		
t Broseley (per			1000)	47	6
000)	50	0	Do. Ornamental (per		
Ornamental (per			1000)	50	0
000)	52	6	Hip (per doz.)	4	0
Hip and Valley			Valley (per doz.)	3	6
(per doz.)	4	0	Staffords. (Hanley)		
t Ruabon red,			Reds or Brindled		
own, or brindled			(per 1000)	42	6
dw'ds) (per 1000)	57	6	Hand-made sand-		
Ornamental (per			faced (per 1000)	45	0
000)	60	0	Hip (per doz.)	4	0
Hip (per doz.)	4	0	Valley (per doz.)	3	6
Valley (per doz.)	3	0			

WOOD.

BUILDING WOOD.	At per standard.					
ls: best 3 in. by 11 in. and 4 in. by 9 in. and 11 in.	£	s.	d.	£	s.	d.
	14	0	0	15	10	0
ls: best 3 by 9	13	10	0	14	10	0
tens: best 2½ in. by 7 in. and 8 in., and 3 in. by 7 in. and 8 in.	11	10	0	12	10	0
tens: best 2½ by 6 and 3 by 6	0	10	0	less than 7 in. and 8 in.		
ls: seconds	1	0	0	less than best.		
tens: seconds	0	10	0	"		"
in. by in. and 2 in. by 6 in.	9	10	0	10	10	0
in. by 4½ in. and 2 in. by 5 in.	9	0	0	10	0	0
sign Sawn Boards—						
n. and 1½ in. by 7 in.	0	10	0	more than battens.		
n.	1	0	0	"		
timber: best middling Danzig	At per load of 50 ft.					
Memel (average specification)	5	0	0	5	10	0
seconds	4	10	0	5	0	0
mall timber (8 in. to 10 in.)	3	17	6	4	0	0
mall timber (6 in. to 8 in.)	3	5	0	3	10	0
vedish balks	2	12	6	3	0	0
h-pine timber (30 ft. average)	5	5	0	6	0	0

JOINERS' WOOD.	At per standard.					
te Sea: first yellow deals, 3 in. by 11 in.	24	10	0	25	10	0
3 in. by 9 in.	22	10	0	23	10	0
Battens, 2½ in. and 3 in. by 7 in.	17	0	0	18	0	0
cond yellow deals, 3in. by 11 in.	19	0	0	20	0	0
" " 3 in. by 9 in.	18	0	0	19	10	0
Battens, 2½ in. and 3 in. by 7 in.	14	0	0	15	0	0
hird yellow deals, 3 in. by 11 in. and 9 in.	14	0	0	15	0	0
Battens, 2½ in. and 3 in. by 7 in.	11	10	0	12	10	0
rsburg: first yellow deals, 3 in. by 11 in.	21	10	0	22	10	0
Do. 3 in. by 9 in.	18	10	0	19	10	0
Battens	14	0	0	15	0	0
cond yellow deals, 3 in. by 11 in.	16	10	0	17	10	0
Do. 3 in. by 9 in.	15	0	0	16	0	0
Battens	11	10	0	12	10	0
ird yellow deals, 3in. by 11 in.	13	10	0	14	10	0
Do. 3 in. by 9 in.	13	0	0	14	0	0
Battens	10	10	0	11	0	0
te Sea and Petersburg—						
st white deals, 3 in. by 11 in.	15	0	0	16	0	0
" " 3 in. by 9 in.	14	0	0	14	10	0
Battens	11	10	0	12	10	0
cond white deals, 3in. by 11in.	14	0	0	15	0	0
" " 3 in. by 9 in.	13	0	0	14	0	0
Battens	10	10	0	11	0	0
i-pine: deals	19	0	0	21	0	0
der 2 in. thick extra	0	10	0	1	0	0
w Pine—First, regular sizes	48	0	0	upwards.		
dments	32	0	0	"		
conds, regular sizes	33	0	0	"		
dments	28	0	0	"		
i Pine—Planks per ft. cube	0	4	6	...	0	6	0
ig and Stettin Oak Logs—per ft. cube	0	3	0	...	0	3	9
all " "	0	2	6	...	0	2	6
scot Oak Logs, per ft. cube	0	6	6	...	0	8	0
Wainscot Oak, per ft. sup. as inch	0	0	10	...	0	1	0
" do. do.	0	0	8½	...	—		
Mahogany—Honduras, Tabasco, per ft. super. as inch	0	0	10	...	0	1	1
ected, Figury, per ft. super. s inch	0	0	1	6	...	0	2	6

WOOD (*Continued*).

JOINERS' WOOD (*Continued*)—	At per standard.					
Dry Walnut, American, per ft. super. as inch	£	s.	d.	£	s.	d.
	0	0	10	0	1	0
Teak, per load	18	0	0	22	0	0
American Whitewood planks, per ft. cube	0	5	0	0	6	0
Prepared Flooring, etc.—	Per square.					
1 in. by 7 in. yellow, planed and shot	0	13	6	0	17	0
1 in. by 7 in. yellow, planed and matched	0	14	0	0	18	0
1¼ in. by 7 in. yellow, planed and matched	0	16	0	1	0	0
1 in. by 7 in. white, planed and shot	0	12	0	0	14	6
1 in. by 7 in. white, planed and matched	0	12	6	0	15	0
1¼ in. by 7 in. white, planed and matched	0	15	0	0	16	6
¾ in. by 7 in. yellow, matched and beaded or V-jointed brds.	0	11	0	0	13	6
1 in. by 7 in. " "	0	14	0	0	18	6
¾ in. by 7 in. white " "	0	10	0	0	11	0
1 in. by 7 in. " "	0	12	9	0	15	0

6 in. at 6d. to 9d. per square less than 7 in.

JOISTS, GIRDERS, &c.

	In London, or delivered Railway Vans, per ton.					
Rolled Steel Joists, ordinary sections	£	s.	d.	£	s.	d.
	7	10	0	8	0	0
Compound Girders, ordinary sections	9	10	0	10	0	0
Steel Compound Stanchions	11	0	0	12	0	0
Angles, Tees, and Channels, ordinary sections	9	10	0	10	0	0
Flitch Plates	9	10	0	10	0	
Cast Iron Columns & Stanchions, including ordinary patterns	7	10	0	8	10	0

METALS.

	Per ton, in London.					
IRON—	£	s.	d.	£	s.	d.
Common Bars	9	0	0	9	10	0
Staffordshire Crown Bars, good merchant quality	9	5	0	9	15	0
Staffordshire "Marked Bars"	11	0	0	—		
Mild Steel Bars	9	5	0	9	15	0
Hoop Iron, basis price	10	0	0	—		
" " Galvanised	17	10	0	—		
(*And upwards, according to size and gauge.)						
Sheet Iron Black—						
Ordinary sizes to 20 g.	10	5	0	—		
" " 24 g.	11	5	0	—		
" " 26 g.	12	15	0	—		
Sheet Iron, Galvanised, flat, ordinary quality—						
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15	10	0	—		
Ordinary sizes to 22 g. and 24 g.	16	0	0	—		
" " 26 g.	17	0	0	—		
Sheet Iron, Galvanised, flat, best quality—						
Ordinary sizes to 20 g.	18	10	0	—		
" " 22 g. and 24 g.	19	0	0	—		
" " 26 g.	20	10	0	—		
Galvanised Corrugated Sheets—						
Ordinary sizes, 6ft. to 8ft. 20 g.	15	0	0	—		
" " 22 g. and 24 g.	15	5	0	—		
" " 26 g.	16	15	0	—		
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	12	10	0	—		
Best Soft Steel Sheets, 2 g. & 24 g.	13	10	0	—		
" " " 26 g.	15	10	0	—		
Cut Nails, 3 in. to 6 in. (Under 3 in., usual trade extras.)	11	0	0	11	10	0

LEAD, &c.

	£	s.	d.	
LEAD—Sheet, English, 4lb. and up	19	12	6	—
Pipe in coils	20	2	6	—
Soil pipe	23	2	6	—
Compo pipe	23	2	6	—
ZINC—Sheet—	In casks of 10 cwt.			
Vielle Montagne	33	10	0	—
Silesian	33	5	0	—
Zinc, in bundles, 1s. per cwt. extra.				
COPPER—				
Strong Sheet per lb.	0	1	0	—
Thin "	0	1	1	—
Copper nails "	0	0	10	—
Copper wire "	0	0	10	—
BRASS—				
Strong Sheet "	0	0	11	—
Thin "	0	1	0	—
TIN—English Ingots "	0	1	11	—
SOLDER—Plumbers' "	0	0	8½	—
Tinmen's "	0	0	11	—
Blowpipe "	0	1	2	—

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.			
15 oz. thirds	2½d.	28 oz. fourths	3½d.
" fourths	1½d.	32 oz. thirds	5d.
21 oz. thirds	3d.	" fourths	4½d.
" fourths	2¾d.	Fluted Sheet, 15 oz.	3½d.
26 oz. thirds	4d.	" 21 oz.	4½d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.			
⅛ Hartley's	2d.	Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white	3½d.
⅛ "	2½d.		
¼ "	2¾d.	Ditto, tinted	5d.

* Not less than three crates.

OILS, &c.

		£	s.	d.
Raw Linseed Oil in pipes	per gallon	0	3	2
" " in barrels	"	0	3	3
" " in drums	"	0	3	5
Boiled " in barrels	"	0	3	5
" " in drums	"	0	3	8
Turpentine in barrels	"	0	2	10
" in drums	"	0	3	0
Genuine Ground English White Lead, per ton		26	10	0
Red Lead, Dry	"	23	5	0
Best Linseed Oil Putty	per cwt.	0	10	0
Stockholm Tar	per barrel	1	12	0

VARNISHES, &c.

	Per gallon. £	s.	d.
Fine Pale Oak Varnish	0	8	0
Pale Copal Oak	0	10	6
Superfine Pale Elastic Oak	0	12	6
Fine Extra Hard Church Oak	0	10	0
Superfine Hard-drying Oak, for seats of Churches	0	14	6
Fine Elastic Carriage	0	12	0
Superfine Pale Elastic Carriage	0	16	0
Fine Pale Maple	0	10	0
Finest Pale Durable Copal	0	18	0
Extra Pale French Oil	1	1	0
Eggshell Flating Varnish	0	18	0
White Pale Enamel	1	4	0
Extra Pale Paper	0	12	0
Best Japan Gold Size	0	10	6
Best Black Japan	0	16	0
Oak and Mahogany Stain	0	9	0
Brunswick Black	0	8	0
Berlin Black	0	16	0
Knotting	0	10	9
French and Brush Polish	0	10	6

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than* 6 p.m. on *Wednesday*. [N.B.—We cannot publish Tenders unless authenticated either by the architect or the building owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is stated, nor any list in which the lowest Tender is under 100*l.* unless in some exceptional cases and for special reasons.]

*Denotes *accepted*. †Denotes *provisionally accepted*.

ARDGLASS.—For erection of a new masonic hall, for Ardglass Masonic Lodge. Messrs. Browne Bros., architects, Ardglass, Ireland:—
R. McDonald, Church-street, Downpatrick £575;
‡ Exclusive of heating, lighting, and furnishing.

BARROUL.—For erection of a new laundry at the North Lonsdale Hospital. Mr. A. T. Fowler, A.R.I.B.A., architect and surveyor, Barrow:—

T. Slee	£800	J. H. Neal & Son,	
H. Britton	785 15	Ltd.	£745 0
W. Gradwell & Co., Ltd.	769 0	W. Saddler, High-street, Barrow-in-Furness*	737 7
J. Neal	760 0		

BELMONT.—For erection of two cottages, for Messrs. H. Lashlie and J. Dawson. Mr. W. T. Jones, F.S.A., F.R.I.B.A., architect, 7A, North Bailey, Durham:—

T. Coates	£824 5 2	C. Gibson	£723 10 0
D. Elliot	803 0 11	F. Goodyear	693 15 0
T. Whittingham	775 0 0	W. Sparrow, Hetton-le-Hole*	638 15 0
Beevers & Clark	747 13 9		

BOWLING (Bradford).—For altering and enlarging St. John's Church Sunday-schools, Paley-road. Messrs. T. C. Hope and Geo. Roberts, architects, Bradford. Quantities by the architects

Masons: North & Son, Bradford* .....
Joiner: C. Chambers, Bradford* .....
Plumber: H. Marks, Bradford* ..... } £599 5
Plasterer: J. Wheeler, Bradford* .....
Slater: T. Nelson, Bradford* .....

[Total amount of the highest tenders for these trades, £951 17s. 6d. Forty five tenders were received.]

BRADFORD.—For erection of St. Chrysostom's Sunday-school and Parochial Institute. Mr. H. E. Priestley, M.S.A., architect, Manningham. Quantities by the architect:—

Excavators, Masons, and Bricklayers J. & P. Obank, Idle, Bradford	£680 10 0
Carpenter and Joiner: T. Patrick, Clayton	227 10 0
Slater: J. Smithies, Great Horton, Bradford	73 18 6
Steelwork H. Barrett & Sons, Thornton-rd., Bradford	80 5 3
Plasterers: J. & W. Bates, Manchester-road, Bradford	85 0 0
Plumber and Glazier W. Toothill, Otley road, Bradford	89 5 6
Painters: J. O. Gelder & Son, Totter-lane, Bradford	22 17 0

DUBLIN.—For erection of forty-five two-story cottages on the Cook-street area, for Dublin Corporation. Mr. C. J. MacCarthy, F.R.I.A.I., City Architect. Quantities by Mr. James Mackey, 58, Dame-street, Dublin:—

J. Pemberton	£7,825 18 2	J. & M. Clark	£6,721 0 0
H. J. Monks	7,699 0 0	Farmer Bros.	6,621 12 11
T. Mackey & Sons	7,400 0 0	H. Duncan & Son	6,550 0 0
H. & J. Martin, Ltd.	7,300 0 0	A. Hall & Co., Ringsend-road, Dublin‡	6,390 0 0
J. & P. Good, Ltd.	6,850 0 0		

‡ Recommended for acceptance.

GREAT BURSTEAD.—For erection of seven cottages in Church-lane, for the Billericay Rural District Council. Mr. Hugo R. Bird, architect and surveyor, Brentwood

	Extra if Built in Red Facings.
W. Monnkan	£1,841 10 0 — £5 16 0
A. J. Gozzett	1,500 0 0 — —
H. Potter & Son	1,450 0 0 — —
W. Boardman & Son	1,390 0 0 — 10 0 0
J. Parren & Son	1,347 10 0 — 25 0 0
H. Iles	1,325 0 0 — —
F. W. Jarvis	1,317 0 0 — —
F. W. Burtwell	1,287 0 0 — —
W. E. Sharpless	1,266 0 0 — 14 10 0
W. Dallenger	1,260 10 0 — 18 10 0
W. Shipton	1,250 0 0 — 31 10 0
Spalding, Sons, & Co.	1,243 0 0 — 16 0 0
Rudking & Finch	1,155 0 0 — 10 0 0
Harris Bros, Billericay‡	1,150 0 0 — 10 0 0
E. F. Selby	1,148 0 0 — 14 0 0

‡ Recommended for acceptance.

HUNSTANTON.—For additions and alterations to Convalescent Home, for the General Committee. Messrs. MacAlister & Skipper, architects, Cambridge. Quantities by the architects:—

Redding & Son	£3,131	Rose & Sons	£2,913
I. Cracknell	3,079	Bell & Son	2,899
Rands & Son	3,072	Dye & Allen	2,898
W. Saint	3,064	Shanks & Son, Chatteris*	2,888
Willmott & Son	3,030		
F. Southgate	3,009		

LANCASTER. For erection of farm colony buildings. Messrs. Woolfall & Eccles, FF.R.I.B.A., Liverpool:—

Excavators, Drainers, Bricklayers, Masons, Carpenters, Joiners, and Ironfounders: Thompson & Morris, Dalton-square, Lancaster*	£3,030 0 0
Slaters and Plasterers: T. Cross & Sons, Kirk-street, Lancaster*	376 12 6
Plumber and Glazier: R. P. Wilson, Kingstreet, Lancaster*	465 15 0
Painters: Eaton & Bulfield, King-street, Lancaster*	102 8 6

LONDON.—For the erection of new premises, High Holborn, for the Pearl Assurance Company, Ltd. Mr. H. Percy Monckton, F.R.I.B.A., F.S.I., architect, 32, Walbrook, E.C.:

W. Lawrence & Son	£174,471
Higes & Hill, Ltd.	168,84[illegible]
Perry & Co. (Bow), Ltd.	166,844
Foster & Dicksee, Ltd.	165,670
Trollope & Sons & Colls & Sons, Ltd.	165,163
J. Mowlem & Co., Ltd.	164,880
Holland & Hannen	164,444
Parkinson & Sons, Ltd.	162,383
J. Carmichael	161,898
Holloway Bros. Ltd.	161,000
Wallis & Son, Ltd.	159,890
Dove Bros., Ltd.*	158,365

LONDON.—For alterations and repairs to the band stands in the Clissold and Brockwell Parks, for the London County Council:

	Brockwell Park.	Clissold Park.
A. Roberts & Co., Ltd.	£245	£285
J. C. Mather	292	272
W. Downs	283	274
F. & G. Foster	277	261
J. Grover & Son	265	253
F. & T. Thorne	238	243
Marchant, Hirst, & Co	238	223
W. J. Mitchell & Son	220	235
Rowley Bros.	218	224
J. Garrett & Son	200	215
G. Godson & Sons	205	194
F. W. Fletcher	189	199

LONDON.—For the supply of steel pipes and cast-iron special pipes, for the London County Council:—

(i.) Steel Pipes.

	With Welded Flanges.	With Riveted Flanges.
The British Mannesmann Tube Co., Ltd.	£173 18‡	—
J. Spencer, Ltd	170 0	£145 0
Clayton, Son, & Co., Ltd.	137 10	156 0
Stewarts & Lloyds, Ltd	125 0‡	157 0‡
T. Piggott & Co., Ltd.	—	98 10

(ii.) Cast-Iron Special Pipes.

Holwell Iron Co., Ltd.	£68 15 0
Stanton Iron Works Co., Ltd.	65 13 3

‡ Less 2½ per cent.

LONDON.—For the electric lighting of the new engine-house at the Abby Mills Pumping Station, for the London County Council:—

Tilley Bros	£849 19 6	Pinching & Walton	£745 2 0
Tredegar & Co.	839 0 0	E Newbald & Co.	699 0 0
G. E. Taylor & Co.	801 13 6	Foot & Milne, Ltd.*	680 0 0

[The Chief Engineer's estimate, comparable with the tenders, was £990.]

LONDON.—For erection of a warehouse, Bartholomew-close, E.C. Mr. Walter Pamphilon, architect, 21, Finsbury-pavement, E.C.:—

Trollope & Colls	£18,650	Dove Bros.	£17,675
Price	18,642	Bovis & Co.	17,397
Harris & Wardrop	18,487	Prestige & Co.	17,257
Cubitt & Co.	17,948	Greenwood & Co.	16,973
Hall & Beddall & Co.	17,724	Grover & Sons	16,972

LYMINGE.—For erection of a new infirmary and nurses' home at the workhouse, for Elham Board of Guardians. Mr. A. Robert Bowles, architect, Folkestone. Quantities by Mr. J. H. Moody, Folkestone:—

Mills & Co.	£7,447 11 0	J. J. Clayson	£4,795 0 0
C. Jenner	5,319 0 0	Denne & Co.	4,794 0 0
O. Marx	5,250 14 6	Castle & Son.	4,778 0 0
J. G. Parsons	5,129 5 0	Barton & Co.	4,694 9 11
Hayward & Paramor	5,059 0 0	R. Webster	4,643 0 0
Scott Bros.	4,979 0 0	W. Shippam	4,618 0 0
Parker & Co.	4,945 0 0	F. W. & J. Clark	4,610 0 0
Lawn & Co.	4,900 0 0	Wallis & Son.	4,594 0 0
J. Gosby	4,831 6 0	S. Vant, Folkestone†	4,255 0 0
G. Browning	4,809 19 10		

ROSEHEARTY.—For erection of new Masonic Hall. Mr. W. S. F. Wilson, architect, Fraserburgh:—

Mason: W. Birnie, Rosehearty	£173 0
Carpenter: A. M'Kenzie, Rosehearty	128 12
Slater: G. Gerrard, Rosehearty	30 12
Plumbers: R. Tindall & Son, Ltd., Fraserburgh	50 10
Plasterer: A. Wiseman, Fraserburgh	25 10
Painter: A. McKenzie, Rosehearty	10 2

SILKSWORTH. For erection of a new picture hall, according to amended plans. Mr. J. Newton Fatkin, architect, 1, St. Nicholas-buildings, Newcastle:—

J. Elrick	£1,149 0	J. Clark & Son	£1,000 0
E. Weatherley	1,115 0	J. W. White	999 0
R. C. Brown	1,046 0	J. & T. Parker	990 0
Clerey & Charlton	1,044 0	R. & A. P. Tait, Seaton Delavel, Northumberland*	985 10
W. B. Cooper	1,017 0		
Golding & Ward	1,014 0		
J. Huntley	1,011 0		

STOCKTON. For erection of new deaf school, handicraft, and cookery centres. Mr. E. G. Fletcher, architect, Stockton-on-Tees:—

R. Aspden	£5,078 1 6	A. J. Cooke	£4,606 6 3
T. Brown	4,758 0 0	W. A. King & Son, Ltd.	4,556 10 0
T. Pearson	4,737 0 0	W.M. Doughty	4,547 5 6
S. Coates & Co., Ltd.	4,700 14 5	J. W. Moore, West Hartlepool‡	4,363 0 0
G. E. Gray	4,689 13 0		
W. Weir	4,689 17 2		

‡ Recommended for acceptance.

TOTTENHAM.—For new County school at High road, Tottenham, for the Middlesex County Council. Mr. H. G. Crothall, Architect to the Education Committee:—

Leslie & Co.	£20,508	A. Porter	£18,1[illegible]
Holliday & Greenwood	19,730	A. Fairhead & Son	18,0[illegible]
C. Wall, Ltd.	19,706	A. Monk	17,8[illegible]
Higes & Hill	19,484	G. E. Wallis & Co.	17,77
J. Garrett & Son	19,000	H. Knight & Son	17,25
Brand, Pettit, & Co.	18,859	W. Lacey	17,17
J. Carmichael	18,475	W. Lawrence & Son	16,9[illegible]
W. J. Dickens	18,258	Mattock Bros.‡	16,57

‡ Recommended for acceptance.

WARRINGTON.—For erection of a bathroom to No. 72, Mersey-street. Mr. T. Longdin, Borough Engineer and Surveyor:—

W. & A. Ashton, Bridge Foot, Warrington*	£35 8

Ham Hill Stone.
Doulting Stone.
Portland Stone.

The Ham Hill and Doulting Stone Co., Limited
(incorporating the Ham Hill Stone Co. and C. Trask & Son, The Doulting Stone Co.).
Norton, Stoke-under-Ham, Somerset.
London Agent:—Mr. E. A. Williams, 16, Craven-street, Strand.

Asphalte.—The Seyssel and Metallic Lava Asphalte Co. (Mr. H. Glenn), Office, 42, Poultry, E.C.—The best and cheapest materials for damp courses, railway arches, warehouse floors, flat roofs, stables, cow-sheds and milk-rooms, granaries, tun-rooms, and terraces. Asphalte Contractors to Forth Bridge Co. T.N. 2644 Central.

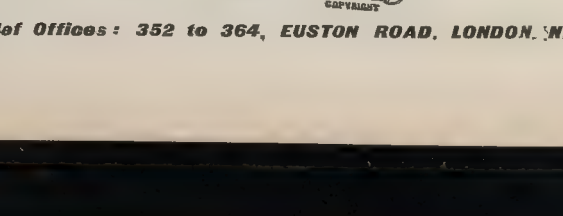
SPRAGUE & CO., Ltd.,
PHOTOLITHOGRAPHERS,
69 and 70, Dean-street, Soho, W.

JOINERY,
Of every description and in any kind of Wood.
CHAS. E. ORFEUR, LTD.
ESTIMATES ON APPLICATION.
COLNE BANK WORKS, COLCHESTER
Telephone: 0196. Telegrams: "Orfeur, Colchester."

J. J. ETRIDGE, Jr.
SLATE MERCHANTS. LTD.

EXPERTS IN
SLATING, TILING.
BEST WORK ONLY.
Telephone 2685 Wall, or write—
BETHNAL GREEN SLATE WORKS,
BETHNAL GREEN, LONDON, E.

PILKINGTON & CO.
(ESTABLISHED 1838),
DEPTFORD WHARF,
190 & 192, CREEK ROAD, DEPTFORD, S.E.
Telephone No.: New Cross 1102 (two lines).
Registered Trade Mark.
Polonceau Asphalte.
PATENT ASPHALTE AND FELT ROOFING.
ACID-RESISTING ASPHALTE.
WHITE SILICA PAVING
SEYSSEL ASPHALTE (*Direct from the Mines*).

ALSO AT DEPTFORD, LIVERPOOL, BRISTOL,


GLASGOW, FALKIRK, BELFAST, & DUBLIN.
Chief Offices: 352 to 364, EUSTON ROAD, LONDON, N.W.

THE BUILDER

VOL. CII. No. 3806. MARCH 15, 1912.

CONTENTS.

	PAGE
Y Employ Architects?"	289
orentine Palace (with Illustrations)	290
	291
rchitectural Association (with Illustrations)	292
London County Council	296
tition News	296
rchitectural Association Fourth Spring	297
Protection in Paris (with Illustration)	297
tectural Societies	297
ral News	299
New County Hall	299
Years Ago	299
rial Summary	300
ings	300
spondence	300
s to Illustrations	300
Monthly Historical Review	
The Architecture of Portugal.—I. (with Illustrations)	301
The English House from the Normans to the Tudors	303
Notes (with Illustration)	305
The Building Trade:—	
Manchester Building Trades Exhibition (with Illustration)	306
The London Association of Master Decorators	308
General Building News	308
Applications under London Building Acts, 1894 to 1909	309
Projected New Buildings in the Provinces	309
The Carpenters' Hall Lectures (with Illustrations)	310
Church Restoration	312
Presidential Address, Devon and Exeter Architectural Society	313
The Prudential Assurance Company, Ltd.	314
Law Report	314
London Councils	314
Foreign and Colonial	314
Patents	314
List of Competitions, Contracts, etc., Open	315
Some Recent Sales	316
Prices Current	317
Tenders	318

Illustrations.

Selected Design for Parish Church of St. Luke, West Hartlepool. By Messrs. Lofting & Cooper.

The Palazzo Davanzati, Florence:—
- Detail of Frieze.
- Bedroom on Second Floor.
- Room on Third Floor.
- The Peacock Room.



The Palazzo Davanzati, Florence: Principal Salon First Floor. (*See page* 290.)

"WHY EMPLOY ARCHITECTS?"

THIS question has often been asked by persons who have no adequate notion of the complicated nature of an architect's work. They perhaps think of an architect as a kind of high-flown gentleman who charges large fees for preparing beautifully-coloured drawings and nothing more. Some of them may have derived their notions of the profession from the memoirs of the Rev. Sydney Smith, who paid an architect five-and-twenty guineas for a set of plans which were absolutely useless, and then set to work, aided solely by his mother-wit, to build his own house, which, he afterwards admitted, was the ugliest in the county. We can all sympathise with the reverend gentleman, if indeed his case has not been exaggerated, and we can believe that there were Pecksniffs in his day, although there is no room for them now.

Persons who imagine that money is to be saved by dispensing with the services of an architect usually place themselves in the hands of some firm who undertake to combine the functions of architect and builder. It has been argued that, since these functions used to be combined in the Middle Ages, the same state of things ought to be possible to-day. The reply would, of course, be that, in the complex conditions under which modern work is carried out, a specialisation of functions has become a necessity of our times. It is not surprising that an ignorant client or customer should fail to grasp this point, though a little reflection might convince him that the work of

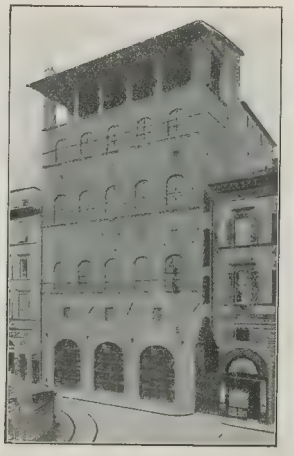
preparing plans must be paid for in some way. We have previously referred in these columns to the system of offering plans and estimates "free of charge." Such offers are calculated to attract the class of mind that expects to obtain something from nothing. But it is strange that persons bent on economy should not perceive that the expense of furnishing plans and estimates free to those who do not authorise the execution of works must be shared amongst those who do.

Some years ago a firm of building contractors established an architectural department as an adjunct to their business, and continued for some time to undertake work that is usually done by architects. In the result, a large amount of business came into their hands which would otherwise probably have flowed into other channels; but they found that they had lost certain other business which would have been obtained through the recommendation of architects, and, balancing loss against gain, they concluded that the new arrangement was not in the long run remunerative, and they ended by abolishing their architectural department.

The above instance emphasises one aspect of the question. Architects, being human, are naturally unwilling to employ building firms who make a practice of usurping professional functions. This, however, does not prevent a building owner who regards architects as "expensive luxuries" from employing such firms. He may learn by experience the disadvantages of the system which he is helping to support. It may be asked, In what way is the question likely to impress itself upon his mind?

A leading firm has assured the writer that they always prefer, when possible, to work under an independent architect, as such an arrangement relieves them of much responsibility. Competition compels them to undertake architectural work in order to secure a large amount of custom which would otherwise be lost to them; but such work is never quite satisfactory to them. The fact is that the building owner who dreads the expense of employing an architect has at the back of his mind a lurking suspicion, born of ignorance and therefore often ill-founded, that his builder seeks to persuade him to sanction unnecessary works in order to run up a large bill of "extras." Such suspicions are exceedingly embarrassing to a building firm, and often prevent them from advising their customer to take the course which they know to be the best in his interest. When, however, there is an independent professional adviser standing between the building owner and the builder, no such suspicions against the latter can arise. There are, indeed, persons ready to mistrust everyone, including their architect. They may argue that, whereas it is in a solicitor's interest to create legal difficulties, and in a physician's interest to postpone a patient's recovery, in order to add to professional charges, so is it in an architect's interest to increase the cost of a building in order to enhance his own emolument of 5 per cent. Such a low view of professional men's general conduct may be justified in some cases, because dishonest men are to be found in all ranks of life; but every intelligent architect knows that the policy suggested above would lead to a loss of practice far outweighing in value the immediate gain.

There is another kind of suspicion to which an architect is open, namely, that of favouring his client at the expense of the builder. The difficulties of an architect's position in this connexion were emphasised in the discussion on "The Newer Responsibilities of Architects" at the R.I.B.A. last January. The architect is now the agent of the building owner, and anon he is called upon to arbitrate between him and the builder. It might be argued that, whereas an architect cannot afford to offend his client, he cannot be expected to act impartially between client and builder in any dispute between them. "You are the builder's man," said an architect to a quantity surveyor some years ago. "True," retorted the surveyor, "but I am driven to that position because you are the client's man, instead of being impartial, as you ought to be." No doubt there are grounds for such complaints at times, but from the building owner's point of view this is no reason against employing architects.



The Palazzo Davanzati, Florence.

A FLORENTINE PALACE.

A SHORT time back we discussed the type of museum best calculated to interest the public, and pointed out, in dealing with past epochs, the desirability of calling up a vivid picture of the manner of life and the customs of the times illustrated.

Such a view has guided Professor Elia Volpi in his dealings with the XIVth-century Florentine palace, now known as the Palazzo Davanzati. When this property came into Professor Volpi's possession in 1904 the rooms had been subdivided and modernised, but he made it his task to restore the whole building as nearly as possible to the condition in which it existed in the XVIth century.

The palace, however, does not date from this period, being already some 300 years old when it passed, in 1578, i the hands of the family whose name now bears. Small and unpretentio compared with great blocks like Strozzi and Pitti palaces, it must nev theless have been, at the time it w built, one of the most important priva palaces in the city, and even after occupation by the Davizzi family for th centuries it must still have been regard as a well-appointed and commodio residence, judging from the fact that purchasers, the Davanzati, were one the most prominent families in Floren at that time, and that they did not fi it necessary to make any very drast alterations to the building.

In accordance with the conditio prevailing in a mediæval walled city t palace is of a considerable height proportion to its area. The main façad in the Via Porta Rossa has a heig nearly double the frontage, and consis of four lofty floors of the XIVth centur crowned by the loggia added by t Davanzati in the XVIth, but as t upper room was lowered in forming th loggia and the high battlemented parap was then removed the proportions the façade were not greatly altered.

The building was originally detache on the other three sides, but only b means of narrow alleys, now partiall built over. Its depth is slightly mor than the width, and the back follows somewhat irregular line.

Of the five floors above the groun level, the first, second, and third ar similar in plan, and seem to have bee occupied as distinct residences even fro quite early times.

The main façade faces north, and it whole length on each of these floors i taken up by the principal saloon behind this are placed, on the east side the kitchen offices, in the centre a smal court containing the staircase, and on th west a second large saloon extending to the back of the building; behind th kitchen and courtyard are the bedrooms

The ground floor seems to have bee mainly occupied by the guard and retainers, and occasional onslaughts were evidently anticipated, as in the floor of the saloon over the entrance hall there are a number of apertures through which missiles could be discharged on an attacking party that by craft or force might have succeeded in getting through the massive entrance-door. We can picture that if a hand-to-hand struggle were going on in the hall the defenders might be materially assisted by those in the room above.

Interesting though they are, the arrangements of the building are not the most important features of this palace; these may be found in generally similar lines elsewhere. Neither does the collection of furniture, valuable though it is as an assistance in realising the original effect of the rooms, possess a claim to go beyond what can be found in other collections. No, the great and outstanding interest of the Palazzo Davanzati lies in the remarkable preservation of the characteristic and beautiful mediæval decorations. We know of no other case in which a private palace of this period has retained the wall paintings in so perfect a state, and in which it is possible to see the rooms

ost exactly as they were in the XIVth ury. The more important rooms e hung with textiles or tapestries, as ident from the hooks for this purpose h still remain. We would give h to see these original hangings, alas, they have probably long since shed! In the principal bedrooms, ever, the walls were painted from to ceiling, the upper part being n up to a decorative frieze (see es), while the lower imitated the gings which were to be found in the e position in the saloons. Judging he pattern of these painted coverings, actual ones in use were probably en material, geometrical in design, gh, of course, it is quite possible that genuine hangings were either richer pattern or perhaps of tapestry. If take contemporary paintings as a le, the more likely material is one with peating pattern, such as we may find mall pieces in the principal museums. he main interest of the painted work naturally concentrated in the frieze, being clear of the furnishings. In illustrations given it will be seen that painted diaper patterns on the lower tion of the walls clearly represent gings, as the top edge is either a esentation of rings on a rod or shown lightly dropping from nails at inter- ; above this is an indication of ble slabs with inlaid margins, and the ze in each case represents a land- pe or garden scene visible through nings in an arcade or loggia. While treatment is varied in each case, the eral scheme is the same. Thus he second-floor room the frieze is more naturalistic and varied in the peacock-room. These and some smaller birds are the only incidents that break the uniformity of a formal arrangement of trees and heraldic shields. In the third-floor room, also, each panel between the painted columns has repeating motive composed of vases and foliage. The work throughout displays considerable fertility of invention, while the rich and harmonious colouring compares favourably with the more accomplished work of the succeeding century.

NOTES.

The Associates and the R.I.B.A.

We do not suppose that the concluding sentence of our leading article, which Mr. Horace Bonner did us the honour to quote at a recent meeting of the R.I.B.A., conveys to all our readers the meaning which, to judge from his interpolated explanations, it appears to convey to him. Our remark might be equally true if interpreted in this way, but it does not happen to be what we meant. We referred to the interests of the general public or of the State, and not to those of the members of the Institute. Possibly, however, Mr. Bonner only intended to express the opinion that the two things are always identical, and that in mentioning one we might reasonably be supposed to be referring to the other; whereas it was our profound sense of the occasional difference, even antagonism, between them, and of the possibility in an imperfect world of privileges clashing with public duty that prompted our observation. This is a point that we think should be borne in mind, for a charter not only confers privileges, but also entails responsibilities towards the State which grants it.

Lambeth Bridge.

We are glad to see that Parliament has again risen to the occasion and declined to sanction the reconstruction of Lambeth Bridge on lines which would be unworthy of its position. Mr. John Burns in supporting the opposition has done another good day's work for London. When the Committee's proposal for a second and narrower bridge was first put forward we called attention to the fact that it appeared to provide for less traffic than the original scheme, without giving any reasons why a decrease of traffic was to be anticipated. We suppose, however, it is again the same question of misplaced economy not unconnected perhaps with the question of party politics. It certainly does seem a pity that this should be the case, and that improvements which so vitally affect the general amenities of the city should be at the mercy of a party vote. Surely it should be possible to lift them to a higher plane and for the two parties to come to some common agreement as to what London should look like and as to the scale on which public monuments should be conceived and carried out. There may, no doubt, be political differences of opinion as to whether a certain improvement is advisable or not, but any difference of opinion as to the method whereby it is done should be technical rather than political.



The Palazzo Davanzati, Florence: Principal Salon, Second Floor.

Anyone who introduces continuity of policy in these matters will do another good day's work for London.

Preservation of Ancient Monuments. THE announcement that the First Commissioner of Works will introduce a Bill dealing with the preservation of ancient and historic monuments will be received with general satisfaction. The need for some step of the kind has long existed; but after the Tattershall Castle muddle it was obvious that matters could not be left where they were, and it became a question only of how long Government action would be delayed. The proposed demolition of the Reindeer Inn at Banbury seems to have brought matters to a head, and we shall look forward with interest to the appearance of the proposed Bill. What France and other countries can do by scheduling ancient buildings in order to guard and preserve them as national treasures should have been done here long ago, and the early date promised for the introduction of the Bill in the House of Commons is an indication that the Government at last realise their responsibilities.

The Improvement of London. THE speech delivered by the King when laying the foundation-stone of the New County Hall for London, with its reference to London as not only the capital of the Empire, but as in many respects the centre of the world, may be taken, we hope, as an indication that the State is alive to the importance of making London more worthy architecturally of its high destiny, and that all efforts in this direction will never lack the sympathy and support of the State. The reference to the growth of efficiency, which is the result of carrying on deliberations in surroundings worthy of their importance, has an application to every sphere of life, and may well be borne in mind by all local authorities throughout the land. Rightly understood, this consideration may indeed be said to be the *raison d'être* of architecture. The value of its influence in all the affairs of life, whether public or private, needs no further justification. The recognition of this by the Chief of the State, with special reference to the public monuments of London, will do much, we are sure, to rouse that sense of civic pride in which London hitherto has been so sadly lacking.

Combined Heating and Power Plant. CENTRAL heating installations for groups of buildings, such as modern hospitals, asylums, and workhouses, are quite familiar to architects of to-day, but a somewhat unusual arrangement is that of the combined central heating, electric light and power station now in operation at McGill University, Montreal, described in the paper read by Mr. R. J. Durley to the Institution of Civil Engineers recently. Up to 1908 the buildings were heated by independent steam or hot-water equipment, and electricity was obtained from the local supply company. With the object of effecting important savings, the authorities laid down their own electricity generating plant, with a central boiler-house, and have been able in consequence to use fuel of much cheaper quality than heretofore, and to utilise exhaust steam on an extensive scale for warming purposes. The system fully deserves the consideration of architects engaged in the design of large public institutions.

The New Indian Capital. THE announcement which appeared in the daily Press on Wednesday will be read with interest by architects and especially by readers of this journal. The Secretary of State for India has, at the request of the Government of India, appointed a Committee of experts to advise the Government of India as to the site of the new capital at Delhi and the laying out of the same. The Committee will consist of Captain George Swinton, Chairman of the London County Council; Mr. John A. Brodie, C.E., City Engineer, Liverpool; Mr. E. L. Lutyens, F.R.I.B.A.; and Mr. H. V. Lanchester, F.R.I.B.A. The Committee will assemble at Delhi about the middle of April, where it will find materials ready for consideration, and will have the assistance of the Department of Indian Public Works and of other Departments of the Indian Government. Its work, which will be of a general and preliminary nature, and will involve no questions of detailed planning or architectural design, is expected to occupy four or five months.



AN ordinary general meeting of the Architectural Association was held on Monday at No. 18, Tufton-street, Westminster, S.W., when Mr. Gerald Horsley, President, occupied the chair.

Mr. Hall, Hon. Secretary, made the following announcements:—

The Fifth Spring Visit on March 16, to King's College Hospital, Denmark-hill (architect, Mr. W. A. Pite, F.R.I.B.A.).

The Annual Smoking Concert and Revel of the A.A. Athletic Club, on March 26, at eight o'clock, at the Pillar Hall, Victoria Station Restaurant.

The President announced the Council's nominations for the House List for Session 1912-13, as follows:—

House List, Session 1912-13.

President.—Mr. Gerald C. Horsley.
Vice-Presidents.—Mr. W. Curtis Green, Mr. Maurice E. Webb.
Hon. Secretary.—Mr. H. A. Hall.
Hon. Librarian.—Mr. W. H. Ward.
Hon. Editor A.A. Journal.—Mr. P. Cart de Lafontaine.
Hon. Treasurer.—Mr. Arthur Keen.
Council.—Messrs. A. T. Bolton, C. C. Brewer, H. P. Burke Downing, F. C. Eden, G. L. Elkington, Stanley Hamp, A. G. Horsnell, Geoffry Lucas, Winton Newman, T. Fyfe, W. G. Newton, A. G. R. Mackenzie, W. J. Tapper, Gilbert A. Scott, Alan J. Slater.

The President announced that a special general meeting had been held, and that the following alteration of By-law 36 had been passed:—"The office of Hon. Secretary shall not be held for more than *two sessions consecutively*."

On the motion of the President, the following votes of thanks were accorded:—

To Mr. G. Norbury for kindly presenting a number of cork models of various English cathedrals to the Association.

To the Secretary of the Hampstead Garden Suburb Trust for kindly conducting a party of members over the two new churches and institute, upon the occasion of the Fourth Spring Visit, to the Garden Suburb, on March 9; also to Mr. E. L. Lutyens for kindly allowing drawings to be exhibited.

To the Society of Dilettanti for kindly presenting plates from Penrose's "Athenian Architecture" to the Association.

AMERICAN ARCHITECTURE.

Mr. C. A. Daubney then read a paper entitled "American Architecture." He said:—

"We may criticise here and there, condemn this and that, and express approval of isolated works, but in architecture it is still true that there are no discoveries similar to those in the realm of science which flash like beacons in the night or which open up untrodden of progress and leave the old ones discredited and to decay.

New forms of construction and materials it is true, may be at the disposal of the architect. He may experiment with them at his own or at his client's cost, but his art will be little affected thereby.

Rivalry or striving after effect does not account for the subtle variations in contemporaneous architecture in its best periods.

Local differences of climate, material, and resources played some part in affecting change in detail, but in every case the artist had before him general principles and great ideals, which were surely little affected by local affairs.

He built literally in many cases upon the ruins of his predecessor's work, but he had scrupulous regard for the best that had gone before.

I dare not hope to reveal to you to-night any startling ideal in American architecture at the present day. There is much in it that is good and hopeful side by side with much that is bad and hopeless. All I can do is to indicate certain phases which may lead you to investigate and study the subject more fully. I am reminded that architecture is the graveyard of many an accepted platitude. Genius, said Carlyle, is the transcendent capacity of taking trouble first of all. Hogarth similarly said that genius is nothing but labour and diligence; while Matthew Arnold adds his verdict that genius is mainly an affair of energy.

If such be true, we should find a genius at every street corner, more particularly in New York, Chicago, and the other great cities of the States, where the painstaking efforts of the architects cannot be denied. Then, too, the belief that the pathway to Hades is paved with good intentions is flatly contradicted where architecture is concerned.

None will deny that it is an upward path, and not a downward one, which is trodden by those who set out equipped with a good intention and an earnest desire to do good work.

It is the servile copyist, the architect with no intentions, who will find his place on the slippery slope. He has not within him that dynamic force which will overcome the downward drag of the commercial world, the vanity of the flesh and the devil of competition. The subject divides itself naturally into environment, execution, and education.

Environment.

It is reported that a lady from the States, on seeing the lawn in front of one of our University colleges, approached an attendant and inquired as to how the thing was produced. She had a lawn, on which money had been lavishly expended, but it was a failure compared with this one. "We rolls it," replied the man, "and we waters it. Then we waters it and we rolls it for about 400 years, and it always comes out all right."

In considering American architecture we are bound to recognise its recent birth.

re is no long line of tradition to steady pencil and to guide the pen. ubstantially no historic masterpieces ng from the heroic times are readily at d for study and reverence. The archi- must largely import his ideas, and must t in the preparation of his designs to very unsatisfactory evidence of illus- ions and photographs rather than to the ks themselves.

moment's consideration will show that such circumstances two things must pen. The strong man will demand to e before him clear and explicit records he best works corresponding to that upon h he is engaged. If he cannot recreate r atmosphere, he will at least grasp the il. His work shall be correct and nically good, even if in the transportation he design the spirit has been irretrievably The weak man, on the other hand, will bably try to distract attention from his ciencies by riding off on his own un- lated fancies into realms of wild experi- t which other workers of mature experi- have long since learned to shun. some such way it is possible to account the extreme care and completeness of h of the work.

mparisons are always odious, but one is ed to the conclusion that the nakedness ome of the modern work on this side is entirely due to the poverty of the client o a desire for severe simplicity at any , but rather to a lack of capacity on the of the designer to tackle a more ornate possibly more appropriate scheme.

he rapid growth of the country on all ds demands that the architect should ess great capacity for work and organi- on, and must be ready to switch off his from the elaborate calculations for a craper to the design for a cathedral, an bition building or a pavilion in the park. nture to suggest that there are few—if —of our architects who could control a staff as is to be found in some erican establishments. One cannot, of se, magnify beyond its proper limit the ue of expedition in the preparation of ing drawings, but there is something to aid in the favour of those who can, for ance, prepare in six weeks the complete wings, including all the necessary elabo- d calculations, plans, and details, for a ion-dollar skyscraper. It demands a sure certain grasp of the business and a com- e knowledge of at least one side of the ession.

nother factor having important bearing the architectural problem is the rapid lopment and change on every hand. hin the last generation, for instance, the er part of New York business centre been rebuilt, not for the reason that the dings were decayed or unsuited to the ls of the times, but solely because there a demand for business accommodation h exceeded the supply.

was a perfectly sound financial under- ng to tear down the old buildings and t new ones on the site with increased mmodation obtained by carrying the and the upper stories into the clouds. n architect is not human if he is not lly affected by such an environment. will work for the immediate present and in the knowledge that his building will ll probability be, for good or bad, a last- landmark for the next dozen generations. cue, in many of the more permanent dings, such as the colleges, municipal and e institutions, there is a different element. find there a keen effort to give character he work, if, however, there is some ency towards the fantastic and bizarre. buildings are usually subject to com- tion, and in view of the shifting acter of personnel of the local authorities not to be wondered at that the attrac- design may be the successful one, whereas more appropriate one is ignored.

might be hoped that in the smaller dings of permanent character, such as schools, churches, and the like, some e of a national feeling would be found. re, however, is the all-important diffi- y of distance to be contended with in erica. It is almost impossible for the -known men, who, of course, congregate the centres of population, to dea successfully with such comparatively trifling works, often at an enormous distance from their offices.

It is to be feared that these buildings are being more and more dealt with by specialist firms of contractors who are prepared to erect attractive buildings, as per catalogue, in any spot at a fixed rate from New York to San Francisco.

Even in purely domestic work this commercial element is most painfully in evidence, possibly more so than in our own cities. The man who suddenly rises will have no difficulty in finding what he wants from the flood of catalogues of country houses which immediately overflows his letter-box.

The architect is caught in the stream. He must carry out instructions, and the astonishing fact remains that an architect with a wide reputation will erect some hideous monstrosity apparently without turning a hair. He might be forgiven if he were ashamed of the job and endeavoured to forget it as quickly as possible. But this does not obtain. He will advertise his misdeeds without compunction side by side with other works of his own of which he may reasonably be proud.

I was, for instance, taken by a well-known architect to a seaside residence built at some considerable cost, but which, in my opinion, was disfigured beyond redemption by having the principal reception-room panelled throughout in polished red mahogany, in a style which might be appropriate to the bar parlour of a saloon, but certainly out of place in a private house.

Another element which militates against much real progress is the growth of specialists. Not only do the ordinary structural specialists flourish on every hand, but they will go beyond their European prototype by contracting to carry out an architect's small-scale design, with detail and ornament of high technical and perhaps artistic merit, without the architect in the multitude of the other concerns of his profession having to trouble himself too much on this head.

Execution.

The American architect appears to have wider responsibilities than the architect here. This is more particularly true in the case of the larger works. There is a very general understanding that each man should rule his own roost. The architect will be expected to produce a satisfactory result without having to be guided except on general lines by the client. It may be that the client is only building as an investment and knows nothing of good or bad work. In such circumstances the architect will probably find himself with an absolutely free hand.

This will demand from him close attention to rule and convention. Any hostile criticism of eccentricity of design will shake the faith of a purely commercial speculator, and so we find a certain amount of restraint upon originality and genius.

Another restraining element is the fact that in most of the large centres there is a very rigid building regulation which demands the production of full plans, details, and calculations for inspection by the local authority in order that a building permit may be considered. The omission of essential information will delay the permit being issued, and the work itself will be consequently retarded. Novelties or variations from customary procedure will, as may be expected, be looked upon with suspicion by the building officials and cause possibly lengthy explanations and inquiry.

When his building permit is obtained there is the risk of objection by the building inspector if variations from the approved



[From the *Brickbuilder*, Boston.

School of Industrial Arts, Trenton, N.J.
Mr. Cass Gilbert, Architect.

plans are attempted. In this position the architect will also feel compelled to work upon safe lines. He cannot have the luxury of watching his building develop and of making alterations and improvements in the design as the work proceeds.

Of course, the splendid generosity of wealthy patrons frequently affords the architect an opportunity of exhibiting his genius free from all such trammels as have been referred to above. I venture to suggest, however, that these isolated cases do not represent the main stream of architectural life in the country. Remember, too, that native artisans are practically non-existent. The architect may even find it necessary to have his work executed here in England or on the Continent. This cannot conduce to progress.

The crude native sculpture on some Celtic monument is still more highly regarded than the careful carving by the contemporaneous workmen in the streets of Rome of ornament and design copied from the Greeks.

Do not let us forget that we are here discussing American architecture, and I make the distinction between a native effort towards an ideal which shall be characteristic of the land and its marvellous people, and an architecture which may largely consist of careful adaptation of European models, but which shows no real ground for hope of progress in the near future.

Education.

Whatever I have said which seems to criticise adversely modern methods must be discounted in considering future prospects. Architecture will be safe from degeneration if continued effort is made on proper lines to train the coming generations. Not only will it tend to develop the art of architecture, but it offers a restraining influence upon the eager but unqualified who press into a profession which to-day opens up splendid prospects for many a pushful youth.

A high standard of education is becoming more and more essential. The tremendous interests, both public and private, which are at stake in many of the large undertakings demand a technical skill in the first place which does not but rarely obtain here. I think that public sympathy is strong on the side of rigorous examination and qualification for all practising architects. This, of course, is a hopeful sign, and the universities are alive to the necessities of the case.

Harvard, for instance, offered a five-years' course. There was an entrance examination which included English, French, German, Physics, Drawing, and Histories of Greece and Rome. The student had the advantages of a hall of casts, painting-room, exhibition-room, modelling-room, library, photograph darkrooms, etc. The first year's course included the Technical and Historical Development of Ancient Styles, Drawing in Line and Colour, Mathematics, Languages, and Physics. In the second year Design, Perspective, Statics, Resistance of Materials, Mediæval Renaissance, and Modern styles were added. In the third year Building Construction, Theory of Design, Masonry and Foundations, and Mineralogy were taken. In the fourth year, in addition to general topics, two special subjects had to be taken from a list which included Design in Painting, Sculpture, and Architecture, Greek Art, Fine Arts of the Middle Ages and of the Renaissance, Classical Archæology, Private Life of the Romans, Life in Ancient Greece, Landscape Design, Æsthetics, Bridges and Buildings, Health and Ventilation. The average gross cost to the student for residence and education was only 100*l.* per annum.

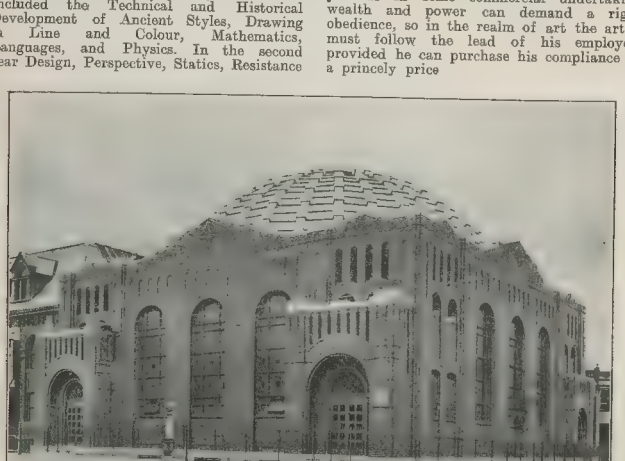
There was a somewhat similar programme given in connexion with Washington University, and at a somewhat similar cost.

The Massachusetts Institute of Technology at Boston gave a very full five years' course with a continuous training in design for three years' Freehand Drawing throughout and one complete year in the Life Class. A feature of these college courses is the Summer Schools. I have a note of one which was in the form of a tour to Europe particularly for the study of the work in the northern towns of Italy, finishing with a bicycle excursion from Genoa to Paris.

The University of Pennsylvania offered three separate courses—viz., a four-year course leading to the degree of Bachelor of Science in Architecture, another course leading to the degree of Master of Science in Architecture, and a shorter two year course. There was an additional three-years' course in Interior Decoration.

The Syracuse University provides almost equal facilities for the student. These are but illustrations of the facilities for study and preparation for the profession. The total result is generally seen in the fact that the majority of the young men in the offices of practising architects are college men with a college degree. Incidentally, there is a minimum of the mechanical drudgery which in many London offices is handed over to inexperienced youths who may possibly grow up to exploit the special features of the work done by their employers. If one may venture into the realm of prophecy it must be to express the belief that there is a bright prospect for architecture in America.

The question as to whether this will be realised in the near or distant future depends upon one main factor—viz., the education of the public taste for the beautiful. As matters stand at the present time, art may be degraded and good taste may be corrupted by being compelled to follow on the heels of those who act on the principle that just as in some commercial undertaking wealth and power can demand a rigid obedience, so in the realm of art the artist must follow the lead of his employer, provided he can purchase his compliance at a princely price



[From the *Brickbuilder*, Boston.

Linden Baptist Church, Camden, N.J.

Messrs. A. Truscott & A. H. Moses, Associated Architects.

The good time would be brought wit measurable distance by a period of c mercial depression. Architects might t find time to turn their attention to everyday affairs of the community. A te ment house would not then be recogni as now, as a ghastly imitation of a facto or the ordinary suburban dwelling as so thing very much akin to a wooden barn.

Architects might even find time to r protests against the desecration of the pu streets by hideous advertisements encroachments upon the public convenie by corporations whose only concern is the dividends of their shareholders.

There would then grow up a corpor sense of what is good, and that a man sho not have a free hand to offend the good ta of his fellow-citizens, even though he may a successful business advertiser.

In conclusion, may I again venture prophecy that if we are anxious to ma real progress we shall do so only on t lines adopted with success in the State Registration is a futile procedure if it resu only in shutting within a ring fence the go and the bad. We must begin where all r progress begins—in the school and in t workshop, in the public Press, in t common affairs of life. When the authorit who are responsible for the bridges acr our rivers and the lamp-posts in our stree when the factory and mine proprietor w can and does blast the landscape and ru our buildings by the reek of his works, wh the workman, as in days gone by, recogni that it is as easy to make a beautiful thi as it is to make an ugly thing, when the co munity at large expects that the little thin of life shall be presented in a true a beautiful form, we shall have no cause th for anxiety for those larger works whi have too long been looked upon as the on and proper sphere for the architect and arti alike."

Mr. C. C. Brewer followed with some notes impressions gained during a recent visit to t United States. He also showed some lante slides of interesting American work. H said :—

"I would like first to give a preliminar word of warning to any architect conte plating an architectural holiday in Americ namely—get the idea of a holiday out of yo head. Climate, conditions of travel, t amazing—indeed, almost incredible—hosp tality of the nation, and their feveris energy, will combine to make the experien comparable only to some such effort as th of watching from an express train an arch tectural cinematograph in a gale of win and endeavouring to make mental notes the solutions of hitherto unthought-of arch tectural problems. The result is intoxic tion, and on regaining consciousness one impressions are somewhat dimmed.

The chief characteristics of America architecture to-day seem to me to be vigou competence, singleness of purpose. All thes are, of course, the outcome of the nation spirit, the amazing commercial activity, an the climatic conditions. A country pr gressing at the speed of America to-day ha crying need of a race of competent an vigorous architects, and forces them to th single purpose of erecting the best possibl building in the shortest possible time. I leaves them no leisure for the "Hopes an Fears for Architecture" or "Philosophi Doubts." Do not let me be misunderstood I am not suggesting that haste is apparent i the best building of America of to-day, for I hold strongly that the architects are rising with almost incredible success, to meet no only the commercial and practical needs of th community, but to work out artistic prob lems with a certainty, a dignity, and a breadth the equal of which it would be hard to find in any other period. Indeed, I believe the history of architecture of the last twenty years in America will be read almost as a fairy-story by future generations.

Mr. Daubney has hinted at the conditions of rush and hustle under which these build ing are produced, and has not—could not—exaggerate it; nor should it ever be forgotten in judging the results.

It is, indeed, a matter for amazement and admiration that even sky-scrapers, for which the working drawings, of a completeness undreamt of in England, are said to have

n made in a period which would barely ce with us for the preliminary sketches, ot more often skriek aloud to the world horrid tale of the speed of their concep- , labour, and birth.

judging the work of architecture in any try to-day I hold, of course, that it nly fair to put out of court perhaps er cent. of the buildings. We must judge the large public buildings, the railway- ons, the office blocks and stores, and by thoughtful and more serious domestic for either the rich or poor.

n international comparison of cinemato- h palaces, public houses, and the estic vulgarities of the *nouveau riches*, he one hand, or the meannesses of the y-builder on the other, would be neither he point nor profitable, for the first are ly a form of pictorial advertising and jerry buildings are surely temporary tures. In America, however, I believe there is a smaller percentage of both blatant and the mean than in most pean countries, for the Americans are ing with big schemes and new ideas even dvertising, and mean buildings grow less when set in the ample suburbs of rican cities.

an example of what I mean by big s, even in advertising, I would instance new Pennsylvania Railway Station in York.

new station becoming necessary, the idea the finest and largest station in the d might be no bad advertisement seems ave occurred to the directors, and their step was to employ an architect of large fine ideas; their choice fell luckily upon McKim.

seems not only to have entered into scheme, but surely his enthusiasm must carried them on till the undertaking almost in the spirit of cathedral ders. The result is a temple to the glory, nly of the Pennsylvania Railway Com- in particular, but of well-ordered and transport.

u have probably all seen photographs of wonderful building, but no photographs give an impression of the effect which its iess, orderliness, and completeness pro- on coming to it out of the turmoil of York.

agine an entire railway-station with gs and furniture, even to the spittoons, ned by the architects; a railway-station anned and so contrived that there is no nor bustle, where no porters intrude with ge, and where it has even been thought while to forego the profits of the bill- er that all may be well ordered and dig- d. This last was the culminating stroke nius, for the effect of a station, where the notices are subdued and where the tion signs are of bronze set upon marble ts and advertisements are not, upon the accustomed to walls, ticket offices, and s covered with lettering and pictures of size and shape is one of almost be- ring calm. It is as if the Directors had "We will startle the public, not with and noise of our money-making, but dignity and repose."

d so to-day the conception of a rail- station as a dignified thing seems to taken hold of the Americans, and we the big Washington Station and others e same spirit.

mparing these with the three latest ni in London—the Great Central and wo at Victoria, which had not even the to be one—we weep for London.

is idea of the dignity of commercial prise seems growing upon the business and showing itself in the stores, office ings, and banks.

the Americans be learning the market of repose in the midst of their strenu- ife?

may be argued that there is no real ess in this great Pennsylvania Station the hall is a mere translation of the s of Caracalla on, I believe, a larger ; that the detail on this and most other ings of the same type in America is ly taken from Italy or Greece.

is brings me to the wider criticism of architects which is so often made by icans to-day : that they are not evolving ional style.

is surely difficult for contemporaries to judge whether or not a style is being evolved in any art, and it is probable that the same critics, had they lived in the XVth century in Italy, would have been chiding the architects for being mere copyists of the Romans.

I cannot believe that men who are approaching architectural problems with the freshness, vigour, and clearness of thought of the Americans of to-day will not leave behind them something worthy to be called a national style, even if they are content, for the while, to use and reuse the language of the past.

Speed and hustle are the natural parents of copying in architecture. The man, set face to face with enormous problems to be tackled at great speed, turns naturally to the text-book for his details, and I am not sure that, given speed as one of the conditions, the results do not gain in the process, for the architect has the more time for mass and the big idea.

Certain it is that the trend of architectural training in America is to this end—to train competent architects and competent assistants, not thinkers and writers on architecture. The man who knows where to find



New York Library : Back Elevation.

Messrs. Carrère & Hastings, Architects.

From a Photograph by Mr. H. M. Fletcher.

chapter and verse in those wonderful libraries which seem to be a *sine qud non* in every large office, and how to use the matter when found with a competent good taste and discretion, is the man to help the designer of big schemes. And I must admit that one rarely sees a draughtsman on the architectural side of a big office without a great folio of Renaissance, or classic art at his elbow.

A word as to training. Mr. Daubney has given a rough sketch of the curriculum in vogue some ten years ago, but has said no word as to the influences at work within the schools themselves. That this is entirely French no one will deny. At the time of my visit Harvard was preparing to celebrate the arrival of a French born, speaking, and trained Professor of Design, and Harvard was the last college to hold out against the Beaux-Arts tradition. All the others had already either Frenchmen or Americans trained in the French manner as their guiding spirits. Harvard and Boston architects had long fought for training on more English lines, but the force of the Beaux-Arts movement, as evidenced by the roll of students in their own and other colleges, counselled surrender.

In the face of this it is a matter of surprise to me that American work is not showing even stronger evidences of French fashion. This may be somewhat accounted for by the great influence of McKim, who, although French-trained, yet drew most of his inspiration for his later work from Italy. But I hope the reason is rather the growing strength of a tradition of their own, a strength fostered by the individuality of the American character, and their brilliant qualities of self-reliance and rapid, straightforward thought.

As to the influence of their own colonial style, this seems to me for the moment under a cloud. Much that has been perpetrated by the jerry-builder under cover of the word colonial has swung the pendulum of fashion a little far from New England and Virginia, and, although many men of taste and culture are using the vernacular in their domestic work, one is a little sorry to find that development along these lines does not seem likely.

The lack of mediæval building in America itself and latterly the Beaux-Arts training no doubt account for the poverty as a whole of the ecclesiastic and domestic work. The wave of the Gothic revival can only have been a feeble ripple by the time it reached the States, for it left behind it a trail of thin and wiry buildings of unimaginable meanness.

Richardson, with his strong, if at times somewhat clumsy, hand, left his mark upon the town halls and churches of his day, and was followed by less strong men, why by their eccentricities soon brought his manner into disrepute.

His influence seems to linger to-day only in the West, where the work of that brilliant architect and contriver of clever detail, Mr. Louis Sulivan, still shows signs of early Richardsonian influence.

The success of Cram & Goodhue's Gothic scheme in the competition for the rebuilding of West Point, and the masterly manner in which they are carrying it through in the face of much adverse criticism, is evidence that there is now a finer feeling for Gothic work. The French and classic tide is not quite sweeping all before it, and there still remains a small but faithful band of thoughtful men—"the Englishmen," they sometimes call themselves—who are fighting against it. The little leaven of their work may not be without good effect upon the lump, especially in the one quality in which American work of to-day seems lacking.

On returning to England our work, at all events in our towns, had a very depressing effect on me. It seemed mean and muddled and with an uncertainty and a hesitancy about it as if we had been for many years without a goal. Our public buildings strongly reminded me of the criticism upon them of a candid American architect, who, when pressed to tell how they struck him, said : "Why, I guess they look like scrambled eggs!" But we seemed, especially in the country, to have one quality which American work had not : I mean the right and truthful use of material.

In the States one's sense of decency and honesty is constantly being hurt and one's nerves jarred by shams so cleverly carried out as to deceive the eye if not the hands. I could quote instances without number, but one must suffice.

There is at West Point a charming memorial hall by McKim; the interior has many bronze ornaments—some are cold to the touch, others more difficult to reach are warm. The entrance to the large hall is through a screen of caryatid figures, ostensibly of bronze; but the discovery of a horrid wound of plaster where two toes have been kicked off seems to take away any value the building may have as a memorial.

The use of stucco for stone, of plaster painted, and most cleverly painted, as oak would seem not to be confined to the music-hall and the saloon, or to the work of vulgar men—such things are surely unworthy of so great and rich a nation.

In England, even in our poverty to-day, we have one great heirloom from our Gothic past, a certain love of honesty in materials, which gives even the weakest of us a sense of shame in their wrong use.

If I might borrow a little American confidence to sum up what seems to me the strongest characteristic of their race, I would say, "Knowing what they want and getting it."

When the architects realise that besides vigour and certainty, competence and dignity,

delicacy and brilliancy, they want also honesty, they will get that too, and then American architecture will come to its own."

Mr. H. M. Fletcher,
in proposing a vote of thanks to Mr. Daubney and Mr. Brewer, said he agreed as to Mr. Brewer's remarks as to the singleness of purpose of the American architects. They intended to go in a certain direction, and they devoted all their mind to get there. They knew what they wanted to make their cities fine, town planning being to them a very real thing, and it was amazing to see the schemes they were producing for different cities, though those schemes did not always get carried out owing to vested interests and so on. He did not suppose that in any other country had there been such splendid plans produced within a few years as those for San Francisco, by Burnham (or rather Burnham & Co.), the centre of Chicago, of Cleveland and Washington. New York was not a fine example of town planning and never could be owing to its cramped site on an island, but all over the States there was a great feeling of rivalry between cities, and that showed how they were aiming at great objects. It was the same with the buildings: attention was given to mass and the grouping of big features and the detail rather went to pieces, sometimes, or it was borrowed from other buildings; but there was a big architectural movement, and it was splendidly backed by the men who had grown rich; they were extraordinarily generous in helping to carry out such schemes.

Mr. Mackenzie
seconded the vote of thanks, and referred to the great progress in American architecture during the four years since he was there. He thought that was owing a great deal to the public interest in architecture in America. As far as he could tell the people were as interested in architecture and as ready to talk about it as the ordinary people here were ready to talk about sport and theatres, and the American architect got more encouragement than did the English architect.

Mr. W. H. Ward
said he was much struck during a visit to the United States by the extent of the architectural progress there in the last few years. He agreed with Mr. Brewer as to the great hopefulness that there is for the future of American architecture, based chiefly on the immense efforts being made to educate the young architect and to give him a thoroughly sound grounding in all matters of design, and to teach them what is being done in Europe. What they were engaged on at present was working through the European styles and getting to know as much as was possible to know about them. One might hope that in the course of half a century or so a really national style would be evolved. It was interesting to observe all the different styles they had been trying and making experiments in. It was his impression that there was not any real or thorough understanding of the spirit of Gothic architecture, for the Gothic churches he saw did not impress him greatly, but he had not seen Mr. Cram's work. Some of the most interesting experiments in European styles were in the early Italian manner. The chapel of the Columbia University was a most charming building, chiefly in brick with a little marble and a considerable use of tiles.

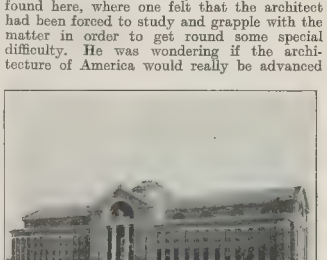
Mr. J. M. Whitelaw
said he was struck by the intense zeal and earnestness and definiteness of aim and ideal in the American architects and the go-ahead character of their work. A high note was being struck in genuine art expression.

Mr. A. T. Bolton
said that what they had seen that night in the way of illustrations must have been a great revelation to many of them. It was very difficult in one country to form a proper idea of what was being done in another, and in judging the architecture of another country we were apt not to know who was doing the best work, and the fact took a long time to get round. Americans he had met showed a great interest in architecture and talked intellectually on the subject, but that was because they travelled largely, and, like English people who travel, they naturally took more interest in the buildings they saw abroad than those they had at home. They necessarily took an interest in the subject. The Americans were in a comparatively new country, but they had not kicked ancient architecture out of doors and derided the historical method; on the contrary, they seemed to have rather too much appreciation of it.

The Chairman,
in putting the vote of thanks, said he was rather surprised that more had not been said about the work of Richardson and Hunt, because he believed he was right in saying that they really founded modern American architecture, and they were both of them Englishmen.

The vote of thanks having been heartily agreed to,

Mr. Daubney,
in reply, said they had been hearing about two most important problems, *i.e.*, education and the rush of American work. He thought that the student and the architect in America exhausted himself at his work, but there were not so many limitations or cramping of that work. An architect here was tied up by money, convention, ancient lights, and things of that kind, but over there a man could exhaust himself on a subject, and could study for some specific object, such as a railway, a church, a big museum, but there was an absence of subtle features in building, such as could be found here, where one felt that the architect had been forced to study and grapple with the matter in order to get round some special difficulty. He was wondering if the architecture of America would really be advanced



War College, Washington.
Messrs McKim, Mead, & White, Architects.
(From a Photograph by Mr. Richard Philipp, Milwaukee.)

if there were to come a commercial catastrophe and the architect had to think out his problems more as we do.

Mr. C. C. Brewer
also replied, and said he met many American men who thought about their work and seemed a good deal keener than most Englishmen. All English architects who went to America—at all events, all he knew—were impressed by the vigour and fineness of the American ideals. The Americans were trying and were no mere hustlers; they were a race of keen, extraordinary well-trained men, and that training was altogether beyond what we had. It was difficult when an architect had perhaps a hundred assistants to say which was the work of A. and which that of B., but in the case of Messrs. McKim, Mead, & White, his idea was that, as Mr. Mackenzie had said, White was a curio hunter with very good taste, and had educated his clients and the public greatly in that way, but most of the finest buildings by the firm were, as far as one could get to know, by Mr. McKim, and he had a wonderful way of impressing everyone about him, very much as Mr. Norman Shaw did in this country. When Mr. McKim got interested in a work he gave up all else for it, and that note of keenness was characteristic of the American. He was certain that public interest in architecture was much greater in America than here—at least, it was more intelligent; people think about what modern architects are doing, they have a knowledge of architects' names, and they discuss the works of the big men in the way in which the works of painters are discussed here by people of the same class. Gothic work in America was poor, except in the cases of a few men who had thrown themselves into it with great interest. The work of Sulivan, of Chicago, was very thoughtful. As to Richardson, almost every town had some copy of Richardson, who, wonderful man that he was, had a sty which did not lend itself to copying, and h features had been copied with unfortuna results. Americans admitted he was a gre architect, but his work did not seem to le anywhere, and it got badly caricatured. The was an absence of muddle in American wor but they did not get the delightful details be seen in English work.

The President announced that the ne meeting will be held on March 25 (combin meeting with the Camera, Sketch, and Deba Club), when a paper by Mr. C. F. A. Voyse entitled "Patriotism in Architecture," will b read. The nomination of officers for Sessio 1912-13 will also take place.

THE LONDON COUNTY COUNCIL.

THE usual weekly meeting of the Londo County Council was held on Tuesday in th County Hall, Spring-gardens, S.W. Durin the opening of the meeting Sir Edward Whit occupied the chair, but retired after Captai G. Swinton had been elected Chairman fo the ensuing year.

KNIGHTHOOD.—A vote of congratulation proposed by Sir John Benn and seconded b Mr. Cyril Jackson, was accorded to Si Maurice Fitzmaurice, the Chief Engineer t the Council, on having been Knighted by th King on the occasion of the foundation stone laying of the new County Hall on Saturda last.

TOWN PLANNING OF DELHI.—Captain G Swinton reported to the Council that h should only be able to occupy the chair fo about four weeks, as he will be leaving fo India at the end of that time, having bee appointed one of the Committee for the tow planning of Delhi.

LOAN.—The Finance Committee recom mended and it was agreed to make a loa of 3,770*l.* to the St. Pancras Borough Counci for a housing scheme.

ALTERATIONS.—Various alterations are to b carried out at the Oldfield-road School, Hack ney, at an estimated cost of 160*l.*, and mino improvements at the Sidney-road School Hackney, at a cost of about 1,460*l.*

ALDWYCH.—The Improvements Committe reported that an offer had been received o 8,000*l.* a year for a lease of ninety-nine year for a part of Block R, Aldwych, and it i stated that it is proposed to erect an hotel o the site.

COMPETITION NEWS.

R.I.B.A. Prizes and Studentships.

The pamphlet of the Royal Institute an nouncing the subjects for the next competi tions for students has now been issued. Fo the first time the Essay Medal is offered for a treatise to be chosen by the author. The subject set for the Soane Medallion is "A Terminal Railway Station," for the Tite Prize "The Façade of a Royal Palace in a City," and for the Grissell Prize "A Riding School."

KING EDWARD MEMORIAL.

In the House of Commons, on the 5th inst. Colonel Burn asked the Hon. Member for the East Dorset Division, as representing the First Com missioner of Works, whether anything had been decided as to a site for the King Edward VII Memorial; and would an opportunity be given for a full discussion in the House before any thing was definitely settled.—Captain Guest, in reply, said: The Committee has recommended that the statue of King Edward VII. should be placed in the grass vista which leads from Piccadilly to the Queen Victoria Memorial. A model will be exhibited in the Tea Room as soon as it is completed. The question of dis cussion may perhaps be allowed to stand over until the model has been shown.—Earl Winterton: "Is there a chance of discussing the subject before the Committee's decision becomes binding on the country?"—Mr. Asquith: "Yes."—The Executive Committee of the King Edward Memorial Fund have approved, under certain conditions, the model sub mitted by Mr. Bertram Mackennal, A.R.A., and Mr. Edwin Lutyens for the statue of King Edward at the Piccadilly end of the Broad-walk.

THE ARCHITECTURAL ASSOCIATION:

FOURTH SPRING VISIT.

EXECUTED town-planning schemes in which ne designer has been alike responsible for he disposition and form of the buildings re sufficiently uncommon in England to lend particular interest to the Central-square t the Hampstead Garden Suburb, which vas visited by the Architectural Association n Saturday, March 2. The site—a level lateau some 500 ft. each way—is almost deal for its purpose, and the general scheme f laying-out adopted by Mr. Lutyens is a ne one. It consists of a square about 350 ft. cross, open to the west (from whence it is ommonly approached), facing which is the nstitute centrally placed on the east, the outh side closed by St. Jude's Church, and ne north by another church described as inter-denominational." Beyond these two hurches to the north and south on either ide of the square are other open "places," n shape long closed rectangles with approach oads centring with the transepts of the hurches. The houses surrounding both of hese squares and their approach roads are lso included in the scope of Mr. Lutyens' cheme, which thus creates the entire icture. Other roads from eastward centre rith the long axes of the two churches.

The buildings at present erected comprise ne north block of the Institute—to be alanced eventually by a corresponding nked block—St. Jude's Church with its icarage, the Free Church and its manse, nd the greater part of the buildings round ne north square and its approach road, rskine-hill. All are treated externally in milar materials and in a generally homo geneous manner as to detail. The bulk of the alling is faced with silver-grey thin bricks ith bright red dressings and a sparing use stone in cornices, bands, and entrances. he roofs are tiled. The massing and detail are stinctively Mr. Lutyens', leaning towards ne Wren manner of the Kensington rangery and Hampton Court Palace. Only ne public buildings were examined in detail y the members present, and in this they ere greatly assisted by the selection of the rchitect's drawings, which was kindly placed n view in the Institute, these showing, mong other things, the many points upon hich original intentions had been curtailed abandoned –as notably in the omission of clearstory from St. Jude's.

Unquestionably the most interesting of ne three buildings is the Church of St. Jude-n-the-Hill: helped by its lofty situation, ne fine mass of its central tower tells mirably from many distant points, and the mpletion of its spire will make it even ore striking. Externally the main build-g is little more than a very high pitched of rising almost from the ground, inter-cted by flush transepts of narrow span but ual ridge-height, and dominated by the fty central tower and spire. From the w eaves rise tall dormer windows lighting e aisles, the remaining light of the interior ing derived from large windows in the ansept ends, a temporary west window and clearstory on either side of the sanctuary, ove the lower Lady Chapel and vestries spectively to north and south. A note-orthy feature externally is the absence of utters and down pipes, the eaves dripping om a stone cornice into a paved channel und the wall base. The aisle walls are uilt hollow—a necessary precaution in such case. Internally a one-bay aisleless sanc-ary (eventually to be completed by an sidal east end) and the space under the wer are each covered by pendentive domes concrete plastered, with a ring of brick ussoirs marking off a saucer-dome above e pendentives. The aisled nave has a astered concrete barrel vault with brick ch-ribs. The main arcade is of brick, with fty plastered pilasters rising to a bold stone rnice in each bay, and the effect is very assive and dignified. Opinion may be vided, however, as to the expediency of e constructional jugglery of the aisle roofs, hich seem not only confused in appearance, t considerably out of harmony with the ld and simple scheme of the nave and nctuary. The roof timbers are of Oregon ne, sandblasted, and are very pleasant in colour and surface. The choir at present occupy temporary seats in the sanctuary, but the plans provide for their eventual transference to the west end, where, above a vestibule between the church and a projected meeting hall, the organ will also be situated. The pulpit, altar, and some other fittings are from Mr. Lutyens' designs.

The Free Church is so designed as to balance the opposite building, in a general way the transept fronts, aisle wall, and main roof being similar, shortened in the eastern limb by the curtailment of the chancel, the east end being encircled by a range of low buildings and the crossing surmounted by a tiled cupola on an octagonal brick drum, not sufficiently important to rank as more than a central feature or to make the effect that of a domed church. The design of the east end is very cleverly managed, particularly the frank disposal of the chimneys from the rooms below. Internally the construction is reinforced concrete, and the extreme tenuity permitted by this material produces an open effect totally at variance with that of the church. The aisles are divided by orthodox Roman Doric columns and entablature, formed in plaster on the concrete construction, a plain barrel-vault covering nave, chancel, and transept, and a hemispherical dome the crossing. The external cupola is built up of timber on a reinforced concrete cone 30 ft. 6 in. high, and a copper-covered lantern projects above. Both churches are at present disfigured by temporary west fronts, but it must be regarded as a matter for satisfaction that the central features—spire and dome—are being carried to completion; such features are in like case so often deferred and eventually abandoned.

FIRE PROTECTION IN PARIS.

THE British Fire Prevention Committee has issued a Report on the fire protective arrangements in Paris, the Report comprising an illustrated volume of some 110 pages, profusely illustrated from photographs, and having been prepared by a Special Commission, which included the Earl of Londesborough, K.C.V.O., Messrs. Edwin O. Sachs, F.R.S.Ed., Horace S. Folker, F.A.I., Ellis Marsland, District Surveyor, and others closely connected with the subject.

Besides giving a detailed record of what the Commission considered instructive, the Report is prefaced by a number of observations and impressions which should be of considerable importance to the fire protective work in this country, as also in the Colonies, the data being prepared in such a manner as to be of use to the various authorities concerned.

The Paris Fire Brigade Regiment is dealt with at considerable length. This brigade is fast becoming a motor fire brigade, and, being a military body conducted on modern lines, is remarkably well disciplined and of splendid physique. The fire preventive measures as to shops, warehouses, theatres, and tube railways are dealt with in detail. These excellent precautionary measures are mainly due to the initiative of the well-known police Prefect, Monsieur Lepine, whose mobile cyclist police squadrons are also illustrated, as also his river police, which is equipped with fire floats.

The National Fire Service, the Paris Suburban Fire Brigades, the fire precautions at great establishments outside Paris, like those of some of the great gasworks, are reported upon, as also the organisation of the French Fire Service Federation.

The whole subject is fully reviewed by the British Fire Prevention Committee with reference to both the national and local aspect, and the many illustrations are supplemented by a coloured map of Paris, and include as frontispiece the well-known picture illustrating the death of the late Colonel Froidevaux, of the Paris Brigade, at a great factory fire in 1882. We give an illustration, taken from the Report, of the trophy won by the Paris Fire Brigade in the National Inter-Regimental Gymnastic Competition of the French Army.



Trophy won by the Paris Fire Brigade.

ARCHITECTURAL SOCIETIES.

The Society of Architects.

The fifth ordinary meeting of the Society of Architects for the Session 1911-12 was held at No. 28, Bedford-square, W.C., on March 7.

Mr. Percy B. Tubbs, F.R.I.B.A. (Vice-President), presided, in the unavoidable absence of the President.

The ballot was taken, and the following candidates were declared to be duly elected:—

As Members.

E. O. Brown, Gravesend
A. E. Chasemore, London
P. R. Fincher, Penywern, Neath
W. J. Kemp, jun., Muswell-hill, N.
J. M. Miller, Montreal.

As Students.

W. Brooke, Cleckheaton
W. H. Rebbeck Frome
H. S. Clark, St. John's Wood, N.W.
R. H. Richardson, Wood Green, N
M. Evans, Kensington, Liverpool
C. S. Rhodes, Lytham
R. C. E. Griffiths, Bridgend
J. E. Sanders, Liverpool
F. C. Haslam, Grays
T. Scott, Lemington-on-Tyne
F. Holt, New Brighton
T. E. Turner, Hampstead, N.W.
W. H. Marley, Barry
A. Tutton, Gravesend
W. A. Miller, East Finchley

Mr. A. Alban H. Scott (member of Council) then read a paper on "The Testing of Materials for Reinforced Concrete," and a discussion followed. Our report will be given next week.

Devon and Exeter Architectural Society: Annual Meeting at Exeter.

The annual meeting of this Society, which embraces the counties of Devon and Cornwall, in alliance with the Royal Institute of British Architects, was held on the 9th inst. at the Half-Moon Hotel, Exeter, the President, Mr. James Jerman, F.R.I.B.A., of Exeter, being in the Chair, and among those present were—Messrs. J. M. Pinn, J. Crocker, J. A. Lucas, S. Dobell, B. H. Palmer, T. A. Andrews, L. Tonar, O. Ralling, A. Stevens, A. N. Tucker (Exeter), W. H. May, A. S. Parker, B. P. Shires, E. Coath-Adams, R. H. Arthur, H. Watts, C. H. L. Varcoe, B. W. S. S. Baily (Plymouth), and Allan J. Pinn, Hon. Secretary.

The annual Report was presented by the Hon. Secretary, and the balance-sheet was presented by the Hon. Treasurer (Mr. S. Dobell).

The retiring President, Mr. James Jerman, then delivered an address, an abstract of which appears on p. 313.

A cordial vote of thanks was proposed by Mr. B. P. Shires to the President for his address, and also for the able manner in which he had discharged the duties of his office during the past year. This was seconded by Mr. James Crocker and carried by acclamation.

The meeting proceeded to elect the officers for the ensuing year, as follows:—Mr. E. Coath-Adams, M.S.A. (Plymouth), President. Mr. J. A. Lucas, A.R.I.B.A. (Exeter), Vice-President. Messrs. J. M. Pinn, L. F. Tonar, T. A. Andrews (Exeter), R. H. Arthur (Plymouth) to fill vacancies on the Council of those retiring, as well as those remaining in office, viz., H. L. Thornely, F.R.I.B.A., Sampson Hill (Redruth), and the two Past-Presidents, Messrs. W. H. May, M.S.A. (Plymouth), and James Jerman, F.R.I.B.A. (Exeter). Mr. S. Dobell, Hon. Treasurer, and Mr. Allan J. Pinn, A.R.I.B.A., Hon Secretary.

The retiring President proposed a hearty vote of thanks to the Hon. Treasurer and Hon. Secretary for their services during the past year, and bore testimony to the very efficient manner in which they had carried on the business of the Society. This was carried by acclamation, and Messrs. Dobell and Pinn returned thanks for the further confidence reposed in them.

The newly-elected President, Mr. E. Coath-Adams, in taking the Chair, thanked the members for the honour they had done him, and felt sure that he should receive the support of the members and the able assistance of the Secretary in carrying out the duties of his office.

Mr. E. Coath-Adams then proposed a vote of thanks to the retiring President, Mr. James Jerman, which was seconded by Mr. S. Dobell and carried, to which Mr. Jerman replied, saying the great pleasure it had been to render any assistance to the Society, and that his duties had been lightened by the constant and ready help he had at all times received from the Hon. Secretary.

Subsequently the members lunched together, at which the toast of the King was followed by that of the healths of the President and Vice-President, and the President gave "Success to our Profession."

During the day the visiting members were shown the various points of interest in the City, under the guidance of the President, Mr. James Jerman, and amongst those visited were the Rougemont Grounds, Law Library, the Bishop's Palace, the Cathedral, College Hall, Guildhall, and several churches and mediæval buildings.

The thanks of the Society were expressed to those who had so kindly given permission for visiting the various buildings.

Aberdeen Architectural Association.

At a recent meeting of the Aberdeen Architectural Association Mr. J. A. Ogg Allan, architect, delivered a lecture on "The Educational Buildings of America." The lecturer limited himself to the description of the elementary and secondary schools of four cities—New York, Chicago, Boston, and St. Louis—want of time preventing him from describing the university and technical college buildings he had visited. In America there are diversities owing to condition of climate, etc., and there is no such uniform type as prevails in this country and in Germany, as every State has its own way of doing things, and controls its own educational affairs. In New York the problem to be solved is rendered more difficult owing to the value of building land, the city being built on the narrow tongue of land known as Manhattan Island. Some school sites have cost as much as 140,000*l.* and accommodation provided for as many as 4,000 pupils in one building. The site is usually on a lot facing two streets and bounded by buildings on the two sides. The plan is in the form of the letter H, and in the basement under the play yards are provided a large "anditorium" and an elaborately equipped gymnasium. The classrooms are arranged in the stories above, and ample staircase accommodation is provided. In Chicago a somewhat similar type prevails, but more room is available for sites, and lighting can be got from all sides. Boston has still larger sites, and there many small schools have been built in addition to larger buildings. St. Louis has still more available space, and the prevailing type is the "E" plan. The buildings are lower, consisting of two stories and basement, while the "auditorium" is omitted. Mr. Allan showed by means of lantern slides many plans of schools in these four cities, with photographic views of the exteriors and interiors, and he explained the details of arrangement and equipment, the latter being much better than in this country. Single desks for all pupils and shallow baths are provided, and there are such matters as electrically controlled clocks and telephones from the master's room, vacuum cleaners, etc.

Glasgow Institute of Architects.

The annual general meeting of the Glasgow Institute of Architects was held on the 6th inst. in the premises of the Institution of Engineers and Shipbuilders, 39, Elmbank-crescent, Mr. J. B. Wilson, the President, in the chair.

Mr. C. J. MacLean, the Secretary, submitted the forty-fourth annual Report. It stated that fourteen new members were admitted as Fellows during the year, and that sixteen new Associate members and three new student members were enrolled. The membership of the Institute now stood as follows:—113 Fellows, seventy-six Associates, thirty-two lay and twenty-two student members, giving a total of 243. During the past year the Council was actively engaged in formulating the scheme for the better regulation of competitions which has now been adopted by the Institute, and in terms of the new Articles of Association the following resolution was passed by the Council and approved of at a general meeting of Fellows and Associate members, viz.:—"Any Fellow or Associate member shall be considered to have been guilty of professional misconduct in terms of the Memorandum and Articles of Association of the Institute, and shall be liable to the penalties therein stated, if it be found by the Council either (1) that he has knowingly submitted, directly or indirectly, a design in any competition which has previously been the subject of a notice by the Council or by the Committee on Public Architecture and Competitions, prohibiting members of the Institute from taking part in the same; or (2) that he has knowingly solicited the promoters for permission to submit a design in a limited competition after the lect has been closed." The scheme which was put before the Institute after long and careful consideration by the Council is, the Report stated, similar to that of the Royal Institute, by which it has been approved. A like course of action has been adopted by several of the allied societies in their respective districts, and the Council is in communication with all those in Scotland toward securing similar procedure on their part where not already in force. The Council hopes under the powers now granted to it to be able to deal more effectively with the apparently increasing number of unsatisfactory competition
The Council had under consideration the pr
posal that the extension of the Municip
Buildings should be carried out by the Ci
Engineer's Department, and a letter protes
ing against this course of action was fe
warded to the Corporation. It was not
with satisfaction that the Corporation r
mitted the proposal back to the Committ
for reconsideration. The Council, the Repo
further stated, accorded its cordial suppo
to a proposal that an exhibition of the tow
planning drawings exhibited in London la
year, and more recently in such centres
Edinburgh and Dublin, should be held
Glasgow. In co-operation with the loc
branch of the Garden Cities and Town Pla
ning Association a letter was forwarded
the Town Council asking them to give th
proposal their support. A reply was receive
from the Town Clerk stating that the matt
had been remitted to a Sub Committee
consider as to inviting the exhibition
Glasgow at an early date. Recognising th
importance of the Scottish National Confe
ence on Housing and Town Planning A
ministration to be held in Glasgow on Marc
19 and 20 next, the Council has, on the inv
tation of the Standing Advisory Committ
of the Conference, appointed the whole
its members as delegates on behalf of th
Institute.

The Chairman proposed the adoption of th
Report. He referred to the recently inst
tuted Licentiate section of the Royal Inst
tute of British Architects, and said he w
pleased to say that the response from the
province had been very gratifying, and th
from what he personally saw during his ter
upon the Royal Institute Council, not onl
in numbers had the Glasgow Province bee
equal to any section of the kingdom, but
quality also. He said it was pleasant
know that the Town Council, awakened
last either by a sense of duty or emulatio
of other cities, proposed to encourage
assist a Town Planning Exhibition and Co
ference in Glasgow. The exhibition could b
but a shadow of what it might have been ha
they accepted the offer made them last yea
as the bulk of the best drawings were n
now available; but it was something to kno
that at last they recognised that town pla
ning had interests beyond these merely
architects and builders, and that it concerne
the municipality and the public most of al
The Corporation having seen the error
their ways in relation to this matter, the
might hope for better and saner procedur
in other civic matters which nearly concer
them as architects and in which they ha
recently ventured respectfully to enter the
protest. He referred, of course, to th
large and rapidly increasing amount of mun
cipal building work emanating from the Cit
Engineer's office. At present the A
Galleries, the rebuilding of the histori
Tontine, and the extension of the Municip
Buildings—work all calling for high archi
tectural skill—was being, and proposed to b
designed and controlled from an "Engineer
Department." Not only as ratepayers, i
the city's interest, but as architects, prou
of the architectural reputation of their city
they desired to show that the skill of th
past had not departed and that their publi
buildings should be worthy of them and o
the city to which they were proud to belong
Referring to the new regulations for com
petitions, he said these had been adopted b
the Institute and homologated by the Roya
Institute of British Architects, and h
trusted such public bodies, committees,
individuals who were proposing competition
would recognise that their desire was not t
be antagonistic but helpful.

Mr. Alexander N. Paterson seconded th
Report and financial statement, which wer
adopted.

The Council for the ensuing year wa
elected as follows:—Messrs. John B. Wilson
John Watson, J. K. Hunter, Alexander N
Paterson, W. G. Rowan, John Fairweather
Charles R. Mackintosh. Robert Wemyss
James Lochhead, James M. Monro, Georg
A. Paterson, Alexander M'Gibbon, Ninia
Macwhannell, James Lindsay, James H
Craigie, William B. Whitie, Alan G. Mac
Naughtan, and Alexander Wright.

The retiring President was heartil
thanked for his services in promoting th
interests of the Institute.

GENERAL NEWS.

Professional Announcements.

Mr. George H. Wenyon, architect, Castle ..ill, Dudley, has given up his practice at ..udley and Tipton, and is going abroad for ..is health. Messrs. Thompson & Warming..on, solicitors, Dudley, will receive any ..mmunications on his behalf.

The partnership hitherto existing between ..r. T. W. Haigh, architect and surveyor, ... Exchange-street East, Liverpool, and Mr. ..rnest S. Thompson has been dissolved as ..om November 24 last. Mr. Thompson ..tires from the practice, which will in future ..e carried on by Mr. T. W. Haigh under his ..wn name.

Mr. H. Guicharde Todd, F.S.A.(Scot.), ..S.A., architect and surveyor, has changed ..s address from 6, Cheapside, London, E.C., .. Southampton House, 317, High Holborn, ..C. His telephone number is Holborn 627.

The Mansions of England.

Mr. William Heinemann is issuing a fac..mile reprint of Joseph Nash's "The Man..ons of England in the Olden Time." The ..w edition, a large 4to as the original, ..ntains, in addition to the plates, a Preface ..y Mr. Reginald Blomfield, A.R.A.

Art Museums and Picture-Galleries.

Mr. Edwin T. Hall will read a paper on ..t museums and picture-galleries at the ..neral meeting of the Royal Institute of ..itish Architects, fixed for April 1. The ..ustrations will include a fine collection of ..des specially prepared for the paper. Mr. ..all's paper is in substitution of that on "Modern Methods of Construction," which ..r. Dunn is unable to read.

The Mural Painting Exhibition.

The committee of the forthcoming exhibi..n of Designs for Mural Paintings and for ..e Decoration of Schools, etc., have now ..ued a final circular containing full par..culars of the competitions offered to artists, ..d of the exhibits which it is hoped to ..cure. The Exhibition will be opened at ..rosby Hall, Chelsea, on Saturday, June 1, ..d a number of definite offers of wall-spaces ..be decorated, and of funds to bear the ..penses, have already been secured. The ..rculars will be sent to anyone interested ..application to the Hon. Secretaries, Mural ..ecoration Committee, Crosby Hall, S.W.

Petersfield Main Sewerage.

The Petersfield Urban District Council ..ve instructed Mr. Harry W. Taylor, ..M.Inst.C.E. (Messrs. Taylor & Wallin), ..ewcastle-upon-Tyne and Birmingham, to ..port upon improvements of the existing ..ain sewerage of the town.

The Photographic Survey of Surrey.

From the ninth annual Report for 1910 of ..e Council of the Photographic Survey and ..cord of Surrey we learn that during the ..st year 482 photographs have been received ..d recorded, this being a decrease of 108 ..1909. The photographs received are ..assified as follows :—Architecture, 177; Art ..d Literature, 235; Anthropology and An..quities, 11; Geology, 1; Natural History, ..Topography and Passing Events, 57. ..otal brought forward from last Report, ..293. As to the architectural prints contri..ted, they include Chertsey, Frensham, and ..urt, and the district around Godalming ..s received attention by a member who has ..t in twenty-six prints from this neigh..urhood. Besides these, prints have been ..ceived of streets in old Croydon, of Farn..m, Tadworth, Walton-on-the-Hill, Walton-..-Thames, Nutfield, Godstone, Bletchingly, ..dhill, Thursley, Hindhead, Compton, ..ngfield, Epsom, and Pirbright.

mmons and Footpaths Preservation Society.

Lord Eversley presided over the monthly ..eting of the Commons and Footpaths Pre..rvation Society held at 25, Victoria-street, ..W. A letter was read from Sir T. Fowell ..xton and Mr. E. N. Buxton forwarding a ..ntribution of 200 guineas in celebration of ..eir golden weddings and in commemoration ..their forty-seven years' connexion with the ..ciety. The solicitor, Mr. Percival Birkett, ..ported that the Bill of the Metropolitan Railway Company had now been amended so that the proposed new line from Rickmansworth to Watford would stop short of Cassiobury Park, instead of bisecting that open space. It was also stated that negotiations were taking place in regard to the provisions of the West Ham Corporation Bill, under which 4 acres of Wanstead Flats will be taken. It was decided to oppose the Woking District Gas Bill, under which 4½ acres of Horsell Common would be enclosed. It was reported that the National Trust had agreed to take up the Society's scheme for the purchase, for 1,250*l.*, of the manorial interests in Minchinhampton Common, Glos., over 600 acres in extent. The purchase fund already amounted to 620*l.*

International Smoke Abatement Exhibition.

Particulars have now been issued of the arrangements in connexion with the Conferences of Delegates of Municipal Authorities and other bodies to be held at the Royal Agricultural Hall in connexion with the International Smoke Abatement Exhibition. The Conferences will take place on the 26th, 27th, and 28th inst., the respective Chairmen being Sir William Ramsay, K.C.B., F.R.S. (President British Association); Sir William Richmond, K.C.B., R.A.; and Lord Justice Fletcher Moulton. The Conferences are divided into three sections to consider: (*a*) Smoke Pollution and its Effects; (*b*) Smoke Abatement; and (*c*) Law and Legislation. Amongst the numerous papers to be considered are those on "The Action of Coal Smoke on Building Stones and Mural Paintings" (Sir Arthur Church, K.C.V.O., F.R.S.); "The Effects of Town Air on Metalwork" (Dr. S. Rideal, D.Sc., F.I.C.); "The Economic Aspect of Smoke Abatement" (Dr. R. Lessing, Ph.D., F.C.S.); "Inference of Smoke on Pigments" (Mr. Noel Heaton); "Kew Gardens and Smoke" (Mr. W. J. Bean, Assistant Curator, Kew Gardens); "Should the Domestic Smoke Nuisance be Any Longer Tolerated?" (Bailie W. Smith, of Glasgow); "The Smoke Problem in the U.S.A." (Mr. Z. A. Willard, of Boston); "Smoke Abatement Laws in Other Countries" (Mr. Julian S. Corbett, LL.M.); "Is Further Legislation Necessary?" (Mr. Joseph Hurst, Barrister-at-Law); "The Proposed Smoke Abatement Bill" (Principal J. W. Graham); "A Plea for the Appointment of a Royal Commission" (Dr. H. A. Des Voeux, Treasurer, Coal Smoke Abatement Society). In addition to the papers special lectures are being organised on the different phases of the Smoke Abatement Movement.

Geology of Tavistock.

The Board of Agriculture and Fisheries desire to give notice of the publication of a new colour-printed Sheet No. 337 of the Geological Survey map on the 1-in. scale, and, in explanation of the map, a Memoir of the Geological Survey on the Geology of the Country around Tavistock and Launceston. This memoir describes the geology of the area covered by the 1-in. colour-printed map Sheet 337, including part of Bodmin Moor and the country around Tavistock and Launceston. After an Introductory Chapter, Chapters II. and III. are devoted to the Devonian and carboniferous rocks; Chapter IV. describes the igneous rocks earlier than the granite intrusion; Chapters V. and VI. deal with the granite and its surrounding aureole of metamorphism; Chapter VII. relates to the Drift, and Chapter VIII. to Economics. The memoir is illustrated by two plates of geological structures, and one of photomicrographs. Copies may be obtained from any agents for the sale of Ordnance Survey Maps, or, through any bookseller, from Mr. T. Fisher Unwin, 1, Adelphi-terrace, London, W.C. The price of the map is 1s. 6d., and the memoir, 3s.

Cambridge University.

The Sites Syndicate have recommended that for the increased accommodation required by the School of Agriculture an extension should be made, westwards, of the present building, near Tennis Court-road, and that for the Forestry Department a site should be allotted in the south-eastern portion of the ground bought from Downing College. Mr. Bruce Joy designed the memorial which is being erected in Jesus College Chapel to Thomas Cranmer, who was a Fellow of the College.

THE NEW COUNTY HALL.

THE King and Queen, accompanied by the Prince of Wales and Princess Mary, visited the site of the new County Hall at Westminster Bridge on Saturday last, when his Majesty laid the foundation-stone of the building. As the result of open competition, Mr. Ralph Knott's design for the new building was declared to be the most suitable, and in 1909 a start was made with the construction of the embankment wall. The wall was successfully completed by September, 1910, at a total cost of 58,000*l.* The plan of the principal floor of the new County Hall indicates a building 750 ft. long with an average width of 310 ft. The building is to consist of nine stories, of which the two lowest, being below the road level, will be utilised for storage purposes. The principal floor will be mainly devoted to the Council Chamber, lobbies, and committee-rooms, but there will also be accommodation for chief officers whose duties necessitate close attendance upon the Council's committees. The remaining floors will be allocated to the staffs of the various departments. The Council Chamber will be 3,500 sq. ft. in area and 55 ft. in height, with galleries for the accommodation of the Press and public. On that portion of the site which is to be built on at present accommodation is provided for a staff of 2,270.

The external elevations of the frontages to the river, to Westminster Bridge-road, and to Belvedere-road will be of Portland stone on a base of granite. The scheme as originally approved by the Council was estimated to cost 1,706,000*l.*, but it has now been decided to exclude the site of Messrs. Holloway's premises from the scheme. The estimated cost is accordingly reduced to 1,412,000*l.* The building has been designed and planned by the selected architect, Mr. Ralph Knott, in collaboration with the County Council's official architect, Mr. W. E. Riley, and the embankment wall was designed by the Council's Chief Engineer, Sir Maurice Fitzmaurice.

Illustrations of the building have appeared in the *Builder* for February 8 and 15, 1908; August 1, 1908; September 10, 1910.

In connexion with the ceremony of laying the foundation-stone of the new County Hall, the following gentlemen had the honour of being presented to their Majesties :—The Chairmen of the General Purposes Committee and the Establishment Committee, the Architects of the Building and the Council, the Chief Engineer and the Valuer. At the conclusion of the ceremony the King and Queen were conducted to the Withdrawing Room, where the Chairman of the Council presented to their Majesties copies (specially bound in covers made by students at the Council's Central School of Arts and Crafts) of a descriptive account of the New Hall, after which the King and Queen signed the Council's record. The King conferred the honour of Knighthood upon Mr. Edward White and Mr. Maurice Fitzmaurice.

FIFTY YEARS AGO.

From the *Builder* of March 15, 1862.

The Cost of Soot.

IN connexion with the British and Indian Army estimates, an honourable Member called attention lately in the House of Commons to a charge of 5,891*l.* for sweeping chimneys. If it cost such a large sum for the clearing of the chimneys of the offices, barracks, etc., connected with our Army, how great must be that of sweeping all the chimneys in the British Empire? If this sum may be taken as affording something like a scale for the amount expended for chimney-sweeping by the British population who use chimneys, the annual charge would amount to nearly a million sterling. This sum, large as it is, is probably not over the mark, if we remember in the metropolis alone how many houses there are of which every room is inhabited. And how much are we to add as the cost of fuel which is wasted in the formation of all this soot? Various improvements have been made of late in the construction of fireplaces in both manufactories and dwellings; notwithstanding, great would be the public benefactor who would provide us with a sure means of economically consuming the chimney smoke.

EDITORIAL SUMMARY.

In our leading article, "Why Employ Architects?" we deal with several aspects of the question.

An illustrated article on "A Florentine Palace" (p. 290) deals with the Palazzo Davanzati.

In "Notes" columns (p. 291) will be found observations on: "The Preservation of Ancient Monuments"; "Combined Heating and Power Plant"; "Lambeth Bridge"; "The Associates and the R.I.B.A."; "The Improvement of London"; "The New Indian Capital."

A meeting of the Architectural Association was held on Monday, when papers were read on "American Architecture" (see p. 292).

A report of the Fourth Spring Visit of the Architectural Association, to the Central Square at the Hampstead Garden Suburb, is given on p. 297.

Brief reports of meetings of the following Architectural Societies are given on p. 297: "Glasgow Institute of Architects"; "Aberdeen Architectural Association"; "Devon and Exeter Architectural Society"; "Society of Architects."

In Correspondence columns (p. 300) will be found letters on: "Trade Unionism and Restraint of Trade"; "Padbury *v.* Holliday, Ltd."

The Monthly Illustrated Historical Review (p. 301) includes: "The Architecture of Portugal"—I.; "The English House from the Normans to the Tudors"; and "Notes."

The Building Trade Section (p. 306) includes: "The Manchester Building Trades Exhibition"; "London Association of Master Decorators"; "Projected New Buildings in the Provinces"; "Applications under the London Building Acts."

An abstract of the sixth Carpenters' Hall Lecture, by Mr. M. H. Baillie Scott, on "House Building, Past and Present," appears on p. 310.

"Form and Vision in Reference to Art" was the title of a recent lecture at Carpenters' Hall, an abstract of which appears on p. 311.

An abstract of a paper on "Church Restoration" is given on p. 312.

On p. 313 some notes from the Presidential Address of Mr. James Jerman before the Devon and Exeter Architectural Society are given.

In our Law Report columns on p. 314 is given: "Pratt & Co., Ltd. *v.* W. F. Frith."

MEETINGS.

FRIDAY, MARCH 15.

Institution of Mechanical Engineers.—Dr. Rudolf Diesel on "The Diesel Oil Engine." 8 p.m.

Royal Sanitary Institute.—Mr. H. Phillips Fletcher on "Ventilation, Warming, and Lighting." 7 p.m.

Glasgow Architectural Craftsmen's Society (Technical College).—Mr. A. H. Purdie on "Some Practical Considerations on the Measuring and Valuing of Mason and Brickwork."

South-Western Polytechnic Institute, Chelsea.—Sir David Gill, K.C.B., F.R.S., will present prizes and certificates to students of Evening Classes and Day College. 8 p.m. (Laboratories and workshops open to public inspection at 9.15 p.m.)

SATURDAY, MARCH 16.

Architectural Association.—Fifth Spring Visit, to King's College Hospital, Denmark-hill. Meet at the building, 3 p.m.

The Royal Institution.—Professor Sir J. J. Thomson, M.A., LL.D., D.Sc., F.R.S., on "Molecular Physics"—(IV). 3 p.m.

MONDAY, MARCH 18.

Royal Institute of British Architects.—Mr. W. H. Ward, M.A., on "The Architecture of the French Renaissance." 8 p.m.

Royal Society of Arts.—Mr. Noel Heaton, B.Sc. F.C.S., on "Materials and Methods of Decorative Painting"—(I). 8 p.m.

Royal Sanitary Institute.—Mr. W. E. Fretwell on "Details of Plumbers' Work." 7 p.m.

Liverpool Architectural Society (Incorporated).—Mr. J. Hubert Worthington, M.A., on "The Inspiration of Florence." 6 p.m.

Institute of Sanitary Engineers (Caxton Hall, Westminster).—Mr. Fraser on "The Modern Home." 8.15 p.m.

TUESDAY, MARCH 19.

Northampton Polytechnic Institute (Illuminating Engineering).—Mr. W. E. Goodenough on "The Practical Use of Gas Lamps." 7.30 p.m.

The Illuminating Engineering Society (Royal Society of Arts, John-street, Adelphi).—Papers on the "Lighting of Printing Works and Offices" will be read by Mr. F. W. Goodenough (Gas Light and Coke Company), and Mr. Justus Eck (Union Electric Company). 8 p.m.

The Institution of Civil Engineers.—Papers on "The Main Drainage of Glasgow," by Messrs. A. B. McDonald and G. M. Taylor, MM.Inst.C.E.; "The Construction of the Glasgow Main Drainage Works," by Mr. W. C. Easton, B.Sc., M.Inst.C.E.; "Glasgow Main Drainage. The Mechanical Equipment of the Western Works and of the Kinning Park Pumping Station," by Mr. D. H. Morton, M.Inst.C.E. 8 p.m.

WEDNESDAY, MARCH 20.

Carpenters' Hall, London-wall (Lectures on Arts Connected with Building).—Mr. W. R. Hoare on "The Craft of the Brick and Tile Maker." 7.45 p.m.

Edinburgh Architectural Association.—Mr. J. Campbell Mitchell, A.R.S.A., on "The Study of Nature by the Student of Decorative Art." 8 p.m.

Royal Sanitary Institute.—Mr. Henry C. Adams, Assoc.M.Inst.C.E., on "Sewerage." 7 p.m.

Northern Architectural Association.—Annual meeting. 7.30 p.m.

THURSDAY, MARCH 21.

Carpenters' Hall, London-wall.—Professor Wm. Somerville, M.A., D.Sc., on "The Forests of North America." 8 p.m.

Society of Antiquaries. 8 p.m.

The Institution of Electrical Engineers. Discussion, to be opened by Mr. S. Z. de Ferranti, President, on the following subject: "The Causes Preventing the More General Use of Electricity for Domestic Purposes." 8 p.m.

FRIDAY, MARCH 22.

Royal Sanitary Institute.—Mr. Henry C. Adams, Assoc.M.Inst.C.E., on "Sewage Disposal." 7 p.m.

Leicester and Leicestershire Society of Architects (Students' Evening).—Introduction to discussion on the R.I.B.A. Report on Reinforced Concrete, by Mr. W. Keay, A.M.Inst.C.E.

Aberdeen Architectural Association.—Mr. A. N. Paterson, M.A., A.R.S.A., on "French Influence on Scottish Architecture." 7.30 p.m.

BOOK RECEIVED.

SMALL WATER SUPPLIES. By F. Noel Taylor. (London: B. T. Batsford. 6s. net.)

CORRESPONDENCE.

Trade Unionism and Restraint of Trade.

SIR,—I brought the letter published by you in your issue of February 23 last before my Council, and the happy experience of the writer was warmly extolled as "lovely and innocent." The paradise of exemption and industry in which "X." has dwelt was the envy of everyone present. His ignorance is touching. That there is no society rule limiting the amount of work to be done by workmen is admitted, but the unwritten law as to the practice has been materially and expensively brought home time after time to every builder I have ever met. It is difficult to take "X.'s" letter seriously. He cannot be an employer at all or he would realise the absurdity of his letter.

SECRETARY,
THE INSTITUTE OF BUILDERS.
Kingsway, London.

East Sussex Hospital Competition.

A copy of the following letter to the Editor of the *Hospital* has been sent to us:—

SIR,—You have been good enough to forward me a marked copy of last week's issue of the *Hospital*, in which attention is particularly drawn to some criticisms upon the award of this competition and reflections upon the system of judging generally.

The jury system which appears so desirable to you has been under consideration for many years by architects who are most intimately concerned in the matter. It has also been tried on more than one notable occasion, but the results have scarcely been such as to recommend it.

The whole system of competition is open to grave objection, although it must be acknowledged that it has some redeeming features. I venture to think, however, the pros and cons of a purely architectural question such as this is scarcely likely to be of interest to the majority of your readers. Neither is it necessary to trespass upon the space you may be good enough to allow me by dealing point by point with your correspondents' criticisms, which are so easy to make. They will be convincing to no one but such of the unsuccessful competitors who lack the instinct of true sportsmen.

I except one point, which, if left uncontradicted, may receive a certain amount of general credence. It is such a common grievance in competitions. Your correspondents respectively state that:—

"The Committee fixed the sum of 35,000 (roughly, 350*l.* per bed) as the total cost for an up-to-date hospital, and the cost was stipulated as being an essential in the selection, 35,000 being the sum the Committee would have available."

The best answer to these misleading statements is to quote the actual condition, which was as follows, viz.:—

"The Committee think that 35,000*l.* is the maximum that they will have at their disposal for the whole hospital, and while they require the hospital to be up to date in all particulars preference will be given to a design within this sum if possible, but competitors must use their discretion in designing if they think that amount insufficient."

No honest reading of this clause suggests that the question of cost was essential.

For the rest, no good award is ever made in consideration of one or two points, but on a general survey of the design from every point of view. In other words, the best design is that which combines the greatest number of good points and the least number of errors; and as to these, an assessor who has given many hours to the study of the plans must be a better judge than your anonymous F.R.I.B.A.'s. By the way, I would be interesting to have their names, and especially to know if either of them competed.

The assessor's character and his work as a hospital architect are too well known to be questioned, and your correspondents' criticisms will probably cause him more amusement than annoyance.

I should like to take the opportunity of correcting a wrong but somewhat general impression. The authors of the successful design are my brother, Mr. John Saxon Snell, and Mr. Stanley M. Spoor, some time my pupil, not your humble servant.

Of the merits of their design it does not become me to speak, but I think no unprejudiced critic will dispute its general excellence.

A. SAXON SNELL.

Padbury *v.* Holliday, Ltd.

SIR,—"Sub-Contractor's" reply to my letter, while agreeing to the necessity of having a proper contract between builder and sub-contractor, branches off into a side issue, in which he depreciates the builder and points out the vast improvements in building work consequent upon the initiative of sub-contractors.

However, the object in my original letter was in reference to the necessity of a sub-contractors' agreement, and I do not propose to make any comment on your correspondent's remarks, which have no bearing on the subject.

I quite agree with his ideas that the agreement adopted should be a fair one, and that the original contract should form the basis of the agreement, and I venture to think it would be to the interests of architects, builders, and sub-contractors if the latter did, as your correspondent suggests, form an association. Then, and then only, would the builder avoid the controversy there invariably is with independent firms of sub-contractors as to whether they should accept their own responsibilities or pass them on to the already overburdened builder.

F. J. GAYER
(E. A. Roome & Co.).

ILLUSTRATIONS.

New Church of St. Luke, West Hartlepool.

THIS is the successful design in a limited competition in which Mr. W. D. Caröe was assessor. The strictest economy had to be studied, and the conditions required the building to be of stone. The cost will be 6,000*l.* exclusive of top of tower. The walls externally are to be faced with local rubble walling, and internally with plaster, while the stone dressings will be in Carlton or other local sandstone.

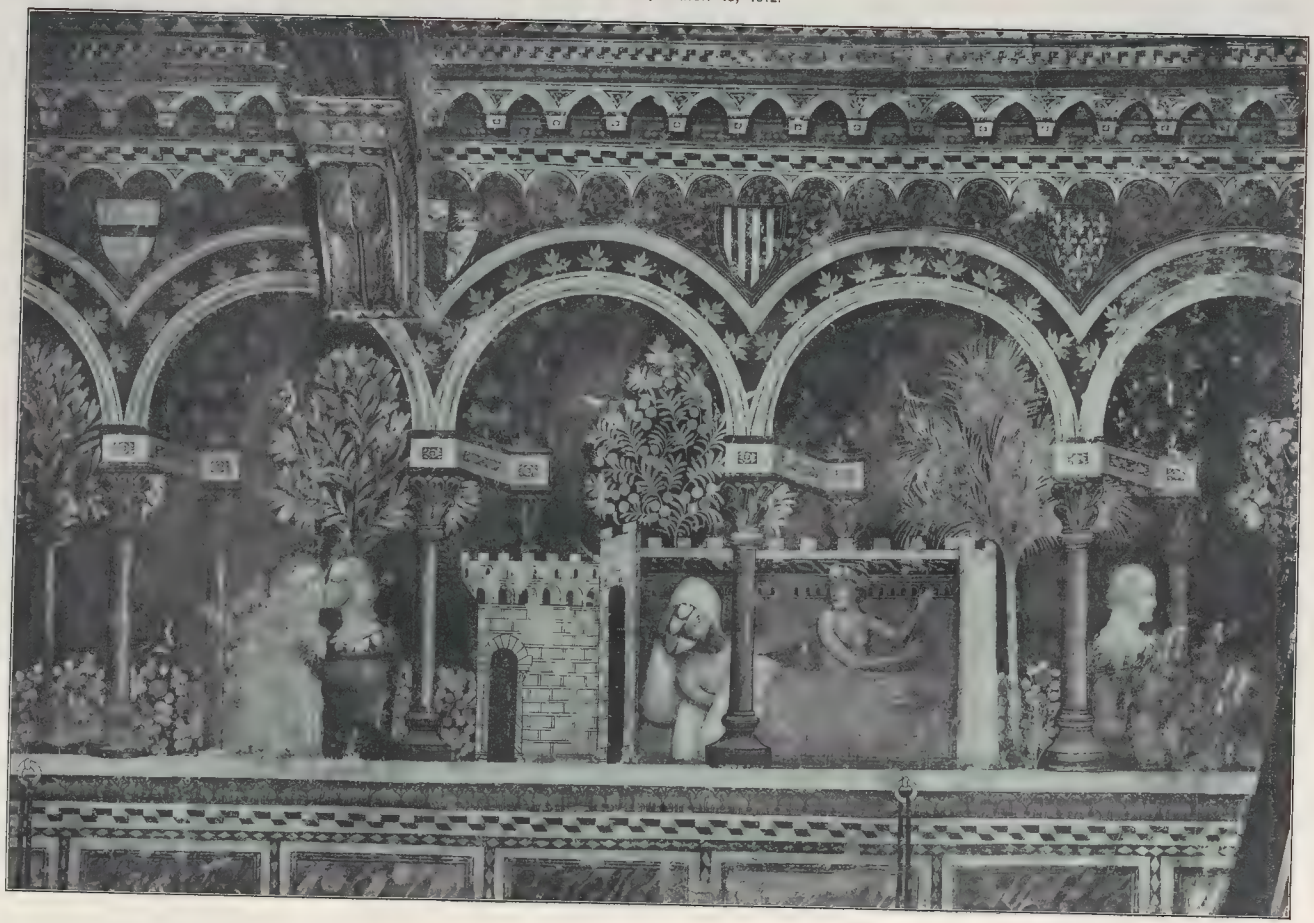
It is owing to the shape of the site, which is situated at the corner of Hart-lane and Tunstall-avenue, that the plan is rather wide in proportion.

The Palazzo Davanzati, Florence.

THESE illustrations are given in connexion with an article on p. 290, wherein they are referred to.



Sprague & Co., Ltd., Printers, 69 & 70, Dean St., Soho, W.



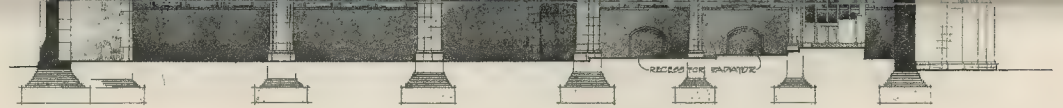
THE PALAZZO DAVANZATI, FLORENCE: DETAIL OF FRIEZE.

Sprague & Co., Ltd., Printers, 69 & 70, Dean St., Soho, W.

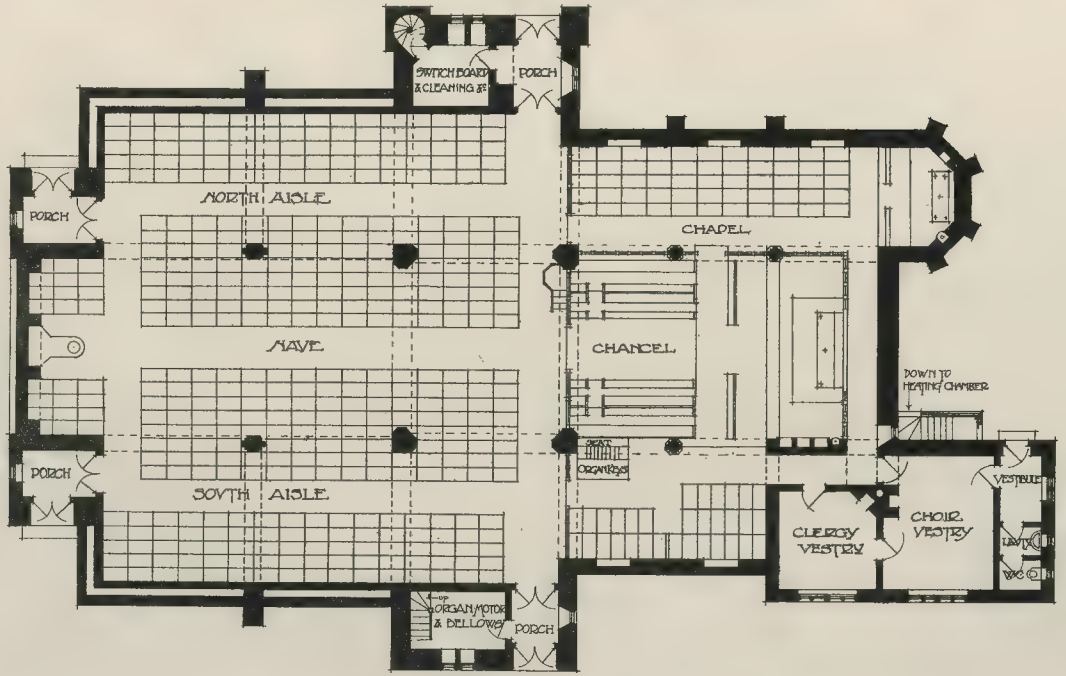


NORTH ELEVATION





LONG SECTION LOOKING NORTH



GROUND PLAN

FEET 10 5 0 10 20 30 40 50 FEET

INK PHOTO SPRAGUE & C° L° 4 & 5 EASTHARDING STREET FETTER LANE E C

SELECTED DESIGN FOR PARISH CHURCH OF ST. LUKE, WEST HARTLEPOOL.—By Messrs. Lofting & Cooper.



Sprague & Co., Ltd., Printers 69 & 70, Dean St. Soho, W.

THE PALAZZO DAVANZATI, FLORENCE: BEDROOM ON SECOND FLOOR.



Sprague & Co., Ltd., Printers, 69 & 70, Dean St., Soho, W.

THE PALAZZO DAVANZATI, FLORENCE: THE PEACOCK ROOM.

MONTHLY HISTORICAL REVIEW.



Fig. 1. Old Cathedral of Coimbra before Restoration.

THE ARCHITECTURE OF PORTUGAL.—I.

PORTUGAL sits apart from her sister nations—

"A 'ewelled coronet gracing Europe s brow,
Where fails the land and ocean's realm begins,"

er own Camoens has sung of her.

ccessible only by sea or through the broad itories of Spain, herself a country relatively e travelled in, she has till recent years been of the last corners of Europe that the ist, casting about for fresh realms to quer, would hit upon as the scene of a day. This was especially the case with architectural student. It was considered cely worth while facing the comparatively ter difficulties of reaching such a destina-, since it was suspected that there was little the journey's end to reward the intrepid lorer. So little known, indeed, was the itecture of Portugal, so scarce the means nformation on the subject half a century ago, Fergusson was obliged to confess his bility to do more than touch upon one or of the best-known monuments, and these dismisses rather disparagingly. Since his things have greatly altered. Portugal has me of easier access. Lisbon is reached in fort to the seaworthy at least—by several mship lines in two and a half or three days Southampton, and the Republic possesses od, if not very rapid, railway system, so that holiday of, say, three weeks or a month the cipal points of architectural interest can be ed. Again, the literature of the subject considerably increased. Not only has the itable German *savant* written on the ect (cf., for instance, C. Uhde s "Baudenk-er in Spanien und Portugal," 1892, A. pt's "Baukunst der Renaissance in ugal," 1890-5), but Portuguese students e investigated many dark corners of their art history. More recently our country-, Mr. Crum Watson, in his "Portuguese itecture" (A. Constable & Co., 1908), has ned up the results of such previous research of his own study of the monuments on the spot. The above-mentioned works, supplemented by a visit of the writer to the principal places described, form the basis of these articles.

The great currents of the world's art have ever been associated with the history of dominant races or mighty movements in human thought and activity, and it is necessarily these main currents which afford the most fruitful field for study. But the art of remoter regions and minor nationalities to whom it has not been given to shake the world by force of arms or ideas need not, therefore, be neglected. An occasional trip can be profitably and pleasantly made to explore such subsidiary channels fed by the mingled filterings from mightier streams, where if the current sets with less vehemence and certainty in any given direction its very hesitations are charming. In a country like Portugal, which, in spite of its small size and population, has had no mean share in shaping the world's destinies, we may look for works not devoid of attractiveness.

Professor Carl Justi, in the historical sketch of Spanish art prefaced to Baedeker's "Guide to Spain and Portugal" (1908), says, "Sometimes it would almost seem as if all the schools of Europe had given each other a rendezvous in Spain at the expense of the Spanish purse." The remark is equally applicable to Portugal and her architecture. For the greater part of its history there is a strange lack of the distinctive marks of a national style; and, at the one period at which some such marks appear, the style in which they occur is neither thoroughly homogeneous, nor even exclusively national, since for a short period at least Spain offers here and there examples of "Manoelino" architecture, Portugal's most characteristic product, or something very analogous to it. Portuguese architecture is throughout merely one of the several provincial variants of the rather vague and composite type evolved in the whole Iberian peninsula under very varied foreign influences. Endowed with something of the Spaniard's strong decorative feeling and love of splendid architecture, the Portuguese, like them, lacked the grip necessary to make thoroughly their own what they borrowed from France, or Flanders, or Italy. They followed in the wake of the nations they imitated, often lagging as much as half a century behind them, and never assimilating their borrowings sufficiently to establish the elements of an independent evolution. Thus each new fashion abroad was in turn followed and in turn abandoned.

It would be too much to say, however, that the Portuguese showed no originality. Their copyings are not slavish, and they usually knew how to impart a flavour to their essays in foreign styles, which effectually and agreeably differentiate them from their prototypes, while in certain directions they attained results which surpass anything to be found elsewhere. This distinctive flavour is perhaps in some measure the result of the Oriental strain which, in view of their national history, was a necessary element in their civilisation. For while the young nation whose very existence was bound up with the profession of the Christian faith naturally turned to other Christian nations more advanced in culture for models of Christian architecture, and borrowed their architects to design important edifices, it was inevitable that skilled handicraft, when required in any quantity, should be supplied by the non-Christian but more highly-civilised population resident in its midst, the Moorish population which had been its master and which it was then engaged in subduing.

If the pedigree of Portuguese architecture cannot be traced like that of Italy or France in a direct line from that of Rome it is because the events which followed the break up of the Empire severed the country completely from its past. The deepest trace left by Roman rule which lasted for over four centuries is to be found in the language. If extant Roman monuments are few, they include in their so-called Temple of Diana at Evora the best-preserved Roman building in the peninsula.

The Vandals and Sueves who overran Lusitania and the adjacent provinces were not builders, and left no visible trace of their passage, and much the same accounts must be given of the Gothic rulers who followed them, though their civilisation, as manifested, for instance, by the jewellery from Toledo in the Cluny Museum in Paris, was of a relatively high order. Early in the VIIIth century the Mohammedan invasion from Morocco swept over the whole peninsula, and subdued all but its north-western mountain districts, which thus provided the starting-point of the later Christian reconquest. Meanwhile the invading "Moors," who consisted partly of Berbers and partly of Arabs, established themselves firmly in the conquered lands and practised all the arts accompanying a refined and luxurious civilisation. Although their rule extended over a period varying from one to five centuries in different parts of the country, their extant buildings anterior to the Christian reconquest are exceedingly few, two or three at the most, the best known of which is the so-called "Castello dos Mouros," on the rocky height above Cintra. This, however, is no measure of the influence of the Moors, which may be traced in several directions in Portuguese architecture even long after the final expulsion of the Moriscos, their Christianised descendants, in the XVIth century. For centuries after the reconquest, Moorish craftsmen were extensively employed and, even subsequent to their conversion to Christianity, the Moriscos retained their national traditions. Thus, while Portugal can show nothing to compare for splendour with the Alhambra of Granada, the Alcazar of Seville, or the Mosque of Cordoba, it boasts a series of buildings of some importance erected by Moors, though not for Moors, and retains some of their building methods to the present day.

By far the most important of these is the old Palace of Cintra, occupied till the recent revolution as a summer residence by Queen Maria Pia, and now maintained as a State Museum. Some sort of castle existed on the site at least as far back as the XIth century; but nothing now standing is recognisably older than the reign of John I. at the end of the XIVth. Yet there is a decidedly eastern look about this older part of the palace, which was much added to a century later by Manuel I., and it offers examples of practically all the characteristics which mark Moorish art in Portugal and which exerted an influence on the architecture of the kingdom.

The plan, as is so often the case in Oriental building, shows no attempt at order, symmetry, or parallelism. The masonry of the older walls, where the plaster has been removed for it to be examined, proves to have been of rubble strengthened at intervals in the Arab manner with lacing courses of thin bricks laid three deep. The elevations are mostly crowned by the Moorish type of battlement and pierced by Moorish windows. In the former the merlons are in steps shaped like the teeth of a saw; the latter each consist of two arches enclosed in a rectangular moulded stone frame. The arched heads, which are usually stilted and cusped, spring from slender shafts with capitals of a type familiar at the Alhambra, and abaci moulded at the sides but not on the face. Similar windows of Moorish type are found with horseshoe arches in the castle at Alvito, and a late doorway of like design, with horseshoe arches and spiral shafts, in the Chapter House of St. John the Evangelist at Evora. When there is cusping it starts at the base with a whole lobe not a half lobe as in occidental work.

At a distance the most striking feature of the old Palace of Cintra is the pair of gigantic cones which rise above its roof, recalling vaguely the oast houses of Kent, and serve the purpose of carrying off the fumes of the charcoal fires in the kitchen. Similar chimneys are still found in Morocco, and all visitors to Alcobaça will remember the remarkable XVIIth century example there, which rises from eight cast-iron columns in the centre of the kitchen of the monastery to a height of between 40 ft. and 50 ft. Unlike the chimneys of Cintra, however, it is rectangular in plan and not visible externally. This kitchen is further remarkable in being lined and paved with marble and fitted with huge marble tanks for sinks, which are fed by a clear mountain stream, running in a channel in the floor.

In examples of glazed tile linings and enriched wooden ceilings, two forms of decoration which play a large part in Portuguese architecture, and are both of Moorish introduction, the old Palace of Cintra is peculiarly rich.

The manufacture of coloured glazed tiles in the east is almost as old as history. They were introduced into Spain by the Arabs possibly as early as the VIIIth century, but no known examples can be proved to be earlier than the XIIIth. The cool expanses of wall and floor surface which they provided, so grateful in the torrid heats of summer, as well as their decorative qualities, soon earned for them a widespread popularity in the peninsula, which they have ever since retained. The earliest form in which they appear is that of self-coloured tiles limited to four shades—bluish-green, brown, dark violet, and milky white—of various shapes and laid in geometrical patterns. Later on the invention of a process similar to that of *cloisonné* work permitted of single tiles receiving a pattern. This was impressed on the damp clay, leaving slightly raised divisions. The patterns used in mediæval times were almost exclusively geometrical, especially the star or aster pattern, dear to Arab art, but grotesque animals and floral motives were also sometimes introduced. At Cintra are several rooms decorated with mosaics of self-coloured tiles, forming high dadoes with richly cusped and crocketed crestings and patterned borders. In others the field of the dado is made of tiles with vine leaves and bunches of grapes embossed and coloured. The old cathedral at Coimbra before restoration was clothed externally with richly-patterned tiles (Fig. 1). At the Renaissance the star patterns gave place to scroll ornaments and arabesques, and the range of colour became more varied, the subjects being



Fig. 2. "Hall of Shields" in the Old Palace at Cintra.

painted on a white ground without bounding ridges. A fine example of this kind of work is to be seen in the open ambulatory of the circular church of São Amaro at Alcantara, where large subjects are enclosed in architectural framework; in the Sacristy of Santa Cruz at Coimbra, and in the Marvilla at Santarem, where the whole walls are covered with a continuous pattern producing the effect of a rich tapestry. The use of lustre tiles, imitated from lustre ware, first light gold and later red gold, also came into vogue in the XVIth century. After the expulsion of the Moors the art of the tile-maker gradually declined. The colours lost in brilliancy, and their range became restricted, till a white ground with designs in blue, varied occasionally by yellows and purples, came to be the almost exclusive treatment.

This blue and white technique, which appears to have arisen almost simultaneously at Delft, was in each case the outcome of a desire to imitate Chinese porcelain, then becoming known in Europe. The use of large bordered panels, to complete which a large number of tiles might be required, came in in the XVIth century, and continued in use till the early XIXth, having reached its zenith in the XVIIIth. Innumerable examples of this system of decoration are to be found throughout the country. The cloisters of the Cathedral of Oporto afford an instance. Here the walls are decorated with a series of panels illustrating, in the lower story, the Song of Songs, and, in the upper, hunting, fishing, and other sports. Another is to be found in the Chapel of our Lady of the Desert in the monastery at Alcobaça, where the scenes are drawn from the Apocalypse. Side by side with these tiles, with a single design on each, a flower, a vase, or a figure, a scene similar to contemporary Dutch work, are commonly used, as, for instance, on the cloister staircase of Santa Cruz at Coimbra.

The modern use of tiles for covering entire façades does not date back beyond the XIXth century. Previously they were used for the walls of rooms, cloisters, and loggias, for dadoes, for the risers and treads of stairs. In gardens they served to line stone seats and the sides of tanks and fountains, as in the charming Quinta de Santa Cruz at Coimbra, and formerly in the cloister at Belem, which was laid out in the XVth century in a stellar plan, with a tiled tank dotted with islands connected up by bridges. One other external use was found for them in early times in the covering of domes and conical roofs. Thus the great chimneys at Cintra were once, and the dome of the Sé Velha at Coimbra and the spire at Evora are still, covered with green and white tiles laid in patterns.

The decorative joinery of the Moorish workmen, especially as applied to roofs and ceilings, likewise had a lasting influence on Portuguese architecture. It was their custom to enrich their roofs by means of strips of wood used ornamentally, either fixed so as to intersect diagonally between the pairs of coupled ties and



Fig. 3. Degrees Hall of the University of Coimbra.

s, which they affected in their roof trusses. the Romanesque Church at Aguas Santas, Oporto, or between the ordinary rafters, Caminha; or, again, on the face of the ing in geometrical patterns, as in the e chapel at Cintra. These roofs were r richly coloured. The deeply-moulded led roofs of barrel or domed form to be seen ny parts of the country seem to be their ndants. One of the finest is that of the of Shields at Cintra, where a square ment is covered by an octagonal timber with its diagonal sides carried on semi- ar ribbed vaults or semi-domes (Fig. 2). latter alone survive from the XVIth ry work, the upper part having been le in the XVIIth. The whole is elabor- coloured and gilded, and the arms of the and nobles and many other devices are duced in the panels. The Swan and Magpie at Cintra likewise have painted panelled gs, the former five-sided the latter three- with the slopes in each case returned at nds. At Coimbra the Hall of the Univer- is also a five-sided barrel with squar s painted alternately blue and red (Fig. 3), t Oporto the above-mentioned cloisters a richly-moulded but unpainted barrel vith panels of various geometrical forms.

E ENGLISH HOUSE FROM HE NORMANS TO THE UDORS.

the 22nd ult. Mr. W. H. St. John Hope, read a paper at Carpenters' Hall, London- on this subject, and showed 121 lantern in illustration of his remarks:

n addressing you to-night on the English from the Normans to the Tudors I se to illustrate by plans and pictures the al changes that evolved from the common uch a dwelling as can be lived in with rt to-day.

e first step in the history of a building is anning of it. Most people now seem to be ned as to their choice of a house by its rance, on paper or otherwise; but our thers thought only of its plan and gement. Old building contracts accord- lay stress solely on the plan and isions, while the style and elevations are much as hinted at, but left entirely in the of the master carpenter or freemason.

Houses at the Time of the Norman Conquest.

vill be convenient as a beginning to inquire sort of houses existed in England at the of the Norman Conquest. Probably not le example is now standing, but a certain nt of information can be gleaned from ents.

s evident from the Great Survey known as sday Book, which was finished in 1086, that XIth century the country houses consisted the humbler dwellings of the cottars, rs, or villagers; and (2) of the more tant farmsteads and manor houses of the h thanes and their Norman successors. the actual nature of the former nothing te is known, and it can only be assumed hey were of a character similar to, and of me perishable nature as, many a labourer's ge of to-day.

e dwellings of the chiefs and owners of rty, on the other hand, were clearly large fty halls, and their sites not improbably be the moated enclosures that are still mmon in many parts of England.

more details of such houses than are hed by the Great Survey we may pass on e forms of agreement by which certain rs in Hertfordshire and Essex belonging Canons of St. Paul's were let to farm the XIIth century. These not only ull particulars of the manors themselves, f the stock and farming implements, otices of all the buildings, and sometimes dimensions. These buildings, moreover, ot new, and there is no reason why many m should not have been much older than orman Conquest. I have only time to o a few.

Ardleigh, in 1141, there were two manors. e were three granges, or barns, and the tic buildings comprised a good hall and er, a tressaunt, an appendage to the wards the south, a privy adjoining the er, and another in the court, a good y, a kitchen, a hay house, and a stable. other manor also contained a hall, with mber next to it, a kitchen, a stable, a bakehouse, and a house for the servants. In the hall were a dormant table, a buffet, and two movable benches.

At Belchamp the house was within a little gate. In 1152 the manor house at Kensworth (Herts) consisted of a *halla* or hall, a *thalamus* or great chamber, and the *domus* or house-self, which was betwixt the hall and the great chamber. The three sections were, therefore, in line. The hall measured 35 ft. by 30 ft., and was 11 ft. high to the roof beams, and the same above. The "house," or parlour (as we should call it), was 12 ft. by 17 ft., with a height of 10 ft. below the beams and 7 ft. above. The chamber measured 22 ft. by 16 ft., and was 9 ft. high below the beams, and the same above. The length of the house was, therefore, about 73 ft. Since the span of the hall, 30 ft., is rather wide for ordinary tie beams, it perhaps consisted of a hall proper of the same width (17 ft.) as the house part, lighted by windows in the gables, and with aisles about 5½ ft. broad, divided off by a row of posts on each side. The whole of the buildings were probably of wood and roofed with shingles. The remains of such a wooden hall, though of late XIIIth century date, exist at Tiptofts, in Essex, and part of the Norman wooden arcade of the great hall of the Bishop of Winchester may still be seen in his castle of Farnham.

Another bit of documentary evidence may be found in the so-called Boldon Book. This is a survey made in 1183 of the then revenues of the Bishoprick of Durham and the assized rent and customs then and formerly due. In the vill of Boldon twenty-two villans were bound to set up for their lord the Bishop, "if there shall be need," a house 40 ft. long and 15 ft. wide; the thirty-five villans in Whickham were similarly holden. In Aucklandshire all the sixty-six villans were bound, on the occasion of the great hunts, to make the Bishop's hall in the forest, with a buttery and pantry, a chamber and privy, and a chapel. The hall was to be 60 ft. long and 16 ft. wide within the posts, which shows that it was of wood, and the chapel 40 ft. long by 15 ft. wide. The twenty villans of Stanhope were responsible for the appendages to this hall, namely, the kitchen, the larder, and a kennel, and they had also to find litter in hall, chapel, and chamber. The chamber was, no doubt, the Bishop's own room, but the hall would serve, as was then usual, not only for meals, but as the dormitory of the servants and attendants.

Here, again, we have a description of buildings "that formerly had been" probably from the foundation of the bishoprick itself.

Our examples of these early houses are not many, and have survived through their being built of masonry instead of wood. For the introduction of stone construction in domestic architecture we have to thank the Normans, who were the first to realise that the methods already used in building stone churches could equally well be applied to their houses and castles; buildings in masonry, moreover, had the advantage of being less liable to destruction by fire.

Houses of the Hall Type.

A comparative examination of the surviving XIIth-century houses shows that they may be divided into two classes: (1) those that carry on the tradition of the common hall; and (2) dwellings of another type, of two stories.

Houses of the hall type are to be sought among the infirmary buildings of the monasteries where the common life prevailed, or in the manors and castles of the great feudal lords, where they served as before as a lodging for the servants and retainers.

The great hall of Chepstow Castle is the earliest that can be dated, since it is almost certainly the work of William FitzOsbern, before 1072. Later changes, by which it was converted into a cellar to a new hall above, have done much to obscure its arrangements, but it still retains its original doorway, of almost Roman design and character, and a number of small windows towards the bailey.

The finer and less altered hall of Richmond Castle is not much later in date. It stands over a cellar, and, owing to its position on top of a cliff, was lighted on both sides by curious two-light windows.

The monastic infirmary was not only the hospital for the sick, but the lodging of the infirm and elderly monks; it was also the temporary abode of the monks who had undergone the periodical blood-letting. For the housing of these several companies an establishment of some size was needed in a large abbey. This took the form, in the XIth century, of a pillared hall, the body or nave of which served for meals and for exercise in bad weather, and the aisles to hold the beds. The infirmary also included a kitchen and a chapel, etc.

At Christchurch, Canterbury, the early XIIth-century infirmary hall was of seven bays and 150 ft. long, with a large chapel at the upper end. At Ely the hall, which was built about 1165, is of nine bays, but only 105 ft. long, with a chapel on the east, as at Canterbury. The infirmary halls at Norwich and Dover Priory had one aisle only.

The best known of the manorial halls is that of the King's Manor at Oakham, in Rutland. It was built of stone, about 1180, in place probably of the earlier hall mentioned in the Great Survey. It is 65 ft. long, and divided by stone pillars with carved capitals into a nave and aisles. The kitchens and other offices have perished, perhaps because they were only of half-timbered construction.

Bishop Pudsey's great hall at Auckland is of the same date and type as Oakham, but later changes have effaced its original condition.

At Appleton, Berks, is a moated manor house which retains the doorway and other features of a handsome little hall, *circa* 1190. It was a simple oblong in plan, but has been subdivided and turned into a two-storied house.

There is a remnant of another interesting example at Warnford, Hants. The hall is 52½ ft. long by 48½ ft. wide, and had four very tall stone pillars to support the roof. At one end was the chamber, over a cellar and offices.

But the finest Norman hall must have been the great structure added to the royal palace of Edward the Confessor at Westminster by William Rufus. It was 238 ft. long, with a span of 67 ft., and was apparently subdivided by two rows of mighty wooden pillars, about 40 ft. high, to carry the roofs, for each of the three divisions had its own. The hall was of twelve bays, and lighted from each side by a row of large windows set at intervals in an ornamental wall arcade, as well as from the ends. This new hall at Westminster was used for the first time in 1099, and when some of those present criticised its inordinate size the King said it was not half big enough, and but a mere chamber to the palace which he would build.

Probably not many of you are aware that the outer walls of the present Westminster Hall are, in the main, those of William Rufus.

Of the kitchens attached to these Norman halls very few have survived. Those at Canterbury and Dover have lost the old arrangements, and the kitchen at Fountains Abbey is one of the few that retains them. It had two chimneys in the middle, back to back, and was vaulted throughout. That at Kirkstall Abbey closely resembled it, and both were so contrived as to serve two dining-halls, between which they were built. A good deal of cooking was, no doubt, done in the open air, after the manner so vividly depicted in that quaint piece of Norman stitchwork miscalled the Bayeux Tapestry.

The Two-Storied Type of House.

The two-storied type of house was square or oblong in plan. Its low basement served as a cellar, and perhaps in part as a kitchen, and the upper story formed the solar or living-room, which was reached by an external staircase. Such a house is depicted in the Bayeux Stitchwork, and shows us how the inmates were occupied. The staircase was usually wooden, but there is a beautiful example in stone at Christchurch, Canterbury, which led up to the old tramps' lodging adjoining the monastery gatehouse. Houses for the accommodation of guests were among the buildings of every monastery. Two, of a date about 1150, are still standing at Fountains Abbey. Each formed a two-storied house with living-rooms on both floors, the lower being a lofty vaulted basement.

Another good instance of a Norman house, *circa* 1160 or so, though now ruined, exists within the precincts of Christchurch Castle, Hants. It is built of slabs of Purbeck marble with stone dressings, and has a basement 76⅔ ft. long and 24 ft. wide, which formed the cellar, etc., and an upper floor with a chimney, and large two-light windows. At one angle was a small room built out over the mill beat, and at the other end of the house was a vice down to the cellar. The upper room was, perhaps, subdivided, and reached by an outside stair at the opposite corner.

Another but fortunately complete example of about the same date is at Boothby Pagnell,

Lincs. It consists of a vaulted basement in two sections, one of which probably served as the kitchen, and an upper story reached by an outside stair. The doorway opens into the screens, beyond which is the hall or solar, with a fine hooded chimney and a smaller chamber. The screens are now largely occupied by a staircase to an upper floor, of Tudor date, formed within the roof.

XIIIth-Century Houses.

The scarcity of XIIIth-century stone houses, as compared with those of the Norman period, suggests that the majority of the manor houses continued, as before, to be built of wood; but so little is known of them that nothing can be deduced as to their size or plan. The stone buildings are still divisible into halls and houses, but the latter now exhibit new types of an interesting character.

The monasteries again provide examples of the common hall. At Waverley Abbey, Surrey, the infirmary hall, built in 1201, had one aisle only, shut off from the nave by a row of round wooden pillars, which were afterwards cased with masonry. The infirmary hall at Kirkstall Abbey, of a date *circa* 1230, also had at first only one aisle, shut off by a line of wooden posts, but about 1300 it was remodelled and furnished with two narrower aisles with stone arcades.

At Tiptofts Manor House, Essex, is a rare instance of the remains of a late XIIIth-century hall of carpentry work, which helps to illustrate the Waverley and Kirkstall examples. At Fountains Abbey the plan remains of a notable infirmary hall, built all of stone by Abbot John of Kent, between 1220 and 1247. The hall was 170 ft. long and 70 ft. wide, and had to the east a chapel attached to a great chamber, or lodging for the visiting abbot, with a large kitchen, etc., adjoining. Remains of like halls may be seen at Gloucester and Peterborough. Monastic infirmaries were not, however, always of this character. That at Jervaulx has a hall of quite the domestic type, built over a sub-vault and reached by an outside staircase, and includes a chapel and other chambers. The kitchen of it stood a little distance away on the opposite side of a court.

The fine hall of Winchester Castle is contemporary with the Fountains example, but differs from it in plan, which is like that of the nave and aisles of a church. It is 111 ft. long, and of five bays, with arcades carried by marble pillars. The windows are transomed and of two lights with side seats. The hall was built by King Henry III. between 1222 and 1232, but the roof was renewed *temp.* Edward IV. The kitchens, etc., which were added in 1234 have been destroyed.

Of the same date and character was the great hall added to the palace at Lincoln by Bishop Hugh of Wells (1209-35). It was 85 ft. long and of four bays, with arcades carried by marble pillars. The doorway into the screens was covered by a two-storied porch, and at the same end were the buttery and pantry and a way to the kitchen, with chambers over. Beyond, over a bridge, was the kitchen itself, built, owing to the fall of the ground, upon a lofty range of cellars. At the opposite end the hall was attached to the older palace of St. Hugh.

A similar addition was made to the palace at Wells by Bishop Robert of Burnell (1275-93). This great hall was 115 ft. long and 60 ft. wide, or a little larger than that at Winchester, and of five bays, with aisles divided off by wooden pillars that helped to carry the roof. At the west end was a porch and a great chamber, etc., above the buttery and pantry, as at Lincoln. The kitchen was beyond, but has been destroyed, and of the hall, etc. only enough is left to show its design and general arrangement. It had lofty windows of two lights with transoms.

Another notable work of Bishop Robert was the large house at Acton Burnell, for which he had a licence to crenellate in 1284. It forms an oblong 95 ft. by 60 ft., with a square tower at each corner, and was divided longitudinally within into two sections. The northern half contained, above a range of cellars, the great hall, with a room over the screens, and the southern half the great and other chambers, raised apparently over the kitchen and offices. For its date the plan of this Acton Burnell house is unique.

Several quite small houses remain to us which had as the principal room a hall upon the ground floor. At Coggs, in Oxfordshire, the remains of such a hall, with beautiful windows, somewhat of the Winchester type, are incorporated in more modern work. A fair-sized house at Charney Bassett, fortunately complete, has upon the ground floor a hall, which has been modernised, with a projecting wing at each end. One contained the kitchen, with chambers over; the other the cellars, with a solar and chapel above, reached by an outside stair.

At Longthorpe, Northants, are the remains of another house with a hall on the ground floor, having attached to one corner a massive squat tower, containing three stories of chambers.

The fine and perfect house known as Stokesay Castle, in Shropshire, is also an example with an appendent tower. It stands on one side of a moated enclosure, entered through a picturesque Jacobean gatehouse. The main division is a great hall on the ground level, of four bays, with open roof and dormered windows. At the north end is a three-storied tower, with cellar basement, and two living-rooms above, reached by a wooden step-ladder from the hall, and provided with chimneys and garderobes. To the south, in line with the hall, is the great chamber, reached by an outside stair and furnished with a large chimney, now enriched, as are the walls, with Jacobean wainscoting. Beneath it is a cellar on the ground level, with another below. Beyond the solar, and connected with it by a small gallery containing the garderobes, is a tall and massive tower of three stories, with living-rooms on each floor. The kitchen, which was semi-detached to the north-east of the hall, has disappeared. The date of this extremely interesting house, for it is nothing more, can approximately be fixed by the licence to crenellate, or fortify it, granted in 1291.

There are many XIIIth-century houses in which the principal rooms occupy the first and not the ground floor. In the larger houses of this class the chief room was still a hall, as in the infirmary of Jervaulx Abbey. In association with this example, since they are practically of the same type, may be mentioned the residences of the bishops and dignified clergy, unmarried men who were given to hospitality and maintained an establishment of some size; they thus kept up to some extent the old idea of the common hall.

Lanfranc's palace at Canterbury was one of the earliest, and another, also of the XIth century, was built by Bishop Gundulf at Rochester; but neither has survived. The Archbishop's palace at Lambeth dates from 1197, and the existing chapel, with its fine sub-vault, must have been begun soon after, but the great hall has been rebuilt.

The palace at Salisbury still contains within it the original house of Bishop Richard Poore, built in 1220 and 1221. It consisted of a hall, a chamber, and a chapel, raised upon a vaulted substructure, which was perhaps the servants' department, with a kitchen and offices projecting at right angles from one end. Access to the hall was probably by an external stair.

The first palace at Lincoln was begun soon after the translation of the see from Dorchester in the XIIth century, but has disappeared. The great St. Hugh (1185-1200) is said to have begun the "new palace," considerable remains of which exist. It seems to have had a hall and a great chamber raised above a series of vaulted cellars and servants' quarters, with a bedchamber, etc., to the south, and the chapel, etc., at the north end. I have already described the great hall added to it by another Bishop Hugh.

The bishop's palace at Wells is, happily, almost intact. It was begun shortly after 1220 by Bishop Joscelin, brother of the builder of the added hall at Lincoln, and consisted originally of a hall 68 ft. long, with a great chamber at one end, and another opening out of it. These were overlapped by a gallery which communicated with the kitchen (probably) at one end and the chapel at the other. The chief rooms were raised upon a vaulted basement, and reached by vices at the ends of the gallery. The chapel was reconstructed during the last quarter of the XIIIth century by the same Bishop Robert who added the great hall.

The Minor XIIIth-Century Houses.

Of the minor XIIIth-century houses one of the earliest and most curious is the abbot's lodging at Kirkstall Abbey. It is three stories high, and though but a floorless and roofless ruin is fairly complete throughout. The basement seems to have been the servants' department. The main floor was the abbot's hall or solar, a comfortable room with a wide chimney; and the second floor, which also h a chimney, probably served as his bedroo The two upper floors were reached by a w staircase within the house. At the west e were the garderobes, and on the east a la chapel upon a vaulted sub-vault, in which w the kitchen. The original windows were two pointed lights divided by a pillar a rebated for shutters or glazed casements.

The house of the Master of St. John's Hospit at Northampton, of a date *circa* 1250, thou much altered, seems to have included a hall, chamber, and garderobe, all on the upper flo with offices beneath.

The parsonage at West Dean, Sussex, is also example, *circa* 1260, of a small XIIIth-centu house. It has a ground story lighted by sm windows, and an upper floor gained by a vi at one corner, with windows of two cusp lights.

Another Sussex parsonage, at West Tarrin has a XVth-century hall attached to a tw storied late XIIIth-century block, with sol upstairs reached by an outside stair.

At Millichope, near Ludlow, is another sm house of simple plan of late XIIIth-century wor It consists of a vaulted basement, which forme a cellar and kitchen, with a wooden stair to t upper floor, which has two nice original windo with pillar mullions and side seats. It on measures 33 ft. by 21 ft.

At Tollard Royal there is a small and co plete house, quite early in the century, consistin like that at Millichope, of an oblong baseme with an upper chamber, or solar, reached by outside stair, but having at one corner an oblo tower with small rooms on each floor.

At Crowhurst, Sussex, are, or were, the rui of another small house, consisting of a solar ov a vaulted basement, with a tower-like por at one corner, which served as a vestibule to outside stair, with a chapel or chamb above.

The charming example of this type at Litt Wenham, in Suffolk, is likewise noteworthy f its perfect condition. It consists of a vaulte basement, which formed the cellar, with a hal like solar above, reached by an outside sta Attached to the opposite angle is a squa tower, with an appendent stair-turret or vic having upon the first floor a chapel, wit shuttered window-openings toward the sola and a low-side window on the north. Abov the chapel is a bedchamber, reached by the vic which also descends to the basement.

At Aydon, in Northumberland, is anothe perfect XIIIth-century house. It is of tw stories, having a cellar with kitchen over at th west end, then the hall (which is reached by a outside stair) over a minor hall for the servant and a transverse wing at the east end, with th servants' kitchen, etc., below and a long sola upstairs. The house stands on one side of court, and licence to crenellate, or fortify it, w granted in 1305, but the buildings seem to b some twenty years or more earlier.

Use of Brick in Building.

Before leaving the XIIIth century a few word must be said as to the early use of brick in building. Though known to and freely use by the Romans, bricks seem to have been neglected or forgotten as a building materia till well on in the Norman period. The fine ar late Norman church at Grimsby has a relieving arch of undoubted contemporary bricks ov the west door, and the late XIIth-century gate house chapel of Coggeshall Abbey, Essex, is not only brick-faced throughout, but has details in moulded brick. Bricks moulded to build arched window heads are also found in early XIIIth-century work in Allington Castle, Kent. In Watton Church, in Holderness, an earl XIIIth-century chancel is largely faced with brick, and the Little Wenham house also exhibits original brickwork. At the beginning of the XIVth century the Corporation of Kingston-upon-Hull was running a brickyard as a commercial speculation, and the large Church of the Holy Trinity there, of a date *circa* 1315-20, is faced throughout with what are doubtless local bricks. Later examples, of course, abound, especially in districts where stone was obtainable only with difficulty and at some cost."

[The remainder of Mr. St. John Hope's paper will be given in our next issue.]

THE LONDON OPERA HOUSE.

The second article on the London Opera House promised for this week is unavoidably held over until next week.

HISTORICAL NOTES.

rotection Historic uildings.

In the House of Commons last week Mr. King asked the Prime Minister whether he was aware that France and other countries scheduled their nt buildings and other historic monuments the object of protecting them as national oms and securing them against vandalism struction; and whether he could promise ation with a similar object to protect historic buildings as the Reindeer Hotel, ury, now threatened with partial demoli-

Mr. Asquith, in reply, said: "I am aware e procedure in France referred to by the member. The First Commissioner of His sty's Office of Works proposes to introduce early date a Bill dealing with the question e preservation of ancient monuments and ings, but pending its introduction I can no statement with regard to its provisions, s to whether the Reindeer Inn at Banbury all within its scope."

rofessor cerell, R.A.

A RECENT issue of the *Journal* of the Royal Institute of British Architects contained an essay by Mr. Ernest Prest- on the life and work of Professor C. R. erell, R.A., one of whose early works was fanover Chapel in Regent-street, demo- a few years ago. Of this building we are o give an illustration, and, in connexion it, the following reference may be quoted Mrs. Russell Barrington's "Essays on the ise of Art," a book full of appreciative ons on modern art.

"ow do we, in this conceited age of ours, those benefits which come down to us from ages?" asks Mrs. Barrington. "How did we treat a beautiful church built in a quite recent generation by a true artist, a master of Renaissance architecture, whose grave is to be found among the greatest of England's children in the Crypt of St. Paul's Cathedral, Professor Cockerell? It had not existed half a century when we pulled it down. Why? To widen the pavement in Regent-street so that the shopping-loving people in this much-frequented thoroughfare should not for a moment be impeded in their important quest."

The Old Chapter Library at Windsor.

SOME interesting discoveries have just been made in the old Chapter Library of St. George's Chapel, Windsor Castle. Over the whole length of the roof of the western walk of the Dean's Cloisters at St. George's Chapel was situate in former days the ancient library of the Dean and Canons of the chapel. In 1662 the library was transferred to its present quarters overlooking Thames-street. Of the space occupied by the old library the larger portion is now the Chapter Room and the smaller portion the office of the Chapter Clerk. The external architecture, the window tracery, and the interior of the present Chapter Room are comparatively modern. Recently, on the appointment of Mr. F. W. H. Deane as Chapter Clerk, the old office was repaired. The ceiling had, up to then, appeared to be only of lath and plaster whitewashed; but after removal of the whitewash and several coats of paint, it was found by Mr. A. Y. Nutt, resident Architect at the Castle, to consist of panels of very fine oak work with bosses of delicate and elaborate carving. These were each and all carefully taken down, cleaned, photographed, and eventually replaced. The centre boss represents a chalice, between the initials "T. B.," reposing on an altar slab of which the five crosses are still visible. The consecrated wafer above the chalice has, however, been chiselled off. Another discovery has been that of a beautiful wooden window with an oaken frame of ten lights, which was found embedded in the wall at the north-east corner. This would have originally looked over the north wall of the Cloisters towards the Deanery. No doubt the whole of the eastern side of the old library was furnished with a series of similar windows.—*The Times*.

Clifton Campville Church.

MR. W. H. QUARRELL writes to *Notes and Queries* as follows:—"The fine church of Clifton Campville, Staffordshire (near Tamworth), has just been saved from ruin—at a cost of about 3,000*l*.—an expenditure of 500*l*. or so being still needed to preserve the ancient windows and to complete the tower. This magnificent building has for many years been in a deplorable state. The XIIIth-century masonry and buttresses in the north wall and the southern pillars have been fully repaired where necessary, and the roof has been put back to its original place. Considerable fresco-work has been discovered, evidently that noted by Shaw, but it is very indistinct. The chantry chapel has been restored, and is now no longer screened off from the church, while the fine roof is once more revealed. The southern aisle, called the Haunton aisle, has been extensively repaired, this being necessitated by the bad state of the stone; and the removal of the poor plaster-work has shown the best features of the structure, and with these an interesting fresco, apparently depicting the founder, Sir Richard Stafford, who built the church about 1353."



Hanover Chapel, Regent-street, now demolished. Professor C. R. Cockerell, R.A., Architect.

By Permission of the Royal Institute of British Architects.

THE BUILDING TRADE.

MANCHESTER BUILDING TRADES EXHIBITION.

THE Building Exhibition organised by Messrs. H. G. and H. C. Montgomery has been opened at the Exhibition Hall, Rusholme. The building at Rusholme represents a city in miniature, replete with all that is up to date in building construction, decoration, and internal fittings. Mr. Montgomery has certainly eclipsed himself at Rusholme. The Hall is an immense one, allowing plenty of scope for broad and effective treatment. The exhibitors' stands, many of which are of elaborate and costly structure, are suitably grouped in the central parts of the Hall. Across the top end of the Hall stretches a picturesque and ornamental garden, which extends halfway down each side of the Hall. This is laid out, and a pergola and other features add to its attractiveness and charm. The combination at Rusholme of placing the exhibits in a setting of Nature's surroundings was a happy inspiration, and has resulted in a most pleasing and successful display. It is unfortunate that the Exhibition should have been held at the present time, and whilst the country is in such an unsettled state, and doubtless business prospects will suffer. Mr. Montgomery appears to have spared no expense in making it a success as a high-class exhibition.

Messrs. Hayward Brothers & Eckstein, Ltd., 187 to 201, Union-street, Borough, London, S.E., have a stand at No. 24D 40 ft. long by 10 ft. wide, and have built a small office at one end of it, in which they have incorporated a number of things, such as their prismatic pavement lights, tiled lights, opening flaps, reflecting stallboards, "Copperlite" stallboards, patent puttyless roof glazing, steel sashes, and casements, and some examples of "Prior" glass —a rich, coloured type of leaded glazing. The firm had the order for the stained glass windows for the Westminster Abbey Coronation Annexe at the time of the Coronation of His Majesty King George V.; and they supplied this glazing, as they have on several occasions, for Windsor Castle. At the other end of the stand the firm have erected on columns a full-size steel puttyless glazed lantern skylight, showing all points of construction of Hayward's "Reform" system, giving the maximum strength, simplicity, and lightness. Around the stand are a series of numerous types of Hayward's patent collapsible gates, showing lift fronts, shop gates, and a large strong H section type for public courtyards, etc. There are numerous other examples, such as ventilators, Sheringhams, mica flaps, "Alliance" roof vents, a plastered panel of Hayward's "Jhilmil" steel lathing for fireproof work, and fire-resisting "Copperlite" glazing, and iron spiral staircases, etc.

The Kleine Patent Fire-Resisting Flooring Syndicate, Ltd., exhibit floors, staircases, and roofs constructed of reinforced hollow bricks. The framework of the structure consists of steel stanchions and horizontal steel joists covering a ground area of 20 ft. by 10 ft. The floor of the exhibit is raised about 3 ft. from the floor level of hall in order to permit of two short flights of stairs being constructed on the Kleine System to lead up to same. This floor is constructed of small size hollow bricks set on edge and reinforced with flat tension bands to form a floor 6 in. deep spanning 10 ft. and built into the webs of girders on either side, only the ends not requiring a support. Above this is constructed a 20-ft. span, 7½ in. thick, built with Kleine patent hollow bricks with closed ends reinforced with round rods and cantilevering slightly beyond the steel frame. A small opening has been left in the middle of this span without trimming joists to demonstrate the fact that openings may be left if desired. On top of this 20-ft. span are built Kleine hollow brick reinforced walls. The 20-ft. span has been built on top of the girders to demonstrate that there is no arch action in the Kleine floors, and consequently there is no thrust on the steelwork. The advantages of the Kleine system are briefly:—Absolute fire resistance, high sound-proof qualities, lightest weight of any floor, no thrust on walls or steelwork, no cracks in plaster of ceilings, can be constructed for any span and for any load required.

The stand of Messrs. Machin & Koenig, Hare-court, 62, Aldersgate-street, London, E.C., shows their Compoboard, which is used for the lining of ceilings and walls, their fireproof asbestos slabs for the same purpose; also their asbestos tiles for roofs. The firm are making a special effort to bring before the public a large variety of hardwood panels for the construction of ceilings, dadoes, walls, etc. These panels are made of plywood in superior woods like oak, mahogany, ash, silvery birch, and satin birch. These woods are shown either framed as dadoes or ceilings in position, or they are shown in large sheets not fixed.

Messrs. R. Waygood & Co., Ltd., makers of lifts and cranes, Falmouth-road, London, S.E., are showing the lift machine only of one of their electric passenger lifts, and the machine only of their small electric service lifts. In addition they have on exhibit a model of Waygood automatic electric passenger lift and a model of a hand-power service lift, as well as lift accessories in the way of blocks, etc.

The leading features of the exhibit of Messrs. S. & E. Collier, Ltd., Grovelands, Reading, are their old-fashioned roofing tiles and reproductions of hand-made brick in various thicknesses, textures, and colours, together with the well known Reading silver grey bricks and red rubbers; also similar texture roofing tiles with varied tints and colours. The other exhibits consist of plain and ornamental roofing tiles in smooth-faced quality, ridge tiles, moulded bricks, terra-cotta hollow blocks for bungalows and cheap buildings, breeze and partition blocks, tiles for curing damp walls, small tiles for porches, old-fashioned pan and Italian tiles, hand-made paving squares, Roman tile slips for doors, window arches, fireplaces and key blocks, hand-made briquettes for fireplaces, air bricks, white and grey sand lime bricks, dovetail breeze bricks for floors, and Silchester art pottery.

Messrs. Frederick Jones & Co., Duncan-street, Salford, Manchester, etc., are the manufacturers of the "Hercules" fireproof partition blocks for all kinds of internal partitioning, and at their stand these goods are shown in the various stages of fixing and finishing, giving a very good idea of their strength, stability, and suitability for this class of work. The goods can be supplied in plaster-concrete, portland-concrete, pumic-concrete, or in the plaster quality with a smooth face on both sides requiring the finishing coat. In addition, their exhibition shows their fibrous plaster ceiling slabs fixed and finished, showing how these goods can be applied cheaply and quickly to ceilings or partitions. The firm are well known as manufacturers of British-made slag wool (silicate cotton), non-conducting material, which is also fire, sound, and heat proof. Samples of this material in the loose state, and also made up into handy forms for pipe, boiler, cylinder covering purposes can be seen and obtained at their stand.

The Saxon Portland Cement Company, Ltd., Cambridge, show the raw material as taken from the quarry, after drying, ground marl ready for burning, raw material ready for kilns, sample of finished Saxon cement, etc. The raw material is a mixed "chalk-marl," consisting of a combined chalk and clay deposit, containing from 15 per cent. to 25 per cent. of clayey matter, and an average of about 79 per cent. of carbonate of lime. As the raw materials in the quarries vary considerably in the proportion of carbonate of lime at different points the moisture is first driven out of the material as quarried to enable it to be ground to an impalpable "flour," so that it can be combined to the correct chemical porportions in special mixers, whose contents are constantly being analysed by the works chemists. This is to ensure the absolute uniformity of the mixture before it is allowed to pass to the next stage of manufacture. The ground marl after leaving the mixers is pressed into blocks for convenience of loading into the kilns. In the case of the rotary kiln the "flour" is conveyed to the kilns for burning. The finished cement is a finely-ground powder, consisting of about 60 per cent. of absolute "flour," and the whole of it is of an average fineness as to leave only 1 per cent. on a sieve having 5,800 holes per square inch. This fineness of grinding is important, as the finer a cement is ground the greater is its cementitious value or power of cementing together particles of sand and aggregate, or other materials having no cohesive power in themselves. The tensile strains developed by Saxon cement after seven days are therefore high, and a minimum of 600 lb. per square inch is guaranteed with every ton sent out from the works. Its expansion under the Chatelier test is only 1·5 millimetres, as compared with the 6 millimetres allowed in the British Standard Specification, and in the boiling test it is thoroughly sound. All Saxon cement is guaranteed to pass the British Standard Specification.

Messrs. G. Jackson & Sons, Ltd., of 49, Rathbone-place, London, W., and Mr. G. P. Bankart, of Baldwin's-gardens, Gray's Inn-road, London, E.C., are jointly exhibiting various interesting examples of modelled plasterwork, also leadwork and stucco work. The exhibit also shows a Georgian treatment for a roomside with panels and door dressings, and likewise an Adam treatment with pilasters and plaque, ornament, etc.

Messrs. John P. White & Sons, Ltd., the Pyghtle Works, Bedford, and New Bond-street, W., are showing oak panelling and their special hospital teak-faced doors at their own stand. In addition to this, they fitted up for Mr. Montgomery a large portion of the hall, consisting of about 20,000 super. ft., as a garden, treated with trelliswork pergolas, in which people may walk about or sit down and rest.

The exhibit of the Gypsum Mines, Ltd., Kingston-on-Soar, Derby, and Robertsbridge, Sussex, consists of Sirapite finished in various ways on brickwork, lathwork, metal lathing, polished Sirapite, Sirapite with a stucco finish, also plasters and Keene's cement.

The stand of Messrs. Thos. Parsons & Sons, varnish and japan manufacturers, Endell-street, Long Acre, London, W.C., is the same as the one they showed at the Olympia Building Trades Exhibition last year—that is, the white enamelled "Battleship." The stand space occupies 600 sq. ft. in a prominent position. The stand has not been re-enamelled since the exhibition at Olympia last year, and has been continuously on view, chiefly at the Crystal Palace, ever since that time. The firm are also making an exhibit of sample panels finished with "Endelflat" and "Lacreite" enamels; and other materials which they are bringing to the notice of visitors are "Opako" lead-free undercoating, "Mosaico" metallic paints, and their new "Trans-ol" friezes. The latter are transfers executed in oil colours, and are, therefore, both washable and permanent.

At Stand No. 57, Row F, "Ronuk," Ltd., have a stand built entirely of oak. The entire surface of the wood has been prepared and polished with "Ronuk," and shows the result of the "Ronuk" method of treating interior woodwork. The firm are contractors for the first preparation and polishing of all kinds of flooring and panelling.

Messrs. Hammond & Champness, Ltd., Alfreton-street, Old Kent-road, London, S.E., are showing lifts.

The Ravenhead Sanitary Pipe and Brick Company, Ltd., St. Helens, have an exhibit of rustic brick facing, including window openings, mullions, transomes, sills, heads, etc. They also show a sand-faced brick wall in different thicknesses of bricks, Sneck walling in rustic-faced work, clinker paving, and other clay manufactures.

Messrs. Chubb & Son's Lock and Safe Company, Ltd., of London and Wolverhampton, and 3, Cross-street, Manchester, are exhibiting various examples of their specialities and latest developments in the construction of security appliances. A group of four strong-room doors is shown of various qualities, also a new type of party-wall door, made of reinforced concrete covered with steel plates according to a special construction for which the makers have obtained provisional protection for a patent. The door shown measures 6 ft. 3 in. by 2 ft. 9 in., and is

od of two steel plates made to interlock
ch a way that the interlocking pieces and
stening rods inside between the two plates
the reinforcing members of the concrete
. The concrete is put in from the open
which are then closed by end plates
ded with inturned and twisted pieces
ided in the concrete. This particular door
ged to a section of a concrete wall which is
ded with a suitable recess. The door has
s own distinct frame, although Chubb &
supply these when required. The fastenings
p and down bolts thrown by a handle
ecured by a lock. This door can be supplied
d or sliding in single or double leaves,
or without frames as required. They can
ade to close automatically in case of fire.
astenings may be simple catches or of a
elaborate character with locks. This
uction is also suitable for partitions or
lete rooms for fire-resisting and other
ses. The firm's light steel adjustable
ng is shown; also safes of various qualities,
ing one of the latest anti-blowpipe con-
ion, together with a section of strong-room
uction of anti-blowpipe material made up
ubb's interlocking steel plates with inner
ining, forming a triple treasury, as supplied
ly to several London banks and also to the
onwealth of Australia. Cases of locks are
, including Chubb's new springless lock.

ssrs. G. R. Speaker & Co., of 29, Mincing-
London, E.C., show a bungalow which is
ly framed with Speaker's "Eternit," both external and internal walls (also ilings), and roofed with red tiles $11\frac{3}{4}$ in. by $7\frac{3}{4}$ in., laid with $2\frac{3}{4}$-in. lap. Bungalows of escription have been erected in all parts country by the firm, and they supply material for all classes of buildings.

stand of Messrs. C. Jennings & Co., merchants, joinery manufacturers, and woodworkers, Pennywell-road, Bristol 58), is a structure illustrating some of any kinds of wood goods which they facture. Prominent features of the exhibit twork arches and screens, doors in various s, a polished teak shop-front, and stairs g from one side of the stand to the other. levation shows twenty-four panels, as es of various kinds of plywood, compo- matching, etc. Attention is directed specimens of oak and ash plywood. kinds are particularly free from defects, e scraped on one surface ready for use. exhibits include two windows, one ating C. Jennings & Co.'s P.T.O. fittings, e other Miller's B.C. system. Doors are in a variety of designs, also balusters -turned, square-cut, and fret-sawn) and ,and other examples of their manufactures. are shown in about forty designs, and g, garden gates, and balcony balustrading ous designs. Some of the fencing samples osoted by force, and others treated with en (registered) wood preservative. The patent geyser is shown, and there will be strations of its working at frequent ds, and mouldings, electric light casings, cture rails are on exhibition, as well as re chimney-pots. The exterior of the (with the exception of the shop-front) is with Kang-He enamel, manufactured mes Rudman, Cambrian Colour Works, street, Bristol. Messrs. Jennings are also ing a four-fold brass-jointed souvenir ld at 7d. each, and a new fully-illustrated ue containing 264 pages, which can be ed at the stand for 5d.

rs. Ragosine & Co., Ltd., Albion Wharf, London, are showing Dixon's White, is a new paint base used in place of lead. The makers particularly wish to sise that their article is not merely a ute for white lead; it is, it is claimed, r to that old-time poisonous substance, as qualities which the latter does not . For instance, white lead becomes ed by the sulphur compounds contained ated atmosphere, but Dixon's White s unaltered. An experiment proving this g shown at the stand. Dixon's White ates much more thoroughly than white and the covering power is infinitely , while it is much more economical. eat advantage is that the material is isonous, and by using a non-poisonous he workman can insure himself against isoning.

Row G, Stand 74, Elliotts' Moulding inery Company, Ltd., Newbury, the old- hed firm of woodworkers, are exhibiting of selected Cuba mahogany doors and



The "Eternit" Stand.

frame, surmounted by a carved over-door. The moulded and raised panels of the doors are heavily bolection moulded and cross banded with satinwood. The whole has been highly French-polished and afterwards cut back to a dull finish. The firm exhibit two yellow pine turned and fluted Ionic columns and carved caps. There are also shown a number of pieces of dado panelling in satinwood, brown oak, Austrian wainscot oak, and Spanish mahogany, together with various samples of mouldings (features of which are the cleanness and sharpness of the work), and numerous photographs of work recently executed. Their two notice-boards, in Spanish mahogany, are worthy of notice. Messrs. Elliott are the manufacturers of an improved kind of revolving door (Buckingham's patent), particulars of which are given in their catalogue.

Messrs. J. & H. Patteson, marble, granite, and mosaic workers, 96, Oxford-road, Manchester, are exhibiting examples of their work in marble for wall linings, marble pavements, marble steps, pedestals for statuary, chimney-pieces, monumental work, etc. In mosaics they show examples of hand-placed Roman mosaic, marble adamant terrazzo, marble Granito pavements, etc., steps in adamant terrazzo and marble Granito in a variety of colourings. An exhibit of the actual working, cutting, and fitting of the marble cubes for the hand-placed Roman mosaic will be given during the progress of the exhibition by Italian mosaic workers taken from the staff of the firm. Messrs. Patteson also show dados in their special marble Granito wall lining; alabaster work for fonts, pulpits, reredoses, wall decorations, etc., granite work (examples of every British and foreign granite are shown for buildings, pedestals, monuments, shop-fronts, etc.) and tiling (a selection of specially-designed dadoes in hand-finished and brilliant enamels, and various glazes in a variety of colours). Of monumental work examples are shown of Runic crosses in American and Scotch granites. The Westerley or American granite cross on view is specially designed and worked for this exhibition, the intricate Runic ornament being finely carved and finished. Attention is called to the St. Martin's Cross, a copy of the well-known Cross of Iona. Other examples of monumental work are shown in Carrara marble and Furness limestone. A special exhibit is being made by the firm of a variety of useful and ornamental articles in Cornish and Serpentine marbles, for table christening fonts, pedestals, vases, rose-bowls, candlesticks, etc.

Messrs. Jones & Attwood, Ltd., of Stourbridge, specialists in apparatus and machines for modern sewage works, exhibit at Stand 101, Row K, interesting models of their sprinklers for covering bacteria beds and filters, and converting contact beds so as to increase their efficiency. The models revolve round circular filters and travel to and fro on rectangular ones, and these distributors are automatic, being driven by the sewage itself without cost for power, and a single distributor can be made to travel up and down a filter 300 ft. or 400 ft. in length sprinkling in the form of rain in both directions of travel so that the sewage is well aerated and the filters are rested between each dose, which amounts to not more than one gallon per square yard, the rate of travel being proportionate to the quantity of sewage. This method of sewage purification is now being generally adopted, and enables a filtration of the highest class to be effected even on filters as shallow as 3 ft. Some filters, circular in shape, may be as small as 8 ft. in diameter, and are very suitable for isolated country houses or small institutions. Messrs. Jones & Attwood show many other specialities for use on sewage works.

In Row D, Stand 29, Messrs. D. Anderson & Son, Ltd., Roach Road Works, Old Ford, London, E., show their "Marosa," a wall lining in which some very fine marbling is reproduced. It is made in sheets (24 in. by 16 in. by about $\frac{1}{4}$ in.) in nine different shades, by means of which some highly decorative effects may be obtained.

In Row E, Stand 46, the Crittall Manufacturing Company, Ltd., of Braintree, show the "Crittall" metal windows, jointed steel sashes, and metal furniture and storage appliances. The "Universal" (patented) casements can be had in all sizes to fill openings to any size, and ventilators of all types to the same detail. They are supplied in solid steel, Koperoid, or bronze. The patent "Fenestra" jointed steel sashes for all classes of commercial buildings are shown, and the metal furniture includes lockers, filing cabinets, hospital fitments, racking, and shelving.

In Row E, Stand 43, Messrs. Pinchin, Johnson, & Co., Ltd., Minerva House, Bevis Marks, E.C., show "The Temple of Minerva," consisting of four sets of double columns, supporting a circular entablature and dome, the whole being surmounted by a cupola. It is entirely finished with Satinette enamel—gloss white and flat white—with the exception of the dome, which is gilt. The Satinette enamel gives a perfectly white, smooth, and lustrous surface, as will be seen from an examination of the columns. It is further illustrated upon a panelled section of wall and a door, where the contrast of gloss white and flat white is revealed. Minerva

paint, which the firm guarantee to be pure, is shown upon a revolving exhibit. Primer, opaque white for undercoats, gloss whites, and flat whites for finishing are displayed in order of application, together with specimen of each of the twenty-four standard colours or stainers and the ninety-six proportionate reductions obtained therefrom by simply adding certain quantities of gloss white. Deydo distemper is also shown. It is not an ordinary distemper, but a washable water paint. Veritone, a new stain and scumble, is shown as a stain on pitch-pine panelling. The panels are finished with Minerva flat varnish, while the stiles and rails are in Minerva brilliant varnish. Several panels are also on view where Veritone is used as a scumbling or graining colour for a ground coat. "Minerva" varnishes, "Silveroid" (a silver paint), "Syronite" (rust preventative), and other specialities are also to be seen.

In Row F, Stand 53, Messrs. Sissons Brothers & Co., Ltd., varnish, paint, and colour manufacturers, of Hull, and 199B, Borough High-street, London, S.E., give in their exhibit a representation of the interior of a first-class modern drawing-room furnished and decorated throughout in the Adam style. A feature of this scheme is that "Hall's Distemper" is used in the colouring all through. The panels into which the walls are divided are tinted with a delicate shade of green, the ceiling being treated in white. All the woodwork, doors, and mantelpieces are treated in Messrs. Sissons Brothers' "Orientolac" and "Sisco" white japan. The outside of the exhibit, as well as the inside, is designed, decorated, distempered, and painted in a similar manner, the shades being selected from the range of over seventy colours in which "Hall's Distemper" is made. The interior lighting of the stand is in keeping with the general scheme.

THE LONDON ASSOCIATION OF MASTER DECORATORS.

A MEETING of the General Committee was held at No. 92, Queen Victoria-street on Monday, February 12, Mr. C. E. Wilkinson in the chair.

The Committee proceeded to the consideration of the publication of the revised Report of the Educational Committee, in conjunction with letters from the London County Council appointing February 15 for receiving a deputation.

After discussion it was agreed that the deputation should consist of the members of the Educational Committee, together with Messrs. J. Baird, H. H. Holliday, T. S. Rowden, and Young, and also Mr. A. S. Jennings.

Mr. Anderson proposed and it was agreed that the letter to the members of the Association and the full Report of the Educational Committee should be published.

Work for Slack Seasons.

The Committee then proceeded to consider the desirability of urging local bodies as a means of relieving distress and meeting trade conditions to arrange their painting and decorating contracts at times when business was slack, and in consequence much unemployment existed.

Mr. Anderson said the matter had to be looked at from many points of view, not from the decorator's point of view only. He had had the matter very much before him for ten or twelve years on the Borough Council of Kensington, where it had come up each winter for discussion. He had endeavoured to get the work of the Borough arranged so as to be done as much as possible in the slack time, and the Borough of Kensington had arranged during the last four or five years to do as much work as possible in that time.

The Chairman asked whether any harm would be done by sending a copy of the resolution of the Association to the various local bodies, asking them to consider it.

Mr. Anderson said it was necessary to formulate some practical scheme showing how it was possible. Most of the public bodies were occupied during the slack season, and to do the work in that season would require a good deal of arrangement.

The Chairman thought most buildings were to a very great extent occupied all the year round.

Mr. Anderson said that, unfortunately, as far as painting was concerned, the majority of the public buildings were done when everybody else was busy, in the long vacation, as it were. The officials were away, and the place was more or less shut up. Even hospitals and schools were always done at that time.

The Chairman thought there could be no slack season in workhouses and hospitals.

Mr. Anderson said there was no slack season with them, but they had the bulk of their work done at the busiest time. It would mean that the officials of those buildings had to take their holidays during the slack time in the trade.

The Chairman asked what the officials had to do with the case.

Mr. Colley said they could not have the workmen in their offices while they were at work.

The Chairman said what he had in his mind was more particularly the question of hospitals, workhouses, infirmaries, and buildings of that kind, where there was no holiday season except for certain of the officials, and he did not see why the officials should be studied in that connexion. They were the last people who should be studied, having regard to the serious nature of unemployment.

Mr. Anderson instanced public libraries as buildings which were used very little during the holiday season.

The Chairman said, taking hospitals and workhouses alone, they would provide a considerable amount of work if they were done while business was slack.

Mr. Colley said it would be impossible to deal with hospitals at the slack time of the year, because they were then fuller than ever.

The Chairman thought they were full all the year round.

Mr. Colley said they were not so full in the summer-time as in the winter, because in the summer they could get many of the patients away to convalescent homes.

Mr. Anderson said he did some work one year at the Chelsea Hospital for Women in the Brompton-road. That hospital arranged for the moving of the patients out of the hospital when the work had to be done, and the hospital was practically empty for two or three weeks. The great point was that all the doctors who gave their services free were away for their holiday at that time, and the principal difficulty seemed to him to be the usages of society. Even workhouses were much more occupied during the winter than the summer. It was a most admirable matter if it could be arranged, but he did not know how it was going to be done. It was no use throwing out vague suggestions without giving some practical directions. Over and over again he had been asked to propose a scheme, and he had been really unable to do so. He should certainly not like to be one of a deputation to go to any public body suggesting that they should have their work done in the slack time of the trade. He had not yet been able to see how it could be worked.

The Chairman thought such experience was very valuable.

Mr. Anderson said he had tried year after year to give employment to men so that they might not be walking about the streets in crowds during the slack season, but he had failed.

Mr. Milton said there was a great deal of work that could be done in winter.

Mr. Dakin did not see that more could be done than pointing out to public bodies the desirability that whenever possible the work should be done in the slack season.

Mr. Milton thought that course had been already pursued.

Mr. Anderson said it had been done year by year by associations and other bodies. At the beginning of each year his Borough Council had had the matter before them, and had received deputations, and had discussed the subject, and had never been able to get a suggestion of what really could be done.

The Chairman said unemployment was not likely to become acute just now, having regard to the fact that the winter was now on the wane.

Mr. Anderson said that if any suggestion could be brought forward now was the time, so that it could go before the various Committees in order that they might have time to formulate anything that could be done for next winter. It was no use going to a Committee in September or October to suggest to them altering their arrangements to do work that winter.

Mr. Anderson thought it would be well to publish the matter in the report of the proceedings, and ask for suggestions from the members of the Association and refer it to the General Committee for further discussion.

It was agreed that the members of the Association and the trade should be invited to offer general suggestions on the subject.

The Committee next considered the subject of adopting a discharge certificate in connexion with the trade. The idea was a certificate which the workman could carry containing particulars of his various employments, the length of time such employment was held, etc.

The Chairman said he would make a note to obtain samples and estimats of the proposed books in accordance with the suggestions that had been offered, and submit them to the next Committee.

It was agreed that the general meeting should be held on March 25, and that the following items should appear on the agenda:—(1) Action to be taken with reference to the Insurance Bill; (2) report of the Educational Committee and the deputation to the London County Council; (3) to discuss the issue of certificates of employment and discharge.

GENERAL BUILDING NEWS.

NEW CHURCH, FORFAR.

The Lowson Memorial Parish Church, which is to be erected in Forfar, has been designed by Mr. A. Marshall Mackenzie, architect, of Aberdeen, and the building will provide accommodation for about 700 people. It is also proposed to erect a manse at the south side of the church and a hall to seat about 300 people.

NEW BUILDINGS, REGENT-STREET, LONDON.

New premises for Messrs. H. J. Nicoll & Co., Ltd., are being erected in Regent-street from designs by Mr. Henry Tanner. The buildings will form the central feature of a continuous block between Glasshouse-street and Regent-place when the complete reconstruction has been effected. The front elevation has been completed three months within the scheduled time, and the contractors, Messrs. Holland & Hannen, expect that the other alterations will be finished by next September.

ROCHDALE INFIRMARY EXTENSIONS.

The extensions to this infirmary are estimated to cost about 18,000*l.*, and the new work to be erected includes a pavilion to contain fifty-six beds, kitchens, bathrooms, stores, etc. The architect for the work is Mr. Hugh Healey, A.R.I.B.A., of Messrs. Jessop Horsfal & Healey, architects, of Rochdale and Manchester.

NEW HALLS, YOKER.

These buildings are being erected on a site adjoining the Yoker Parish Church, and the seating accommodation provides for 450 persons. The architect for the work is Mr. H. D. Walton, of Glasgow, and the estimated cost of the buildings is 1,600*l.* The contractors are:—Messrs. M'Leod & Campbell, masons; Mr. James Wilson, joiner; Messrs. Peter White & Co., slaters; Messrs. R. P. Duff & Co., plumbers; Messrs. William Graydon & Miller, plasterers; Mr. Simon Kemp, painter.

NEW LIBRARY, CLYDEBANK.

It is proposed to erect a new Carnegie Library at a cost of about 10,000*l.*, and the building will have a frontage of about 100 ft. and an elevation of 40 ft. The architects are Messrs. Gardner & Whyte, of Glasgow.

TRADE NEWS.

Under the direction of Mr. A. V. Gardner, architect, 164, Bath-street, Glasgow, Boyle's latest patent "air-pump" ventilators have been applied to the New Picture Theatre, Smith-street, Glasgow.

Messrs. E. A. Roome & Co., builders and contractors, of 36, Basinghall-street, E.C., have taken into partnership their manager, Mr. F. J. Gayer. The title of the firm will remain as before.

The validity of Booth's patent as applied to the plant made by the British Vacuum Cleaner Company, Ltd., has been upheld by the House of Lords. The judgment of the Court of Appeal, affirming the judgment of his Lordship Mr. Justice Neville, has been affirmed by the House of Lords.

The Catholic Cathedral Schools, Plymouth, are being supplied with Shorland's warm air ventilating patent Manchester grates and inlet ventilators, by Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester.

The well-known joinery works of Messrs. Samuel Elliott & Sons, Ltd., of Caversham, Reading, have been carried on for the last three or four months by the Receiver and Manager, and we are informed that the large staff of skilled workmen have been working overtime in order to cope with the orders in hand. We are asked by the Receiver to state that he is prepared to enter into negotiations for the amalgamation or purchase of the concern, and could probably arrange to finance a considerable portion of the purchase price. Enquiry should be addressed to the Receiver, Mr. Sydney W. Tubbs, F.C.A., 28, Basinghall-street, E.C.

Messrs. Patman & Fotheringham, Ltd., 100 and 102, Theobald's-road, London, have secured a large contract for pulling down and rebuilding Nos. 171 to 177, Great Portland-street, London, W.

n and after the 15th inst. the offices and ehouse of the Yale and Towne Company m which only a wholesale business is con-ted with the trade) will be removed to 17-20, t Smithfield, London, E.C., where con-rable additional accommodation has been vided for the business.

WOODWORKERS, LTD.

he first annual report of the Woodworkers, , who commenced building a new works at shworth in November, 1910, and began the ufacture of joinery on June 1 last, shows a e of 24,693*l.* This is the result of the bined business of the concern and of the eral Builders, Ltd., with which it was lgamated towards the end of last year. r meeting all expenses, charging revenue depreciation on building plant and hinery, 4½ per cent. interest on loan stock, there was a profit of 985*l.*, from which a lend of 4d. in the pound has been declared urchases of customers and on the wages of loyees. Mr. William Grant is the manag-director of the Woodworkers, Ltd., which been chiefly engaged in manufacturing oinery required for the various co-partner-estates.

PLICATIONS UNDER LONDON UILDING ACTS, 1894 to 1909.

Tuesday's meeting of the London County ncil the following applications under the lon Building Acts were dealt with. (The es of the applicants are given in paren-e) :—

Lines of Frontage and Projections.

ttersea.—Erection of a building and ed way at the rear of Nos. 24 and 26, on-road, Battersea, to abut upon the tern side of Musjid-road (Messrs. J. A. J. dward & Sons for Mr. B. J. Bosher).—sed.

sbury, Central.—Projecting crane at a ing on the western side of Goswell-road, bury, abutting upon the northern side of val-street (Messrs. Hobden & Porri).—ent.

enwich.—Erection of buildings next to onsfield-road and Westcombe Park-road, nwich (Messrs. Davis & Emanuel for Mr. Yarrow and Mr. F. E. Elliot).—ent.

mpstead.—Bay-windows and a porch to houses on the northern side of St. Cuth-t-road, Hampstead (Messrs. Rix & ns).—Consent.

isham.—Greenhouse at No. 76, Granville-, Lewisham, next to Eliot-park (Mr. J. W. s).—Consent.

isham.—Erection of buildings on both of Bartram-road, Lewisham (Mr. J. E. ury for the Abbis's Trustees).—Refused.

isham.—Addition in front of No. 116, -vale, Lewisham (Mr. A. R. Westworth Mr. E. C. Christmas).—Consent.

ylebone, West. — Re-erection of the h of the Annunciation upon a site on orthern side of Bryanston-street and the n side of Old Quebec-street, St. Maryle-(Mr. J. G. P. Meaden for Mr. W. J. r and the vicar and churchwardens).—nt.

ylebone, East.—Four projecting balconies nt of Nos. 171, 173, 175, and 177, Great nd-street, St. Marylebone (Mr. R.).—Consent.

nd.—Projecting sign at No. 3, Piccadilly-next to Shaftesbury-avenue (Mr. C. A. for Messrs. Frank, Ltd.).—Consent.

tminster.—Erection of the clock-tower at ehouse building on the southern side of all Bridge-road, Westminster (Mr. Stowell for Hovis Bread Flour Com-Ltd.).—Consent.

lwich.—Iron and glass hood at Nos. 68 70, Dallin-road, Plumstead (Mr. W. rey)—Consent.

Width of Way.

techapel.—Erection of a building at St. ce Schools, at less than the prescribed e from the centre of the roadway of row, Union-street, Whitechapel (Mr. Leslie).—Consent.

idth of Way and Lines of Frontage.

nington.—Erection of buildings upon a n the western side of Dolland-street, th (Messrs. J. A. J. Woodward & Sons Messrs. J. Dennis and H. Ryland).—d.

ham.†—Erection of a one-story addition rear of Nos. 91, 93, and 95, Rye-lane, m (Messrs. W. T. Champion & Son).—d.

George, Hanover-square.—Projecting t the Victoria Palace, on the eastern side of Allington-street, Victoria-street (Messrs. F. Matcham & Co.).—Consent.

Lines of Frontage and Construction.

Lewisham.—Building of a temporary character on the eastern side of No. 163, Killearn-road, Catford, next to Torridon-road (Mr. A. Ward).—Consent.

Marylebone, West.—Temporary range of luncheon and store sheds at Lord's cricket ground, abutting upon St. John's Wood-road, Wellington-road, and Wellington-place, St. John's Wood (Mr. W. H. Slatter).—Consent.

St. George, Hanover-square.†—Retention of buildings at the premises of the British Motor Cab Company, Ltd., Grosvenor-road, Pimlico (Captain D. A. Lynch for the British Motor Cab Company, Ltd.).—Refused.

St. Pancras, South.—Iron and glass shelter over the Pentonville-road entrance to King's-cross Metropolitan Railway station (Mr. F. Sherrin for the Metropolitan Railway Company).—Consent.

Width of Way and Construction.

Poplar.—Two temporary iron sheds on the south-eastern side of Deptford Ferry-road, Millwall (Guelph Patent Cask Company, Ltd.).—Consent.

Width of Way, Frontage, and Construction.

Wandsworth.—Retention of two buildings of a temporary character at the rear of No. 24, Lewin-road, Streatham (Mr. J. P. Bastard).—Consent.

Space at Rear.

Chelsea.—Alterations to a building at Adam's-mews, Cheyne-walk, Chelsea (Messrs. F. C. Trafford & Son for Mr. H. Smith).—Consent.

Limehouse.—Re-erection of the "Cock" public house, Nos. 3 and 5, Broad-street, Ratcliffe, with an irregular open space at the rear (Messrs. W. Bradford & Sons for Messrs. Taylor, Walker, & Co., Ltd.).—Consent.

Paddington, South.—Additions upon the space at the rear of Nos. 114, 114A, and 116, Westbourne grove, Paddington (Mr. G. A. Sexton).—Consent.

St. George.—Erection of a building upon the site of No. 44, Grove-street, St. George-in-the-East, abutting also upon Fairclough-street (Mr. F. E. Mennie for Messrs. A Miller & Son). –Consent.

Deviation from Certified Plans.

Finsbury, Central.—Erection of buildings upon the site of Nos. 52, 53, and 54, Chapel-street, Finsbury (Mr. F. C. Spiller for Mr. H. Erdman).—Consent.

Width of Way and Space at Rear.

Westminster.—Erection of two houses upon a site abutting upon Wood-street, Cowley-street, and Little College-street, Westminster (Mr. E. L. Lutyens for Sir Henry Norman and the Hon. F. McLaren).—Consent.

Alteration of Buildings.

Hampstead.—Alterations at No. 47, Fairfax-road, Hampstead (Mr. A. C. Cross for the trustees of the late Mr. T. Yeo).—Consent.

Paddington, South.—Enclosures to a bath-room at the rear of No. 46, Queen's-gardens, Hyde Park (Messrs. Richardson & Gill for Mr. C. H. Fox).—Consent.

Westminster.—Addition to the existing top story of No. 120, Victoria-street, and the erection of an additional story to No. 122, Victoria-street, Westminster (Messrs. C. Heathcote & Sons for the Edinburgh Life Assurance Company).—Consent.

Cubical Extent.

Fulham.—Erection of buildings at the Manbré Saccharine Works, Brandenburgh-road, Fulham (Manbré Saccharine Company, Ltd.).—Consent.

Lewisham.—Additional cubical extent in respect of alterations and additions at the garage of Messrs. Thomas Tilling, Ltd., Molesworth-street and Salisbury-yard, Lewisham (Messrs. Gilbert & Constanduros for Messrs. Thomas Tilling, Ltd.).—Consent.

Southwark, West.—Erection of an iron building on the flat roof of Nos. 211-215, Blackfriars-road, Southwark (Messrs. G. Pearson & Son for Messrs. J. Gosnell & Co., Ltd.).—Refused.

Uniting of Buildings.

City of London.—Uniting of shops in the arcade over Liverpool-street (Metropolitan Railway) station, and buildings Nos. 23 and 24, Liverpool-street, City (Mr. C. de W. Kitcat for the Metropolitan Railway Company).—Consent.

City of London.—Uniting of Nos. 17 and 18, Bread-street, City (Mr. G. Bailey for Messrs. Jones, Lang, & Co., and Messrs. Hitchins & James).—Consent.

City of London.—Formation of an opening at the ground-floor level between Nos. 38, Lime-street and Nos. 35-36, Lime-street, and No. 16, Fenchurch-avenue, City (London Offices Company, Ltd.).—Consent.

City of London.—Uniting of Nos. 11 and 13, St. Andrew's-street, City, by means of an opening at the basement level (Mr. J. Sayer for Messrs. Grimwades, Ltd.).—Consent.

Finsbury, East.—Uniting of Nos. 16 and 18, Finsbury-street, City, by means of an opening at the basement level (Messrs. Stockwell & Co.).—Consent.

Finsbury, East.—Uniting of Nos. 17 to 20, West Smithfield, by means of an opening at the fourth-floor level (Mr. G. Vickery).—Consent.

Finsbury, East.—Formation of a lift well, to the use of iron doors and teak doors to openings in the division walls on either side of such lift well, and betwen blocks C and D of the premises of the Bovril Company, Ltd., Old-street, Finsbury (Messrs. Lanchester & Rickards).—Consent.

Hampstead.—Formation of openings fitted with double-armoured doors at the ground and first floor levels between premises on the western side of Cressy-road, Hampstead (Mr. F. S. Hammond for Messrs. Mansell, Hunt, Catty, & Co.).—Consent.

Holborn.—Uniting of Nos. 10 and 11, Hart-street, Bloomsbury, at the ground-floor level (Mr. A. C. Martin for Mr. J. V. Olver).—Consent.

Holborn.—Uniting of a building at the corner of Streatham-street and Bloomsbury-street, Holborn (Mr. L. Sharp for Mr. M. Harris).—Consent.

Southwark, West.—Use of doors of special construction in lieu of iron doors to openings at the premises of Messrs. J. Pascall, Ltd., Boundary-row and Valentine-place, Southwark (Fireproof Doors, Ltd.). –Consent.

Wandsworth.—Formation of openings in the party wall on the ground and first floor levels between Nos. 2 and 4, East-hill, Wandsworth (Mr. M. Lewis).—Consent.

The recommendations marked † are contrary to the views of the Metropolitan Borough Councils concerned.

PROJECTED NEW BUILDINGS IN THE PROVINCES.*

AYRSHIRE.—Club-house for Dundonald Golf Club (2,000*l.*); Messrs. Duncan & Copland, architects, 146, West Regent-street, Glasgow.

Broughty Ferry.—Esplanade in ferro concrete (10,000*l.*); Mr. J. K. Roddan, Surveyor, Town-buildings, Broughty Ferry.

Burton-upon-Trent. — Receiving home (2,250*l.*); Mr. T. Jenkins, architect, Burton.

Eastbourne.—Plans have been passed for an addition to Clarence Laundry, Clarence-road, for Mr. G. Deacon, builder; also for additions to premises, Star-road, for the Star Brewery Company; Mr. B. Earp, architect.

Forfar.—School (2,500*l.*); Messrs. Gavin & Soutar, architects, High-street, Forfar. Model dairy (2,000*l.*); Mr. A. Waterson, Surveyor, Town Hall, Forfar.

Fortrose (Ross-shire).—Additions to Springfield (2,000*l.*); Mr. J. P. McDonald, Fortrose.

Gellifaelog.—School (18,980*l.*); Messrs. E. Williams & Sons, builders, Dowlais.

Haslingden.—Grain mills (3,000*l.*); Messrs. P. Drake & Sons, builders, Allerton-road, Bradford.

Heywood.—School (4,500*l.*); Mr. H. Anderson, 3, Longford-street, Heywood.

Houghton (Co. Durham).—School (7,000*l.*); Mr. W. Rushworth, Architect, Shire Hall, Durham.

Inverness-shire.—Additions to Glenmazeraw Shooting Lodge and also to Dalmigavie Lodge (3,000*l.*); Mr. Thomas Munro, architect, 62, Academy-street, Inverness.

Llandilo.—Mansion house; Mr. D. Thomas, architect, Quay street, Ammanford.

Northampton.—Buildings at Ravensthorpe Waterworks (2,000*l.*); Mr. F. Tomlinson, Water Engineer, Town Hall, Northampton.

St. Helens.—School; Mr. R. C. Wrinch, architect, 16, Museum-street, Ipswich.

Salford.—Reconstruction of Union Offices (4,200*l.*); Messrs. Topham & Adshead, architects, Manchester. A plan has been passed for the reconstruction of the "Horse Shoe Inn," Back Hope street, Broughton, for the proprietors.

Stratford-on-Avon.—Electric picture palace plans just passed by Council; Messrs. Homer & Lucas, architects, London and Oxford.

Walker.—Baths and wash-houses; Mr. W. J. Meele, Engineer, Town Hall, Newcastle. (Architect to be appointed.)

* See also our list of Competitions, Contracts, etc., on another page



Queens' College, Cambridge, showing President's Lodge.

THE CARPENTERS' HALL LECTURES:

HOUSE BUILDING.

THE sixth of the present series of Carpenters' Hall lectures on the Arts Connected with Building was delivered on Wednesday, February 28, at Carpenters' Hall, London-wall, Mr. Percy Preston, Past-Master, presiding, when Mr. M. H. Baillie Scott lectured on "House Building, Past and Present."

The lecturer, who showed a number of interesting lantern slides, said in the modern world, it seemed to him, house building was not taken seriously enough as a subject of art, and, as he believed that art should find (as it had in the past always found) its main expression in the building of houses, which was man's way of decorating, or disfiguring, the world we live in; and as he thought it did not matter so much what we put in our picture galleries as long as our streets are full of living art, he would first consider the houses of the past, by which he meant the houses built in those dark ages of old England before people became sufficiently enlightened and sufficiently educated to build the modern board school and to live in the modern jerry-built suburban villa. It was the noble part of such a company as the Carpenters' Company to foster and encourage that pride and joy in creative work which was the mark of the old craftsman. It was concerned not so much with a minimum standard of wages as a minimum standard of work, and it seemed to him that the chief need in the industrial world of to-day was to study the spirit and methods of our old trade guilds and seek to reconstruct some such system in the training of our craftsmen to give them back that lost heritage of theirs—those deep and satisfying joys which good work alone can give. And the net result of this system in the past was these old houses which we have lost the art of producing. If we study it carefully we should find the first lesson we have to learn from it was the absolutely vital importance of building technique. It was hardly too much to say that the whole of our modern methods and ideals of building were wrong artistically, and we touched here the very root and centre of the failure of modern work. Architects might make beautiful designs on paper, but when you see these designs interpreted by the modern high-class builder you must end by sorrowfully inscribing "Ichabod" over the doorway, for all the glory had departed.

Go to such an old house as Haddon Hall, for example. Apart from the various architectural features which were but passing fashion, where did the root of its beauty lie? Was it not in mere building? Every square yard of its masonry was full of interest and vitality and subtle variety. And what was the principle that underlay it all? We heard a good deal of talk nowadays about texture, as if that were an end in itself instead of a result of right principle. And the principle appears to him to be that building should be an education of materials. And just as the ideal human education was that which evolved all the best in the individual, instead of levelling all to the uniform standard of the particular school, so the ideal education of a material consisted in shaping it to its place in the structure with only such sacrifice of its individuality as its function there demanded. That was always understood in old work. In modern work the desire for mechanical accuracy had led to the obliteration of the characteristic qualities of materials. In this education of a material, then, he meant that the work done in it should help to express those of its qualities which were peculiar and unique. A brick should look like a piece of burnt clay, a bit of mother earth, moulded to man's ends, but still of the earth earthy: stained and marked it might be in its ordeal by fire. As such it was much more than a mere coloured rectangle. We could read its whole life-story in its form and surface.

Any comparison between the methods of the past and present in building disclosed all the difference between a living art and a dead formula. Take, for example, the treatment of a floor in an old cottage. The joists would be full of character. Their outlines would have the slight undulations suggested by the grain. They would not be exactly straight or exactly level. You might go in a dozen cottages and each would vary in treatment. There would also be pleasant undulations in the plaster, and nowhere would we find the brutally rigid, mechanical outlines of the modern room. Turn to any modern text-book on building, and you would find no hint conveyed to the student that construction was anything else but a dead and trite formula. Joists—mere scantlings without any possible kind of interest—were shown there placed 15 in. apart from centre to centre, and below these the inevitable plaster ceiling with its badly-designed moulded cornice and so on. There was no suggestion that the whole art of building begins in the placing and shaping of its materials in such ways that the characteristic beauties of each are drawn out. You would not find a line to suggest that building was an art at all, but it was presented as a peculiarly dismal science. Building thus being made a dead letter, our architects were reduced to conceal the poverty of essential building by all kinds of histrionic superficial adornments. The next vital principle we might learn from the old house was the principle of relation, by which he meant that the beauty of anything was not so much intrinsic as relative, and the beauty of building depended on the reciprocal relation of its parts to one another, and then to the relation of the whole to its surroundings. In the country house this principle of relation would find itself chiefly expressed by the connexion between the house and Nature. It was in this respect mainly that the modern country has failed. If we consider the modern houses which we build in the country shall we not generally find that, however well designed they may be in themselves, they leave us with the impression of a cockney importation from the town of the latest developments of architectural thought there. Especially was this the case with the formal XVIIIth-century scheme now so much in vogue. This had its place in the sun, no doubt, and there were natural sites which seemed to demand just this kind of house built in the old sympathetic way. But when you come across one of these formal schemes in a Surrey wood with a few ragged pines in the front garden it made the whole of the natural surroundings appear to want grooming.

Houses in windswept open spaces near the sea and on exposed hillsides alike seemed to demand a certain ruggedness of aspect. They should look like hardy out-door open-air creations, and not seem to demand protection from the elements; and inspiration for buildings in such positions might well be sought from the old castles, which seemed to add so much beauty to wild and rugged places. By level pastures and slowly winding rivers the personality of the house might become more kindly and gentle, and the less rigorous outlines of timber and tile take the place of the more austere qualities which belong to rugged stone and slate.

In close connexion with relation was what might be called "scale." It was chiefly the recognition of scale which made the old cottage so attractive. In these humble dwellings the inevitable smallness of the plan was accepted and appeared right, because every feature and detail was made correspondingly small. The windows, doors, and staircase were all of the cottage kind, and everything was in scale. In the modern cottage or small house the traditions of villadom suggested that smallness was an evil not to be accepted with due humility, but to be protested against wherever possible. Thus the rooms were contracted on plan that might still remain lofty, windows might be made large, and the staircase could be made a feature, and so on. And the final result was that, instead of a comfortable and compact cottage, the building appeared to be vainly struggling against inevitable limitations. Nothing was so important to remember in cottage building as that the smallness of the parts increased the apparent size of the whole. The beauty of the old cottage seemed to consist largely in the frank acceptance of limitations. Necessity was made a virtue indeed, and the designer, since he must make a small thing, chose to fall in love with smallness. Since, too, he could only use simple homely materials, he would make homeliness and simplicity his ideals, and so successful was the result that these simple old cottages often put to shame their more pretentious neighbours.

As to the planning of old houses in the earliest times, the house consisted of one room. It was unicellular, and its development consisted in the formation of secondary specialised cells or rooms grouped round the central apartment. In the old English manor house this development proceeded in two opposite directions from a central axis. This axis was the passage which went right across the house at the lower end of the hall or main apartment. On the one side of this were developed the apartments for service, while at the opposite (or dais) end of the hall the withdrawing-rooms and all that part of the house which was devoted to the elegancies of life were added. As these accessory apartments increased the functions of the hall were gradually absorbed by the special apartments, and so it gradually shrank to the dimensions of a mere passage with a staircase in it. It still retained its old central position as the axis of the house, and in this condition we find it in the XVIIIth and XIXth centuries in the plans of the majority of houses, with the difference that on restricted town sites the kitchens have been pushed from their positions on the side of the hall to the back.

While admitting the reasonableness of the
n which had reduced the hall to a passage
fely, we found the type of house which had
ialised rooms only, not entirely expressive
ur needs. It lacked focus and coherence.
as we passed from one specialised room to
ther specialised room never could we
as of old: "I am here in the house." We
er achieved more than the occupation of
mpartment. We must either study in the
dy, dine in the dining-room, sleep in the bed-
n, or withdraw to the withdrawing-room.
d so we sigh for the old houseplace or hall
a place to foregather and dissemble in.
d we sigh for it all the more if we must
ds live in a small house, because then our
e specialised rooms were each and all too
ll for comfort, and as we go from one
e plastered box to another little
ttered box it occurs to us that in the
fines of this bit of space we have walled
roofed in surely there was room for one
nt apartment for which it might be
th while to sacrifice something. Let us
up studying in the study, withdrawing in
drawing-room, or even dining in the
ng-room to get that. And thus we
ve at the conclusion that the requirements
amily life in the small house suggest a
eption of the house which shall contain
ast one good-sized central room, and for
sake of this accessory rooms should either
deliberately eliminated or reduced to a
ss in the main apartment. The multi-
tion of small rooms in the small house
after all, no expression of actual needs.
the planning of the modern house let us
ate the old house mainly in this: That
lan should be the outcome of our require-
s, and, while so satisfying material needs,
ould also minister to something more
those. Let us design it from within
ards, and let its outward aspect be the
ral expression of its inward grace.
the matters of decoration and furnishing
might be learnt from the old house.
do people, otherwise sane and intelligent,
rently delight in surrounding themselves
all kinds of unnecessary and unbeautiful
s? "Copy if you like the old methods
workmanship, because they were the
ally right methods, or copy the old
rtions or any other essential or vital
iple which is right yesterday, to-day,
o-morrow; but let the superficial saliencies
le go! Within limits such as these we
rightly design our modern rooms on the
of old ones, imitating nothing in them
the fundamental principles on which
beauty depends. In such work we
find space for some expression of that
nal initiative which was the character-
of the old work. We, too, may invent
reate, and in the expression of our joy
doing add the essential note to the
"

at were the main conditions of modern
hich made it difficult not to imitate the
of the old house, but at least to
se the methods which led to its beauty?
f the foremost was that obsession of
and the academic tradition, under the
f which authority art becomes tongue-
and all the spontaneous and human
t art of the past was replaced by trite
las. He fully appreciated the great
s shown by our designers in modern
buildings. But their appeal was
y discounted by the knowledge that
was a one-man art, and that they
nly realised at great cost by the un-
ing and uninspiring toil of unnamed
of workers. How different was the
sion conveyed by the Gothic building,
the whole structure seemed to have been
d by a band of intelligent craftsmen,
ontributing his share to the beauty of
hole! Such a building was a living
m rather than an academic composition.
, whatever kind of building we evolve
future, he thought it should be one
included in its scheme—as Gothic
did—that kind of happy human ex-
n of the creative instinct of the work-
which the classic tradition crushes out
tence. Having once rid ourselves of
ghtmare obsession of the masterpieces
past, and having given up all idea of
ng little Christopher Wrens or little
ngelos, we must next demand a
in our building by-laws which at
make cottage building impossible.
set of these rules to any beautiful Old
village and its beauty would melt
away. The overhanging gables and low-
led homely rooms of the farmhouse would be anathema. It seemed reasonable that architects who had made a special study of building should be allowed to frame their own rules and not be made to submit to regulations which were condemned by the better informed.

As an architect he found himself with a rooted prejudice in favour of beginning from the foundations upwards, and not from the roof downwards. Give him a universal and common speech of good building, without any architectural nonsense about it, which would lend a homely beauty to the rank and file of building, and then our great buildings would grow naturally out of that. In other arts the value of simple statement was recognised. Why, then, in building alone, in order to command the approval of the critics, was it necessary to be bombastic and diffuse, dragging in the spoils of Rome to give a kind of spurious exterior effect to a building whose real structure was ferro-concrete? Would it not be better for a change to give up the *rôle* of man, the imitative ape, and to take up the nobler and more difficult part of man



Stadt Stein, near Schaffhausen, Switzerland.

the creator? But probably the most essential reform required for the recreation of building as an art was the education of the craftsman by the formation of guilds, where art would be approached from the workshop and not from the art school with its dilettante methods. The art school had a way of spoiling horns without making spoons, and its academic traditions were fatal to that folksong kind of beauty which was once the possession of the people. Perhaps one of the latest survivals of this art was in the carving of the old figure-heads on our ships. How delightful it would be in our villages and old towns if, when a memorial was required for a street or square, instead of importing something trite and academic, we could produce locally a gaily-painted wooden effigy which would gain a new kind of beauty as its colours weathered! And then, suppose on entering the village church, if instead of seeing there the usual dull trade-carved figures on the chancel screen, designed by the eminent architect, we found there again the expression of this local art, bright with colour and gay as a wood in spring! This kind of art would mean far more than the varied interest it would give to our towns and villages, for it would stimulate that creative instinct so long stifled, and men would find joy again in the work of their hands.

FORM AND VISION WITH REFERENCE TO ART.

The seventh of the present series of Carpenters' Hall lectures on the Arts Connected with Building was delivered by Mr. W. S. Frith on the 6th inst. in the Hall of the Company, London-wall, Mr. Percy Preston, Past-Master, presiding.

Mr. Frith, whose subject was "Form and Vision—with Reference to Art," and who showed some excellent lantern views in illustration of his subject, said that in a work of art there might be said to be three principal factors—the thing seen, the person seeing it, and the technical qualities employed in representing it. If art could be exactly defined it would not be art, but science, and it must remain elusive. It was a record of thought and crystallised thought into a form which enabled it to abide with us and to be translated to others. By its art every nation had been judged, for it was felt to be a true index of its condition. All great art brought together its series of impressions, emotions, and experiences into a form which had the effect of removing the veil of extraneous matter that obscured the significant. Science and art, the two principal factors in intellectual development, constitute an interesting partnership, science having a tendency towards materialism, and art, appealing to the emotions and aspirations, had, unless a firm grip be maintained on things as they are, a tendency to become wild and visionary. Nature was the vast store from which art took such treasures as might be required for a definite purpose: if more was taken, it encumbered. Form was the subject of the sculptor's art, his theme being expressed by it. It was in proportion to the wisdom of his selection and his skill in developing and perfecting to express with grace and beauty that his art was vital or otherwise. In order to make a right selection of form the knowledge must be extensive, and a careful, exact, and prolonged copying of Nature essential, as well as reference to accepted masterpieces. But copying, and nothing else, brought into play mainly the more mechanical faculties, the eye observing equally the important and the unimportant, and there was a vital something missing. As science and art run together, so in art does imitation and invention, and, therefore, design should proceed together with copying, and the continual making of sketches in which the imagination could have full play would provide a sound balance. The making of these sketches would greatly assist the student in finding out what it was he must get Nature to teach him.

As to style, it was the tasteful and dignified delineations of the selected subject. But the word was used with reference to particular periods, and it was argued that in the present day, when photography had brought all these within our view, our conception of sculpture was confused beyond solution. There might, however, be the compensation that these varied manifestations of the spirit of the art should give us the opportunity of forming a wider and more comprehensive view—a vision that would include all, and from which a better understanding of the whole might enable a greater order to be evolved. The bringing out of the character was an essential part of art: it was the artist device of explaining to others what you see yourself. What was the lesson of historical styles? Why did these styles persist for a time and then die out? Was it the rule of Fashion? He was convinced the Greek copied Nature in the way experiences had shown him best, and that the Renaissance man was following what he thought the approved Greek method. There arose, however, the point mentioned in a previous lecture in that Hall—*i.e.*, that Greek art was founded on a geometric basis; while the art of the Renaissance was essentially on an anatomical basis. It was not, he thought, pointed out on that occasion that geometric did not only refer to measurement of masses—the correct proportion of the figure and its parts and the curves made by these—but also embraced surface measurement and proportion, and in this included the consideration of the proportions and character of the light-bearing and shadow-bearing surfaces. This was important, as it formed the principal link between sculpture and architecture. For instance, on a blank wall the light and shade of a piece of sculpture was free, but if architectural details, giving a definite scale, were within the visual area, the scale of light and shade in the piece of sculpture must be such as would form an agreeable harmony or contrast. This was the dominating general principle in architectural ornament, whether figure or foliage; when, however, he spoke of harmony it was in the musical sense in which a knowledge of harmony included a knowledge of nominal discords, which were probably the most beautiful parts, and those to which music owed most of its power of expression.

In viewing the path sculpture had followed in the past, it seemed to have started with making a mass indicating the rough outlines of the object, followed up in the direction of obtaining a more convincing likeness; this in time followed by an increased elaboration in the treatment of detail, exalting this at the expense of the more vital qualities, until this had overpowered or demeaned the work, destroying its appreciation at the same time as its high purpose. To those working in times when there was one accepted type of art this progression seemed to have been inevitable; but " with many types before us we may say there is no final style. And that the path for us is, while appreciating all that is excellent which had gone before, to be sure we see with our own eyes, and that we execute with the very fullest skill our hands can attain, the vision presented. See that the craftsman in you takes real joy in his work. What should he delight in if not in the successful exercise of those faculties with which he has been endowed ? "

CHURCH RESTORATION.

THERE was a good attendance of members at the meeting of the Nottingham Architectural Society, held at their rooms on Tuesday, February 27. In the absence of the President, Mr. E. R. Sutton, F.R.I.B.A., took the chair. After disposing of several business matters, Mr. A. I. West was elected an Associate member.

Mr. Wilfred Bond, Lic.R.I.B.A. and Architect to Croyland Abbey, then read the following paper on " Church Restoration; or Notes on the Repair and Refitting of Churches " :—

"There is no branch of the work of an architect which requires so much and so varied knowledge, or which calls for the exercise of so much skill and forethought, as the care of old churches. The architect requires accurate knowledge on matters structural, archæological, artistic, practical, and even legal. There is, moreover, no department in which his work is subjected to wider criticism. There is the criticism of architects and others who have really expert knowledge, which is valuable. Then the clerical critics, all of whom are deeply interested in the subject, and not a few have intelligently studied it and can assist the architect materially. There are a few, not often to be come across, but nevertheless in existence, who seem to think that their office and position constitute them authorities on church architecture. In such cases it is usually their only claim. Lastly, the general public, every one of whom is, or considers himself, quite capable of saying the last word as to what should or should not be done to his parish church.

The path of the struggling church architect is not a bed of roses, but, great as are the difficulties, the rewards, though unfortunately not financial, are equally great. The work is of the most absorbing interest and the study needful equally so.

In tackling the work at an old church the first and most important consideration is always the repairs to the actual fabric. These should be executed in the most conservative manner possible. Walls should be very carefully repaired and pointed and all cracks and voids well filled and grouted in. In most cases it will be found best to point stone walls with mortar composed of lias lime and coarse sand rather than with cement. Facing stones should only be renewed when their decay has gone so far that they are a danger to the stability of the wall. Stones frequently decay on the surface and then weather to quite a good hard face. Such stones can often be retained by weather-pointing the lower joint so as to keep the wet from penetrating the wall below. When a facing stone has decayed so far that its renewal is imperative it should be replaced with similar stone or a sound stone which will quickly weather to the same colour as the surrounding wall.

Good stone should invariably be used for repairing stonework, patching up with cement, or artificial stone, and plaster abominations should be avoided. I can never see why it is declared to be so wicked to repair stone with stone, but quite right to fake it up with cement or mortar and bits of tile. Where patching has been done in brickwork which is sound there is no harm, and often much advantage in not disturbing it—not that there is any real archæological value in a stone wall patched with brick; but it has generally weathered to a tint harmonising far better with the old stone than new stone would for many years.

Decorative stonework should, generally speaking, not be renewed except for constructional reasons. Where stones have to be replaced which have had carving on them those blocks should be left plain, as they were sometimes even in mediæval times, unless a really first-rate carver can be afforded. Good carving is never cheap.

The general dryness of walls can be improved by a concrete or asphalt channel round the outside with drains of socketed pipes to carry off the water. If common land drains are used care must be taken to keep them well above the foundations, otherwise the drainage of the subsoil will cause shrinkage leading to disaster. Such a channelling will often allow eaves gutters and rainwater spouts to be dispensed with. Where a dripping eave is possible it is much better without the hard lines of iron spouting. Besides, one of the last things churchwardens in the country seem to be able to afford is a little paint for eaves gutters.

Old roofs, generally of oak, require very careful repair. Many an old oak roof has been ruthlessly torn off and replaced by a mean and often gaudy pitch-pine one, when careful repair would have made it very nearly as sound as a new one.

Main timbers and tie beams can be carefully spliced, and the junctions of purlins and other timbers strengthened and secured by iron plates on their upper sides, secured by coach screws and concealed bolts without being unsightly. Even the most conservative repairer need not be brutal.

It is a great convenience in carrying out the repair of an old roof to erect an awning over it of tarpaulins, and the work can be deliberately carried out under it without pulling the roof more to pieces than need be.

I once saw a specification for the repair of an old roof, the first clause in which described that the contractor, before proceeding to repair, should carefully lay out in the churchyard all the timbers from the roof for the architect's inspection. The majority of repairable old roofs will hardly be likely to go together again if subjected to such drastic treatment.

Boarding should be renewed with oak boards of varying widths, and the flat surfaces of all the timbers may often with advantage be left from the saw or adzed and not planed; much of the old work will be found so treated. The lead should be recast and laid on deal boarding, and the sheets should be joined in the old manner with welts or hollow rolls, and not on rolls with a wood core. Floors should be carefully relaid on concrete beds and vaults filled up. Old brick or old tiles should not be discarded. They are often the original flooring, and if carefully relaid will make an excellent floor. It is difficult to match them, but if new of the same kind cannot be found the old flooring will probably be sufficient for some portion at least—say, the central abbey, and the sides can be made out with some other paving. Wood platforms are best laid with solid floors or wood blocks kept level with the alleys. It is well to take care that the concrete is good and has a layer of dry rubbish below if the ground is damp, or dry rot may be set up. The colour-wash on internal stonework should be carefully cleaned off with hard brushes, but not tooled or scraped.

Internal plastering should be retained. It is usually original, or has replaced earlier plaster. The XIXth-century restorer, in his terrible zeal for showing the construction, which he quite wrongly thought was invariably shown in mediæval work, said, " Plaster is a sham; let us get back to the good honest stonework "; and tore off the plaster together with the white-wash, often destroying valuable paintings lying between them. The colour-wash should be very carefully removed, so as to disclose any painting there may be on the plastering. Never straighten out new plastering, but have it done with short floats with a natural uneven surface, but without any attempt at studied roughness.

There has been of recent years a good deal of abuse of the professional architect and his methods of carrying out work in old churches. Our friends the builders have also come in for their share. The architect and builder are held up as scamps of the usual kind who, it is more than hinted, increase the cost and scamp the work for their own profit. The remedy for this disastrous state of things is said to be that the work should be undertaken by " young architects with a taste of construction," liv on the job and acting under the direction o certain London society, and done by d work. The advantages of this method of " o paying for the work done, no more and no les are hardly so attractive when you consider th you also pay for hire of scaffolding, often an enhanced price, from a local builder, or e purchase it and sell it again, and also purch the materials retail through an agent undoubted ability for the job; and the o guide towards the ultimate cost of the work the architect's approximate estimate.

The store of practical knowledge wh builders have and their commercial abili together with the skill of their specially trai and experienced workmen, is not a thing to lightly cast away. Where would Croyla west front be but for the wonderful mann in which John Thompson straightened The imputation that a builder will scamp t work in order to make it pay is a cheap sneer a body of honourable men. If people wou only employ reliable builders they have nothi to fear on that score, and we know fr experience that much church restoration done at little or no profit.

The disadvantages of contract by a lu sum can be got over by careful specificati of work, and in work where it is not possib to ascertain the exact amount by provisio sums or by schedule. This provides for ent elasticity for carrying out the work and making alterations as the work proceeds, t cost of which, as well as of any additio works, can be ascertained by the schedu One of the most interesting features of mediæ work is the local variations in different perio Ancient architecture may be compared to language with many dialects. This was d in some measure to the happy conditions wh necessitated building with materials most read to be obtained, which generally meant th close at hand. And still more was it the res of the working out of a design or scheme the local workmen. It was no time of work to drawings produced by eminent London arc tects, or jobbed by far-off assistants for lo practitioners.

The designers and workmen lived and work on the spot, and though, with the mod possibilities for travel, we can hardly hope get back to such a happy state of things, I think that the claims of provincial men to church work in their own locality is worthy more attention by those who have the direct of it. They live and work in the distri and are much more likely to appreciate a know local characteristics than the archite from a distance, however eminent. In middle of last century, nothing later th XIIth or XIIIth century work was more th tolerated, and XVIth and XVth conside debased, and as a consequence, perhaps, such a narrow view the great idea of chu restorers and their architects was to try exactly restore an old church to what th imagined it to be in the XIIth or XII century and fit it in harmony therewith, w the result that late Gothic work was frequen removed to make way for XIXth-cent reproductions of early features. We are sa now, and do not spend our time on " Norma fonts and pulpits " or " Early English " readin desks and choir stalls.

In the arrangements of the fittings of th chancel the chief difficulty to be faced is th accommodation has to be provided for ma people in the chancel than was probably th case when the church was built. The intro duction of surpliced choirs has made it th fashion for the singers to be accommodate in the chancel.

There have been attempts of recent yea to return to the west end position for organs an singers, reserving the chancel for the clergy an their immediate attendants. From an archi tectural point of view the gain to the church would be immense, particularly in small country churches. There are, however, practica matters which make such an admirabl arrangement impossible, particularly in thos places where there is least room. . . In al but a few special cases the choir and orga should be accommodated in or as near th chancel as possible. . .

Although many very beautiful reredos have been constructed, and the general effec is very fine, yet in the majority of cases i seems to be a mistake, and quite as effective a east end can be got by the old English arrange ment of a long altar with a comparativel

reredos, or a simple dorsal cloth or
r frontal with simple side curtains enclosing
altar, and suitable hangings or other
iments on the east wall. There is, of
e, a possibility of a Daylight Saving Bill
ng matters in the same state as in the
le Ages, and our east windows would
in to their own again. . .
e pleasing variety of size and shape of
s so evident in the old windows can be
ned, and the ancient ironwork should be
red and kept. Great harm is done to
ppearance of windows, both inside and out,
s removal and by substituting nasty thin
Glass painters are the greatest offenders
The old saddle bars came at more or less
ar intervals, and with the stancheons give
le more trouble in designing glass. If I
enter on the subject of stained glass or
r decoration I shall never get to an end.
d that it is perfectly allowable to put in
rn stained glass, provided it is really of
ery best and the work of a craftsman, not
imercial firm, as also with colour decoration
alls, as the latter can so easily be white-
ed if not considered satisfactory in the
generation."
ving referred to the lighting of a church,
author said, as to heating, "that where
se is no object probably one of the better
ir systems, assisted by low-pressure hot
for radiators near the doors, is the most
actory; next to that low-pressure hot
; and after that, good stoves, which, if
ied by fresh air from the outside, are
bly as satisfactory from the heating point
ew as anything. They should be placed
the principal entrances. If hot water is
oyed it is best to avoid channels covered
gratings as much as possible and to let the
tors be sufficiently large to do the heating;
le pipe of moderate size running along the
walls of a church is not unsightly, but the
of snake-like small-bore pipes which
tain to the high-pressure system, and
the heating engineer delights to turn and
about everywhere, should be avoided like
n. Where it is possible to get some high-
pipes or radiators there will be less chance
wn draughts, but this is seldom possible
old church without being unsightly. . .
windows of a church comprise such a
anding position in the building that the
l treatment of the glazing is essential.
old plain clear crown glazing of varying
of white and green is far more restful
the atrocity known as "cathedral
" It is not necessary that glass should
aque. People will not thus be kept from
ring in mind when service or sermon is
ractive. Old windows should be releaded
reused, and by a careful glazier who
se up all the old glass.
most serious problem ever presented to a
h architect is that of making an addition
mediæval building. Even the most rabid
ppers-up and protectors have to admit
here are cases when the effective use of a
h require that some alterations should be
to the fabric. These conditions, they
, must not be made by imitating the old
ng, but be frankly modern in style.
ounsel, whilst sounding plausible enough,
not lead very far, as we do not happen to
a modern style. It must be remembered
"Gothic" had never actually died out
before the "revival." The least harmful
od is to build simply the additions required,
g them distinctly subordinate to the old
ngs, having a care not to build meanly,
ith some of the spirit of the old work. The
of additions is best kept late rather than
in character. Early construction, to say
g of detail, is hardly possible now. Modern
ds and our modern state of hurry and
ience hardly create an atmosphere suited
mediæval manner.
very severe self-restraint is necessary
se who handle old buildings. There are
churches where all the merit of the careful
to the fabric and its seemly fitting has
poilt by additions bearing the emphatic
s of the too exuberant individuality of
chitect. In the fittings and wall decora-
considerably more freedom is possible,
e architect has his chance of designing
ful fittings and decoration, and unfor-
ly he too often comes in competition
he church shop or stores run by the
l tailor, whose obliging representative
vith equal celerity, measure the parson
air of bags and the church for a reredos
or a painted window. There are here and there happily those who care to have good craftmanship with suitable design, and one hopes in church work as in secular that they are increasing in number. The architect who aspires to work in old buildings must study them throughout, and especially inquire into the particular uses for which they were intended, as only thus can they be properly understood."

The Chairman having invited the visitors present to join in the discussion, Messrs. Gill, Hazell, Gascoyne, Taylor, Wright, Gleave, Dickman, and Spencer took part.

In reply to the discussion, Mr. Bond said he personally felt that it was quite allowable to put in parts of new glass to make good an ancient defective window if it were carefully done, and the same with regard to stone carving. At the same time it was far better to leave them blank unless you could do it properly. In answer to a question as to what period it was best to restore to, he said his rule was "always respect the best."

On the proposition of Mr. Sutton, seconded by Mr. A. C. Hazell, the heartiest thanks of the meeting were accorded the lecturer.

PRESIDENTIAL ADDRESS, DEVON AND EXETER ARCHITECTURAL SOCIETY.

At the annual meeting of the Devon and Exeter Architectural Society, on March 9, Mr. James Jerman, F.R.I.B.A., delivered his Presidential address, in the course of which he said:—

"There is one matter in the Report of more than ordinary interest. I refer to the part taken by some members of our Council, to whom I feel we are much indebted, in acting with the Committee of the Exeter City Council to revise the building by-laws. This co-operation on the part of the two bodies materially tended to elucidate many points of importance, and one gratefully acknowledges the courtesy of the authority and their responsible officials for seeking assistance of a technical character from those who have a desire and are in many ways responsible for faithfully complying with the important details of construction affecting the comfort and even the lives of our citizens.

Professional Work.

During the past year a marked endeavour has been made by the Royal Institute to come to terms with the Society of Architects on the subject of recognition and so pave the way to Registration. The work has been one of great difficulty, and matters have proceeded as far as the consideration of the amendment of the Royal Charter of the Institute to enable this desirable movement to be forwarded. One hopes that the present deadlock may be got over when the concessive spirit shown on both sides is generously regarded.

Many important matters are under the consideration of the Parliament of the Profession sitting in Conduit-street, and one of great concern to architects is the revision of the present scale of charges which has been in operation for such a long period. The altered condition of circumstances and the practice in the counties makes the revision not only desirable, but necessary. An official scale must have great weight with the general public, and should there be attached thereto, as is done in some countries, a code of professional etiquette, the result would not only be material but an influence for good in raising the tone of the members towards one another, as well as with the public employing architects. Such an official pronouncement will be of immense interest to client and architect alike in disposing of misunderstandings and clearly stating the position and duties of architects. The important question of copyright has also received attention at the hands of the Institute.

Professional Education.

The satisfactory position and the recognition of the examinations, as now arranged by the Institute, is a subject for congratulation, and puts the professional status on an altogether higher plane. The recognition of architecture as a part of the curriculum at many of our universities, by the granting of degrees, has strongly induced our students to take advantage of the splendid courses of study now provided at the University of London, University of Liverpool, the Architectural Association, and other institutions. Lastly, the students of our Society, preparatory to proceeding to the larger academical centres, can take advantage of the training supplied at our University College and the art department therein. With opportunities afforded in most of the chief towns in our district the earnest student can be prepared with facilities little dreamed of by some of us who had to work individually to reach the goal by a harder road.

Whilst referring to the subject of education I am tempted to say a word or two on the higher and after culture, so important to the uplifting of a learned profession. One deplores the falling off of the acquisition of archæological knowledge and interest amongst younger architects. The great impulse given to the study of our ancient buildings, more especially churches, during the wave of church restoration during the latter half of the last century acted in the most impelling manner in producing amongst architects many scholarly exponents of mediæval art throughout the country. The decline of this wave of restoration and the revived appreciation for classics and Renaissance traditions had decreased the flow of study, both amongst architects and the clergy, who had done so much in the past in instilling a love for the study of the beautiful buildings under their care. It may be hoped, however, that the newer interest may widen the whole sphere of art and produce even more enthusiastic exponents of historical study of this our elder art.

To advance the training of our younger brethren much might be done locally, and one would suggest, in addition to classics, lectures and visits to buildings under trained guides, that the Council, and others acting with them might draw up a list of buildings suitable for measured drawings and intimate study. For this purpose there are often charming specimens of minor construction, such as doorways, ceilings, mantelpieces, often available as examples of good work which might profitably be scheduled for attention where it is not possible to select complete buildings of any period. Photographs and descriptions could be prepared to enable the student to proceed without waste of time. In our own immediate neighbourhood of Exeter there is, of course, a wealth of good examples of almost every period and style, and the same applies in a lesser degree to the chief towns of our province. There are few places where some suitable example could not be found for study and measuring.

Schools of Architecture.

For some years there has been a fully-established school at Athens for the study of Greek architecture on the spot to supplement the preparation afforded by the Schools of Architecture in our own country. The great value of such study cannot be too strongly impressed on the student who desires to proceed on academic lines and draw inspiration from the highest types of classic work. Those of us who were privileged during our recent visit to Rome to see the British School of Architecture and Archæology established there felt that this school in Classic Rome completed a scheme for study on the lines of that already established by the French, German, and American architects, to whom their respective schools had been of inestimable benefit in advancing the genuine study of architecture. The generosity of the Italian Government, supplemented by the additional generosity of those who erected the building, in giving the site and building recently used at Rome for the Fine Arts British Exhibition cannot be over-estimated, and this further aid to study must have its influence for good.

Returning once more to the subject of the Society and its operations, the time appears to be at hand when more work will be expected of the allied societies and more responsibilities thrown on them by the Institute. The approval of applicants for admission to the various ranks of the Institute—especially that of the newly-created class of Licentiates—will require anxious and careful discrimination on the part of our Council, and it should be insisted that all local candidates should first be enrolled as members of our allied Society, for obvious reasons. With the greater interest in and the increasing knowledge of architecture on the part of the public we may legitimately say that the prospects of our profession were never brighter or better. This involves on our parts, both collectively and individually, a strenuous desire to uphold the best traditions of the profession."

THE PRUDENTIAL ASSURANCE COMPANY, LTD.

FROM the sixty-third annual report of this company we learn that the number of policies issued during the year was 60,012, assuring the sum of 5,396,721*l.*, and producing a new annual premium income of 325,699*l.* The premiums received during the year were 4,812 268*l.*, being an increase of 6,147*l.* over the year 1910. The claims of the year amounted to 3,423,273*l.* The number of endowment assurances matured was 20,862, the premium income of which was 119,586*l.* The number of policies in force at the end of the year was 901,693. In the industrial branch the premiums received during the year were 7,631,408*l.*, being an increase of 205,091*l.* The claims of the year amounted to 2,976,058*l.*, including 277,083*l.* bonus additions. The number of claims and surrenders, including 4,488 endowment assurances matured, was 373,641. The total number of policies in force in this branch at the end of the year was 19,041,748: their average duration exceeds twelve years. The assets of the company, in both branches, as shown in the balance sheet after deducting the amount written off securities, are 81,239,682*l.*, being an increase of 3,710,456*l.* over those of 1910. The valuation has again been made by Mr. Schooling. In the ordinary branch the surplus shown is 1,878,357*l.*, including the sum of 334,311*l.* brought forward from last year. Out of this surplus the directors have added 250,000*l.* to the Investments Reserve Fund, which, after deducting the 175,000*l.* written off value of securities, stands as at December 31, 1911, at 850,000*l.* In the industrial branch the surplus shown is 1,681,551*l.*, including the sum of 506,360*l.* brought forward from last year. Out of this surplus the directors have added 250,000*l.* to the Investments Reserve Fund, which, after deducting the 200,000*l.* written off value of securities, stands as at December 31, 1911, at 650,000*l.* The total surplus of the two branches, as shown by the valuation, is 3,469,908*l.* The directors are pleased to announce an increase in the rate of bonus of both branches of the company, as follows:—In the ordinary branch a reversionary bonus at the rate of 1*l.* 16s. per cent. on the original sums assured has been added to all classes of participating policies issued since the year 1876. This is an increase of 2s. per cent. over the rate declared for the past two years. In the industrial branch a bonus addition will be made to the sums assured on all policies of over five years' duration which become claims either by death or maturity of endowment from March 8, 1912, to March 6, 1913, both dates inclusive. This is an increase over the rate declared for last year of from 10 to 30 per cent. for all policies upon which over thirty years' premiums have been paid.

LAW REPORT.

KING'S BENCH DIVISION.

(Before Mr. Justice CHANNELL.)

J. A. Pratt & Co., Ltd. *v.* William Francis Frith.

THIS was a non-jury action in which Messrs. J. A. Pratt & Co., Ltd., of 43, Woodford-road, Watford, who are building material merchants, claimed an injunction restraining defendant, who carries on business as a timber merchant, etc., under the style of Messrs. Frith & Co., at Aylesbury, from breach of a covenant entered into between the parties.

Mr. Sanderson, K.C., and Mr. B. A. Cohen were for the plaintiffs; Mr. Clavell Salter, K.C., and Mr. B. Houghton appearing for the defendant.

The plaintiffs' case was that by agreement dated May 11, 1909, they engaged the defendant for five years, one of the terms being that Mr. Frith should undertake not to carry on or be engaged in business of a similar nature for five years after leaving the plaintiffs employ, within 8 miles of the company's head office at Watford, or within 2 miles of the branch depôts of the company at Harrow and Wealdstone, Sudbury, and Wembley, Amersham, Chesham, Boxmoor, Letchworth, and St. Albans. Messrs. Pratt & Co. determined Mr. Frith's employment during the spring of 1910, and it was now alleged that he had since supplied materials to, and canvassed orders from, customers of the plaintiffs.

The defence was that the plaintiffs had broken their contract in such a way that Mr. Frith was entitled to regard it as at an end, and that he was no longer bound by the restrictive covenant in question.

His Lordship heard considerable evidence, and eventually granted the plaintiffs the restraining injunction they asked for, with costs.

LONDON COUNCILS.

Bermondsey.—Plans have been passed for Messrs. R. L. Stuart & Sons, 194, Lower-road, Rotherhithe, S.E., for the erection of additions at 182, Lower road, for Mr. C. Offermatt; also for Mr. J. M. Kennard, architect, 13, Railway approach, London Bridge, S.E., for the erection of a building in Corbetts-lane, Rotherhithe.

Brentford.—The tender of Messrs. George Wimpey & Co., at 485*l.*, has been accepted for paving Ferry-lane.

Chelsea.—The tender of the Improved Wood Pavement Company, Ltd., has been accepted for paving a portion of Chelsea-embankment with 9-in. wood blocks, at an estimated cost of 11s. 10d. per yard super., the Company to maintain the paving free of charge for a period of three years.

Friern Barnet.—The tender of Messrs. Grounds & Newton, at 3,223*l.*, has been accepted for making-up Torrington Park. Plans and estimates have been approved for making-up Friern-lane at an estimated cost of 1,398*l.*; also for making-up Hollyfield-avenue. Plans have been passed for Mr. W. J. Warren for six houses in The Crescent.

Hendon.—An estimate by the Surveyor (692*l.*) has been approved for kerbing, channelling, and making-up the foothpath in a portion of Daws-lane, Mill Hill. Plans and estimates are to be prepared for making-up a portion of Hamilton-road. At an estimated cost of 703*l.* the last portion of Russell-road is to be made up. The following plans have been passed:—Messrs. William Moss & Sons, seven houses, Hammers-lane and Wills-grove, Mill Hill; Mr. A. J. Reynolds, four houses, The Ridgeway; Second Hampstead Tenants, Ltd., flats, Addison-way; Mr. J. Webb, four houses, Hallswelle-road; Mr. W. T. Streather, twelve houses, Ella Russell-gardens; Messrs. Hamiltons, six shops, Hamilton-road; Kensington Freehold Land Trust, garage, rear, The Promenade, Lawrence-hill, Mill Hill; Messrs. Haymills, four houses, St. Dunstan's-road, Golder's Green.

Hornsey.—Plans have been passed for Messrs. Cheritons, Ltd., Hampstead, to enable them to make alterations and additions to the Bakery at No. 6, The Broadway.

Lambeth.—300 ft. of the sewer in Ship-lane is to be relaid in 9-in. pipes at an estimated cost of 210*l.* The whole of the sewers in the neighbourhood of St. Mary's-square are to be relaid. During the ensuing year paving and repairing, etc., works are to be carried out in the borough at an estimated cost of 35,788*l.* A plan has been lodged with the London County Council by Messrs. J. A. J. Woodward & Sons on behalf of Messrs. J. Dennis and H. Ryland, for the erection of seven houses in Dolland-street.

Poplar.—The sewer from East India Dock-road to High-street is to be reconstructed with 12-in. and 6-in. pipes at an estimated cost of 576*l.*

Rickmansworth.—Plans have been passed for Mr. Fred Franklin for twelve cottages, Mill End, and for Messrs. Benskin's Watford Brewery, Ltd., for alterations to Western Inn, High-street.

Watford.—Plans have been passed for Mr. J. Giffin for the erection of three houses in St. Alban's-road; also for Mr. F. Fisher for shops and offices in High-street and King-street.

Wimbledon.—The Borough Surveyor has been directed to prepare plans and estimates of the cost of paving the margins of the carriageways of Worple-road, Hill-road, The Broadway, and part of Merton-road with wood blocks. A portion of the footpath in Worple-road is to be paved with concrete slabs, at an estimated cost not to exceed 294*l.* The Open-Air Swimming Bath Committee have decided to make application to the Local Government Board for sanction to borrow 1,650*l.* for the construction of an open air swimming-bath. The following plans have been passed:—Messrs. G. Baines & Son, church school, Quicks road; Mr. W. T. Tanner, additions to "Helena," Alan-road; Mr. R. J. Thomson, additions to "St. Aubyns," Grosvenor-hill; Messrs. W. & C. Brown, Ltd., additions to factory of the British Incandescent Mantle Company, Ravensbury-road; Mr. E. T. Manley, six shops, Durnsford-road. Plans have been lodged by Mr. R. J. Thomson for five shops and offices in Hartfield-road.

FOREIGN AND COLONIAL.

Building in Austria-Hungary.

The *Zentral Anzeiger für das öffentliche Liefcrungswesen* (Vienna) of February 1 states that the municipal authorities of Brixen recently decided to erect an infirmary in Brixen at a cost of 1,530,000 kronen (about 63,700*l.*). The municipal authorities of Kassa have also arranged to build a hospital there at a cost of 1,600,000 kronen (about 66,700*l.*). The hospital is to have accommodation for 400 beds.

Water Supply, etc., Roumania.

The *Monitor Oficial* (Bucharest) of February 18 publishes a copy of a Bill presented to the Roumanian Legislature for the grant to the municipal authorities of Tulcea of powers to contract a loan of 1,600,000 lei (64,000*l.*), two-thirds of which amount it is proposed to devote to supplying the town with drinking water, and with a drainage system, and the remainder to be applied to the erection of schools and other buildings.

Street Construction, Building Material, etc., Argentina.

The *Boletin Oficial* of February 2 publishes the text of a Law (No. 8,854) declaring the necessity for constructing in Buenos Aires an avenue nearly 100 ft. wide to run from the junction of the Calle Rivadavia and Calle San Martín as far as the junction of the Calle Libertad and Calle Lavalle, together with the erection of buildings on each side of the proposed new thoroughfare. In order to carry out this enterprise the municipal authorities of Buenos Aires are empowered to contract either an internal or external loan amounting to 15,000,000 pesos gold (3,000,000*l.*).

PATENTS.

APPLICATIONS PUBLISHED.*

27,937 of 1910.—Wilhelm George Henry Browne: Slop grate or dish for gullies.

3,861 of 1911.—Herman Meyer Braun and Isaac Diamond: Securing and retaining devices for doors and the like.

3,923 of 1911.—Walter Lees, Thomas William Lees, and Archibald Lees: Apparatus for heating buildings and the like.

4,693 of 1911.—Walter James Emms: Gas-heater for hot-water systems, applicable for use with closed kitchen ranges, greenhouses, and for other similar purposes.

5,136 of 1911.—John Doyle: Isolating screen for rooms or compartments in hospitals, public buildings, and the like.

5,510 of 1911.—Samuel Henry Adams: Manhole covers.

9,178 of 1911.—James Henry Bennetts and George Richard Leadsom: Apparatus for operating casements, fanlights, and the like.

9,899 of 1911.—Adrian Eugene Lundstrom: Rising hinges.

10,028 of 1911.—David Mein Nesbit and Ashwell & Nesbit, Ltd.: Radiators for heating buildings and the like, and fittings for the same.

14,197 of 1911.—William Henri Luther: Roof lights and the like.

18,398 of 1911.—Friedrich Ernest Benzing: Controlling door-lock

21,564 of 1911.—William Henry Colwill: Cowls for chimneys and ventilating shafts.

24,822 of 1911.—Allan Keene Pruden: Metal buildings or constructions.

27,157 of 1911.—Alexander Reid Mauson: Roofing materials.

28,755 of 1911.—George Albert Chaddock: Windows.

28,756 of 1911.—George Albert Chaddock: Windows.

LANGHOLM WATERWORKS.

The Local Government Board have sanctioned the scheme prepared by Mr. Harry W. Taylor, Assoc.M.Inst.C.E. (Messrs. Taylor & Wallin), Newcastle-upon-Tyne and Birmingham, for the augmentation of the water supply of the Burgh of Langholm. By this scheme additional springs in the Ewes Water Valley will be tapped, a new reservoir built, and the distributing in the town considerably improved. The cost is about 6,000*l.*, and the work will be commenced at once.

* All these applications are in the stage in which opposition to the grant of Patents upon them can be made.

List of Competitions, Contracts, etc.

For some Contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) are advertised in this number**: Competitions, —; Contracts, iv. vi. viii. x.; Public Appointments, —; Auction Sales, xxii.

Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Competitions.

ARCH 15. — **Drammen, Norway.**—RAILWAY-ION.—Particulars from the Norges Statsr, Christiania.

ARCH 15. — **Prestatyn, North Wales.** — ING-OUT ESTATE.—Lord Aberconway and the stees of the Prestatyn Estate invite designs laying-out of the estate Three premiums offered. Particulars from 33, Henrietta-et, W.C. See advertisement in issue of nary 5 for further particulars.

ARCH 16. — **Harrow.** — PUBLIC OFFICES.—The row-on-the-Hill U.D.C. invite tenders for the rgement of and alterations to their Public ces. See advertisement in issue of January 5 further particulars.

ERCH 25.—**Colchester.**—SCHOOL. -Limited to itects practising in the borough.

ARCH 30.—**Edinburgh.**—MEMORIAL TO KING VARD.—Limited. See Competition News, 5l, February 9.

ARCH 31.—**Manitoba, Canada.**—PARLIAMENT LDINGS.—The Government of Manitoba e designs for the new Parliament buildings e erected in the City of Winnipeg. See rtisement in issue of February 9 for further iculars

RIL 20.—**Birmingham.**—BLUE COAT SCHOOL. mited to local architects. Assessors, Mr. H. Hunt, F.R.I.B.A., and Mr. C. E. Bate-, F.R.I.B.A. Particulars from the Secre-, the Blue Coat School, Birmingham.

AY 1.—**Rhos Ruabon.**—PAIR OF WORKMEN'S TAGES.—Premiums of 10*l.* and 5*l.* Assessor, Raymond Unwin, F.R.I.B.A. Particulars Mr. G. Meirion Griffiths, Rhos Ruabon.

AY 1. — **Wombwell.**—SWIMMING BATHS.— Wombwell U.D.C. invite designs in com-ion for public swimming baths, to be ed in Hough-lane, Wombwell, Yorkshire. e prizes of the value of 40*l.*, 30*l.*, and 20*l.* ectively are offered for the designs placed second and third respectively by the ssor. See advertisement in issue of uary 16 for further particulars.

Y 15.—**Portland.**—COUNCIL OFFICES.—The land U.D.C invite competitive designs and s for Council Offices. See advertisement in of March 8 for further particulars.

NE 1.—**Dunfermline.**—INSTITUTE AT NETHER-.—Cost not to exceed 7,000*l.* Premiums of 150*l.*, and 100*l.* Assessor, Mr. E. A. Jamieson. cialars from the Secretary, Carnegie Trust, ot-street, Dunfermline.

NE 28.—**Hale, Cheshire.**—TOWN PLANNING ME.—Premiums 50*l.* and 25*l.* Particulars the Council Offices, Hale.

NE 30.—**Padiham.**—TOWN HALL, BATHS, ETC. emiums 40*l.* and 20*l.* Particulars from Mr. Pregson, A.M.Inst.C.E., Surveyor's Office, ham.

LY 1. — **Dusseldorf.** — A plan for the sion of the City of Dusseldorf. Premiums 000*l.* to 375*l.* Conditions on application to Chief Burgomaster, Dusseldorf. A transla-appeared on page 365, September 29.

GUST 30. — SAXON SNELL PRIZE. — Fifty eas; with medal, is offered for essay on a tal subject. Particulars from the Sanitary tute, 90, Buckingham Palace-road, S.W.

DATE. — **Cardiff.** — FOOTBALL STANDS.—Pre-s 30*l.*, 20*l.*, and 10*l.* Particulars from S. Arthur, 53, Queen-street, Cardiff.

DATE.—**Jordanhill, Glasgow.**—PROPOSED NING COLLEGE.—Limited to six firms, named mpetition News, December 1, page 635.

DATE. — **Ormskirk.** — CLUB-HOUSE.—Com-ve plans are invited for proposed club-, for Ormskirk Golf Club. See advertise-in issue of March 1 for further particulars.

DATE. — **Sheffield.** — CRIPPLES' HOME. — ted to local architects. Mr. E. M. Gibbs, .B.A., and Mr. F. E. P. Edwards, .B.A., assessors.

DATE. — **Warrington.** — SCHOOL. — The ington Education Committee invite com-ve plans for the erection of a public ntary school. See advertisement in issue bruary 16 for further particulars.

Contracts.

BUILDING.

date given at the commencement of each graph is the latest date when the tender, or ames of those willing to submit tenders, be sent in.

CH 15.—**Hepworth.**—ADDITIONS.—For erec-of additions and alterations to the stores he Hepworth Industrial Society, Ltd. Plans seen, and quantities from Mr. J. Berry, architect and surveyor, 3, Market-place, Huddersfield.

MARCH 16. **Eccles.**—STORE.—Erection of a store-shed in the Town Hall yard, Irwell-place. Drawings, etc., seen, and quantities, on deposit of 1*l.* 1s., from the Borough Surveyor, Town Hall, Eccles.

MARCH 16.—**Pontymister.**—ALTERATIONS.—For alterations to the Forge Hammer Inn. Particulars with Mr. C. M. Davies, M.S.A., High-street, Merthyr Tydfil.

MARCH 17. — **Macclesfield.** ADDITIONS.—For additions at the public baths. Specifications and quantities from Mr. Chas. W. Stubbs, Borough Surveyor.

MARCH 18. — **Arbroath.** — ALTERATIONS. — For altering and adapting the corn exchange and butter market for cinematograph entertainments. Plans and specifications with Mr. P. C. Smith, Burgh Engineer, Arbroath; or Mr. D. Tullis Dunn, Surveyor, 112, Bath-street, Glasgow. Deposit of 1*l.*

MARCH 18. **Dalton.**- ADDITIONS.—Erection of additions to Greenside Store, for the Huddersfield Industrial Society, Ltd. Plans seen, and quantities from Mr. J. Berry, architect and surveyor, 3, Market-place, Huddersfield.

MARCH 18. — **Dungannon.** — HOUSES. — The Governors of Charles Sheils Institution, Dungannon, invite tenders for the erection of a block of houses, laundry, etc., adjacent to the present houses Plans and specification with Messrs Young & Mackenzie, architects, Scottish Provident Buildings, Belfast, and quantities from Mr. S. C. Hunter, building surveyor, Belfast, on deposit of 2*l.* 2s.

MARCH 18. — **Harrogate.** - ALTERATIONS -For alterations to the old Town Hall. Plans seen and quantities from Mr. C. E. Rivers, A.M.Inst.C.E., Borough Engineer and Surveyor.

MARCH 18. **Huddersfield.** — SHELTER. — For erection of a shelter in Norman Park, Birkby. Plans, specifications, and general conditions seen, and quantities and forms of tender from Mr. K. F. Campbell, M.Inst.C.E., Borough Engineer and Surveyor, Peel-street.

MARCH 18.—**Kendal.**—HOUSES.—For erection of two additional almshouses on Aynam-road. Plans and quantities with Mr. John Hutton, Lic.R.I.B.A., architect, Kendal.

MARCH 18. **Lancaster.**—WALLS.—For erection of walls on Slyne-road. Particulars and forms of tender with the Borough Surveyor.

* MARCH 18. — **Lewes.** — SCHOOL. — The East Sussex Education Committee invite tenders for new secondary school for girls. See advertisement in this issue for further particulars.

MARCH 19.—**Belfast.** PICTURE PALACE.—For erection of new picture palace at Newtownards-road, for Irish Electric Palaces, Ltd. Quantities from Messrs. M'Carthy & Brooks, Scottish Provident-buildings. Plans and specification with Mr. Thomas Houston, architect and civil engineer, Kingscourt, Wellington-place, Belfast.

MARCH 19.—**Linthwaite.** HOUSES.—Erection of six dwelling-houses near Royal Oak. Plans seen, and quantities from Messrs. Lunn & Kaye, architects and surveyors, Milnsbridge.

MARCH 19.—**Middlesbrough.**—ADDITIONS, ETC. —The North-Eastern Railway Company invites tenders for additions and alterations to offices, Middlesbrough Goods Warehouse. Plans and specification with the Station-master, Middlesbrough. Quantities and information from Mr. William Bell, the company's architect, at York.

MARCH 19.—**Pontypool.**—ALTERATIONS For alterations and improvements to the George-street Council School. Plans and specification with Mr. John Bain, F.R.I.B.A., County Council Offices, Newport, Mon.

MARCH 20. - **Keighley.** — ALTERATIONS. — For alterations to the cottage, No. 210, Oakworth-road. Drawings seen, and specification and quantities from Messrs. Moore & Crabtree, architects, York-chambers, Keighley.

MARCH 20.—**Keighley.** TOOL-HOUSE Erection of a tool-house at the Sewage Farm, Steeton. Also for laying of water main in Thornhill-road, Steeton. Plans, specifications, and quantities with Mr. Thomas Burton, Surveyor and Sanitary Inspector, 80, Cark-road Keighley.

MARCH 20.—**Lurgan.** FACTORY. For erection of a factory, etc., at Tanderagee-road, Lurgan Plans and specification with Messrs. Young & Mackenzie, architects, Scottish Provident Buildings, Belfast, and quantities from Messrs W. H. Stephens & Sons, building surveyors, Belfast, on deposit of 2*l.* 2s.

MARCH 21. — **Abercynon.** — WALL, ETC. — For taking down and rebuilding about 50 yds. of river wall, with construction of breakwaters in the river bed near the Glyncoch Mill. Plans, specification, and quantities from Mr. W. R. Harris, Clerk to the Committee, Town Hall, Merthyr Tydfil.

MARCH 21.—**Egremont.**—COTTAGES.—Erection of two cottages at Briscoe Mill. Plans and specifications with Messrs. W. G. Scott & Co., architects and surveyors, 2, Park-lane, Workington.

MARCH 21.—**Rhondda.** — HOUSE. -Erection of manager's house at Wattstown, Rhondda. Plans and specification seen, and quantities on deposit of 2*l.* 2s., from Messrs. A. O. Evans, Williams, & Evans, architects, Pontypridd.

MARCH 21. -**Sherborne.**—COTTAGES.—For erecting thirty-one workmen's cottages on the Ludbourne Hall Estate. Plans and specifications with Mr. Duncan Brown, Surveyor, Council Offices, South-street, Sherborne.

MARCH 22.—**Batley.**—ADDITIONS, ETC.—For alterations or additions to the Batley (Boys') Grammar School in Carlinghow-hill. Plans, specifications, and quantities with Messrs. W. Hanstock & Son, Branch-road, Batley.

MARCH 22. **Bourne.**—VILLAS.—For erecting a pair of villas in West-road. Plans and specifications with Mr. T. A. Morris, West-street, Bourne.

MARCH 23.—**Orkney.** -ADDITION.—For construction of an addition of 140 ft. to the pier at Scapa, Orkney, in cement concrete, the widening of the existing pierhead by 7 ft., erection of a Customs watch-house, and other works. Plans and specifications by Mr. M. Heddle, engineer, Broad-street, Kirkwall. Specification and quantities on deposit of 1*l.* 1s. to Mr. D. J. Robertson, Clerk to the Orkney Harbours' Commissioners, Kirkwall.

MARCH 25.—**Belfast.**—BUILDING.—The Great Northern Railway Company (Ireland) invite tenders for the erection of a brick building, containing a sand store and furnace, at their Adelaide and Windsor locomotive depôt, near Belfast, and also for a two-story house at Castlebiayney Station. Drawings and specifications at the Engineer's Offices at Dublin and Belfast, and quantities and forms of tender from Mr. T. Morrison, Secretary, Secretary's Office, Amiens-street Terminus, Dublin. Deposit of 2*l.* 2s.

MARCH 25. -**Braintree.**—BATH.—Construction of an open-air concrete swimming-bath. Plans and specification with Mr. H. H. Nankivell, Surveyor, Vestry Hall, Braintree.

* MARCH 25. **Southampton.** ALTERATIONS.— Tenders are invited for alterations to No. 122 and 124, Above Bar, Southampton. See advertisement in this issue for further particulars.

MARCH 26.—**Cradley.**—OFFICES, ETC.—The Great Western Railway invites tenders for the erection of a goods shed, offices, etc., at Cradley, Staffs. Plans and specification seen, and forms of tender and quantities at the office of the Engineer at Wolverhampton Station.

MARCH 26.—**Croydon.**—HOUSE, ETC.—Erection of a boiler-house and chimney at the Borough Hospital. Plans and specifications seen, and quantities and form of tender at the office of the Borough Engineer, Town Hall, Croydon. Deposit of 1*l.* 1s.

MARCH 26. **Durham.** -BUILDINGS.—For erection of a new block of college buildings, for the St. John's College, Durham University. Specifications and quantities with Messrs. J. Potts & Son, architects and surveyors, 12, Eldon-square, Newcastle-on-Tyne. Deposit of 2*l.* 2s.

MARCH 26. — **London.** — ADDITIONS, ETC. — Alterations and additions to the Marsh street boys' school. Names to the architect, Mr. H. Prosser, M.S.A., Architect to the Committee. Quantities on deposit of 5*l.* to Mr. T. W. Liddiard, Secretary to the Committee, Education Committee Offices, High-street, Walthamstow.

MARCH 26. — **Oldham.** EXTENSION.—For erection of an extension of the existing Town Hall and Municipal Buildings. Plans seen, and quantities and forms of tender from the architects, Messrs. Taylor & Simister, 29, Queen-street, Oldham. Deposit of 1*l.* 1s.

* MARCH 26. — **Sheffield.**—PURIFYING HOUSE.— The Directors of Sheffield United Gas Company invite tenders for erection of a brick and stone purifying house. See advertisement in this issue for further particulars.

MARCH 27.—**Belfast.**—ALTERATIONS.—For structural alterations at the Ormean-avenue Baths. Plans and conditions seen, and specification at the office of the City Surveyor; deposit of 1*l.* 1s.

MARCH 27. **Bridgend.** — ADDITIONS. — For alterations and additions to Emlyn House.

BUILDING—*continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

Plans and specifications seen, and quantities on deposit of 2l. 2s. from Messrs. Geo. F. Lambert & Son, architects and surveyors, Bridgend.

MARCH 27. **Chelmsford.** DWELLINGS.—Erection of thirty-eight working-class dwellings, in five blocks, on a site adjoining Rainsford-lane. Forms of tender, plans, and specification at the Borough Engineer's Office, 16, London-road, Chelmsford.

★ MARCH 28.—**Bristol.**—ALTERATIONS, ETC., TO WORKHOUSE.—The Bristol Guardians invite tenders for the builder's work in connexion with alterations and additions to the Southmead Workhouse. See advertisement in this issue for further particulars.

MARCH 28. **Portsmouth.**—REPAIRS, ETC.—For certain repairs and additions to the ferro-concrete and timber work to the landing-stage at the South Parade Pier, Southsea. Drawings and specification, on deposit of 1l. 1s., to Mr. G. Hammond Etherton, Town Clerk, Town Hall, Portsmouth.

★ APRIL 3. **Plymouth.**—NEW QUARTERS.—The Secretary of State for War invites tenders for warrant officers' and married soldiers' quarters, Fort Bovisand, Plymouth. See advertisement in this issue for further particulars.

APRIL 3.—**Salisbury.**—ROAD, ETC.—For erection of a new roof for the engine-room at the sewage-disposal works. Plans and specification seen, and form of tender from Mr. W. J. Goodwin, A.M.Inst.C.E., City Engineer and Surveyor, Municipal Offices, Salisbury.

★ APRIL 15.—**Tonbridge.**—SCHOOL.—The Kent Education Committee invite tenders for erection of a new girls' school. See advertisement in this issue for further particulars.

NO DATE.—**Buckden.**—HALL.—Erection of a township hall at Buckden, near Skipton. Plans seen and quantities from Mr. J. W. Broughton, architect, 19, High-street, Skipton.

NO DATE.—**Ely.** HOUSE, ETC.—Erection of superintendent's house, chief constable's offices, and constables' cottages. Mr. R. S. W. Perkins, County Surveyor, Ely. Deposit of 1l. 1s.

NO DATE. **Goole.** ALTERATIONS. For alterations to the house, Marshfield-road. Plans and specifications with Mr. F. Turner, architect, Goole.

NO DATE. **Haverthwaite.**—SCHOOLS.—Alterations and additions to the Haverthwaite Schools. Plans seen, and quantities from Messrs. Settle & Brundrit, A.R.I.B.A., architects, Ulverston and Barrow-in-Furness.

NO DATE. **Lossiemouth.** VILLA.—Erection of a villa. Mr. R. B. Pratt, architect, Elgin.

NO DATE. **Rawdon.**—SHED, ETC.—For erection of a new woollen shed, engine and boiler house, etc., Park Mills, Rawdon. Mr. George Foggitt, architect, Yeadon.

NO DATE **Scunthorpe.**—EXTENSIONS, ETC.—The Frodingham Iron and Steel Company, Ltd., invite tenders for extensions and alterations to office premises. Quantities and drawings with the Frodingham Iron and Steel Company, Ltd., Scunthorpe, Lincolnshire

ENGINEERING, IRON, AND STEEL.

MARCH 19. — **Belfast.** — BRIDGE.—The Great Northern Railway Company (Ireland) invite tenders for the construction of a bridge, with brick abutments and steel superstructure, under main lines, near Belfast. Drawings at the Engineer's Offices at Dublin and Belfast, and drawings, form of tender, specification, and quantities from Mr. T. Morrison, Secretary, Secretary's Office, Amiens-street Terminus, Dublin. Deposit of 2l. 2s.

MARCH 30. **Bedford.**—BRIDGES.—For construction of two bridges over the River Ouse and the Railrace from Cardington Mill. General conditions, specification, and form of tender from the Engineer, Major Hector Tulloch, C.B., R.E., No. 28 Victoria-street, London, S.W. Deposit of 3l. 3s.

APRIL 3.—**Blackpool.** HEATING.—For heating the Palatine-road new Council school. Particulars, with plans from Mr. John S. Brodie, Borough Engineer.

FURNITURE, PAINTING, MATERIALS, etc.

★ MARCH 25.—**London, W.**—WOOD FLOORING.—The St. Marylebone Guardians invite tenders for laying maple and pitch-pine flooring at Workhouse, Northumberland-street, Marylebone, W. See advertisement in this issue for further particulars.

★ MARCH 26. **Willesden.** VANS. — The Willesden D.C. invite tenders for supply of slop vans and water vans. See advertisement in this issue for further particulars.

★ MARCH 27.—**Dartford.** ALTERATIONS, PAINTING, ETC.—The Metropolitan Asylums Board invite tenders for fire-resisting works, cleaning, and painting works at the Small-pox Hospital. See advertisement in this issue for further particulars.

★ MARCH 27. **Grays.**—TEAK DECK.—The Metropolitan Asylums Board invite tenders for relaying the upper deck of the training ship *Exmouth* in teak. See advertisement in this issue for further particulars.

★ MARCH 27.—**Littlehampton and Hampstead.**—PAINTING, REPAIRS, ETC.—The Metropolitan Asylums Board invite tenders for cleaning, painting, and repairs at the following institutions:—Millfield, near Littlehampton, and the Fever Hospital, Hampstead, N.W. See advertisement in this issue for further particulars.

APRIL 2.—**London.**—PAINTING.—For painting, etc., a portion of the interior of schools, High road, Leytonstone. Forms of tender and specification, on deposit of 1l. 1s., from Mr. D. Thomas, Clerk to the Board, Bishops-road, Victoria Park, N.E.

ROADS, SANITARY AND WATER WORKS.

MARCH 21. — **Naburn.** — SEWERAGE.—For construction of works of sewage disposal at Naburn, near York. Plans, specification, quantities, etc., on deposit of 3l., from Mr. F. W. Spurr, City Engineer, Guildhall, York.

★ MARCH 27.—**Hampstead.**—TAR-PAVING. The Metropolitan Asylums Board invite tenders for tar-paving works at the Fever Hospital at Hampstead. See advertisement in this issue for further particulars.

★ MARCH 27.—**Hither Green.** ROAD DRAINAGE. The Metropolitan Asylums Board invite tenders for road drainage at the Park Hospital, Hither Green-lane, S.E. See advertisement in this issue for further particulars.

★ MARCH 28.—**Bath.** HEATING, WATER, ELECTRICAL WORK, ETC.—The Bristol Guardians invite separate tenders for:—(*a*) Boilers, economisers, steam pipes, pumps, heating apparatus, hot and cold water mains and services, hydrants, kitchen fittings, etc.; (*b*) electric light generating plant; (*c*) laundry machinery, motors, and appliances, all of which are in connexion with the alterations and additions to the Southmead Workhouse. See advertisement in this issue for further particulars.

Auction Sales.

Nature and Place of Sale.	By whom Offered.	Date of Sale.
*STOCK OF TIMBER, 115, BETHNAL GREEN-ROAD, E. On the Premises	Joseph Hibbard & Sons	Mar. 19
*DEALS, BATTENS, BOARDS, TIMBER, ETC.—Great Hall, Winchester House, E.C.	Churchill & Sim	Mar. 20
*FREEHOLD PROPERTY, FINCHLEY-ROAD—At the Mart	Fox, Bousfield, Burnetts, & Baddeley	Mar. 2
*FREEHOLD SHOP PLOTS AND SITES, ACTON—George and Dragon Hotel, Acton	Henry H. Collier & Madge	Mar. 28
*HOUSE AND SHOP, ST. PANCRAS—At the Mart	Rutley, Son, & Vine	April 2
*HOUSES, SHOPS, ETC.—At the Mart	Rutley, Son, & Vine	April 2

SOME RECENT SALES OF PROPERTY:

ESTATE EXCHANGE REPORT.

March 5.—By LEONARD T. DAVEY.

Bromley, Kent.—4, 6, 8, 12, 14, and 16, Florence-rd., u.t. 56 yrs., g.r. 39l., w.r. 201l. 10s. £780
4 and 6, Glebe-rd., u.t. 56 yrs., g.r. 13l., w.r. 59l. 16s. 260

By HIBBARD & WHITTINGHAM.

Bermondsey.—54 to 59, Martin-st., u.t. 34 yrs., g.r. 10l. 10s., w.r. 148l. 4s. 725

By MARK LIELL & SON.

Shoreditch.—242, 244, and 246, Brick-la.; 1, 2, and 3, Princes-ct., f., e.r. 139l. 14s. 1,350
Dalston.—5 and 7, Brownlow-rd., u.t. 33 yrs., g.r. 19l., y. and w.r. 73l. 12s. 390

By C. W. MAYNE.

South Kensington.—11, Coleherne-ter. (s.), u.t. 38 yrs., g.r. 15l., y.r. 130l. 1,350

By WEATHERALL & GREEN.

Aldershot, Hants.—Farnham-rd., plot of land, f. 100

By GEORGE LOVEITT & SONS.

Berkswell, Warwick. Waste-la., The Orchard, f. 440
Coventry, Warwick.—49 and 51, Cox-st., f. 405
22, 24, and 26, Lower Ford-st., f. 655

March 6.—By EDWIN FOX, BOUSFIELD, BURNETTS, & BADDELEY.

Norwood.—Central Hill, f.g.r. 15l., reversion in 23 yrs. 350
Whetstone.—High-rd., f.g.r. 22l., reversion in 16 yrs. 490
Stepney.—64, Maplin-st., f., w.r. 20l. 16s. 110

By HOBSON, RICHARDS, & CO.

Ponders End.—Northampton-rd., f.g. rents 17l. 10s., reversion in 66 yrs 290

By A. PREVOST & SON.

Mile End.—4, Grafton-st., u.t. 30 yrs., g.r 4l. 10s., w.r. 54l. 12s. 275
37, Grafton-st., u.t. 37 yrs., g.r. 6l., w.r. 46l. 16s. 235
Rectory-sq., Rectory Cottage, u.t. 51 yrs., g.r. 3l. 10s., w.r. 29l. 18s. 135

By ROBSON & PERRIN.

East Ham.—37 and 39, Henderson-rd., u.t. 78 yrs., g.r. 4l. 4s., w.r. 61l. 2s. £250
Clapton.—5, Sewdley-st., u.t. 65 yrs., g.r. 5l. 10s., w.r. 36l. 8s. 135

By T. B. WESTACOTT & SONS.

Highbury.—58 and 60, Riversdale-rd., u.t. 58½ yrs., g.r. 12l. 12s., e.r. 72l. 500

By DOUGLAS YOUNG & CO.

Notting Hill.—43, 44, and 45, St. James-sq., f., y. and e.r. 140l. 1,500
Battersea.—3, 5, 7, and 9, Ingrave-st., u.t. 37 yrs., g.r. nil, w.r. 123l. 16s. 630
Clapham.—27, Mayflower-rd., u.t. 70 yrs., g.r. 10l., e.r. 45l. 350

By GEORGE LOVEITT & SONS.

Stockingford, Warwick.—Galley Farm, 75 acres, f. 2,390

By SEDGWICK, SON, & WHALL.

Bickmansworth, Herts.—Swan Hotel and premises adjoining (unlicensed), area 3 a. 1 r. 27 p., f. 6,000

March 7.—By H. HOOKEY & CO.

Streatham.—82 and 84, Mitcham-la., f., w. and e.r. 117l. 1,350
Croydon.—Lower Church-st., Dome Picture Palace, beneficial lease for 3 to 21 yrs. at 100l. per annum. 100

By MONTAGU & ROBINSON.

New Southgate. — Bosworth-rd., f.g. rents 19l. 10s., reversion in 92½ yrs. 135

By NEWSON & SHEPHARDS.

Harringay. 315, Green-lanes (s.), u.t. 83 yrs., g.r 15l., y.r. 60l. 490
Holloway. 65, Hornsey rd. (s.), u.t. 33½ yrs., g.r 8l., y.r 40l. 185
Barnsbury.—32, Barbara-st., u.t. 48¼ yrs., g.r. 7l. 10s., y.r. 36l. 200
Islington.—89, 91, 93, 95, 101, and 103, Rotherfield-st., u.t 5½ yrs., g.r. 9l., y.r. 220l. 300

By STIMSON & SONS.

Battersea. 30, Chivalry rd and stabling, f., p. 1,220
Fulham.—68, Wardo av. (s.), u.t. 82¼ yrs., g.r. 8l., y.r. 50l. 650
Tooting.—61, Vant-rd., f., w.r. 33l. 16s. 275

By J. A. & W. THARP

Plumstead.—Melling-st., f.g. rents 21l., reversion in 86 yrs. 420

By WHITE & Co.

Dulwich.—239, Lordship-la., u.t. 67 yrs., g.r. 8l., w.r. 39l. £1

By GRIMLEY & SON.

Moseley, Worcester.—Woodstock-rd., Woodlands, u.t. 62 yrs., g.r. 7l. 10s. 1
King's Norton, Worcester —79 to 83, Macdonald-st.; 150 to 158 (even), Barford-st., f., w.r. 223l. 1,
Small Heath, Worcester.—664, Coventry-rd., u.t. 68 yrs., g.r. 4l. 15s. 1

March 8.—By A. G. BONSOR.

Kingston, Surrey.—90, Eden-st., area 6,025 ft f. 1

By HALL & NEWMAN.

Hackney.—8 to 15, Montagu-ter., u.t. 65 yrs., g.r. 32l., w.r. 136l. 10s. 1

By WALTER WINDHUM.

Hornsey.—37, 39, and 41, Clarendon-rd., f., y. and w.r. 86l. 6s. 7
Mile End.—7, 9, and 11, Berner-st., f., w.r. 156l. 12 and 13, Coke-st., f., w.r. 91l. 1
Plaistow.—183 and 185, Balaam-st., f., w.r. 78l. 3

Contractions used in these lists.—F.g.r. for freehold ground-rent; l.g.r. for leasehold ground-rent; i.g.r. for improved ground-rent; g.r. for ground-rent; r. for rent; f. for freehold; c. for copyhold; l. for leasehold; p. for possession; e.r. for estimated rental; w.r. for weekly rental; q.r. for quarterly rental; y.r. for yearly rental; u.t. for unexpired term; p.a. for per annum; yrs. for years; la. for lane; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; cres. for crescent; av. for avenue; gdns. for gardens; yd. for yard; gr. for grove; b.h. for beerhouse; p.h. for public-house; o. for offices; s. for shops; ct. for court.

TERMS OF SUBSCRIPTION.

"THE BUILDER" (Published Weekly) is supplied DIRECT from the Office to residents in any part of the United Kingdom at the prepaid rate of 18s. per annum, with delivery by *Friday Morning's Post* in London and its suburbs.

To Canada, post-free, 21s. 8d. per annum; and to all parts of Europe, America, Australia, New Zealand, India, China, Ceylon, etc., 26s. per annum.

REMITTANCES (payable to J. MORGAN) should be addressed to The Publisher of "THE BUILDER," 4, Catherine-street, W.C.

ICES CURRENT OF MATERIALS.

Our aim in this list is to give, as far as possible, the ages prices of materials, not necessarily the lowest. ity and quantity obviously affect prices—a fact h should be remembered by those who make use of information.

BRICKS, &c.

Per 1000 Alongside, in River. £ s. d.

Stocks 1 14 0
ed Stocks for Facings 2 7 0

Per 1000, Delivered at Railway Depôt.

£ s. d.

tons 1 12 0
Fareham
d 3 12 0
Red Pressed
abon Facing 5 0 0

ED BRICKS—

s White, Double Headers 13 17 6
ory, and Salt One Side and two
zd.Str'tch'rs 11 7 6 Ends 17 17 6
lers ..... 10 17 6 Two Sides and
ns, Bullnose, one End 18 17 6
1 1/4 in. Flats 14 17 6 Splays & Squints 16 7 6
e Stretchers 16 17 6

Second Quality £1 10s. per 1000 less than best.

s. d.

nes and Pit Sand ..... 6 9 per yard, delivered.
nes Ballast ..... 5 6 "
Portland Cement ..... 31 0 per ton, "
Ground Blue Lias Lime 19 0 "

TE—The cement or lime is exclusive of the ordinary charge for sacks.

Stone Lime ..... 13s. 0d. per yard delivered.
bridge Fireclay in sacks 27s. 0d. per ton at rly dpt.

STONE.

Per Ft. Cube.

STONE — delivered on road waggons, s. d.
ddington Depôt 1 6½
lo. delivered on road waggons, Nine Elms pôt 1 8½

LAND STONE (20 ft. average)—
wn Whitbed, delivered on road waggons, ddington Depôt, Nine Elms Depôt, or imlico Wharf 2 3
ite Basebed, delivered on road waggons ddington Depôt, Nine Elms Depôt, or imlico Wharf 2 4½

Per Ft. Cube, delivered at Railway Depôt.

s. d. s. d.

ster in blocks.. 1 10 Closeburn Red
in blocks ..... 1 6 Freestone 2 0
shill in blocks 1 10 Red Mansfield
y Dale in Freestone 2 4
ks ..... 2 4 Talacre & Gwespyr
Corsehill in Stone 2 4
ks 2 8

STONE—*Robin Hood Quality.*

Per Ft. Cube, Delivered at Railway Depôt. s. d.
led random blocks 2 10

Per Ft. Super., Delivered at Railway Depôt.
sawn two sides landings to sizes (under
t. super.) 2 3
ubbed two sides ditto, ditto 2 6
awn two sides slabs (random sizes)..... 0 11½
o 2½ in. sawn one side slabs (random sizes) 0 7
to 2 in. ditto, ditto..... 0 6

YORK—

Per Ft. Cube, Delivered at Railway Depôt.
led random blocks 3 0

Per Ft. Super., Delivered at Railway Depôt.
awn two sides landing to sizes (under 40 ft.
ths.) 2 8
ubbed two sides ditto 3 0
awn two sides slabs (random sizes) 1 2
elf-faced random flags 0 5

SLATES.

Per 1000 of 1200 at Railway Depôt.

£ s. d. In. In. £ s. d.

best blue 20×10 best Eur'ka
gor ..... 13 2 6 unfading green 15 17 6
ditto ..... 13 17 6 20×12 ditto 18 7 6
1st quality 18×10 ditto 13 5 0
16×8 ditto 10 5 0
ditto ..... 13 15 0 20×10 permanent
utto ..... 7 5 0 green 11 12 6
best blue 18×10 ditto 9 12 6
madoc..... 12 12 6 16×8 ditto 6 12 6
litto 6 12 6

TILES.

At Railway Depôt.

s. d. s. d.

lain red roof- Best "Hartshill"
per 1000) ..... 42 0 brand, plain sand-
ip and Valley faced (per 1000) ... 50 0
per doz.)..... 3 7 Do. pressed (per
Broseley (per 1000) 47 6
) ..... 50 0 Do. Ornamental (per
namental (per 1000) 50 0
..... 52 6 Hip (per doz.)... 4 0
p and Valley Valley (per doz.) 3 6
per doz.) ..... 4 0 Staffords. (Hanley)
Rhuabon red, Reds or Brindled
n, or brindled (per 1000) 42 6
r'ds) (per 1000) 57 6 Hand-made sand-
namental (per faced (per 1000) 45 0
..... 60 0 Hip (per doz.)... 4 0
p (per doz.)... 4 0 Valley (per doz.) 3 6
lley (per doz.) 3 0

WOOD.

BUILDING WOOD. At per standard.

best 3 in. by 11 in. and 4 in. £ s. d. £ s. d.
9 in. and 11 in..... 14 0 0 ... 15 10 0
best 3 by 9 ..... 13 10 0 ... 14 10 0

WOOD (*Continued*).

BUILDING WOOD (*Continued*)— At per standard.

Battens: best 2½ in. by 7 in. and £ s. d. £ s. d.
8 in., and 3 in. by 7 in. and 8 in. 11 10 0 ... 12 10 0
Battens: best 2½ by 6 and 3 by 6... 0 10 0 ... less than 7 in. and 8 in.
Deals: seconds ..... 1 0 0 less than best.
Battens: seconds ..... 0 10 0 " "
2 in. by in. and 2 in. by 6 in. ... 9 10 0 ... 10 10 0
2 in. by 4½ in. and 2 in. by 5 in. 9 0 0 ... 10 0 0
Foreign Sawn Boards—
1 in. and 1¼ in. by 7 in. ..... 0 10 0 more than battens.
¾ in. ..... 1 0 0 "
Fir timber: best middling Dantzig At per load of 50 ft.
or Memel (average specification) 5 0 0 ... 5 10 0
Seconds ..... 4 10 0 ... 5 0 0
Small timber (8 in. to 10 in.) ... 3 17 6 ... 4 0 0
Small timber (6 in. to 8 in.)..... 3 5 0 ... 3 10 0
Swedish balks ..... 2 12 6 ... 3 0 0
Pitch-pine timber (30 ft. average) 5 5 0 ... 6 0 0

JOINERS' WOOD. At per standard.

White Sea: first yellow deals,
3 in. by 11 in..... 24 10 0 ... 25 10 0
3 in. by 9 in. ..... 22 10 0 ... 23 10 0
Battens, 2½ in. and 3 in. by 7 in. 17 0 0 ... 18 0 0
Second yellow deals, 3in. by 11in. 19 0 0 ... 20 0 0
" " 3 in. by 9 in. 18 0 0 ... 19 10 0
Battens, 2½ in. and 3in. by 7 in. 14 0 0 ... 15 0 0
Third yellow deals, 3 in. by
11 in. and 9 in. ..... 14 0 0 ... 15 0 0
Battens, 2½ in. and 3 in. by 7 in. 11 10 0 ... 12 10 0
Petersburg: first yellow deals,
3 in. by 11 in. ..... 21 10 0 ... 22 10 0
Do. 3 in. by 9 in. ..... 18 10 0 ... 19 10 0
Battens ..... 14 0 0 ... 15 0 0
Second yellow deals, 3 in. by
11 in ..... 16 10 0 ... 17 10 0
Do. 3 in. by 9 in. ..... 15 0 0 ... 16 0 0
Battens ..... 11 10 0 ... 12 10 0
Third yellow deals, 3in. by 11 in. 13 10 0 ... 14 10 0
Do. 3 in. by 9 in. ..... 13 0 0 ... 14 0 0
Battens ..... 10 10 0 ... 11 0 0
White Sea and Petersburg—
First white deals, 3 in. by 11 in. 15 0 0 ... 16 0 0
" " 3 in. by 9 in. 14 0 0 ... 14 10 0
Battens ..... 11 10 0 ... 12 10 0
Second white deals, 3in. by 11in. 14 0 0 ... 15 0 0
" " 3 in. by 9 in. 13 0 0 ... 14 0 0
Battens ..... 10 10 0 ... 11 0 0
Pitch-pine: deals ..... 19 0 0 ... 21 0 0
Under 2 in. thick extra..... 0 10 0 ... 1 0 0
Yellow Pine—First, regular sizes 48 0 0 upwards.
Oddments ..... 32 0 0 "
Seconds, regular sizes ..... 33 0 0 "
Oddments ..... 28 0 0 "
Kurui Pine—Planks per ft. cube. 0 4 6 ... 0 6 0
Dantzig and Stettin Oak Logs—
Large, per ft. cube..... 0 3 0 ... 0 3 9
Small " " ..... 0 2 6 ... 0 2 6
Wainscot Oak Logs, per ft. cube 0 6 6 ... 0 8 0
Dry Wainscot Oak, per ft. sup. as inch ..... 0 0 10 ... 0 1 0
⅜ in. do. ..... 0 0 8½ ... —
Dry Mahogany—Houndras, Tabasco, per ft. super. as inch.. 0 0 10 ... 0 1 1
Selected, Figury, per ft. super. as inch ..... 0 1 6 ... 0 2 6
Dry Walnut, American, per ft. super. as inch ..... 0 0 10 ... 0 1 0
Teak, per load ..... 18 0 0 ... 22 0 0
American Whitewood planks, per ft. cube ..... 0 5 0 ... 0 6 0
Prepared Flooring, etc.— Per square.
1 in. by 7 in. yellow, planed and shot ..... 0 13 6 ... 0 17 0
1 in. by 7 in. yellow, planed and matched ..... 0 14 0 ... 0 18 0
1¼ in. by 7 in. yellow, planed and matched ..... 0 16 0 ... 1 0 0
1 in. by 7 in. white, planed and shot ..... 0 12 0 ... 0 14 6
1 in. by 7 in. white, planed and matched..... 0 12 6 ... 0 15 0
1¼ in. by 7 in. white, planed and matched..... 0 15 0 ... 0 16 6
⅞ in. by 7 in. yellow, matched and beaded or V-jointed brds. 0 11 0 ... 0 13 6
1 in. by 7 in. " " 0 14 0 ... 0 18 6
⅞ in. by 7 in. white " " 0 10 0 ... 0 11 0
1 in. by 7 in. " " 0 12 9 ... 0 15 0

6 in. at 6d. to 9d. per square less than 7 in.

JOISTS, GIRDERS, &c.

In London, or delivered Railway Vans, per ton.

Rolled Steel Joists, ordinary £ s. d. £ s. d.
sections ..... 7 10 0 ... 8 0 0
Compound Girders, ordinary sections ..... 9 10 0 ... 10 0 0
Steel Compound Stanchions ..... 11 0 0 ... 12 0 0
Angles, Tees, and Channels, ordinary sections ..... 9 10 0 ... 10 0 0
Flitch Plates ..... 9 10 0 ... 10 0
Cast Iron Columns & Stanchions, including ordinary patterns ... 7 10 0 ... 8 10 0

METALS.

Per ton, in London.

IRON— £ s. d. £ s. d.
Common Bars ..... 9 0 0 ... 9 10 0
Staffordshire Crown Bars, good merchant quality ..... 9 5 0 ... 9 15 0
Staffordshire "Marked Bars" 11 0 0 ... —
Mild Steel Bars ..... 9 5 0 ... 9 15 0
Hoop Iron, basis price ..... 10 0 0 ... —
" " Galvanised..... 17 10 0 ... —
(*And upwards, according to size and gauge.)
Sheet Iron Black—
Ordinary sizes to 20 g. ..... 10 5 0 ... —
" " 24 g. ..... 11 5 0 ... —
" " 26 g. ..... 12 15 0 ... —
Sheet Iron, Galvanised, flat, ordinary quality—
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g. ..... 15 10 0 ... —
Ordinary sizes to 22 g. and 24 g. 16 0 0 ... —
" " 26 g..... 17 0 0 ... —
Sheet Iron, Galvanised, flat, best quality—
Ordinary sizes to 20 g. ..... 18 10 0 ... —
" " 22 g. and 24 g. 19 0 0 ... —
" " 26 g. ..... 20 10 0 ... —

METALS (*Continued*).

IRON (*Continued*)— Per ton, in London.

Galvanised Corrugated Sheets— £ s. d. £ s. d.
Ordinary sizes, 6ft. to 8ft. 20 g. 15 0 0 ... —
" " 23 g. and 24 g. 15 5 0 ... —
" " 25 g. ..... 16 15 0 ... —
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker..... 12 10 0 ... —
Best Soft Steel Sheets, 2 g. & 24 g. 13 10 0 ... —
" " 26 g. ..... 15 10 0 ... —
Cut Nails, 3 in. to 6 in..... 11 0 0 ... 11 10 0
(Under 3 in., usual trade extras.)

LEAD, &c.

£ s. d.

LEAD—Sheet, English, 4lb. and up 19 15 0 ... —
Pipe in coils ..... 20 5 0 ... —
Soil pipe ..... 23 5 0 ... —
Compo pipe ..... 23 5 0 ... —
ZINC—Sheet— In casks of 10 cwt.
Vielle Montagne ..... 33 10 0 ... —
Silesian ..... 33 5 0 ... —
Zinc, in bundles, 1s. per cwt. extra.

COPPER—
Strong Sheet .....per lb. 0 1 0 ... —
Thin " " 0 1 1 ... —
Copper nails..... " 0 0 10 ... —
Copper wire ..... " 0 0 10 ... —
BRASS—
Strong Sheet ..... " 0 0 11 ... —
Thin ..... " 0 1 0 ... —
TIN—English Ingots ..... " 0 1 11 ... —
SOLDER—Plumbers' ... . " 0 0 8½ ... —
Tinmen's ..... " 0 0 11 ... —
Blowpipe ..... " 0 1 2 ... —

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

15 oz. thirds ..... 2½d. 26 oz. fourths ..... 3½d.
" fourths ..... 1¾d. 32 oz. thirds..... 5d.
21 oz. thirds..... 3d. " fourths ..... 4½d.
" fourths ..... 2½d. Fluted Sheet, 15 oz. 3¾d.
26 oz. thirds..... 4d. " 21 oz. 4½d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

¼ Hartley's ..... 2d. Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white..... 3½d.
⅛ " ..... 2¼d.
⅜ " ..... 2½d. Ditto, tinted..... 5d.

* Not less than three crates.

OILS, &c.

£ s. d.

Raw Linseed Oil in pipes ..... per gallon 0 3 2
" " " in barrels ..... " 0 3 3
" " " in drums ..... " 0 3 5
Boiled " in barrels..... " 0 3 5
" " " in drums ..... " 0 3 8
Turpentine in barrels ..... " 0 2 10
" in drums ..... " 0 3 0
Genuine Ground English White Lead, per ton 26 10 0
Red Lead, Dry ..... " 23 5 0
Best Linseed Oil Putty ..... per cwt. 0 10 0
Stockholm Tar ..... per barrel 1 12 0

VARNISHES, &c.

Per gallon.

£ s. d.

Fine Pale Oak Varnish 0 8 0
Pale Copal Oak 0 10 6
Superfine Pale Elastic Oak 0 12 6
Fine Extra Hard Church Oak..... 0 10 0
Superfine Hard-drying Oak, for seats of Churches 0 14 6
Fine Elastic Carriage 0 12 0
Superfine Pale Elastic Carriage 0 16 0
Fine Pale Maple 0 10 0
Finest Pale Durable Copal 0 18 0
Extra Pale French Oil 1 1 0
Eggshell Flating Varnish 0 18 0
White Pale Enamel..... 1 4 0
Extra Pale Paper 0 12 0
Best Japan Gold Size 0 10 6
Best Black Japan..... 0 16 0
Oak and Mahogany Stain 0 9 0
Brunswick Black 0 8 0
Berlin Black 0 16 0
Knotting 0 10 9
French and Brush Polish 0 10 6

TO CORRESPONDENTS.

NOTE.—All communications with respect to literary and artistic matters should be addressed to "THE EDITOR" (and not to any person by name); those relating to advertisements and other exclusively business matters should be addressed to "THE PUBLISHER," and not to the Editor.

All communications must be authenticated by the name and address of the sender, whether for publication or not. No notice can be taken of anonymous communications.

The responsibility of signed articles, letters, and papers read at meetings rests, of course, with the authors.

We cannot undertake to return rejected communications; and the Editor cannot be responsible for drawings, photographs, manuscripts, or other documents, or for models or samples sent to or left at this office, unless he has specially asked for them.

All drawings sent to or left at this office for consideration should bear the owner's name and address on either the face or back of the drawing. Delay and inconvenience may result from inattention to this.

Any communication to a contributor to write an article, or to execute or lend a drawing for publication, is given subject to the approval of the article or drawing, when received, by the Editor, who retains the right to reject it if unsatisfactory. The receipt by the author of a proof of an article in type does not necessarily imply its acceptance.

N.B. Illustrations of the First Premiated Design in any important architectural competition will always be accepted for publication by the Editor, whether they have been formally asked for or not.

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us not later than 6 p.m. on Wednesday. [N.B.—We cannot publish Tenders unless authenticated either by the architect or the building owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is stated, nor any list in which the lowest Tender is under 100l. unless in some exceptional cases and for special reasons.]

* Denotes accepted. † Denotes provisionally accepted.

BLACKWOOD.—For erection of a new mission hall, for the rector and churchwardens of St. Margaret's Church, Blackwood. Mr. A. F. Webb, M.S.A., architect and surveyor, Blackwood:—

J. Newcombe & Son	£2,355	Passmore & Perkins,	
W. Watkins	2,298	Pontllanfraith*	£2,150
Leadbeter & Co.	2,245	T. Matthews	2,126
E. J. Davies & Co.	2,170		

BURNLEY.—For construction of a concrete river wall at Altham Sewage Works, for Burnley Corporation. Mr. G. H. Pickles, M.Inst.C.E., Borough Engineer and Surveyor, Burnley. Quantities by Engineer:—

M. & J. W. Heap, Clifton-street, Burnley* £567 10

CHEPSTOW.—For erection of a police-station. Mr. W. Tanner, F.S.I., County Surveyor, Chepstow:—

D. Bendall & Son	£2,500	G. F. Leadbeter	£2,196
J. Perkins & Son, Ltd.	2,487	J. Jenkins, Ltd.	2,150
G. Edwards	2,448	C. H. Reed	2,126
J. W. Griffiths	2,375	H. J. Herbert	2,100
J. H. Williams	2,287	Poulton & Whiting	2,050
R. W. Moon	2,277	Kirby & Westacott, Newport*	2,029
E. F. King & Co	2,250		

LONDON.—For cleaning and painting the Highbury Industrial School, Ishngton, for the London County Council:

J. Grover & Son	£1,100	W. Silk & Son	£989
McCormick & Sons, Ltd.	1,029	E. Lawrance & Sons, Ltd.	949
A. E. Symes	1,015	Vigor & Co.	810

[The Architect's estimate, comparable with the tenders, is £845.]

LONDON.—For construction of sanitary conveniences in Blackshaw-road, Tooting, and on Clapham-common, for Wandsworth Borough Council:—

Erection of Sanitary Convenience for Women in High-street, Putney, adjoining London and South-Western Railway.

W. Johnson & Co., Ltd. £696

Construction of Underground Sanitary Conveniences in Blackshaw-road, near its junction with Tooting High-street.

Dowsett & Jenkins £1,096

Erection of Sanitary Convenience for Women on Clapham-common, near Clapham Cross.

Dowsett & Jenkins £575

PUDSEY.—For erection of a pair of semi-detached houses in New-street. Messrs. Nelson & Birkinshaw, architects, Leeds:

G. Verity & Son, Lowtown, Pudsey* £778

[Fifty six tenders in all received.]

ROSS.—For reconstruction of Free Library premises into Public Offices and Reading Rooms, for Ross Urban District Council. Messrs. Small & Ashton, architects, Ross—

Peake	£686	Kemp & Sons, Ross*	£587
Lewis	608	Clark ‡	563

‡ Withdrawn.

SKEFFORD.—For new Wesleyan Church. Messrs. George Baines & Son, architects, 5, Clement's Inn, Strand, London, W.C.:

	Estimate A.	B.	C.	D.	E.	F.
		Saving.				
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
C. Wright‡	2,080 0 0	15 0 0	30 0 0	12 0 0	21 0 0	9 0 0
Henson & Son	2,116 10 8	10 10 0	28 0 0	25 19 8	28 0 0	15 16 6
Redhouse & Son	2,159 0 0	16 0 0	26 10 0	75 0 0	30 0 0	13 0 0
Corby & Son	2,219 0 0	16 0 0	40 0 0	20 0 0	30 0 0	11 15 0
Willmott & Sons	2,224 0 0	13 0 0	30 0 0	85 0 0	35 0 0	15 0 0
C. Souster	2,278 0 0	19 10 0	35 0 0	30 9 2	34 0 0	14 6 0
Battley, Sons, & Holness	2,235 0 0	11 10 0	36 0 0	96 0 0	43 0 0	19 10 0
S. Foster	2,330 0 0	12 0 0	28 0 0	20 0 0	30 0 0	18 0 0
Lewin & Son	2,496 0 0	10 0 0	31 0 0	23 0 0	32 0 0	33 0 0

‡ Accepted with modifications.

LIVERPOOL.—For erection of an operating department at the workhouse, Brownlow-hill. Messrs. Haigh & Thompson, architects, 2, Exchange-street East, Liverpool:—

A. W. Pople & Co., Shaw-street, Liverpool* £1,140

LONDON.—For the enlargement of the Riley-street School for Mentally Defective Children, Bermondsey, for the London County Council:—

F. Smith & Co.	£2,088 12 3
W. Smith & Son	2,016 0 0
Rice & Son	2,015 0 0
H. Groves	1,897 0 0
Galbraith Bros., Ltd.	1,889 5 6
G. Parker & Sons	1,890 0 0
T. D. Leng	1,795 0 0
J. Marsland & Sons	1,788 0 0
J. Appleby & Sons	1,756 0 0
W. King & Son	1,745 0 0
E. A. Roome & Co.	1,715 0 0

[The Architect's estimate, comparable with the tenders, is £1,728.]

LONDON.—Rebuilding of Vauxhall-street School, Kennington, and erection of a domestic economy centre, for the London County Council:—

J. Appleby & Sons	£28,334	C. Wall, Ltd.	£24,166
J. Marsland & Son	25,541	G. Godson & Sons	23,457
W. King & Son	25,390	Rowley Bros.	23,457
W. Downs	25,390	J. & C. Bowyer, Ltd.	22,759
W. Johnson & Co., Ltd.	24,350		

[The Architect's estimate, comparable with the tenders, is £23,500.]

SOUTHAMPTON.—For alterations and extensions to No. 128, Above Bar, Southampton, for Colonel Bance. Mr. Wm. Burrough Hill, F.S.I., architect and surveyor, Southampton:—

H. Stevens & Co.	No. 1 Estimate	£143 0
	No. 2 "	226 0
	No. 3 "	110 0
		£479
A. Wright & Son		£469
F. Kimber	No. 1 Estimate	£115 10*
	No. 2 "	213 10*
	No. 3 "	120 0
		£449

Ham Hill Stone.
Doulting Stone.
Portland Stone.
The Ham Hill and Doulting Stone Co., Limited
(incorporating the Ham Hill Stone Co. and C. Trask & Son, The Doulting Stone Co.).
Norton, Stoke-under-Ham, Somerset.
London Agent:—Mr. E. A. Williams, 16, Craven-street, Strand.

Asphalte.—The Seyssel and Metallic Lava Asphalte Co. (Mr. H. Glenn), Office, 42, Poultry, E.C.—The best and cheapest materials for damp courses, railway arches, warehouse floors, flat roofs, stables, cow-sheds and milk-rooms, granaries, tun-rooms, and terraces. Asphalte Contractors to Forth Bridge Co. T.N. 2644 Central.

SPRAGUE & CO., Ltd.,
LITHOGRAPHERS,
Employ a large and efficient Staff especially for Bill's of Quantities, &c.
69 & 70, Dean-street, Soho, W.

OGILVIE & CO., Telephone: DALSTON 1383. Many years connected with the late firm of W. H. LASCELLES & Co., of Bunhill Row.
Amhurst Works, **DALSTON LANE, N.E.**
EXPERTS IN HIGH-CLASS JOINERY.
ALTERATIONS AND DECORATIONS. ESTIMATES FREE.

ASPHALTE
For Horizontal & Vertical Damp Courses.
For Flat Roofs, Basements, & other Floors.

The best materials and workmanship are supplied by
THE
French Asphalte Co.
Whose name and address should be inserted in all specifications.
For estimates, quotations, and all information apply at the Offices of the Company,
6, LAURENCE POUNTNEY HILL,
CANNON STREET, E.C.

J. J. ETRIDGE, Jr.
SLATE MERCHANTS. LTD.
EXPERTS IN
SLATING, TILING.
BEST WORK ONLY.
Telephone 2685 Wall, or write—
BETHNAL GREEN SLATE WORKS,
BETHNAL GREEN, LONDON, E.

EWART'S
Cures in 19 cases out of 20.
"EMPEROR"
Write to-day for Illustrated Catalogue Free to
EWART & SON Ltd.,
346-350, Euston Road, London, N.W.
Established 1834.
Telephone: 2570 North.
SMOKE-CURE

THE BUILDER

VOL. CII.—No. 3607. MARCH 22, 1912.

CONTENTS.

PAGE

FORCED CONCRETE IN ARCHITECTURE 319
CS 320
ROYAL INSTITUTE OF BRITISH ARCHITECTS 322
PENTERS' HALL LECTURE (WITH ILLUSTRATIONS) 323
ITECTURAL SOCIETIES 325
LONDON COUNTY COUNCIL 326
POSED LONDON UNIVERSITY (WITH PLAN) 327
ERAL NEWS 328
PETITION NEWS 328
ESPONDENCE 328
ORIAL SUMMARY 329
TINGS 329
AZINES AND REVIEWS 329
CS TO ILLUSTRATIONS 330
Y YEARS AGO 330

THLY REVIEW OF ENGINEERING:—
INFORCED CONCRETE IN GREAT BRITAIN—III. (WITH ILLUSTRATIONS) 331
E NILE IN ENGLISH HARNESS 332

PAGE

MONTHLY REVIEW OF ENGINEERING (*contd.*):—
THE LONDON OPERA HOUSE—II. (WITH ILLUSTRATIONS) 333
"TESTING OF MATERIALS" USED IN REINFORCED CONCRETE 335
NOTES 337

THE BUILDING TRADE:—
ACCIDENT POLICIES 338
SAFETY SCAFFOLDING FOR STEEL-FRAME BUILDINGS (WITH ILLUSTRATIONS) 338
THE FAIR WAGE CLAUSE, CARDIFF 338
GENERAL BUILDING NEWS 339
APPLICATIONS UNDER LONDON BUILDING ACTS, 1894 TO 1909 339
PROJECTED NEW BUILDINGS IN THE PROVINCES 340

LONDON COUNCILS 340
FOREIGN AND COLONIAL 340
PROPOSED RESIDENCE FOR UNIVERSITY MEN (WITH ILLUSTRATIONS) 341

PAGE

THE ENGLISH HOUSE FROM THE NORMANS TO THE TUDORS 341
LEGAL COLUMN 344
LAW REPORT 344
LIST OF COMPETITIONS, CONTRACTS, ETC., OPEN ... 345
PATENTS 346
SOME RECENT SALES 346
PRICES CURRENT 347
TENDERS 348

Illustrations.

UNION-CASTLE SHIPPING OFFICES, SOUTHAMPTON. MR. W. FLOCKHART, F.R.I.B.A., IN CONJUNCTION WITH MESSRS. LEMON & BLIZARD, FF.R.I.B.A.

R.I.B.A. OWEN JONES PRIZE, AWARDED TO MR. NOEL H. LEAVER: –
PORTION OF DOME IN VILLA MADAMA.
ELEVATION OF CHANCEL OF RICCARDI CHAPEL, FLORENCE.
FIGURES IN FRESCO, RICCARDI CHAPEL, FLORENCE.



Shipping Company's Offices, Southampton.

From the designs of Mr. W. Flockhart, F.R.I.B.A., in conjunction with Messrs. Lemon & Blizard, FF.R.I.B.A.

The illustration above and the plate reproduction show the appearance since it was altered of the Union-Castle Steamship Company's Offices at Southampton. Particulars of the work appeared in our issue of December 22, 1911 (page 735).

REINFORCED CONCRETE IN ARCHITECTURE.

THE strivings of Continental architects for originality in the way of reinforced concrete architecture ve given birth to designs which are tesque or merely fanciful according national temperament and feeling, and efforts of American architects to lve a distinctive style for reinforced crete have not been more successful n their preceding attempts to do the ie thing for structural steel.

British architects have been content, our opinion very wisely, to play the ting game and to abstain from the eavour to create a new architectural e by the simple but unproductive hod of sitting down and trying to lve one by inductive reasoning. A n might just as well place himself, cil in hand, before a drawing-table, ing, "Now I will invent something." annot be too clearly recognised that in architectonic as in constructive problems "Necessity is the mother of invention."

This fact at once suggests the question whether an original style for reinforced concrete is actually necessary. Let us, then, consider briefly the form and attributes of reinforced concrete as manifested by familiar structural members. Apart from its outer texture, a reinforced concrete column only differs from a stone or timber column in the respect that its transverse dimensions are relatively small, and the difference is similarly limited in the case of a beam, corbel, or other member subject to flexure, and in the case of an arch, vault, or structure of like nature. Hence the only suggestion made by the mechanical properties of reinforced concrete is that structural members and elements formed of the material may be somewhat more slender for equal duty than kindred members and elements of stone or timber. Therefore, from this standpoint reinforced concrete does not suggest a new architectural style or any new form of architectural detail.

We often hear the dictum that reinforced concrete architecture should express the distinctive characteristics of the material. We have already dealt with these from the standpoint of construction, and have now only to consider them architecturally. To begin with, the steel used as reinforcement is always out of sight, and, being quite inexpressible, nothing is left for expression but monolithic concrete.

In order to facilitate matters, we will set down the only features capable of being brought out in reinforced concrete design. These are:—

(1) Relative slenderness of construction.

(2) Monolithic continuity.
(3) Natural texture of concrete.

Relative slenderness can easily be revealed by the designer in the case of columns, beams, and various other members, but there is no possibility of causing the outer surface of a wall to indicate the thinness of the material, except at window and other openings, where close inspection may facilitate discovery of this feature.

Monolithic continuity can readily be denoted by avoiding all appearance or imitation of the joints, courses, projections, and lines fulfilling structural requirements in stone and timber buildings.

The natural texture of concrete, which, of course, may be varied by using sand and aggregate of different tints and degrees of fineness, can be expressed by the simple expedient of leaving the surface exposed.

These three modes of expression certainly do not carry the need for, or the slightest hint of, a new architectural style, while they do suggest the unwelcome thought that the most beautiful traditional forms of architecture are not well adapted for reinforced concrete, or *vice versâ*, as the reader may prefer. We should not like to state this thought as a definite conclusion, for it is quite possible that increasing familiarity with construction in the new material may ultimately lead modern architects to the gradual adaptation of accepted forms, or the evolution of new forms, which will make reinforced architecture an accomplished fact. As far as we can see at present, however, this desideratum will be the result of artistic genius, and not the direct outcome of distinctive characteristics exhibited by the material in question.

Familiarity with construction as a first step towards characteristic design in reinforced concrete is not encouraged by the procedure too largely followed to-day. Sometimes the architect only decides upon the adoption of reinforced concrete after a building has been designed on lines expressive of masonry pure and simple. The Y.M.C.A. Building in Manchester is an example, where, as stated by the architects, reinforced concrete was adopted as an afterthought owing to its convenience and structural advantages. Again, it often happens that the architect evolves his design and then enlists the co-operation of a commercial, or semi-professional, specialist to furnish working drawings of the reinforced concrete details. As the specialist is almost invariably an engineer rather than an architect by education and training, and as the commercial side of his calling predominates, he is not qualified and does not think it politic to make suggestions on points affecting architectural design, and so is not an ideal collaborator.

Instead of following either of the foregoing methods, which we believe to be merely tentative and temporary, the architect should, after forming a general idea of the accommodation to be provided by and the proportions of the proposed building, sketch out for himself the reinforced concrete skeleton and enclosing walls in accordance with constructive principles and conforming with any selected architectural style. The treatment of details and the evolution of appropriate decorative effects will then follow in natural sequence, and the work of the reinforced concrete specialist will be limited to matters of practical import.

By proceeding thus, the architect may be enabled to break away from the common practice, evidenced in connexion with steel as well as with reinforced concrete, of creating buildings which purport to be masonry structures, but in reality are skeletons of other materials simply masked by a skin of masonry.

We do not say that a masonry-faced skeleton necessarily constitutes bad architecture, for it must be remembered that many fine ancient buildings, among which the Colosseum may be cited, are of brick faced with stone, and that numerous modern buildings of unquestionable merit have been similarly treated, the stonework fulfilling a requirement that could not be satisfied by the brick or steel which it hides. Nevertheless, our point remains that the method of sheathing reinforced concrete in this manner, and thereby treating it as a purely structural material, can never induce its adaptation to architecturally traditional forms or to the evolution of a new architectural style.

Reverting to the proposition that the architect should learn to think and design in reinforced concrete if that material seems best fitted for the work in contemplation, we may usefully point out that while reinforced concrete is excellent for ordinary structural members, it is not always satisfactory in the form of thin exterior curtain walls owing to the tendency of these to develop small cracks, which, although quite unimportant structurally, are very undesirable architecturally. This characteristic leads to the favourable consideration of an alternative method embodying the construction of a reinforced concrete skeleton supporting brick or stone walls, but left exposed as an essential feature of the architectural composition, displaying honestly the structural duties performed by, and the real surface and texture of, the reinforced concrete work. The exterior of a building so designed, with reinforced concrete columns connected by beams, lintels, or arches, and the addition of porches, doorways, balconies, window-frames, and other details, would be completed by brick or stone curtain walls, with such decorative treatment as the architect might consider appropriate. The conception is not original, and merely embodies an idea which is an essential feature of early English architecture, and to which reinforced concrete may be applied just as appropriately as oak or timber generally. Moreover, the general principle is one capable of extension to other styles of architecture.

On the whole, it seems probable that the best method of dealing at present with reinforced concrete may be, as proposed not long ago by Professor Beresford Pite, "the employment of traditional architectural forms, suitably modified for execution in concrete." But we look forward with confidence to a further advance in the future as architects gradually bring the influence of their art to bear upon a comparatively new material and method of construction.

Those who hope to create an entirely new form of architectural design for reinforced concrete may be reminded that in the beginning architecture was the result of construction practised during preceding ages and intended to provide solely for physical needs. We cannot in the present age expect to attain success by attempting to reverse this natural system of evolution by seeking to model typical construction out of a mere architectural conception. Nor can we arrive at a new architectural form without the solid foundation of approved construction. So long as reinforced concrete building construction, as practised by commercial firms, has no independent existence, and merely follows the lines set by architects who, perhaps with a few exceptions, make no attempt to design *per se* in reinforced concrete, we cannot expect to witness the growth of a special architectural form for that material. The only way in which such a form can be created is for architects to deal first with the problem of construction, and then to seek artistic inspiration from the result achieved.

NOTES.

The East Sussex Hospital Competition.

In a letter to the *Hospital* endorsing the opinion that awards in recent competitions, such as the Hastings Hospital, have undoubtedly displayed a total disregard of the practical work for which hospitals should be designed, Mr. William Herman raises an important point of competition ethics. It may be magnanimous, he thinks, on the part of competitors to invariably accept the assessor's award without complaint; "but is it in the true interests of the public or of the architectural profession?" In other words, is it treating the public quite fairly if when a mistake is made those in a position to know allow the public to be deceived and to imagine that they are getting the best design? The public puts confidence in the profession and trusts to it to select the best design. This confidence is seldom misplaced; but assessors being only human, mistakes must sometimes occur. Should one be made, and be deliberately hushed up, would the public be entitled to call this a breach of confidence? If a code of professional etiquette renders such deception necessary, is that code a sound one? We quite see the difficulty. Everyone wishes to play the game, and long may the wish prevail; but, nevertheless, the public may not see why they should have to put up with a bad building in order that architects may pride themselves on being good sportsmen. Neither should there be any danger that the sporting manlike instincts of the competitors might be traded upon to bolster up any particular system of assessing, nor should the competitors be forced to choose between their loyalty as citizens or as professional men. It is certainly a question whether the erection of an inferior and inadequate building does not lower the profession in the eyes of the public more than the acknowledgment and rectification of an unfortunate

ake, and whether true loyalty to profession would not choose the r evil. We are, however, entirely sed to the reopening of competitions ublic, but, all the same, a position h should never have arisen should be allowed to continue. Where ion is necessary it should be by operly-constituted professional tri-l. The Competitions Committee of nstitute might perhaps be strength- for this purpose.

hitecture Window-reaking. If the smashing of the largest available sheet of plate-glass is to become the recognised method of g attention to grievances of every iption, great changes may be ex-d in the architecture of our shop s. Smaller panes may again come use, and the æsthetic problem of the plate-glass window be solved or r smashed by the hammer that lates a grievance and a shop with low. It is just possible that many rchitect whose æsthetic arguments failed to make an impression on d-headed race of shop-keepers may with complacency that produced ne weightier and more convincing nent of the hammer, and be led by to admire the way in which all s work together for good. Or will e triumph over reaction with a t hammer-proof glazing, and save om designing down to the level ur most downtrodden and from rating once more the well-worn n that art reflects the manners—ck of manners—of the times and t advance beyond them? If our ms are to be reopened, with their nts protected from the fate which ook the Portland vase, some such tion seems needed. But although, e meanwhile, where museums are rned, it is easy to protect the 's art treasures from the too siastic admiration of some of their 's by the simple expedient of shut- the doors, are there not bronze coated warriors and politicians ing our streets, priceless relics of olden age of early Victorian art, stand unprotected at the mercy of ammer? They may not be so easy eak as a Tanagra figure, and there- may escape, but iron on hollow e makes almost as soul-satisfying nd as on glass, so let the authorities e.

London Museum. It is uncertain when the London Museum, which the King visited yesterday, e opened to the public. The un-ble attentions of the window ers are feared. But when the day architects will find among the collected many objects of interest. ngton Palace and Wren's Orangery nt are themselves attractive, but ntents of the former building and ne new annexe claim a special nage. In the Royal Palace are ed innumerable relics of London ner days, including topographical ap engravings, Hollar's delightful colour of "Westminster Abbey," th's oil, "Southwark Fair," and of Mr. Norman's drawings. It is, er, in the annexe that most of the objects of architectural importance are housed. We do not refer particularly to the old Roman boat, found on the site of the County Hall, to the prison cells from Wellclose-square, or to the various excellent models of old buildings, all of which are valuable from a constructional and historical point of view. We direct attention rather to the structural and decorative relics which have found their way appropriately enough into the new Museum. There are balusters, over-mantels, a balustrade by Inigo Jones from 32, Lincoln's Inn-fields, less solid but more ornamental staircase fittings from 2, Portsmouth-street, Lincoln's Inn, and from 34, Redman's-row, Stepney, wooden doorways, linen-fold panelling, and four fine oak corbels from a house in Wandsworth. These are a few of the things which make the annexe instructive, and architects will contrive, no doubt, to supplement them as opportunities occur.

Ecclesiastical Metalwork. Some excellent hand-wrought ecclesiastical metalwork, made by the Duchess of Sutherland's Cripples' Guild, is now on view at 13 and 14, New Bond street, London, W. The Guild was founded some twelve years ago by the Duchess of Sutherland for the purpose of giving employment to crippled lads. It sought to develop their artistic instinct, and to teach them, sorely handicapped as they were, how to lead happy and useful lives, rather than to look for and lean upon charitable relief as the only mitigation of their sufferings. The work on view and for sale at the London depôt proves that the experiment has been more than justified, and these lads bid fair, in spite of adverse conditions, to rival in their productions the delicate artistry of past centuries. The Guild are workers in gold, silver, copper, brass, and silvered copper and enamels, and they can execute architectural fitments, repoussé work, etc. The work of the Guild is deserving of the support of the profession and the public, and we have pleasure in calling attention to it.

The French Ministry of Fine Arts. A new Under-Secretary of State for Fine Arts has been appointed in France. His name is M. Léon Bérard; he is thirty-six and a successful *avocat*; he has also been a Deputy since 1910. He has, further, occupied the position of a former private secretary to the present Prime Minister. According to the *Temps*, he has had something to do with men of letters and artists generally. His qualifications for his present position would therefore seem, on the face of it, somewhat negligible; and a similar appointment in England would no doubt encounter a good deal of criticism. But in France the position of art is held in higher general estimation than here. It would be difficult to find in that country a man who possesses the qualifications of a barrister who does not also possess the respect common to his countrymen for artistic effort. Apart from that, his position as a barrister in the social economy is certainly not higher than an artist's; a man who professes law gains no more respect from his fellow-man than he who professes art. In these circumstances there is something to be said for the appointment of a man with a legal training. He may be able to balance issues with greater nicety and to distinguish with some discernment the various values of expert advice which it will be necessary for him to seek in the employment of his office.



[This is an illustration of the plumb-rule used in laying the foundation-stone of the L.C.C Hall. It is the work of the Bromsgrove Guild, who also made the mallet, the level, and the bronze casket in which the coins and documents deposited under the foundation-stone were placed.]

ROMAN REMAINS IN BRITAIN.

Professor F. J. Haverfield lectured on "The Discoveries of Roman Remains in Britain in 1912," at the British Academy recently, and in the course of his remarks he said there had been only one excavation on a great scale in 1911, that of Corbridge. Silchester and Caerwent were now finished for the present; Verulam had fallen through; Wroxeter, though in active preparation, had not yet been begun. Instead, there had been a most regrettable mass of more or less abortive work—excavations planned but never commenced, or commenced with imperfect means and inexperienced supervisers, or left for years with their results undescribed. The last year or so had seen much of this, and it did no honour to British archæology.

GERMAN EXCAVATIONS AT MILETUS.

The Berlin Correspondent of the *Times* writes that Dr. Theodor Wiegand, the Director of the Berlin collections of antiquities, recently gave an account before the Prussian Academy of Sciences of the principal results of the recent German excavations at Miletus and on the site of the neighbouring Temple of Apollo at Branchidae. After some account of the work on the prehistoric settlement of Miletus he described the good progress made with the excavation of the Hellenistic town. A building of delicate Corinthian work has been brought to light in the south market. The clearing of the Serapeion has been completed, and the fragments of the entablature and pediment of the entrance hall of six columns can be pieced together. A copy of the head of the Canachus Apollo was found on the site. North of the Serapeion and west of a street which continued the line of the Sacred Way the excavators have traced a rectangular peristyle court with an *exedra* and a gymnasium or a small *palaestra* to the south of it. On the neighbouring site of Branchidae five more of the seated archaic figures have been discovered on the line of the Sacred Way. The eastern half of the great Temple of Apollo has been completely cleared.

C

THE usual fortnightly meeting of the Royal Institute of British Architects was held at No. 9, Conduit-street, W., on Monday, Professor R. Blomfield presiding.

Mr. H. T. Hare announced the decease of Dr. Phené, Fellow, elected in 1872, and a vote of condolence was passed to the relatives.

Mr. W. H. Ward then read a long paper, of which the following is an abstract, on

THE ARCHITECTURE OF THE RENAISSANCE IN FRANCE.

"No country outside of Italy made the teaching of the Renaissance in architecture so thoroughly her own as France.

By the time Francis I. came to the throne on January 1, 1515, Renaissance forms had become acclimatised. Though Italians were still frequently employed, the French builders had acquired some skill in the new style. The result was that a number of buildings began to arise, which have been characterised as French construction in Milanese dress. The qualities which charm in this style, the style of Francis I. as it is called, which prevailed roughly from 1515 to 1540 or 1545, are its picturesque and somewhat haphazard grouping, its ingenious use of Italian motives to clothe native building forms in a delicate embroidery of ornament. The early Renaissance was not always smiling, and we see it in a more serious mood in the castle of St. Germain, largely rebuilt by Francis I. about 1540. Yet we must not expect from it the highest achievements of which architecture is capable. The art of composition was in its infancy. But some time before the end of Francis I.'s reign, from, say, about 1530, a new type of design began to come into competition with that which bears his name.

Up to this point the architect in the modern sense had scarcely emerged. He had hardly disentangled himself from the master mason, the master carpenter, and the clerk of works. From this time onwards a new generation of men arose, whose training was theoretical as well as practical, men like Philibert de l'Orme, Jacques Androuet du Cerceau, and Jean Bullant. This brought about one side of the change. The other was due to the new sources of inspiration, for both the young French architects and the Italians whom Francis continued to attract to France were now imbued with the ideas of the mature or Roman phase of the Renaissance. The effect was soon seen in schemes considered as a whole from the start, in a broader manner, a greater regularity and symmetry, in a more systematic use of the Orders, and a more scholarly treatment of detail, as well as in the shedding of much mediæval practice, particularly such as related to fortification. At the same time, much that was both national and picturesque was retained. There had thus been evolved an architecture which, if it still bears upon it both the faults and the charm of youth, may yet be regarded as having reached the first stage of maturity. France, within the middle years of the XVIth century, had arrived at a style based on the classic code of forms and composition, which suited her then requirements.

Renaissance architecture in France may be said to have reached, in the mid-XVIth century, a stage of at least incipient maturity, not only as regards the character of its buildings *per se*, but because it already contained, either in germ or fully developed, nearly all the elements which went to the making of subsequent styles. But in each country of Europe it seems that some untoward circumstance was destined to arrest the flow of Renaissance development, or at least to check it for a time, with the result that, when it was released once more, the environment had sometimes become less propitious. In France the life of the nation was absorbed for a generation in the Civil Wars, which raged intermittently from the death of Henry II. in 1559 to the final recognition of Henry IV. in 1596. The two centuries which followed, from the reorganisation of France as a centralised State to the Great Revolution, coincided with the rule of the Bourbon dynasty, and witnessed the growth, culmination, decline, and collapse of Absolute Monarchy. The architecture of this period is essentially one, though it passes through various changes of taste, affecting principally the decorative system. It represents the full maturity of Renaissance architecture in France in various moods; and these moods reflect the changing conditions of society and politics, thought and literature. They may be roughly grouped under the names of the four Louis whose joint reigns cover all but the first fifteen years of the period. Though the style of Henry IV. is a recognised designation, it is practically indistinguishable from that of Louis XIII. It is only a little less formed. The culmination of the Louis XIII. manner may be placed about 1630, and its influence is traceable here and there in the provinces almost to the end of the century. But long before the death of Louis XIII., in 1643, a different spirit had begun to come over architecture. Architectural studies having been neglected during the later years of the Civil Wars, the architectural profession was rather at a low ebb, and suffered from a dearth of capable men. With the XVIIth century, however, classical studies revived. The reign of Henry IV. produced some notable works rising above the general run of coign and panel architecture. The junction of the Louvre and the Tuileries elicited dignified architectural efforts, whose authorship, however, is still shrouded in some obscurity. But the first quarter of the XVIIth century produced one architect of great talent in Salomon de Brosse. As a grandson of Jacques Androuet du Cerceau, and nephew of the latter's two sons, who were all architects in the Royal employ, he inherited a high tradition of design, and was well fitted by his training, as well as by his position as First Architect to the Crown, to sum up in monumental works all that was best in current methods, and add to them a touch of classical dignity. De Brosse, however, remained a little heavy, even when at his best. But the classicising tendency, the first symptoms of which reappeared in his work, was maintained throughout the succeeding period from 1624 to 1661. The greatest architect of the XVIIth century was François Mansart. In his early Château of Balleroy, begun in 1626, we find him using, but using finely, the "chaîne" and coign system of the day. But in the work carried out by him at Blois between 1635 and 1640 for Gaston of Orleans, though it is obviously reminiscent, in plan and general grouping, of the Luxembourg, he strikes a new note of stateliness, and shows a new sense of scale. But there is still a trace of the heaviness typical of the Louis XIII. manner. All heaviness has entirely disappeared from his work in the noble mansion of Maisons, begun in 1642. Having reached this degree of consummate accomplishment, Mansart maintained it till the end of his career. That among architects Mansart was not an isolated case is proved by an examination of the great buildings of the last years of Mazarin's life. The charming Hôtel de Beauvais, in Paris, built in 1656, is a standing illustration of that same ideal of perfection of form which pervaded the thought of that age.

The contemporary Château of Vaux-le-Vicomte is of great interest from several points of view. Nicolas Fouquet, the minister who hoped to succeed Mazarin, determined to have the most sumptuous mansion of the age. His architect was Louis Le Vau, who was to continue the Louvre, complete the Tuileries, and begin the transformation of Versailles. His decorator was Charles Le Brun, who was to reign supreme over the decorative arts for a generation. His estate was laid out by André Le Nôtre, whose word was to be law in garden design throughout Europe for nearly a century. Le Vau's work, while never reaching the supreme accomplishment of François Mansart, and less certain in a sense of scale, is always dignified an often touched with some degree of imagin tion.

Up to the 'sixties the chief glories XVIIth-century architecture are the sum tuous mansions in town and country in whi the nobles embodied their uncurbed amb tion, as well as their cultured tastes splendid patronage of art. The next thi gave birth to Versailles and the Invalides, splendid palaces and pompous monumen The change is symbolised in the very char ter of the architecture, as well as the p poses to which it was applied. Before, have multiplicity; after, unity. Befo great buildings are broken up into pavili and galleries, with roofs of varying heig and important dormers, and small Orde prevail; after, we have single unbrok masses, continuous or concealed and bal traded roofs, and colossal Orders. Fouquet's fall the group of artists he gathered round him was set free to se Louis. Le Vau and Le Nôtre and Le Br were set to work to transform the ro châteaux into palaces worthy of the gr King. What Le Nôtre did for garden sign was in accordance with the whole tre of the age. He unified and centralise The genius of Le Brun, though he was mean artist, manifested itself likewise chie in organisation, in the success with which gathered together an immense personnel artists and craftsmen of every descriptio native and foreign, and turned their vari aptitudes to account. Of Fouquet's trio o Le Vau, though a very capable archite failed to be quite equal to the spirit of time. His design for the east front of Louvre, conceived on traditional lines, shelved in favour of Bernini's and eventua Perrault's, and his chief activity was tra ferred to Versailles and the Tuileries. advent of Bernini among the French arc tects in 1665 to design the east front the Louvre was the touch needed from o side to precipitate the transformation towa which all things had been moving. Bernin design, whatever its defects—and it is c tainly a fortunate escape for Paris that was not carried out—had the merit of str ing a single unmistakable note. If change in the aims of architecture was all respects a gain is open to question.

The stage which classical architecture France had reached after a century and half of experiment now crystallised, and perpetuated till the Revolutionary era the precept and example of the Academy Architecture founded at this time und royal auspices. This stage may be describ as a kind of free Palladianism based on stu of the antique and of the Italian writers the XVIth century, but it did not dema slavish or pedantic imitation; it had the a septic of common sense. Its chief spokesm was the elder François Blondel, the arc tect of the Porte St. Denis, and its ch exponent, Jules Hardouin Mansart.

Jules Hardouin Mansart, great-nephew François Mansart, who succeeded to the p of architect to all the royal buildings at Vau's death in 1670, was wholly of the n way of thinking. At Versailles he was han capped from the start, and his efforts redeem the scale were doomed to at le partial failure. The transference thither the seat of government, as well as of Court, necessitated enormous increase accommodation. Circumstances obliged Ma sart to obtain this by throwing out vast wings north and south in such a man as to leave Le Vau's work as an unsa factory central projection, which has b the butt of criticism ever since. None have felt the ineffectiveness of this arran ment more than he, but even Louis XIV megalomania must have recoiled from colossal expense of the only course wh could have obviated it—the building of gr terminal wings of equal or greater projecti

Le Brun died in 1690, but his influence h waned before that, and a lighter, more pl ful manner had begun to be visible in works of Bérain and other contemporary signers. J. H. Mansart himself began modify the solemnity of the interiors designed. A new age was at hand. In 1 the old King died unregretted. His s cessor was a child, and the seven ye Regency of Philip of Orleans flashed past a whirl of frivolous and profligate gai

le western suburbs began to be covered
th a host of new "hôtels" by all the
shionable architects of the day, among
om were Robert de Cotte, Mansart's son-
law and partner; Cailletau, his assistant;
d Jacques Jules Gabriel, his relative and
ordinate in the royal works.
The architecture of the first half of the
VIIIth century maintains as a whole the
ssive monumental character and relatively
er classicism of the late XVIIth. The
tlessness of the reaction from the previous
omnity appears almost exclusively in
tters of detail, in that same revolt from
supremacy of the straight line and right
gle which had betrayed itself at earlier
ods. This new tendency of the correct
cial art of the Court and capital to relax
formality in the caprices of Bérain and
ateau was reinforced by the barocco in-
ence from Italy.
f the rococo fashion has been dealt with
erely in our day, it did not escape criti-
m in its own. Reverend seniors of the
ademic School felt it incumbent on them
appear shocked at forms for which
ruvius gave no sanction, and to condemn
m by precept, if not by example. But
met with more whole-hearted opposition
m men who were caught in a current in
theory of design which was beginning to
in an entirely different direction.
Exactly where and when the reaction origi-
ed it may not be possible to determine,
it gained force from the general spirit
learned inquiry which pervaded the
VIIIth century, and brought about re-
rches into the architecture of Rome and
ece, both in Europe and Asia. The first
tems of chance in French architecture
rayed a Roman rather than a Greek in-
ence. The new phase of style, which began
arise between 1730 and 1750, was prac-
ed concurrently with the old between 1750
1 1770, and reigned supreme during the
nty years which preceded the Revolution,
s received the name of Louis XVI., who,
wever, did not come to the throne till
'4. In addition to its return to purer
ssical types and to a general abandonment
flowing curves in plan and decoration in
our of severe geometrical forms, it is
aracterised by greater simplicity that is,
avoids not only twirls and flourishes, but
necessary breaks and elaborations, and
ects quieter lines generally.
The movement did not become general till
conversion of the royal architect, Jacques
ge Gabriel, which took place about 1750.
briel was destined to give it its most monu-
ntal and suave expression, without either
effeminacy which sometimes characterised
erior decoration, or the frigidity from
ich the Pantheon, perhaps the greatest
ievement of the age, is not altogether free.
w men have ever had greater opportunities
n Gabriel, or been so well fitted to use
m. He new all the resources of tradi-
nal French design, and used them with
summate success, obtaining the same
ad, massive effects as the XVIIth century
d achieved, but without their bombast and
asional brutality. In works of the school
Gabriel architecture seemed to have
ched a stage of breadth and scholarship
al to the expression of all possible needs,
t nothing human can be final, and, in
tain works contemporary with his, symp-
ns are to be found of the general unrest
which European society was plunged in
second half of the XVIIIth century
ns of a dissatisfaction with established
titutions and traditions. For the time
ng this unrest manifested itself in an
ensified archæological tendency. It also
ame the fashion to copy ancient buildings
h a literalness hitherto unknown."

. E. Warren,

proposing a vote of thanks to the author,
d he was not quite in accord with the
ening words of the paper, that "no country
side of Italy made the teaching of the
naissance in architecture so thoroughly
own as France." It seemed to him that
nce did not accept the teaching
the Renaissance so unreservedly as
e other countries. France assimilated
spirit and nationalised it, but he did
think she accepted the literal teaching
the Renaissance even so much as we did in England. In England it came a great deal later, but England never assimilated the French influence as did other countries. Even in Holland there were thoroughly French-looking buildings quite early in the XVIIth century, and in Spain and Italy they found almost absolutely French versions of the Italian Renaissance. French architects did not seem to be so happy as the architects of northern countries in being able to build in brick without the intervention of stone. There were some brick buildings in Toulouse, but to his mind they were absolutely dismal in effect.

Mr. H. H. Statham,

in seconding the motion, said there was one particular quality in which the French Renaissance seemed to differ from the Italian. The Italians never really took to the Gothic, and as soon as they got hold of the Classic idea again they began to reproduce. On the other hand, France had behind it a great period of the most romantic style of which they were practically the inventors, and it was owing to that that the early French Renaissance took such a peculiarly picturesque form, quite apart from the comparatively cold way in which it was developed in Italy. Whatever might be said about the corrupt style of the early French Renaissance, he thought it had a very great fascination, and he thought it was one of the styles which had done more than anything else to add to the happiness of mankind.

The Chairman

said the Italian Renaissance they could dissect and classify, but France had never been in that position, and had always maintained throughout some thread of tradition. The French Renaissance was split up into three periods: There was the first period of the amateurs, when people came back from Italy filled with ideas, but really knowing nothing about it. They insisted on the builders carrying out those ideas, and they did their best. Secondly, they came to the period of the architects proper, and they had a very good time as long as the Court lasted. Then came a period of unrest, and the XVIIth century went out in a state of chaos. In the last twenty years of the century the architects did little in France. Then came the reorganisation of the arts under Henry IV., who put the whole of France on its legs again. This was the most important period of the French architect, because during that time the art finally became that vernacular art of France—it became the art of the people. On the old general question Mr. Ward's paper seemed to lend colour to the statement sometimes made that art moves in a circle, and that it wanted a catastrophe like the French Revolution to clear the air and allow a fresh start to be made. He did not believe this. He believed that they really were moving forward, and that students would do well to study these great masters instead of taking up various fashions for study.

The motion having been heartily agreed to,

Mr. Ward

briefly replied, and said he cordially accepted Mr. Warren's correction. He did think, however, that the French influence did have considerable effect in England, and he was looking at some ornaments and monuments in Worcester Cathedral the other day which might well have come from a French book published about 1630. The date of the work he referred to was, however, about 1660 to 1670. In other places the French influence could be seen, but it came about twenty or thirty years later.

THE CARPENTERS' HALL LECTURES:

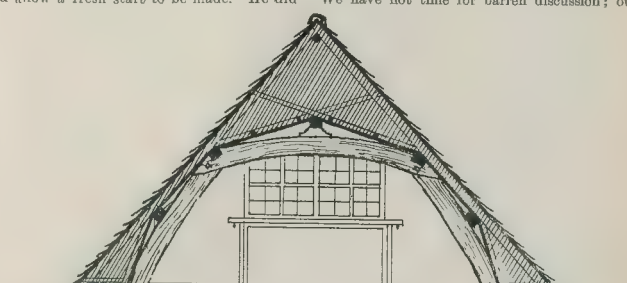
ROOFS AND ROOFING.

The eighth of the course of Carpenters' Hall lectures on the "Arts Connected with Building" was delivered on Wednesday last week by Mr. W. Curtis Green, F.R.I.B.A., whose subject was "Roofs and Roofing," Mr. P. A. Crisp, F.S.A., presiding.

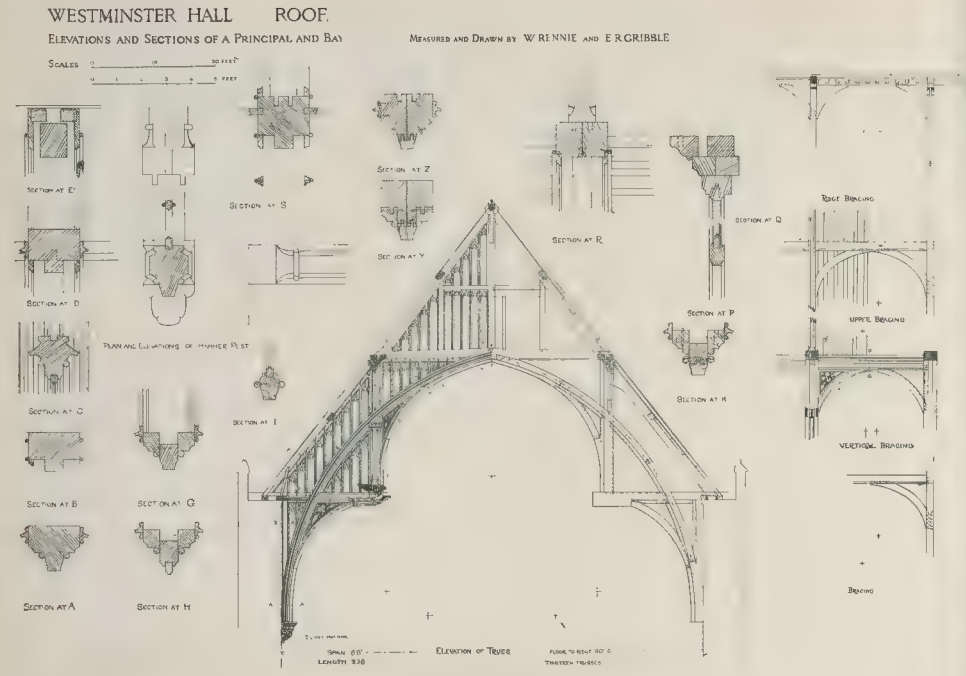
The lecturer showed a number of interesting lantern slides, and in the course of his remarks he said:—

"Our task as craftsmen is, in the first instance, to see that we never produce less than fine prose, and never to lose sight of the goal, which is to create poetry of things in themselves commonplace. The training is one of mind as well as of eye and hand, for the mind to resolve the apparently complex and obscure requirements of the problem into its component parts before the eye or the hand come into play. This is the essence of style and of all progress in art. We must take to heart the saying of Emerson—"that the line of beauty is the line of perfect economy." Remember that all fine achievement comes from inspiration grafted on knowledge—the knowledge of long apprenticeship and of hard work.

Of the two ways of studying the past our concern is with the spirit in which the work was done rather than with the form it took. Archæological knowledge does not make a craftsman; it may by confusing the issue be his undoing. Until the XVth century men did not study the building arts of past times: they handed on the ways and customary methods of their own day, each generation and each race making its contribution to the advance, to the sum of achievement. I cannot satisfy some of my friends or offend others by finding faults with the Renaissance, with the various revivals, or with our own civilisation. We have not time for barren discussion; our



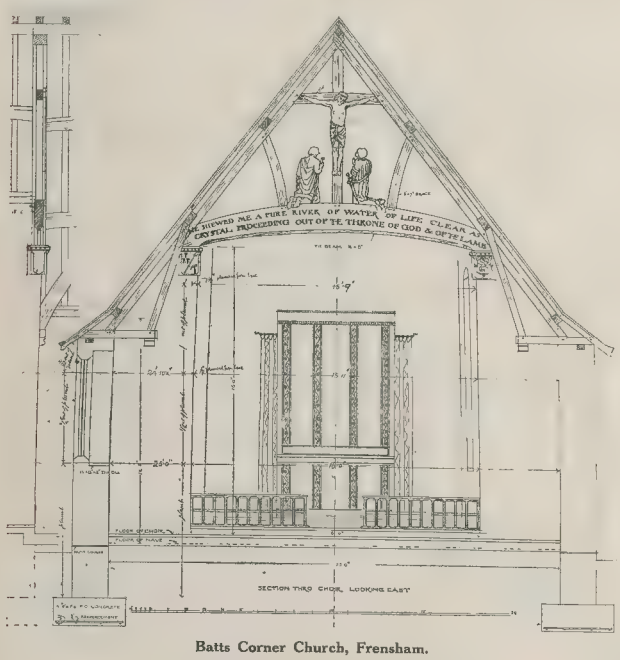
Hall, Wootton Fitzpaine, Charmouth, Dorset.
Mr. F. W. Troup, F.R.I.B.A., Architect.



Westminster Hall Roof.

Measured and Drawn by Messrs. W. Rennie & E. R. Gribble.

needs are too pressing, our time is too short; we have rather to prove ourselves men than that others long since dead were knaves or fools. We can afford to leave the question of whether we are children of the Renaissance, of mediævalism, or of classic civilisation. We cannot recreate the time and the conditions that produced their architecture and their crafts; we cannot recreate our own; our own is the product of theirs. The mistake that many of us make, and which the lesser men of the Renaissance made, is that in studying old work we have been occupied with the form rather than with the spirit. This error is fundamental, and has led to all sorts of theories—theories neglecting, on the one hand, the bases of the crafts—that is, utility, and on the other the "magical and mystical element," the product of the mind, the eye, and the hand in unison. It has led to all sorts of sham revivals of styles and forms without regard to new utilities and to continual intellectual and spiritual growth. There is no great discovery to be made in our calling, unless it is the discovery that we are capable of producing fine work. There is no necessity for originality in its ordinarily accepted sense. That distinguished quality will inevitably arise as we master our craft; yet our instinct will be to express our thought in forms which the eye both by custom and association delight in. This is my point of view with regard to the development of the subject we are considering to-night. Future development is along the old lines; one achieves a happy combination or develops a neglected principle; another catches it up, improves upon it, and hands it back.



Batts Corner Church, Frensham.

Mr. W. Curtis Green, F.R.I.B.A., Architect.

The history of architecture is very largely the history of roofing; the roof and the chimney are synonymous with home; indeed, if these two features were nowadays rightly arranged the whole aspect of the countryside would be changed. One of the fairest sights of an ancient town or village is that of looking down on it from above. This cannot be said of the mass of buildings now springing up round our towns and villages; the majority of these buildings are a blight on the countryside. All the great buildings of the world have, or had, wonderful roofs; the covering in of a great space was part of the problem their builders solved. The pyramid over the tomb of a Pharaoh was the Egyptian idea of monumental architecture—a mighty covering to their illustrious dead; in the case of the great Pyramid at Gizeh, the greatest and most accurate structure ever built, a roof covering 13 acres of land, Professor Lethaby writes:—"When it was new and sharp it must have gleamed cold and white like the peak of an alp rising above the burning golden sand." The Mausoleum of Theodoric at Ravenna has a domed roof hollowed out of a single stone 36 ft. in diameter, while the great

nes of the Pantheon, Santa Sophia, and St. er's, the vaults of Chartres, and the roof of stminster Hall are wonders for all time. ient architecture seems to have had wooden struction as its prototype. The Greeks used ber in their roofs—so far as I can discover, fs of a single span. The single span roof, t is to say, formed by two rafters pitching inst each other, is open to the objection of outward thrust against the walls on which y rest. The Greeks used purlins in their ples which arrested this tendency. The ek contribution to woodwork is not a small . All that is clear-cut and articulate the ek loved; all that is rough and ungainly avoided. While influenced by, if not under, weight of Egyptian precedent, the Greek out to discover a new realm of art, a royal gress from the mysterious and the obscure he comprehensible and the definable. This gress lifted the arts on to a new plane. tendency of the West has been to ance along these lines. This self-imposed llectual limitation to the finite and the nite is the contribution of the Greek to modern student. Matthew Arnold has l that, "Though in many respects the ients are far above us, there is something ch we demand that they can never give." same may be said of other periods as we ie to them; it is the key to study and gress.

Roman construction is in many ways near our own. Viollet-le-duc gives us an idea Roman construction in his illustration of the over the Temple of Fano. This adheres much as possible to the methods of carpentry cated in the antique paintings of Pompeii the bas-reliefs of the column of Trajan. says:—"The timber framing of the Middle s will also afford us great help in our eavours to become acquainted with the art of pentry as it existed among the Romans. all the processes of building construction, ber framing is certainly that in which litions were most faithfully preserved; even in the most barbarious times works in pentry never ceased to be executed in the st, and as early as the time of Cæsar, the ls passed for being very clever in the art of king and framing wood." The roof is shown ed with boarding according to Roman tom; it is not a hipped roof, which would e complicated the construction, but minated with gables of open frame and ice-work.

randon suggests that the absence of examples pen timber roofs during the early period Gothic architecture may be accounted for the monopoly in building enjoyed by the masons. He suggests that this body nen, who excelled in the working of stone, ised English oak and discarded it as an rior material. What is more likely is that were intent on working out, step by step, exquisitely beautiful groined vaults, the roof curtain as it were, to the roof-covering ve. First one and then another considera- swayed the Gothic builders, but one factor always with them, and that was the roof. England we were less ambitious than in nce; with a few notable exceptions, we were tent with far narrower spans to our roofs. consequence the construction is comparay simple, far simpler, for instance, than is case to-day. Owing to rebuilding, to ruction by fire, or to imperfect protection h the weather, there is apparently no open ber roof of the XIIIth century left to us. re is little doubt that roofs of this od were richly coloured with painted erns. As a rule, where the windows a church retain any remains of the inal stained glass, other parts of the church, h as the roof, have been enriched with ur.

is convenient roughly to classify open ber roofs as follows:—Roofs with tie-beams; sed rafter roofs -*i.e.*, single-framed roofs; s framed with hammer beams; collar- ed roofs. The sequence is chronological in origin, for it is impossible to divide ory into precise compartments, saying this done in that century or decade, that in ther. There is over-lapping, and the ciples having their beginnings in remote ory have been rediscovered and reapplied. cover, some districts developed one type, rs another. Kent, Sussex, and Surrey eloped a combination of the trussed rafter, eam, and single purlin. The West Country ved and perfected a trussed rafter of its own—a beautiful waggon-shaped roof. The Eastern counties are famous for hammer-beam roofs . . . The first man to carry his principles into practice in this question of roofs was, so far as I am aware, Mr. Weir Schultz, the architect of Khartoum Cathedral. He was asked to design a Church hall at Cardiff. The problem was to roof over a considerable area at a minimum of cost and yet to use materials the best of their kind. One of the first considerations in such a case is that of acoustics. The best form of hall for singing or speaking in is one with an open timber roof—such a form, for instance, as that of the Mediæval Hall. It was out of the question to use pit-sawn beams for posts and ties and branches for braces and struts. Fir of the ordinary stock sizes had to be used. It is a clever piece of construction, and I am personally indebted to Mr. Schultz both for leading the way and for lending me his drawings. These he has generously published in the *Builder*.* When my time came to solve a very similar problem in designing an adult school hall at Croydon, with Mr. Schultz's work before me I was able to carry the idea a step further. This hall seats close upon 1,000 people, and costs less than a third of what the ordinary unfurnished church costs. These are the working drawings. There are no rafters in this roof and no flat over the clearstory windows, the tiles sweeping round."

The lecturer showed some examples of various types of roofing, and described the principles of construction. He also showed some interesting examples of the work of Messrs. R. W. Schultz, F. W. Troup,—Gimson, —Box, and others, including some of his own designs.

*See our issue for October 7, 1905.

ARCHITECTURAL SOCIETIES.

Leeds and Yorkshire Architectural Society.

A general meeting of this Society was held on March 7 at the Leeds Institute, the President, Mr. Sydney D. Kitson, M.A., F.R.I.B.A., in the chair, when a lecture on "The Scottish Renaissance Architecture" was given by Mr. Lawrence Weaver. A series of slides showing plans of houses and castles illustrated the fact that the towers formed their keynote unlike the English plan which developed from the Hall. It was pointed out that the Scottish Renaissance was entirely based on French influence owing to the political connexions between the two countries, whereas in England the influence of Italy and the Netherland was general. The Scotch Renaissance was much later than the English, and the tenacity of the old Baronial style is remarkable. Many fine slides were shown illustrating picturesque exteriors and gardens. Illustrations of interiors included many fine plaster ceilings and painted ceilings, fireplaces, staircases and screens. A vote of thanks was passed on the motion of Mr. G. F. Bowman and seconded by Mr. J. Smith Findlay.

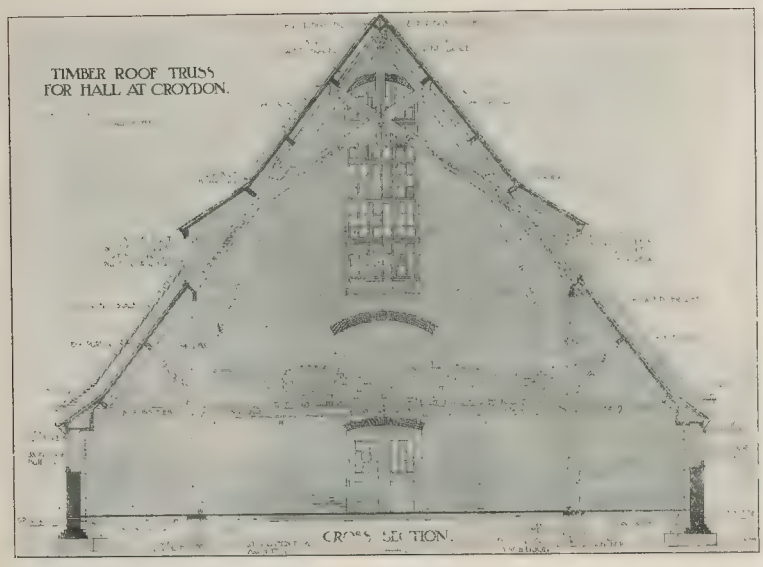
York and Yorkshire Architectural Society.

The following is a *résumé* of a paper on "Sketching" read before this Society on March 13 by Mr. Wm. Whitehead, A.R.I.B.A., Mr. A. B. Burleigh, Lic.R.I.B.A., President, being in the chair:—

"In dealing with the subject of 'Sketching' I speak from my own experience and the educational value of sketching in the training



Church of the Good Shepherd, Frensham.
Mr. W Curtis Green, F.R.I.B.A., Architect.





Hall at Croydon. *(See previous page.)*
Mr. W. Curtis Green, F.R.I.B.A., Architect.

of fellow students of architecture. To treat the subject methodically I will divide it into the following sections:—The uses of sketching, the mediums and styles, composition, and what to sketch. There are times in everybody's life when they desire to put some of these impressions and ideas into more material form. What is the use of an architect who cannot put on paper his ideas? Something more than mechanical draughtsmanhip is necessary to delineate the very numerous and varied detail of modern times for the guidance of craftsman and workman. To attain this degree of proficiency in the various mediums nothing is more helpful than sketching. Other advantages to be claimed for sketching are familiarity with proportion, detail, and construction and perspective. Like all other accomplishments, there are the early stages of drudgery to be passed before one appreciates the pleasure to be derived. Of mediums the pencil, pen, and water colours are the most suited to architectural sketching. The pencil especially should be mastered and a directness and facility of expression attained. Water-colour sketching is probably the most fascinating of the three. The study of colour alone teaches one so much. The harmony of nature is not appreciated until one's notice is directed in the practice of conveying their impressions to paper. Composition in sketching architectural subjects is as necessary as in landscape and other subjects. Concentration, grouping, and contrast require consideration, but detail should not be sacrificed for effect. Lastly, what to sketch. Everything that is likely to be useful or is interesting. A note-book should always be in one's pocket ready to jot down notes, etc., of any feature or detail which one may see. Whether touring or holiday-making in any form, a sketching outfit should accompany one. Time spent sketching is never wasted, and there is always something to show for it. Many things which come to one's notice would otherwise probably be overlooked."

A large collection of sketches formed an interesting exhibition and illustrated many points in the lecture.

A hearty vote of thanks was given the lecturer, on the proposition of Mr. Geo. Benson, A.R.I.B.A., seconded by Mr. S. Needham, Lic.R.I.B.A.

Nottingham Architectural Society.

The fifth and last meeting of the session in connexion with the Designing Club was held at the Society's rooms on Tuesday, March 12. The President, Mr. Robert Evans, F.R.I.B.A., occupied the chair. Although the subject set by Mr. E. H. Child, A.R.I.B.A., "A Seaside Bungalow," was an attractive one, only four designs were submitted. After the criticism, a general discussion took place, and at the close Mr. Child gave his award as follows:—"Dorian" first, "Tide Time" second, and "Carbon" third.

The President, in proposing a vote of thanks to Mr. Child, remarked that it was not very encouraging to those gentlemen who gave up their time to set designs and examine them when there was such a poor response and poor attendance. At the same time, he congratulated the four competitors on their excellent efforts to fulfil the conditions set, which, in this subject, were by no means easy. As it was their last meeting for the session he also included their best thanks to Mr. Swann, the Hon. Secretary of the Designing Club, for his untiring efforts to make the competitions a success.

During the evening it was announced that an attractive programme was being arranged for the Social on March 26, and that, in addition to the students' work being exhibited, Mr. Arthur Marshall had promised to lend a selection of his own pencil sketches.

Sheffield Society of Architects and Surveyors.

Mr. F. E. P. Edwards, F.R.I.B.A., City Architect, went to Rome last autumn for the International Congress of Architects, and on the 14th inst., at the University, he gave members of the Sheffield Society of Architects and Surveyors a formal report on the Congress, and then went on to give an illustrated lecture on the Italian cities he visited, including fine views of architecture at works in Genoa, Pisa, Florence, Venice, and Milan, as well as of Rome. Speaking of a street improvement scheme in Rome, he said it had been under consideration 300 years—a statement which seems to excuse the slow way in which some Sheffield schemes are dealt with. The Vice-President, Mr. A. F. Watson, F.R.I.B.A., presided.

BOOKS RECEIVED.

ENGINEERING WORK IN PUBLIC BUILDINGS. By R. Owen Allsopp. (London: E. & F. N. Spon. 12s. 6d. net.)

REINFORCED CONCRETE DESIGN. By Faber and Bowie. (London: Edward Arnold. 12s. 6d. net.)

THE LONDON COUNTY COUNCIL.

THE usual weekly meeting of the London County Council was held on Tuesday in the County Hall, Spring-gardens, S.W., Captain G. S. Swinton, Chairman, presiding.

LOANS.—The Finance Committee recommended and it was agreed to make loans to borough councils as follows:—Deptford, 10,000*l.*, for street improvements; Hammersmith, 3,243*l.*, for underground conveniences; Kensington, 5,745*l.*, for street improvements; Poplar, 69,626*l.*, for electricity undertaking; and Stepney, 5,000*l.*, for electricity undertaking.

THE GAIETY RESTAURANT.—The Improvements Committee recommended that the offer of Marconi's Wireless Telegraphic Company, Ltd., of a rent of 6,500*l.* a year for a lease of the restaurant for ninety nine years be accepted.

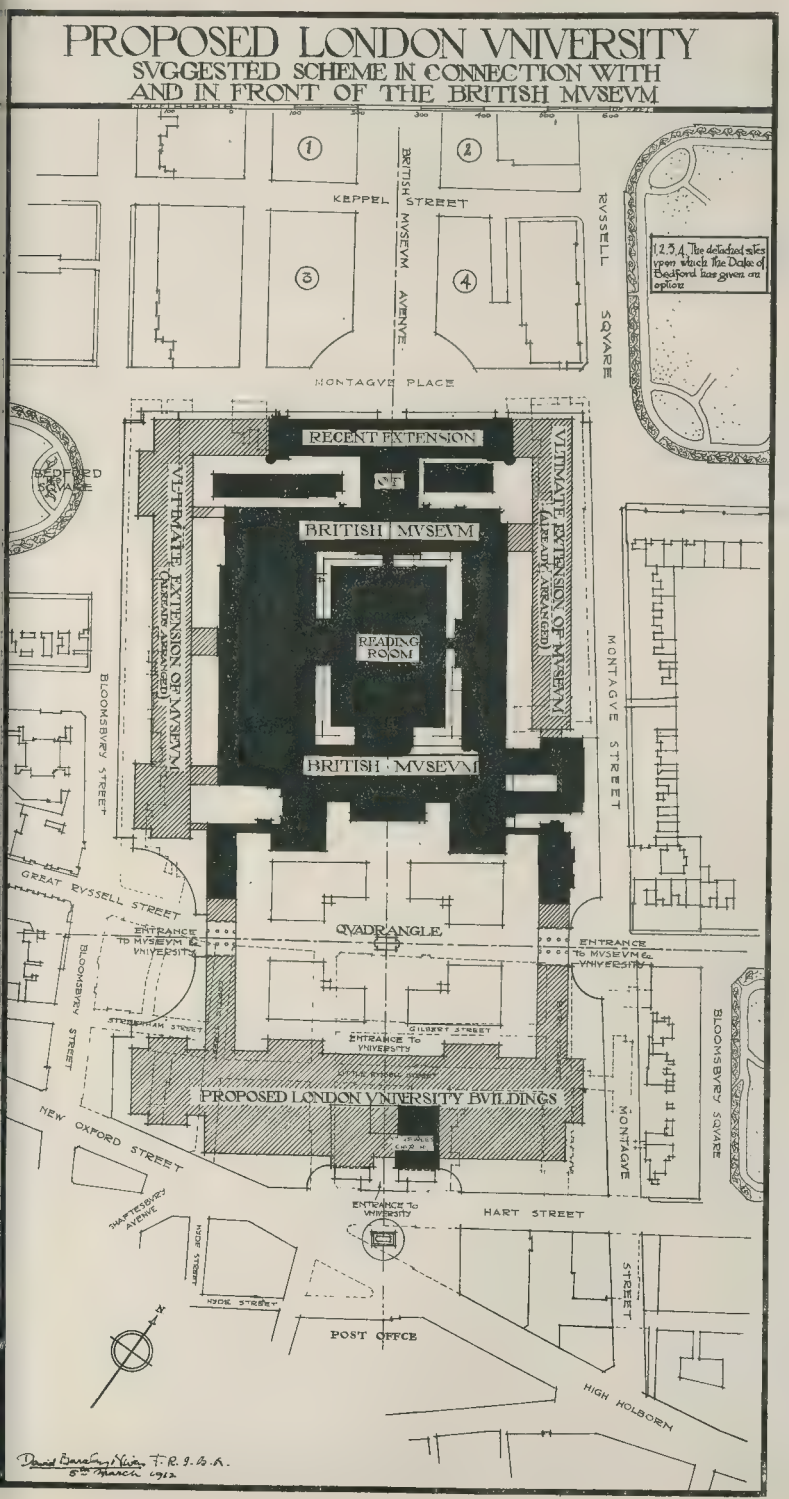
KINGSWAY.—The same Committee also reported that an offer had been received from the London and Northern Estates Company, Ltd., of a rent of 2,050*l.* a year for a lease of ninety-nine years of a site between Lincoln's Inn-fields and Kingsway.

THEATRES, ETC.—The Theatres and Music Halls Committee reported that Messrs. T. Matcham & Co. had submitted drawings showing the proposed alterations to be made at the Amherst Hall, Kingsland High-street, N., and also for proposed alteration and enlargement of the Broadway-gardens Cinematograph Theatre, Walham Green.

The following drawings have been approved by the Committee:—Adelphi Theatre—new dressing-rooms and offices; Queen's Palace of Varieties, High-street, Poplar—construction of a cinematograph enclosure; Royal Academy of Music—arrangement of seating and steppings in the gallery in the concert hall; Royal Assembly Rooms, Woolwich—provision of permanent means of access to the cinematograph enclosure; Royal Horticultural Hall, Vincent-square, Westminster—provision of substructure to the platform; Wesleyan Methodist Hall, Westminster—arrangement of connexions for the switchboard for the battery circuit for the secondary system of lighting.

THE INSTITUTION OF CIVIL ENGINEERS' EXAMINATIONS.

At the Institution of Civil Engineers' Examinations of last February one of the pupils of Mr. G. P. Knowles, 39, Victoria-street, headed the list and obtained the Bayliss Prize.



PROPOSED LONDON UNIVERSITY.

WE have received the following communication from Mr. David Barclay Niven, F.R.I.B.A. :—

"A proposal has been published whereby buildings for a reconstituted London University are to be erected on four detached sites at the back of the British Museum.

As an alternative, I suggest their erection as one block in front of the Museum, in accordance with the accompanying plan.

In this the island area on which the British Museum stands is enlarged so as to afford ample space for these buildings adjacent to the Museum, with St. George's Church duplicated as a central feature, thus introducing a very delightful note in architectural treatment.

This proposal would bring the University into direct relation with the British Museum. The site is large enough for all needful expansion, and the buildings erected upon it would very properly be the visible expression of the University as a great public institution, and would appeal to the imagination of the people.

With the co-operation of the different authorities this scheme should be realisable, the leasehold tenure of the property affected contributing to its gradual development. The immediate necessity is for a liberal well-considered scheme for University Buildings. A start might very well be made on the area facing New Oxford-street, between Museum-street and Bloomsbury-street, where the leases first fall in.

The modern flats and hotels facing the Museum need not be demolished for many years, until the University buildings are almost complete, although the great quadrangle between the Museum and the University would not have its full significance until then.

The proposed quadrangle would show the buildings surrounding it to great advantage. It is as large as Bloomsbury-square, and should be one of the finest architectural courts in Europe. Through traffic would not be permitted, and the two great entrances, controlled by attendants, would maintain a sense of collegiate repose.

A small open public square might be arranged central with the new buildings, at the juncture of New Oxford-

street, Hart-street, and High Holborn. The land abutting upon this is mostly Crown property, which it should be possible to acquire on favourable terms. This open space would be convenient and would indicate the importance of this educational centre.

The scheme would be a great permanent London improvement, and not only the London authorities, but the nation, might co-operate in its realisation. It would enhance the value and increase the security of the priceless national collections in the British Museum upon which millions of public money have already been expended.

The Duke of Bedford, as freeholder and benefactor of the improvements to the north of the Museum, might also be ready to assist in this great improvement."

GENERAL NEWS.

Professional Announcement.

The address of Mr. Alfred Saxon Snell is now 9, Bentinck-street, Manchester-square, W.

The Architectural Association Athletic Club Smoking Concert.

The concert of the Architectural Association Athletic Club, which was a great success last year, will be held at the Pillar Hall, Victoria Station Restaurant, on Tuesday next, March 26, commencing at eight o'clock. Particulars and tickets may be obtained from Mr. C. G. Boutcher, 40, Great James-street, Bedford-row, W.C., and at the Architectural Association office.

Public Offices (Sites) Bill.

The Public Offices (Sites) Bill, presented by Mr. Wedgwood Benn, seeks to make provision for the acquisition of a site in Westminster for new buildings for the Board of Trade, to acquire land and buildings in St. Andrew, Holborn, for the further extension of the Patent Office, and to acquire land and buildings for use in connexion with the Record Office.

Raw Materials and the Coal Strike.

The Great Northern, Midland, the Great Central, and Great Western Companies will, it is stated, refuse to accept the following materials for carriage:—Sand, gravel, chalk, bricks, roadstone, slag, lime, cement, limestone, stone, round timber, iron ore, pig iron, coke, slates, manure.

The British Museum Site.

A friend of London University has offered, it is stated, a contribution of 100,000*l.* towards the acquisition of the vacant site on the Duke of Bedford's estate north of the British Museum. The donor states that he considers the site the most central and suitable one for the contemplated erection of new headquarters, and holds that the University of London ought to be the chief educational institution of the Empire.

Christchurch Priory.

Christchurch Priory is about to be restored, the Chancellor of the Diocese having granted the petition of the vestry for a faculty authorising the pulling down of the galleries in the transepts, the reflooring and rescating of the church, and the placing of a Holy Table in front of the screen. The work is to be proceeded with as quickly as funds will allow, and a series of plans have been prepared by Mr. T. G. Jackson, R.A., providing for a new raised and screned altar and the repairing of the altar-place with black and white marble. In addition, the flooring of the nave and transepts will be replaced with wooden blocks and the present pews give place to oak seats.

Richmond-hill View.

At a recent meeting of the Surrey County Council at Kingston the question of the making of a cutting from the Surrey bank of the Thames to the Ham lands belonging to the Earl of Dysart, where gravel excavations are being carried on, which, it is stated, seriously mar the famous view from Richmond-hill, again came up for discussion. The General Purposes Committee recommended that the County Council agree to the proposal of Lord Dysart to construct a cutting from the river bank through the river lands to a small dock proposed to be formed upon the site of the gravel excavations upon an agreement being entered into by Lord Dysart to contain provisions for the removal of the existing wharf and the covering in of the machinery. Councillor Thompson, of Richmond, moved as an amendment that the recommendation be referred back in order to obtain counsel's opinion as to the legality of the existing wharf on the riverside, which he held had no right to be there. Councillor Humphreys, of Richmond, seconded. Councillor West, Vice-Chairman of the Committee, said the Earl of Dysart had the right, by Act of Parliament, to excavate gravel on this land, and the only point was whether the Council would allow him to do this within certain conditions which would safeguard the amenities of the district. The lesser evil was the better one to adopt. On a show of hands the recommendation was adopted by thirty-five votes to twelve.

Ancient Monuments Bill.

In the House of Commons on Wednesday, in reply to Mr. N. Buxton, Mr. W. Benn (St. George's-in-the-East) said:—"The First Commissioner hopes to introduce the Ancient Monuments Bill next week, when full details will be available for the information of the Hon. Member."—In reply to Mr. King, Mr. W. Benn said he thought the proposal was to introduce the Bill in the House of Lords.

The London Museum.

A valuable collection of views of Old London—gathered by the late Mr. Warwick Wroth, of the British Museum is exhibited in the London Museum. The collection includes views of many of the old tea-gardens and similar places of resort such as the Dog and Duck, St. George's-fields, South Lambeth (whereof the sign, carved on stone, is preserved in the outer wall of Bethlehem Hospital); Sadler's Wells; the White Conduit House, Pentonville, by Rowlandson, 1787; the Pantheon in Spa-fields, by Humphrey, after a drawing by Edwards, 1772; and Bagnigge Wells, of which the gardens were traversed by the Fleet River, lying near what was Pearl-crescent, and between King's Cross-road and Messrs. William Cubitt & Co.'s stone and building yards in Gray's Inn-road. Mr Theodore Lumley has lent also his collection of rare prints relating to London, and Mr. Frank Corner his specimens of bronzes and pottery-ware. The five models of Old London by Mr. John Thorp which were exhibited at the Franco-British Exhibition, and afterwards at the Festival of Empire, have also been acquired.

International Smoke Abatement Exhibition.

An important exhibition will be opened on Saturday, March 23, at the Agricultural Hall, under the auspices of the Coal Smoke Abatement Society. The exhibition will comprise all the latest appliances for the use of smokeless fuels both in the home and in the factory, and should prove of equal interest to the housewife and to the business man. There will be a large display of gas appliances for cooking, for hot-water supply, for the heating of houses, shops, factories, churches, and other public buildings, and for furnace work. Every afternoon and evening demonstrations of cooking by gas will be given with practical hints in the economising of gas, and in the most effective utilisation of cookers, grillers, hot-plates, etc. Tickets of admission will be supplied by the Gas Light and Coke Company to any of their consumers who will apply at any of their offices. The fogs of London have been largely diminished in intensity of recent years as a consequence of the rapidly extending use of gas for fuel; but much remains to be accomplished before the air of London can rival that of Paris or New York, and it is hoped that this exhibition will do a great deal to stimulate the movement in favour of Smoke Abatement.

COMPETITION NEWS.

Liberal Club, Shanklin.

In the competition for the Liberal Club, Shanklin, the first premiated design is the one submitted by Mr. Gordon L. Thorne, 10, Atherley-road, Southampton. The second and third premiated designs respectively are by Messrs. G. W. Kingswell and C. W. Jolliffe, Shanklin, I.W., and Mr. Edgar J. Harvey, Grove-road, Ventnor, I.W.

Murton Housing Scheme, Durham.

The successful architect in the competition for workmen's dwellings at Murton, promoted by the Easington Rural District Council is Mr. J. J. Dobson.

Oakwood-avenue Council Schools, Warrington.

The following notice has been sent to all its members by the Manchester Society of Architects:—"The promoters refuse to modify the conditions they have sent out, and say that it is not their intention to employ a professional assessor.

I am instructed by the Council to inform you that these conditions are unsatisfactory to the Council; therefore members of this Society must not submit, either directly or indirectly, any designs in the above-mentioned competition."

Some Competitions and the Liverpool Architectural Society.

The Council of this Society requests all members to refrain from competing in the following architectural competitions, the conditions for which are unsatisfactory: Warrington Schools, Llandudno Police Buildings, and Ormskirk Golf Club Buildings.

CORRESPONDENCE.

A History of Architectural Development.

SIR,—In the notice of the third volume of my "History of Architectural Development," which recently appeared in your paper, it is stated that the work of the time of Louis Quinze is ignored. May I be allowed to point out that such is not the case? Pages 217 to 225 deal almost exclusively with this work, figures 183-4-5 (two photographs and a plan) are illustrations of it, and it is also referred to elsewhere in the volume. I have considerable admiration for the good points of the buildings of the reign of Louis XV., whilst not blind to their defects, and have expressed my appreciation in no uncertain manner in the pages mentioned. F. M. SIMPSON.

Combined Heating and Power Plant.

SIR,—Your note in the current issue summarising Mr. R. J. Durley's paper describing the plant at the Montreal University would lead one to imagine that we cannot show similar examples of economical engineering in this country.

Such is far from being the case, and, though bemoaning our general backwardness in such matters, one could name various cases where our buildings have been dealt with in like manner.

The first I call to mind is in connexion with our South Kensington buildings.

Electricity is generated for the Imperial Institute, Royal College of Science, School of Mines, and the new Post Office, all of which are warmed by exhaust steam from the engines. The steam is carried through a 16-in. main under the roadway.

S. WHITMORE ROBINSON.

Trade Unionism and Restraint of Trade.

SIR,—With reference to my letter in the *Builder* of February 23, I am pleased to note your statement on page 247 of the issue dated the 1st inst., that the trade union does not interfere with the number of bricks which any one of its members might lay in a day. The Secretary of the Institute of Builders confirms your statement in his letter appearing in your issue of the 15th inst.

I stated it was conceivable that on occasion a number of irresponsible bricklayers may have put their heads together and agreed to limit the number of bricks they would lay quite apart from the existence of a trade union, in the same way that on occasion builders have put their heads together and formed a "ring" for the purpose of keeping up prices without reference in any way to their Federation or Institute. Both events operate in restraint of trade, but in neither case is it fair to impeach the respective organisations.

I regret that the Secretary of the Institute of Builders allowed his feelings to impair the tone of his reply to my letter; but in having secured from such high authorities the admission that the trade union does not interfere with the quantity of work a bricklayer may or may not execute in a day's work I may safely commend the information contained in these letters to your readers. X.

EDITORIAL SUMMARY.

In the leading article some observations will found on the subject of Reinforced Concrete Architecture.

In "Notes" columns (p. 320) will be found nments on: "Ecclesiastical Metalwork"; he French Ministry of Fine Arts"; "Architture and Window Breaking"; "The East ssex Hospital Competition"; "The London nseum."

A meeting of the Royal Institute of British chitects was held on Monday, when Mr. W. H. rd delivered an able lecture and showed ny illustrations on "The Architecture of the nch Renaissance" (p. 322).

The eighth Carpenters' Hall Lecture of the ies on the Arts Connected with Building was ivered by Mr. W. Curtis Green on "Roofs d Roofing." We give an abstract and some strations (see p. 323).

"Architectural Societies" (p. 325) include ef reports of the following: "Leeds and rkshire Architectural Society"; "York and rkshire Architectural Society"; "Nottingham chitectural Society."

An illustrated suggestion in reference to the pposed London University is given on p. 327.

In Correspondence Column (p. 328) will be nd letters on: "Trade Unionism and straint of Trade"; "Combined Heating and wer Plant"; "A History of Architectural velopment."

Some notes on the magazines and reviews of month are given on this page.

The Monthly Illustrated Engineering Review 331) contains: "Reinforced Concrete in eat Britain"; "The Nile in English rness"; "The London Opera House"; esting of Materials Used in Reinforced Conte"; and Notes.

The Building Trade Section (p. 338) ludes: "Accident Policies"; "Safety ffolding"; "Fair Wage Clause, Cardiff"; Projected New Buildings in the Provinces"; Applications under the London Building ts," etc.

The second part of Mr. W. St. John Hope's ture on "The English House from the rmans to the Tudors" will be found on 341.

In Law Reports (p. 344) will be found a ef report of: "Richards *v.* Sanders & Son."

MEETINGS.

FRIDAY, MARCH 22.

oyal Sanitary Institute. — Mr. Henry C. Adams, oc.M.Inst.C.E., on "Sewage Disposal." 7 p.m.

eicester and Leicestershire Society of Architects udents' Evening).—Introduction to discussion on the B.A. Report on Reinforced Concrete, by Mr. W. y, A.M.Inst.C.E.

berdeen Architectural Association. Mr. A. N. erson, M.A., A.R.S.A., on "French Influence on ttish Architecture." 7.30 p.m.

SATURDAY, MARCH 23.

he Royal Institution.—Professor Sir J. J. Thomson, A., LL.D., D.Sc, F.R.S., on "Molecular Physics" , 3 p.m.

dinburgh Architectural Association.—Visits to Usher l and new Masonic Hall, George-street.

MONDAY, MARCH 25.

he Architectural Association.—Paper by Mr. C. A. sey on "Patriotism in Architecture." 7.30 p.m.

corporated Institute of British Decorators. Dinner he Trocadero, Piccadilly-circus. 7.30 p.m.

oyal Society of Arts. Mr. Noel Heaton, B.Sc., F.C.S., "Materials and Methods of Decorative Painting", I. 8 p.m.

oyal Sanitary Institute. — Mr. Henry C. Adams, oc.M.Inst C.E., on "Water Supply, Sources of pply and Distribution." 7 p.m.

TUESDAY, MARCH 26.

uilders' Clerks' Benevolent Institution. — Annual ner at the King's Hall, Holborn Restaurant. .m.

he Institution of Civil Engineers.—Papers on "The nstruction of the Glasgow Main Drainage Works," by Mr. W. C. Easton, B.Sc., M.Inst.C.E.; "Glasgow Main Drainage: The Mechanical Equipment of the Western Works and of the Kinning Park Pumping Station," by Mr. D. Home Morton, M.Inst.C.E.; "The Works for the Supply of Water to the City of Birmingham from Mid-Wales," by Messrs. E. L. Mansergh and W. L. Mansergh, MM.Inst.C.E. 8 p.m.

WEDNESDAY, MARCH 27.

Carpenters' Hall, London-wall (Arts Connected with Building).—Mr. Gerald C. Horsley, F.R.I.B.A., on "Influences in the Development of Planning." 7.45 p.m.

Edinburgh Architectural Association.—Mr. D. Hay Flemming, LL.D., F.S.A., on "Two XVIth-Century Contracts for Building the West Port of St. Andrews." 8 p.m.

Royal Sanitary Institute. Mr. Henry C. Adams, Assoc M.Inst.C.E., on "Scavenging, Disposal of House Refuse." 7 p.m.

THURSDAY, MARCH 28.

Society of Antiquaries. 8.30 p.m.

MAGAZINES AND REVIEWS.

The *Studio* opens with an article on "Turner at Farnley Hall." This mansion on the River Wharfe belonged to Mr. W. R. Fawkes in 1797, when the painter first visited Yorkshire. A close friendship existed subsequently, and the fruits of this association between artist and patron were the series of architectural, topographical, and other water-colours to which reference is now made by Mr. A. J. Finberg. The "Paris Sketches" by Mr. Lester G. Hornby are vigorous semi-architectural studies, and among the "Recent Designs in Domestic Architecture" are examples by Mr. P. Morley Horder, Mr. George Walton, and Miss Ester Claesson, a lady architect of Swedish nationality.

The *Burlington* is an interesting number in which the illustration and reading matter are suitably balanced. The leading position is given to an article, with coloured plate, on the "Rajput Paintings," by Ananda K. Coomaraswamy, which is followed by a contribution by Mr. R. L. Hobson on "British Porcelain in the Trapnell Collection." Mr. A. Bredius has an article in which he gives reason for doubting that Rembrandt painted the portrait of Elizabeth Bas, and the article is accompanied by some fine photographic reproductions. Other contributions include: "A Museum of Oriental Art," by Mr. Lionel Cust; "The Portrait of Ginevra dei Benci by Leonardo da Vinci," by Mr. Herbert Cook, F.S.A.; "Exhibition of Pictures of the Early Venetian School at the Burlington Fine Arts Club," by Mr. Roger Fry, etc.

The illustrations in the *Connoisseur* are chiefly pictorial, with examples of furniture, pomanders, and English plate.

The *Architectural Record* opens with an example of "The Renaissance villa of Italy developed into a complete residential type for use in America," the example being the Harold F. McCormick House on the shore of Lake Michigan, designed by Charles A. Platt, architect, an interesting study in this direction, illustrated by plans and numerous beautiful photographs by Julian Buckly. More generally interesting, perhaps, is an appreciation of the work and personality of "This Most Excellent Master, Baldassare Peruzzi," by M. Stapley, in which full justice is done to his original outlook, his versatility, and his sensitive taste. Photographic views by A. G. Byne show the Palazzo Pollini at Siena, the Palazzo Farnesina at Rome, the Albergati at Bologna, the Casino of the Villa Farnese at Capracola, and the Palazzo Massimo at Rome. This latter has external and internal views, as well as a plan by Mr. Byne of the entrance floor, showing the extremely able manner in which this irregular site was handled. An article by Charles Henry Cheney on the American Academy in Rome is of topical interest. It gives the American point of view towards culture studies, differentiates them from the acquisition of technique, discusses the Ecole des Beaux-Arts in its relation to the subject, and in referring to the value of such a breathing spell in which the artist may "find" himself, points out that its full benefit cannot be derived by those not fully developed in technique. In this direction the British School at Rome may find some difficulties to start with. The article is illustrated by views of the Villa Aurelia, recently bequeathed to the Academy. Part IV. of "Early American Churches," giving views and description of The Ship Meeting House, Hingham, Mass.; St. Peters, New Kent County; and St. Luke's, Smithfield Old Meeting House, Lancaster, Mass., is followed by a "Portfolio of Current Architecture," and by an interesting article on the construction and equipment of the new building for the Curtis Publishing Company of Philadelphia, one of those large buildings full of technical equipment which American architects handle in so fearless a manner.

The *Nineteenth Century and After* is an interesting number, but the article of special interest to our readers is entitled: "Wanted: A Ministry of Fine Arts," by Gertrude Kingston, in which the writer points out that while other countries have their Minister of Fine Arts, England is still without one, though we do not quite follow her in her deduction therefrom that Art has no place in the history of the nation. But the article is in many respects a convincing one, and the views expressed will not be unfamiliar to readers of the *Builder*. In the course of the article the writer says:—

"I question whether the beautiful buildings that I see being destroyed daily in London—the latest to go are the houses in Lincoln's Inn-fields built by Inigo Jones himself—would not have been preserved and repaired in a suitable manner had there been a Ministry of Fine Arts At present, if they are conserved at all, it is only individual generosity that has to be thanked! It appears to be no part of the programme of the First Commissioner of Works and Public Buildings to take a walk between Piccadilly-circus and Oxford-street, let us say, and note the fine survivals of Old London that are marked down for destruction. The picturesque houses in Carlisle street, Soho, the historical houses in Lincoln's Inn-fields, the quaint passages between Soho-square and Golden-square, can nothing be done to make them sanitary and fit for habitation, while keeping the original character of the building? Supposing that there were a Ministry of Fine Arts, assuredly there would be a department for the preservation of such landmarks. . . . The argument will be, of course, that the Public Works has no available funds for the preservation of old monuments, yet this is exactly what could not happen if there were a Ministry of Fine Arts. It would have a knowledge of its requirements and a place in the Budget. That all over Great Britain there are magnificent historical manors, mansions, and castles still extant is due to the fact that these have been inhabited by private families. When it is a matter of castles that have belonged at some period of history to the Crown, it is more often the case that they are either in ruins or in a state of dilapidation; Richmond and Middleham and Ludlow may afford beautiful themes to the imaginative painter, but they are national monuments—of decay! The sum total of it all is that but for the individual there would hardly be an ancient edifice left. This we may say also of the pictures, sculpture, and other *objets de vertu*"

All this, of course, was written before the announcement of Mr. Asquith that a Bill will be introduced by the Government to deal with our national monuments, but even then the need for a Minister of Fine Arts will exist.

An article in *Scribner's* by Mr. E. L. Morse on "Samuel F. B. Morse, the Painter," is of considerable interest, as it records a fact, known probably to very few who are familiar with the name of Morse as the inventor of a system of telegraphy still in universal use, that this same Morse was a painter who is counted among the very best American painters of the first half of the XIXth century. He studied in England and was acquainted with Benjamin West, who took a great interest in his young fellow-countryman. With the article are given some illustrations of the work of the artist, which show him to have been a painter of no mean ability, especially as a portrait painter. Morse hoped to be chosen to paint at least one or two of the historical pictures for the panels in the rotunda of the Capitol at Washington, being supported by the National Academy of Design and others. The wish was expressed by John Quincy Adams, ex-President and Member of Congress, to throw the competition open to the artists of all countries, as he alleged that there were no American artists of sufficient ability to paint such great pictures. A caustic reply to Mr. Adams's assertions appeared anonymously in the New York *Evening Post*, and was attributed by him to the facile pen of Morse. The real author proved to be James Fenimore Cooper, but this became known too late, for Morse's name was rejected by the committee. "He never really recovered from this terrible blow to his artistic ambition," says the writer of the article, "he could never speak of it in later years unmoved; it practically ended his

career as an artist. Thus do the fates weave our destinies; what seem to be calamities are often blessings in disguise. Morse, the artist, dropped his discouraged brush and threw himself with all the ardour of his sanguine nature into the perfection of what was then looked upon as the idle dream of a madman; he struggled on through years of hardship and privation, and gave to the world the electric telegraph." In the same issue, an article on "The Armorer and His Art" appears under "The Field of Art," dealing with a loan collection of ancient European armour and arms recently exhibited at New York at the Metropolitan Museum of Art.

Harper's contains nothing of professional interest this month, but the issue is a good one and is fully illustrated.

ILLUSTRATIONS.

Union-Castle Shipping Offices, Southampton.

THE Union-Castle Shipping Company, Southampton, have recently made very large extensions and alterations to their Southampton offices, the work being carried out under the superintendence of the local architects, Messrs. Lemon & Blizard, FF.R.I.B.A. The exterior, which we publish, was built from the designs of the company's London architect, Mr. William Flockhart, F.R.I.B.A., in consultation with Mr. Blizard.

The Villa Madama, Rome.

THE villa was erected about 1516 by Giulio Romano from designs ascribed to Raphael. It was built for Cardinal Giuliano de Medici, afterwards Pope Clement VII., but was never completed.

Partly destroyed by fire in 1527, it subsequently came into the possession of Margaret, daughter of Charles V., from whom it derives its name. It afterwards belonged to the Farnese family, and then to the kings of Naples, who suffered it to fall into complete neglect.

The villa and its gardens at one time formed an important model for the arrangement of the gardens of Italy.

The fresco decorations in the loggia of the unfinished building were executed after 1520 by Giulio Romano and Giovanni da Udine, pupils of Raphael.

Chapel in the Palazzo Riccardi, Florence (Cappella Riccardi).

THE Palazzo Riccardi, now the official seat of the Prefect of Florence, was formerly the Palace of Medici. It was built by Michelozzo Michelozzi about 1430 for Cosimo il Vecchio. The family of the Medici continued to reside there until 1659, when it was sold by Ferdinand II. to the Riccardi family, from whom it took its present name.

The walls of the chapel are decorated with frescoes by Benozzo Gozzoli, executed between the years 1459 and 1463, for Piero "il Gottoso," son and heir of Cosimo il Vecchio.

The chancel, an elevation of which is shown on the plate, contains two groups of adoring angels, while the remaining portions of the walls are covered by the "Procession of the Magi," with its large train of Florentine citizens, servants, and cavaliers. Many of these are contemporary likenesses, and include several of the Medici, also a portrait of Benozzo Gozzoli, the artist.

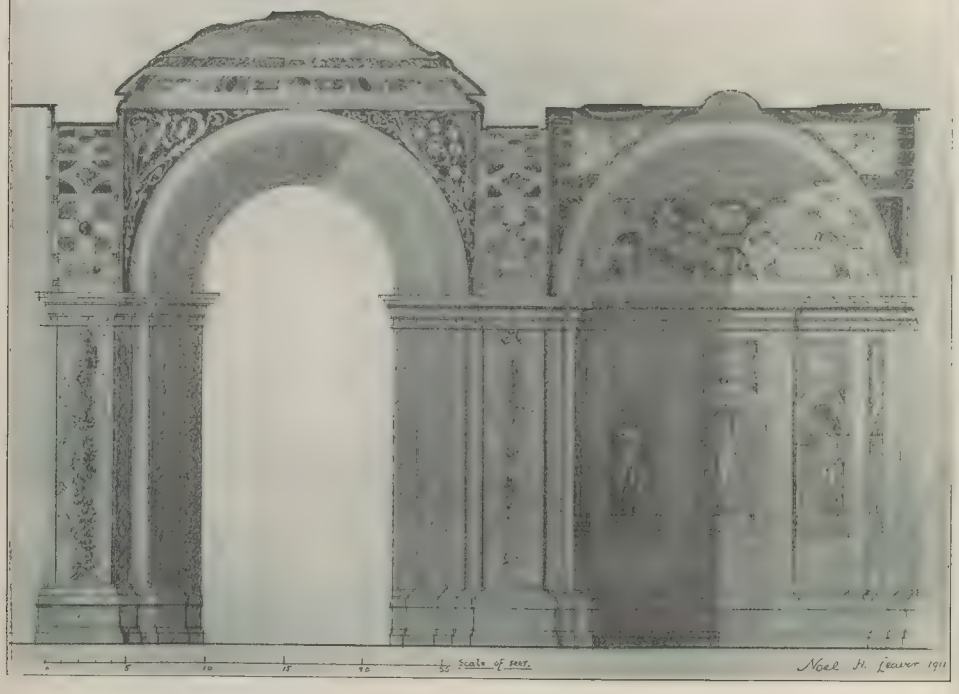
FIFTY YEARS AGO.

From the *Builder* of March 22, 1862.

The Green Park a Monument to the Prince Consort.

IT may be remembered that this land has a gradual slope or inclination from Piccadilly down to St. James's Park. We would divide this slope into so many terraces, with flights of steps descending to each successive level. Here we have at starting and almost ready at hand one grand feature, for it is an admitted fact that nothing has a more stately, impressive, or palatial effect than this mode of laying out ground. It is these flights of steps leading to their terraced temples that impart so much beauty to Indian architecture, and are known there under the appellation of Ghauts. This effect has been well understood since the time of the hanging gardens of Babylon down to those of the Isola Bella. We would devote each of these terraces to the statues or busts—perhaps alternately one of each—to commemorate the peculiar talent of illustrious men. This galaxy of worthies should be confined to England; and there is no want of material for the purpose. By way of hint let us just enumerate the stock upon which we would draw to carry out our purpose: Sovereigns, male or female; legislators and statesmen; poets; military commanders; navigators and naval commanders; dramatic writers and performers; authors, naturalists, artists, sculptors, mathematicians, and astronomers; antiquarians; judges and lawyers; philosophers; scholars and critics; fathers and theologians; prelates and reformers; public benefactors, historians, orators, rhetoricians, and physicians. Now here is a list which might be added to or abstracted from.

At the terminus of the principal vista or avenue of these terraces might be placed the statue or monument of the great object of the whole design, namely, that which is more particularly intended as a commemoration of the late Prince Consort. In the first place it is not necessary that the whole should be completed at one and the same time. The whole of the ground should be laid out, of course, and the terraces completed, most certainly; and the statue commemorative of the departed Prince should also be erected, and pedestals should mark the place for future statues, or busts, as may be. It would doubtless be a pleasing duty each year to add one or more objects towards the completion of the whole; but much might be effected at the present time.



R.I.B.A. Owen Jones Prize.—Awarded to Mr. Noel H. Leaver: Hall of the Villa Madama.



ELEVATION OF CHANCEL OF RICCARDI CHAPEL, FLORENCE.

SHOWING ONE OF THE FRESCOES BY BENOZZO GOZZOLI

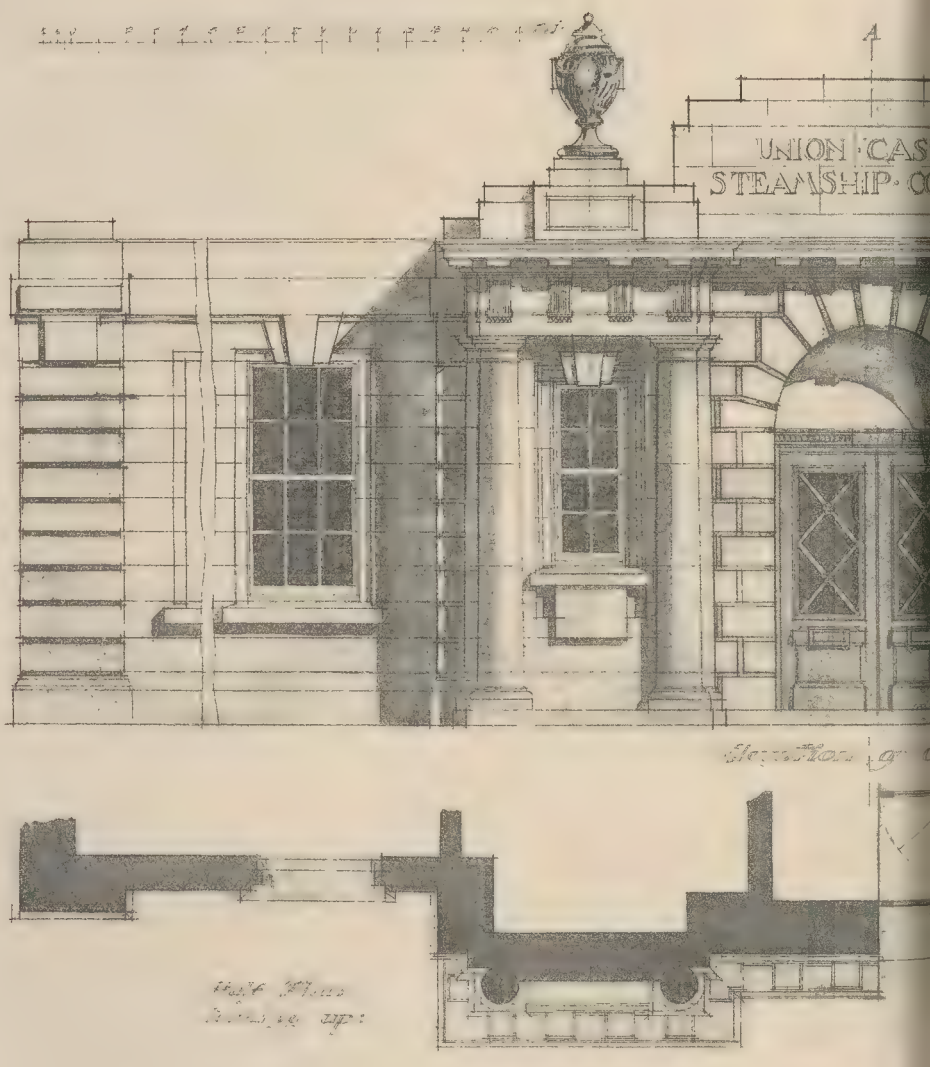
R.I.B.A. OWEN JONES PRIZE. AWARDED TO MR NOEL H. LEAVER





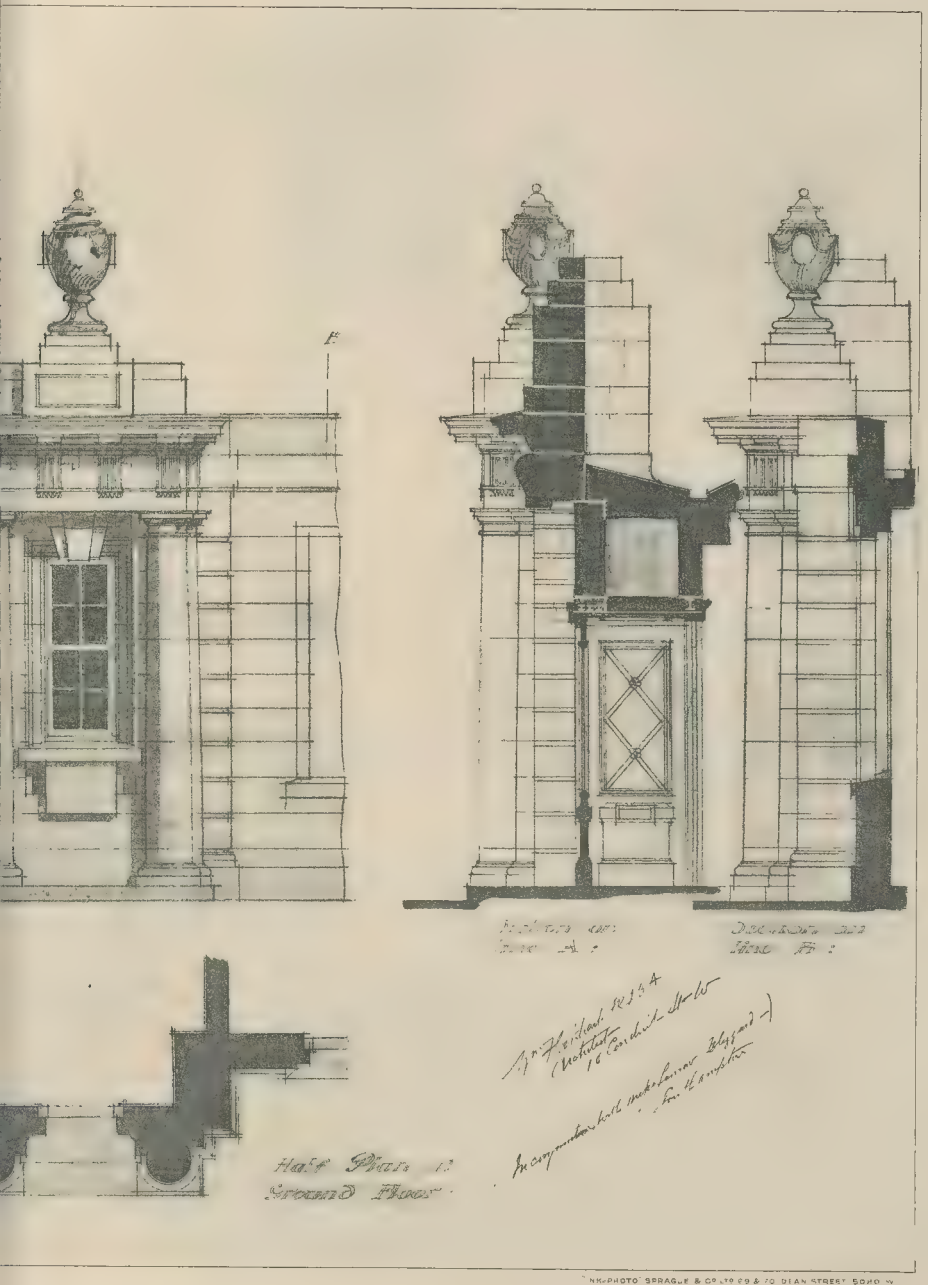
PORTION OF DOME IN VILLA MADAMA

RIBA OWEN JONES PRIZE AWARDED TO MR NOEL H LEAVER



UNION-CASTLE SHIPPING OFFICES, SOUTHA

IN CONJUNCTION WITH MESSRS LEMON & BLIZZARD,



INK-PHOTO SPRAGUE & Co LTD 29 & 30 DEAN STREET SOHO W

HE DESIGNS OF MR. W FLOCKHART, F.R.I.B.A.
ARRIED OUT UNDER THEIR SUPERINTENDENCE.



FIGURES IN FRESCO, RICCARDI CHAPEL, FLORENCE
R.I.B.A OWEN JONES PRIZE.—Awarded to Mr Noel H Leaver

MONTHLY REVIEW · *of* · ENGINEERING.

INFORCED CONCRETE IN GREAT BRITAIN.—III.

By W. NOBLE TWELVETREES.

(*Continued from page* 213.

Systems of Class (a)—*continued.*

ONSIDÈRE SYSTEM.—More than ten years ago M. Armand Considère, of Paris, made a series of investigations the properties of concrete reinforced teel in the form of spiral coils. and communicated his results in the autumn 902 to the Académie des Sciences. His sting investigations and their results have ly been discussed at length in Vol. LXXXV. *Builder*, to which our readers are referred tails. These and subsequent experiments , Considère attracted much attention on Continent and in the United States, and suggested various series of tests for the se of determining the efficiency of lateral rcement in compression members.

er having carried out numerous works in rced concrete in France, M. Considère in established an agency in London for ng his patents, under the style of the dère Construction Company, Ltd., of minster.

e British patent granted to M. Considère 02 was amended in accordance with the on of the Chief Examiner to the Patent in May, 1911, and in the amended ication the only claim is the following: - n constructions of stiffened concrete, rmation of parts under compression in a way that a core of concrete or the like is nded by metallic hooping either external bedded, formed of independent consecutive circular bands, or of helicoidal spirals or without longitudinally arranged wires ds."

e specification also states that the invention s generally to reinforced concrete structures, s more especially applicable to the con- ion of buildings, bridges, and arches of span.

e chief feature of the Considère system is ntroduction of lateral reinforcement as bed above into the areas of concrete under ression, to resist the lateral swelling of the te, longitudinal bars being added in uence of practical considerations. The rcement consists of ordinary round steel nd rods, and the spiral transverse rein- ent is coiled on the site of the works ans of a small hand windlass.

1 gives details of the most recent arrange- of the reinforcement in Considère system ns and continuous beams. The beam here ented is reinforced by tension and com- on bars, vertical web ties or stirrups. n bars in the upper part of the beam near upports anchored into the concrete in ession also near the supports, and spiral or the reinforcement of the concrete in st-named place.

ill be noticed that the main tension bars dependent of the armouring over the inter- te supports, which the patentees claim decided advantage both from theoretical ractical considerations, and that the web re spaced at progressively increasing ces apart from the supports towards the of the span as required by theory.

ng the advantages claimed for this are the following:—

That the resistance and safety of con- s and built-in beams are greatly increased by the addition of spiral coils in the compression areas outside the points of contra-flexure. The patentees also point out that the use of spiral coils in this manner obviates the need for gussets, which may be objectionable architecturally, at the junction of beams and columns.

(2) That the efficiency of spiral reinforcement in columns and struts is from two to three times greater than an equal amount of steel applied in the form of longitudinal bars.

(3) That columns and struts constructed as described are less affected by defects of workmanship in the concrete than similar members constructed in accordance with other systems, and, moreover, they always give adequate notice before final collapse takes place.

Fig. 2 illustrates a new type of column footing patented by M. Considère. The design of conical foundations in this form presents no great difficulty, although the several possible modes of failure have to be carefully considered in designing the profile of the cone and the proportion of reinforcement. The uniform upward reaction of the ground must be resolved at various points into a horizontal component, and also an oblique component acting in the direction of the generatrix of the cone. The first of these components represents a bursting force against which resistance is furnished by circumferential reinforcement, while the other component results in compressive stress, for which provision must be made by an adequate thickness of material. Another contingency is that the column may shear a hole through the roof of the cone. This possibility governs the depth and the amount of reinforcement at the crown. It is claimed that conical foundations of the type described result in great economy, particularly for heavy column loads on ground where only a low pressure per square foot can be safely permitted.

The business of the Considère Company is wholly confined to the design of structures in reinforced concrete, embodying only plain round bars of mild steel of the ordinary commercial sizes. Contractors are not supplied by the company with any material, and any firms of good standing and repute are free to tender for works in accordance with the Considère system on the quantities prepared by the company. All fees and patent royalties in connexion with the preparation of designs are included by the contractor in his tender, and the company are always ready to take full responsibility for all works designed by them.

Piketty System.—M. Paul Piketty, of Paris, having been engaged for about twelve years in the construction of reinforced concrete structures in France, has recently opened a branch in London under the style of Paul Piketty & Co., at 14, Bloomsbury-street, W.C.

The Piketty system of reinforcement for beams and slabs somewhat resembles that of M. Hennebique, and in certain respects is similar to that of M. Coignet.

The steel employed is in the form of round bars for resistance to tension and compression, and of thin rods bent into U-shaped loops for resistance to web stresses.

Fig. 1 contains three part longitudinal sections representing the arrangement of the reinforcement in beams with the ends built into a wall. The main tension reinforcement consists of two or more bars, of which one in each group is always bent up towards the ends, and, as shown in the bottom section, other bars may be similarly treated. The ends of the bars are either fish-tailed or fish-tailed and bent to J-form for security of anchorage. One or more bars are always inserted in the compression area of beams for the following reasons:—(1) For increasing compressive resistance; (2) for resistance to secondary tensile stress due to permanent deformation of the concrete; (3) to provide to fastening the upper end of the web loops or stirrups.

The latter are placed at varying angles, which increase progressively until at the middle of the beam the stirrups are vertical. The upper ends of each stirrup are bent over the compression bars at right angles, as represented in the drawings. Importance is attached to the horizontal projection of the ends of the stirrups into the slabs connected with beams,

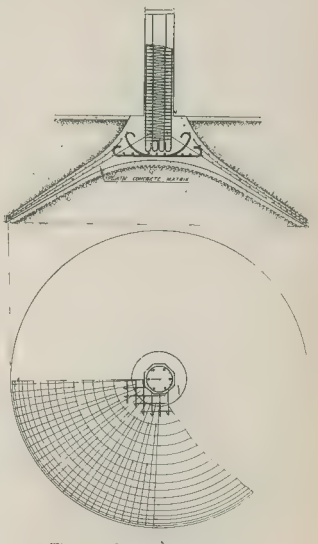


Fig. 2.—Considère System: New Type of Column Footing.

an arrangement offering efficient resistance to the shearing and tensile stresses along the longitudinal connexion.

Slabs are reinforced by two series of rods, those in one series being horizontal throughout, and those in the other series being bent up so as to pass over the compression reinforcement in all supporting beams.

Fig. 2 illustrates the arrangement of the reinforcement in continuous beams and slabs, also showing details at the connexion between a column and the component parts of a floor system. It will be noted in the drawing here given that the floor slab is reinforced in two directions at right angles to one another.

Fig. 3 includes two cross-sections of heavy beams with compression reinforcement rendered essential by the stresses to be resisted, the topmost bars incidentally serving for the attachment of the stirrups. Over the tension reinforcement will be noticed short bars intended for the uniform distribution of the stress, and fulfilling the same purpose as the analogous bars in the Coignet system. It should be noticed that the compression reinforcement is surrounded by encircling bars serving the two-fold purpose of linking the bars together and of increasing the compressive resistance of the concrete by restraining its expansion.

Columns in the Piketty system may be square, polygonal, or circular in cross-section. The reinforcement consists of longitudinal bars braced at intervals by transverse ties, each composed of a steel rod bent around each longitudinal bar, and the ends turned inwards so as to be embedded in the concrete core of the

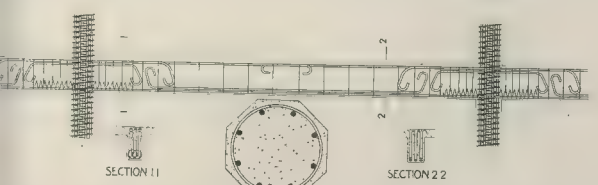


Fig. 1.—Considère System: Reinforcement in Columns and Continuous Beams.

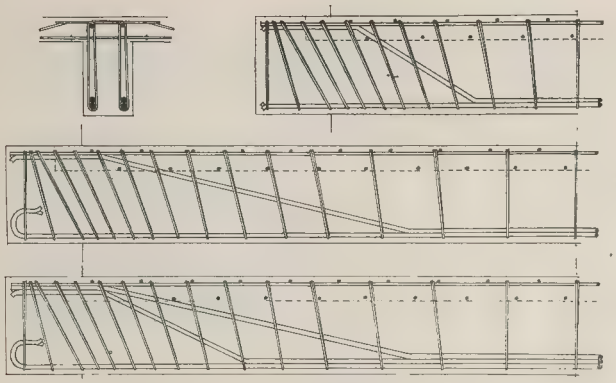


Fig. 1.—Reinforcement in Beams with Built-in Ends.

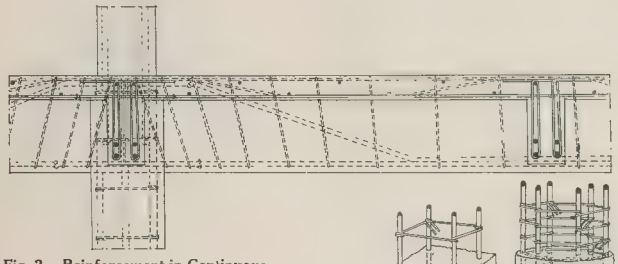


Fig. 2.—Reinforcement in Continuous Beams and Slabs.

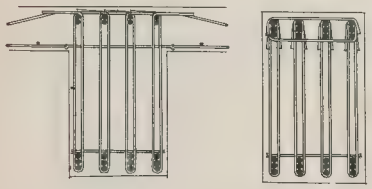


Fig. 3.—Sections of Heavy Beams.

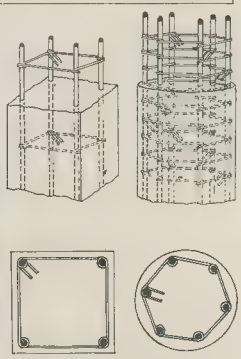


Fig. 4.—Column Reinforcement.

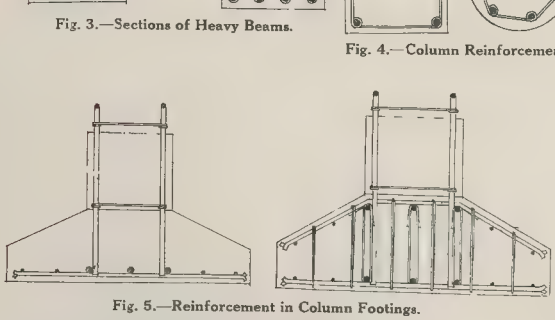


Fig. 5.—Reinforcement in Column Footings.

ILLUSTRATIONS OF PIKETTY SYSTEM.

column. Fig. 4 illustrates two arrangements of this simple method of column reinforcement.

Column bases in the system are reinforced either by a network of tension bars laid near the lower surface of the concrete, or of both tension and compression bars and vertical stirrups, as shown in Fig. 5.

The chief advantages claimed for the Piketty system may be thus briefly summarised:—

(1) That the sloping portions of the upward bent bars in beams furnish the greater part of the resistance needed against stresses due to negative bending moments near the supports of built-in and continuous beams, the remaining resistance being afforded by the upper straight bars around which the ends of the stirrups are turned.

(2) That the angular disposition of the stirrups, varied according to calculation in every case, is one offering the most effective resistance to tension on diagonal planes in the concrete.

(3) That the transverse ties in column reinforcement have the effect of bracing the longitudinal bars in their correct positions and of raising the ultimate strength by preventing the swelling of the concrete under compression.

Messrs. Paul Piketty are willing to give advice to architects, engineers, surveyors, and to their licensed contractors. Contractors for this system of construction are selected from old-established and experienced builders and contractors having reputation for excellence of workmanship, and the firm hold themselves personally responsible for all designs issued from their office.

THE NILE IN ENGLISH HARNESS.*

A COMMON device on the pedestals of the statues of ancient Egypt, more than 3,000 years old, depicts "The Binding of the Two Lands" of the papyrus and the lotus, of the Upper and Lower Nile. It is evidence to show that during the time of the Pharaohs it was recognised, as is done to-day, that whoever is responsible for the welfare of Egypt must control the Nile from its sources to the sea.

The ancient Egyptians appear to have supposed that the source of the Nile was in a cave of the granite islands above the first cataract at Assuan. But information is more exact now. The sources of the Nile are two-fold, viz., the mountains of Abyssinia and the great lakes at the Equator. The rain which falls in the Monsoon months in Abyssinia produces flood discharges in the Blue Nile, Atbara, and Saubat Rivers, and these uniting cause the flood in Egypt. When these floods subside the steady flow of the Nile in summer is maintained by the water that flows out of the Equatorial lakes into the White Nile.

In 1882 the battle of Tel-el-Kebir was fought, and the British occupation of Egypt began. In 1883 the care of the irrigation was entrusted to Sir Colin Scott-Moncrieff, who obtained four irrigation engineers from India to assist him. They found the "Corvée" or official system of unpaid labour established in this country, and one of the beneficial effects of their activity was the abolition of this form of organised slavery and the substitution of paid voluntary labour for it.

The most important part of their work was in Lower Egypt, the Delta, where Mehemet Ali had, during the XIXth century, introduced cotton cultivation, necessitating irrigation all the year round instead of a single inundation during flood time—the ancient system under which corn and cereals were grown. An attempt was made to obtain water by digging canals deep enough to draw in water from the Nile when at its low summer level; but the Corvée was not able to keep these canals clear to the requisite depth, so a river regulator was designed to raise the water level of the river sufficiently to cause a flow into the distributing canals.

The Delta Barrage.

This work is now known as the Delta Barrage. It was designed and built by a Frenchman, Mougel Bey. It consists of two fine regulators, one across the head of each branch of the river just below the point where it divides into the Damietta and Rosetta branches. Each regulator has sixty-one bays with sliding gates for regulating the river levels and discharges. It was designed to hold up 13 ft. head of water. But the foundation layer of concrete had been recklessly laid in running water and the mortar had been washed away, so that the bottom layer of the foundation platform was nothing but loose concrete metal with no binding material to make it water-tight. Consequently, after the superstructure was complete, and an attempt was made by closing the openings to hold the water up, a flow through the bottom layer was produced which displaced the sand on which the whole rested, and cracks and subsidences appeared in the superstructure of a most ominous description. The closure of the openings was therefore removed and the pressure taken off to save the work from destruction. It failed to perform the work it was designed for, and henceforth, till the British occupation, was of use only as a bridge for traffic.

In 1884 the barrage was taken in hand by the new Anglo-Indian engineers. After preliminary examination and experiments its restoration was decided on. A new floor of sound masonry was built over the old one, all springs and leaks and defects being scientifically and thoroughly treated. The new over-lying floor was then prolonged up-stream and down-stream so as to form aprons

* Abstract of a lecture by Sir Hanbury Brown, delivered at Carpenters' Hall, London-wall, on February 15.

. sound construction. The old defective ndation platform was thus covered over d enveloped with a sound exterior floor, ting it off from communication with the er. This work being completed, the rage held up 13 ft. head of water, as it s designed to do.

Cement-Grouting the Foundations.

But still there was left untouched the de- tive bottom layer of the old platform. If s in addition could be compacted together, structure would be still further secure. So e-holes were jumped from the roadway in centre of the masonry of the piers 57 ft. wnwards into the sand-bed of the river derlying the foundations. Five bores were de in the length of each pier. When a e was found to be clear, neat cement-grout, , cement and water only, was poured down bore, and the pouring continued till the e was full to roadway level. The pressure rted at the bottom of the bore by the uid column of cement-grout was 2¼ tons square foot, sufficient to force the grout o all unoccupied spaces in connexion with e bore at any point. Evidence of the travel d setting of the cement under the founda- ns was obtained when clearing bores not grouted. Altogether on the two barrages aggregate of 7⅔ miles of bore was made d over 6,000 barrels of cement poured down m.

Subsidiary Weirs of the Delta Barrage.

But, though, after this operation, the rrage was worthy of more confidence, the ect evidence of the defects in the original ndations obtained by the boring tools duced such an effect on the minds of those ponsible for the irrigation that it was cided to build subsidiary weirs down- eam of the two barrages to pond up the ter, and relieve the old work of some e duty imposed upon it. The weirs were ordingly designed to hold up 10 ft., and barrage was to hold up 10 ft. more, so at, while the head on the barrage was duced from 13 ft. to 10 ft., the total heading was increased from 13 ft. to 20 ft., giving increased control over the river at the ne time as greater security.

The method of construction of the weirs ords a remarkable instance of the employ- nt of cement-grout for subaqueous work. e main wall of the weir went down to 20 ft. ow lowest water level; the footing wall, ft. deep, was also below low water level, well as the greater part of the weir filling. account of anticipated trouble with ings, it was decided to build these weirs thout any unwatering of the foundation a. The river bed was first dredged out to foundation levels of the weir all over, d the main wall and footing wall were then in by forming a succession of blocks under ter by the employment of cement-grout. e blocks were formed by the help of a t made of two large barges with a travelling atry spanning the interval between them, low the gantry and between the barges a r-sided box was formed, the bottom of the x being the dredged bed of the river. The x was 30 ft. by 10 ft. by 20 ft. to 25 ft. ep. Four perforated pipes were fixed along axis, and the box was then filled to water el by throwing in rubble stone of all sizes. ment-grout was then poured into un- forated pipes introduced into the perforated es, and the pouring continued till the water the box had been displaced and the grout d risen to the level of the water outside box. The inner pipes were then with- wn and the box and contents left un- turbed till next morning. It was then nd that the cement had set sufficiently to d the block together, and the box frames re eased off, the sides dismantled, and the paratus moved forward, less one end, to m a three-sided box, with the block formed ving in place of the end removed. A ond block was then made joining on to the t, a third on to the second, and so on, till ntinuous wall had been made right across river. The clay and rubble filling. vided in the design, were then deposited ler water, and the remainder above water el built in the ordinary way.

Exhaustion of Natural Supply.

The old Delta Barrage having been con- dated by adding new floors and aprons, by cement-grouting its defective founda- s, and having been relieved and its ctiveness increased by the subsidiary weirs, such a command over the river had been obtained that every drop of the natural discharge of the river in summer was utilised in the irrigation of the cotton crop, and there was a demand for more.

It became therefore necessary to store some of the river's surplus of the flood and winter seasons to supplement the summer's supply. After careful study the project which involved the construction of the Assuan Dam was decided on as the best of the alternative schemes put forward.

The Assuan Dam is built on the crest of the First Cataract where the river flows over a bed of granite.

Dam Site.

During flood the river flows over the cataract as an unbroken sheet; but when the flood subsides the granite emerges above water level and the river divides itself into five separate channels. The construction of the dam along the length above water presented no engineering difficulty. It was at the five channels, running deep and with high velocity, that the engineer's skill and resource were brought into play. The method of enclosing and laying dry the area within which the permanent dam was to be built was the following.

Temporary Dams to Close Channels.

Temporary dams were made upstream and down-stream of the foundation site. The down-stream dam was first made of large stone to check the rush of water. The up-stream dam was then made, also of stone, still further checking the flow. The upstream slope of this dam was then staunched by small stone, sandbags, and sand till it was practically water-tight. The water between the temporary dams then fell to the level of the water down-stream of the lower dam. This dam was then staunched on its outer face till it, too, was water-tight. The water enclosed between the dams was then pumped out and the site of the work laid dry.

This may sound simple. But in several cases the making of these temporary dams was a formidable undertaking, stones up to 12 tons in weight being used. The Bab-el-Soghair—or little gate—had a depth of 28 ft. of rushing water. As the closing dam advanced its roaring torrent increased in violence and resisted all efforts to master it. The heaviest stone and stone encased in wire-netting was thrown in, and for a week no progress was made. The Nile demanded a sacrifice. So two heavy railway trucks were filled with stone in wire-netting, each truck with its stone weighing 25 tons. Wire ropes were passed under the trucks and over the stones, and the two trucks were bound together with wire ropes. A locomotive with steam up behind the trucks then put on full steam ahead, and shot the whole 50 tons bodily into the roaring water. This settled the business. The trucks stopped where they landed, and formed a footing for the stone which was then thrown in to complete the dam.

Excavating Foundation Bed.

The foundation area having been made accessible, the first operation was to clear away the unsound granite by pick or blasting, till a sound granite bed had been reached all over. The building of the dam of uncoursed granite rubble in cement-mortar was then taken in hand.

Details of Dam.

The dam is 1¼ miles long, it has now (after raising) a greatest height from foundation bed of 143 ft., and will ultimately support a maximum head of 90 ft. The ultimate capacity of the reservoir formed above the dam will be 2,300 million cubic metres (about 506,000,000,000 gallons, or half a million million gallons). It will have cost about 4,200,000*l*. During construction there was a population of 15,000 connected with the work. The maximum shade temperature was 120 deg.

Design of Dam.

The dam passes the whole river discharge through 180 sluices, and has no waste weir or overflow. This particular form of dam was adopted to avoid the tendency of the river to deposit its silt if its velocity of flow were to be checked during flood by material heading up at the dam.

Philæ.

The submersion of Philæ and its picturesque group of ruins is the one deplorable result of the creation of this fine reservoir, but, compared with the benefits resulting to Egypt from the construction of the Assuan Dam, the loss of beauty that the face of Philæ has suffered cannot be counted as unmitigated.

The lecture was illustrated throughout by interesting lantern slides.

THE LONDON OPERA HOUSE.—II.

Steel Construction.

THE whole of the steelwork in the new building was constructed by Messrs. Richard Moreland & Son, under the direction of the consulting engineer, Mr. A. T. Walmisley, M.Inst.C.E., of Westminster.

In order to convey an intelligible idea of the steelwork without unnecessary words we will state the nature of the construction on the different floor levels of the building:—

Stall Plan.—The only steelwork is represented by stanchions behind the stalls for the support of floor girders in the part of the building containing saloons and other accomdation for the public, and for the support of the circle and gallery girders.

Box Tier Plan.—Behind the stage one bay of flooring is carried by steel beams; in the auditorium the steel framing of the box tier is suspended from the floor above; and behind the auditorium steel is extensively used in floor framing.

Circle Plan.—Behind the stage steel framing occurs on the main and mezzanine floors; the circle framework and floor beams behind being also of steel.

Lower Gallery Plan.—In addition to floor girders and joists behind the stage, two 60 ft. span trusses carry the flies on either side of the stage, which is closed at this level by the proscenium girder, 49 ft. long; the gallery and upper boxes, as well as the floors behind the auditorium, are carried by steel framing.

Upper Gallery Plan.—The only steelwork is that of the gallery and a narrow strip of floor behind.

Roof Plan.—Behind the stage the roof frame is of the same design as for a floor; over the stage the roofing is supported by four large trusses carried by two trussed girders; the auditorium roof is carried by a series of six trussed girders extending from side to side of the building; and the flat roof over the part behind the auditorium has steel framing akin to that of a floor.

Although the whole of the steelwork was designed and executed in accordance with the most recent practice, much of it is necessarily of most familiar character. Therefore, in the subjoined notes we give particulars only of the more important details of construction.

The stanchions receiving the enormous loads transmitted by the circle and gallery girders are based on special steel grillages embedded in concrete, the largest of these being 7 ft. square in plan.

The steelwork for the thirteen boxes in the main tier at entrance level is suspended from the main girder of the circle above and the six boxes at the sides are hung from wing girders. The radial floor girders, consisting of 8-in. by 5-in. I-beams, are inclined at the required slope and connected by circular rows of 8-in. by 5-in. beams, and 4-in. by 3-in. joists, the system being completed by 7-in. by 4-in. joists in the outer ring as shown. Each main joist is provided with three slings for attachment to the floor above, the slings being concealed in the partitions between the boxes. The reason for suspending the circle was to avoid obstruction at stall level, where the only columns are two at the sides quite out of the way of the audience. By suspending the box tier as described the load on the grand circle steelwork was greatly increased, and, in consequence, the main girder of the circle tier is of unusual proportions, and is said to be far larger than any member of the kind hitherto employed in theatre construction.

Fig. 1 is a half plan of the grand circle framing. The circle is carried by sixteen raking cantilevers built up of angles, plates, and I-beams. As may be seen by the drawing, fourteen of these cantilevers are fixed into the walls at one end, extending across the main girder to the front of the circle, and two of them start at the main girder, the framework being completed by five raking beams between the main girder and another transverse girder, 22 in. deep by 9 in. wide, at the back of the auditorium. This girder is supported by six stanchions. Steel



The London Opera House, Kingsway.

Mr. Bertie Crewe, Architect.

joists are included as necessary for support of the concrete flooring.

In order to reduce the span of the cantilevers as much as possible, two raking girders of 42 ft. span, 33 in. deep by 24 in. wide, have been introduced, one end built into the side walls and the other end carried by the main girder. Each raking girder weighs more than 12 tons. These raking girders also support one end of each wing girder, 31 ft. span by 19½ in. deep by 18 in. wide, carrying the side-raking cantilevers.

Fig. 2 is a section through the steelwork of the circle showing the suspended flooring of the box tier below, and one of the raking cantilevers in the circle framework. In the same drawing may be seen the arrangement of the stepped tiers upon which the fauteuils are arranged.

The main girder forming the chief support of the grand circle, and of the box tier below, extends from side to side of the house in one span of 85 ft. without intermediate columns or stanchions. This important member is 89 ft. long by 62 in. deep by 31 in. wide, and weighs 62 tons. Fig. 1 contains a half plan, which is built up of steel plates and structural sections. It was constructed at the Silvertown Works of Messrs. Moreland & Son, and delivered in parts at the site, where it was riveted together in position, the ends being carried on stanchions built in the side walls. The load transferred to the stanchions from the girder is 500 tons, half at each end.

The last-mentioned member is carried by two stanchions built into the side walls of the structure.

Each stanchion is 22 ft. 1 in. high over all, and composed of two 15-in. by 5-in. 42-lb. I-beams, spaced 11 in. apart centre to centre, with two 18-in. by ½-in. steel plates, one on each side. The stanchions are hidden in the outer walls of the building and their bases are supported on grillages composed of four 18-in. by 7-in. 75-lb. I-beams embedded in concrete.

The lower gallery is constructed similarly to the grand circle, consisting of fourteen raking cantilevers composed of 15-in. by 6-in. by 59-lb., 16-in. by 6-in. by 62-lb., and 18-in. by 7-in. by 75-lb I-beams reinforced by flange plates, the dimensions of the rakers varying with their length and duty. The cantilevers are built into the outer wall, or secured to the transverse girder at the back of the auditorium, according to position, and pass over the main



Fig. 1.—London Opera House.

l raking girders, as in the case of the con-
action illustrated by Fig. 1. The cantilevers
connected by steel joists for support of the
crete floor slabs.

The lower gallery main girder has inclined
ls to conform with the floor ramp dictated by
ting requirements. This girder has the clear
n of 85 ft., and weighs 41 tons, its dimensions
ng 63 in. deep by 24 in. wide, and, like the
responding member on the circle below,
s built up of structural sections and plates.
raking girders of similar construction
oduced to shorten the span of the cantilevers
gh 9 tons each and have the clear span
12 ft., the average depth of 30 in., and the
th of 14 in. across the flanges.

The main girder of the lower gallery is
ported by two stanchions 45 ft. high, built
b the outer walls.

ix of the raking cantilevers are secured
the back end to a main box girder, with
span of 64 ft., 61 in. deep, 18 in. wide,
lt up of angles, channels, and plates. This
der is carried by two stanchions, and also
ports part of the floor framing at the back
he gallery.

The upper gallery, which is considerably
rower than, and practically a backward
ension of, the gallery below, is composed
nine raking girders supported at the front
by the girder to which the lower gallery
tilevers are attached, and built into the wall
the back.

The proscenium opening is spanned by a
girder 50 ft. long, with the clear span of
ft., 39 in. deep by 18 in. wide, and the fly
lleries, constructed of concrete and steel
ts, are carried by lattice girders, each
ft. long.

Over the stage the roofing is carried by four
in trussed girders of 70 ft. span, 12 ft. 6 in.
p at the centre, these members being
ported at the ends by two trusses with
span of 63 ft. and 12 ft. deep. In
ordance with the requirements of the
ndon County Council the roof is covered
h boards, finished with slates on the outside.
roof trusses also perform the duty of
rying the rib to which the whole of the
nery is slung.

The roof over the main portion of the
ditorium comprises six trussed girders. Five
these members are 10 ft. 9 in. deep by
in. wide, and the sixth is 14 ft. deep by
in. wide. The ends of the trusses are
ported on the side walls of the building.
roof covering consists of 6-in. by 3-in.
ams spaced about 3 ft. apart centre to
tre, encased in concrete and covered with
yer of asphalt. The lower booms of the
sses serve the purpose of carrying the steel
ning of the elliptical ceiling.

Over the gallery the main support of the
roof is a steel plate girder 88 ft. long,
in. deep by 18 in. wide, supported at the ends
the side walls of the building.

With the exception of the combustible roof
ering required over the stage by the London County Council Regulations, all the roofing is of fire-resisting construction, which applies also to the whole of the dressing, wardrobe, property, chorus, and rehearsal rooms.

Finally, it should be mentioned that the heavy exterior cornice of the building is carried by a special arrangement of steel members, with provision for the support of the statuary previously described.

Despite the fact that the London Opera House is in no sense of the term a steel-frame building, some 700 tons of steel have been used on the interior construction, which possesses much interest as an example of modern architectural engineering.

(To be concluded.)

"TESTING OF MATERIALS" USED IN REINFORCED CONCRETE.

On the 7th inst., at a meeting of the Society of Architects, a paper was read by Mr. A. Alban H. Scott on "Testing of Materials Used in Reinforced Concrete." In the course of his remarks he said:—

"The following is an outline procedure I would suggest should generally be adopted with regard to the testing of materials for reinforced concrete work:

All tests to be made at an independent testing and experimental works.

Testing of Cement.—The cement to be tested from samples taken from the bulk, such samples being taken from various positions of the bins at the makers' works. After the cement has arrived on the job samples again taken from various bags, thoroughly mixed and again tested. Further tests made from time to time as the material is being used in the works, the number of these tests being regulated by the quantity of the consignment and the time taken in using same.

All tests on cement should be made in accordance with the latest specification of the British Standard Specification for Portland Cement, with the further test for ascertaining resistance to thrusting stress of both neat cement and also cement and sand in the same proportions used for the tensional briquettes.

Aggregate or Coarse Material.—A sample in bulk to be delivered on to the works, a sample taken and tested:—1st. For freedom from loam and other foreign matter. 2nd. For the proportion of the various sizes of the crushed material. 3rd. For the amount of voids. 4th. For specific gravity. Tests repeated on the material being used in the works from time to time as may be considered desirable.

Sand.—Sand to be treated in exactly the same way as aggregate, and in addition a test for the amount of material that will pass a sieve of $\frac{1}{30}$-in. by $\frac{1}{70}$-in. apertures should be ascertained; this, which can be called "flour," should be rejected.

Water is tested to see that it contains no unusual or injurious properties.

Steel to be first inspected at the makers' works with a view to ascertaining:—1st. Whether welds have been made. 2nd. For surface defects. 3rd. Correctness of diameters.

Every rod of over $\frac{1}{4}$-in diameter must be stamped with a die as having been inspected. Sample lengths are taken from the actual rods, which are duly stamped and sent to the testing works for the purpose of ascertaining:—1st. Their ultimate strength. 2nd. Their elastic limit. 3rd. Their elongation and contracton of area. 4th. To observe the structure of the metal at fracture whether the same is silky or granular. 5th. Bending test.

All these tests to apply to rods and wire from and including $\frac{5}{16}$-in. diameter and upwards.

Concrete.—The test specimens of concrete should be of a standard size of 6-in. cube. Six specimens made for each test, three made in the laboratory and three on the works. The cement for each set of six specimens to be taken from the same consignment. The laboratory tests specimens should be made as far as possible on practical lines, so that the result should be such as can be reasonably expected from concrete in the actual work.

All specimen pieces made on the works should be made from concrete taken from the actual mixing platform. All such specimens should be made in metal moulds, and the concrete worked in by punning and tamping to the same degree as has actually taken place in this structure. Six test cubes should be used for each test, and the minimum tests should be made at the following periods:—Seven days, twenty-eight days, fifty-six days, ninety days, and one year.

For the purpose of record and research work such tests should be carried out at the following periods:—Seven days, twenty-eight days, fifty-six days, ninety days, six months, nine months, twelve months, two years, three years, four years, and five years.

Centering.—No mechanical tests are required for this, but when the strutting is being placed into position rough calculations should be made to see if any undue deflection or movement is likely to take place during the process of placing the moist concrete into position, and inspection made to see that the joints have been properly filled up by rubbing with hard bar soap or other material to prevent dripping of the cement and sand.

We might now consider whether the tests mentioned above are reasonably required, and before proceeding to do so a few remarks on the work the material is called upon to do may not be out of place. In reinforced concrete the concrete takes compression and shear; the steel taking all the tension and assisting for shear and compressional strains. The concrete being stressed to not more than 600 lb. per square inch in compression, and 60 lb. per square inch in shear; the steel in compression in beams not more than nine times per square inch

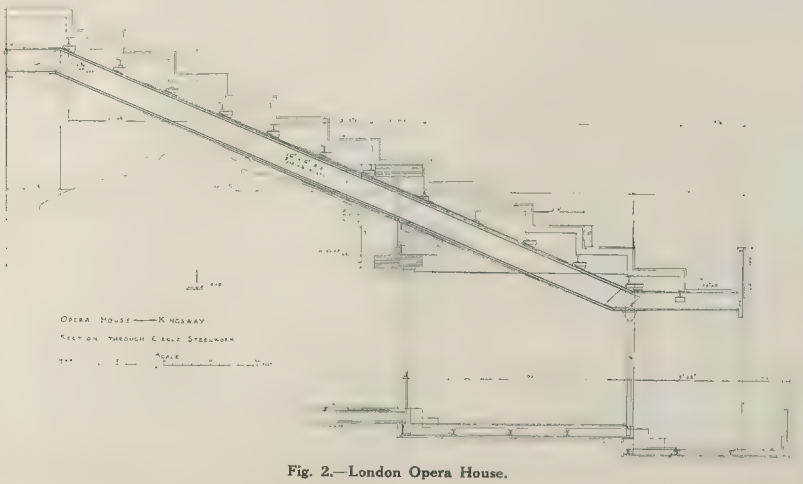


Fig. 2.—London Opera House.

that of the adjoining concrete, and in columns not more than fifteen times that of the adjoining concrete; and steel in tension 15,000 lb. per square inch, and the adhesion of the concrete to the steel 100 lb. per square inch of actual contact.

These figures being subject to various conditions, such as the efficient tying in of the steel in compression to prevent bulging of the rods, proper proportion of metal to the concrete, and spacing of the steel. In the case of columns the effective area of concrete is only taken as that part which is hooped in by the ties to the vertical steel members.

If we are working to a factor of safety of a fourth of the ultimate, the ultimate resistance to thrusting stress of the concrete should not not less than 2,400 lb. per square inch, the resistance of concrete to shear 240 lb. per square inch, and the steel 60,000 per square inch ultimate tensile.

These figures show that all the materials are called upon to be of high efficiency, and to work in harmony and simultaneously together and have been adopted in consideration not only of their ultimate resistance, but also the relative co-efficient of elasticity.

The work is designed on the assumption that the materials actually used in the construction are capable of resisting these stresses.

The following are a few reasons why the author considers the tests necessary:—

Aggregate and Coarse Material.—It has been found that most aggregates (unless washed) contain loam and other foreign matter. A sample of river aggregate recently tested gave as much as 7 per cent. of loam, and most loams have a surprising covering power, being of the very finest of "flour," and consequently when the cement is added there is a thin film between the cement and the actual silicious material, thus preventing the cementing together of the particles.

Some time ago it was advocated in certain quarters that the presence of loam in aggregate did not decrease, but rather increased the strength of concrete. A slight mistake was made there; the material which was mistaken for "loam" actually contained certain cementing properties which had the effect of making the concrete a richer mixture.

With aggregates which are practically uniform in size, or if the various sizes are not properly graded, proper bond is not obtained between the various materials as the mortar is concentrated, and thus a portion of the mixture is deficient in cementing materials; therefore it is most desirable that the grading and voids should be worked out very carefully, and, with certain exceptions, it is found, within limits, that the grading which gives the smallest amount of voids in the aggregate and sand results in concrete of greater strength. With aggregate and sand containing a high percentage of voids a greater proportion of cement is required.

It is possible to arrange these results in various ways, and the following table may be found convenient:—

Size of square apertures in ins.		1	½	⅜	⅛	¼	⅛	1/16	3/32	1/10	Not graded.
	Parts	1	1	1	1	1	1	1	1	1	
1. Thames sand	Perc. of voids	—	—	—	—	39·9	39·0	35·5	34·5	—	
2. Sea sand on shore 26 years		—	—	—	—	26·7	29·5	32·0	—	—	
3. Ordinary Thames sand...		—	—	—	—	—	—	—	—	—	23·3
4. River sand		—	—	—	—	—	—	—	—	—	32·0
5. Sand from crushed rock				—							33·2
6. Crushed rock		40·1		44·1		—	—	—	—		
7. Thames ballast graded ...		38·2	44·5	43·5	42·5	—		—	—	—	
8. Sea ballast		41·8	42·3	41·8	42·0						
9. Ballast and sand as from bank to pass only and not retained on apertures		37·0	38·0	37·6	35·6						
10. Thames sand and ballast not ground	Parts	—	—	—	—	1	1	2	2		
,,		—						32·0			
,,			—	—				28·7			
,,	Parts	1	2	3	4	1	1	2	2		
,,			42·3								
,,				29·3							
,,					25·1						
11. Sea sand and ballast ...	Parts	1	1	4½	3	1½	3½				
,,				29·6							
,,	Parts	1	1	4½	3	1½	1½	3			
,,				23·9							
12. Standard sand				34·5							

In this connexion it should be remembered that as the number or particles increase so the proportion of the cement to the whole should be also increased owing to the greater covering power required. A test cube made with a very small amount of aggregate and a large amount of sand with the usual proportions of cement gave an ultimate resistance to thrusting stress of only about 600 lb. per square inch; such low result was entirely owing to the fact that the usual amount of cement in that case was not sufficient to properly cover each particle of the sand and aggregate, and a perfectly cemented and homogeneous mass was not obtained.

The ultimate resistance of any material is its strength at its weakest point, and the actual area of the concrete is the gross area minus the area of voids at any section; it is therefore necessary that the ascertained percentage of voids in the aggregate and sand should be entirely filled up with cement, withan additional allowance for completely surrounding each particle. The usual rough-and-ready means of determining the exact proportion of the cement to the sand and aggregate has resulted in many cases of disaster.

The specific gravity of sand and cement should be taken in order to compare with the weight of the test specimens, as such weight is materially affected by the original weight of the aggregate and sand. There are at least two methods of ascertaining the amount of voids. One is by ascertaining the specific gravity of the material used; and, secondly, by allowing the aggregate and sand to absorb moisture, then to dry the surfaces without extracting moisture from the material, and then in the test tubes to add water until such time as the level of the aggregate and the water is at the same point.

Water.—The water usually obtained from town supplies can be taken as of proper quality for use in concrete work, but in country districts water obtained from wells and reservoirs often contains foreign matter, such as peat and other vegetables, and it has been found that by using peaty water it retards the setting of the cement; in one case the concrete did not set for a period of three weeks, at which stage the concrete was still very soft and was taken up.

Steel.—In no part of the steel for reinforced concrete should welds be allowed. Welds can be made in various ways, but it is impossible to test each weld, and in these joints it is not an exaggeration to say that not one weld in 500 would be of equal strength to the rest of the bar, and it has been ascertained with most disastrous results that the strength at the point of the weld goes as low as 30 per cent. of the bar adjoining. This is caused not so much by the lack of amalgamation of the material itself, but generally by the fact that large voids are left right in the centre of the joint.

Surface defects in steel are often found in the ordinary commercial bars, being indicated by most minute cracks, generally starting in the shape of a "V." Although such defects are in themselves perhaps almost innocent, yet immediately the material is subject to any stress they develop in a most alarming manner.

It has been found that the diameters of bars vary from that specified, resulting in one case of a loss of 12 per cent. in the area. Excess diameter is also often met with, and as the final measurements are taken on a basis of the correct diameter such excess of diameter will often be the solution of the difference found between the surveyor's measurements and the weight alleged to have been used by the contractor. Reinforced concrete work being designed on the assumption that the whole of the materials employed are exactly in accordance with the specification, a reduction in area of the bars is most serious.

(*a*) The ultimate strength should be taken at not less than 60,000 lb. and not more than 72,000 lb. per square inch.

(*b*) The elastic limit is also of the utmost importance, as although steel might have a high ultimate resistance, the elastic limit might be so low that in case an accidental load is placed on the work a sudden collapse might take place; whereas, by use of material with a proper elastic limit proper warning would be given before its failure.

(*c*) It is essential that steel should be of such properties as will enable it to take a gradual and uniform extension, thus indicating a uniformity of quality; and the contraction of area at fracture should not be less than 40 to 45 per cent., which will confirm the properties of equal extension.

(*d*) A silky fracture indicates a uniformity and a good mild steel so far as the metal, as metal, is concerned. Granular grain indicates brittleness and unequal quality.

Concrete.—Concrete which has its setting somewhat retarded by sprinkling with water gives generally higher results than concrete which was allowed to dry under normal conditions. The question arises here, however, as to the consistency of concrete not only from the point of view of the strength of the concrete itself, but rather as to what consistency will give the best results in actual practice from the point of view of contact with the metal, resistance to crushing, and shear; and although it is essential that as little water as possible should only be used to prevent air-holes occurring after the water has been evaporated, I would feel inclined to use a concrete slightly wetter than the average practice in France, but certainly much drier than the general present use in England.

Comparatively wet concrete will not allow of it being rammed or "tamped"; whereas, to get a drier concrete into its correct position, tamping and gentle ramming is essential. As the whole of the strength of reinforced concrete depends upon proper adhesion of the concrete to the steel, it is an essential factor that the concrete is gently rammed at every point.

The architect has therefore a much better chance of making sure that the concrete is properly placed in position and properly worked between the reinforcing metal, and the greatest trouble has been found to be with contractors wishing to make the concrete wetter than is desirable owing to the fact that a wet concrete is more easily placed in position with much less labour than a dry concrete.

The influence of the percentage of water used is shown in a diagram which is the result of a series of tests which Mr. Kirkaldy carried out for the purpose of arriving at some definite conclusion as to the very debatable point of the efficiency of wet and dry concrete.

The usual period of the first test on concrete has until recently been at twenty-eight days, but with important structures to obtain tests at twenty-eight days after the concrete is made is not going to be of very much use for early correction when the work is being rapidly pushed forward, therefore a seven-day test is essential, so as to be able to immediately detect any error in any of the materials.

At the present moment there are few tests at seven days, so that for the present the reasonable resistance of concrete at this period has not been definitely ascertained (approximately 300 to 400 lb.) Such tests in connexion with the twenty-eight days' tests will also give most useful information with regard to when it is safe to strike the centering, and when one considers the failures that have taken place owing to the centering having been removed too quickly a seven days' test will undoubtedly become a recognised factor very shortly.

The fifty-six days' and ninety days' tests are

rable, as they show what is actually taking be in the work with regard to the increase lecrease in the strength of the structure. he concrete up to about six months of age eases in strength fairly rapidly, but it is ous that from about six to nine months the easing resistance to thrusting stress is very trifling, but after nine months the strength of the concrete again continues to increase at a more rapid rate, although not so rapid as during the first six months.

For the purpose of research work, and where the importance of a job will allow it, it is most desirable that specimen pieces should be made in sufficient number so that each series of specimens are tested up to at least ten years of age. A number of specimens should always be kept, so that if anything should ever happen to any structure or part of same one is in a position to test the concrete, and the steel, of course, could be tested from samples obtained from the actual work.

By the kind permission of Mr. Kirkaldy I am able to give you the actual detailed results of experiments to ascertain the resistance of the thrusting stress on sixty-four cubes made under various conditions at his works.

You will see that there are many things to be learnt from this excellent series of tests. At twenty-eight days the highest result obtained was an average of 2,225 lb. per square inch, and at ninety days the highest result was 3,554 lb. These two results can be taken as being the greatest amount of resistance that can be obtained from concrete made under the most favourable conditions, and it should be compared with the lowest results obtained, which is 1,026 lb. per square inch in twenty-eight days, and 1,787 lb. per square inch in ninety days, with varying results between these two extremes, and the question arises as to which is the most probable result that would be obtained from work in actual practice; in determining this it might perhaps be desirable at the same time to inspect the diagrams showing the results of experiments on concrete taken from the actual mixing platform on several works.

[The remainder of the paper and some notes of the discussion which followed will be given in our next issue.

IGRAM 3.—Results of Experiments to Ascertain the Resistance to Thrusting Stress of Sixty-four Concrete Cubes, Made Under Various Conditions at these Works.

st no.	Description.	Weight.	Dimensions.	Base Area.	Crushed. Stress.	Per sq. in.	Per sq. foot.	
	Age 28 days.	Lb.	Inches.	Sq. ins.	Lb.	Lb.	Tons.	
75	Not sprinkled	17·90	6·00 × 6·00	36·00	34,980	972	62·5	
76		18·17	6·02 × 6·00	36·00	36,080	1,002	64·4	66·0
77		18·31	6·04 × 6·00	36·00	39,430	1,095	70·4	
78	Mixed fairly wet (as in practice) A	18·16	6·04 × 6·00	36·00	37,350	1,039	66·7	
83	Sprinkled with water every other day for first 3 weeks	18·60	6·10 × 6·00	36·00	42,750	1,187	76·3	
84		18·31	6·04 × 6·00	36·00	37,520	1,033	67·7	71·9
85		18·43	6·01 × 6·00	36·00	44,500	1,153	74·1	
86		18·32	6·02 × 6·00	36·00	38,890	1,080	69·5	
81	Not sprinkled	18·04	6·01 × 6·00	36·00	67,700	1,881	121·0	
82		18·03	6·00 × 6·00	36·00	64,300	1,786	114·9	110·5
83		18·15	6·03 × 6·00	36·00	54,700	1,519	97·7	
84	Mixed fairly dry (not rammed) B	18·34	6·06 × 6·00	36·00	60,700	1,686	108·4	
89	Sprinkled	18·22	6·05 × 6·00	36·00	57,300	1,592	102·4	
90		18·26	6·04 × 6·00	36·00	64,900	1,795	115·4	107·3
91		18·10	6·00 × 6·00	36·00	58,800	1,633	105·0	
92		18·17	6·02 × 6·00	36·00	59,500	1,653	106·3	
21	Not sprinkled	18·36	6·01 × 6·00	36·00	68,000	1,889	121·5	
22		18·58	6·04 × 6·00	36·00	75,000	2,083	133·9	129·8
23		18·28	6·03 × 6·00	36·00	73,800	2,045	131·5	
24	Mixed fairly dry (rammed) C	18·37	6·03 × 6·00	36·00	74,010	2,056	132·2	
29	Sprinkled	18·50	6·04 × 6·00	36·00	71,460	1,985	127·6	
30		18·66	6·03 × 6·00	36·00	71,270	2,083	132·7	130·7
31		18·56	6·04 × 6·00	36·00	74,880	2,080	133·8	
32		18·43	6·02 × 6·00	36·00	72,060	2,002	128·7	
37	Not sprinkled	18·13	6·03 × 6·00	36·00	80,580	2,238	143·9	
38		18·20	6·02 × 6·00	36·00	83,100	2,308	148·4	151·0
39		17·90	6·00 × 6·00	36·00	83,280	2,313	148·7	
40	Mixed very dry (rammed) D	18·05	6·01 × 6·00	36·00	73,470	2,041	131·2	
35	Sprinkled	17·72	6·02 × 6·00	36·00	63,250	1,757	113·0	
36		18·28	6·00 × 6·00	36·00	83,460	2,318	149·1	133·6
37		18·10	6·00 × 6·00	36·00	85,020	2,362	151·9	
38		17·72	6·00 × 6·00	36·00	67,500	1,875	120·6	

Description.	Weight.	Dimensions.	Base Area.	Crushed. Stress	Per sq. in.	Per sq. foot.	Increase over 28 days
Age 90 days.	Lb.	Inches.	Sq. ins.	Lb.	Lb.	Tons.	P.c.
Not sprinkled	17·76	6·00 × 6·00	36·00	64,720	1,798	115·6	
	17·77	6·00 × 6·00	36·00	63,920	1,779	114·2	114·9
	17·78	6·00 × 6·00	36·00	64,560	1,793	115·3	71·1
Mixed fairly wet (as in practice) A	17·95	6·00 × 6·00	36·00	64,200	1,783	114·7	
Sprinkled with water every other day for first 3 weeks	17·57	6·00 × 6·00	36·00	58,190	1,616	103·9	
	17·64	6·00 × 6·00	36·00	62,320	1,748	112·4	
	17·82	6·00 × 6·00	36·00	65,130	1,809	116·3	115·5
	17·87	6·00 × 6·00	36·00	71,410	1,984	127·6	60·6
Not sprinkled	18·13	6·00 × 6·00	36·00	87,410	2,422	156·1	
	18·08	6·00 × 6·00	36·00	85, 60	2,388	153·6	
	18·11	6·01 × 6·00	36·00	89,880	2,497	160·6	158·9
	18·12	6·01 × 6·00	36·00	88,180	2,449	157·5	42·0
Mixed fairly dry (not rammed) B	18·18	6·01 × 6·00	36·00	90,400	2,511	161·5	
Sprinkled	18·20	6·01 × 6·00	36·00	88,850	2,415	155·3	
	18·28	6·01 × 6·00	36·00	93,850	2,607	167·7	161·7
	18·25	6·01 × 6·00	36·00	90,800	2,522	162·2	50·7
Not sprinkled	18·24	6·00 × 6·00	36·00	100,500	2,792	179·5	
	18·45	6·00 × 6·00	36·00	105,100	2,919	187·7	
	18·52	6·00 × 6·00	36·00	1 6,900	2,969	190·9	187·4
Mixed fairly dry (rammed) C	18·25	6·00 × 6·00	36·00	107,200	2,978	191·5	44·4
Sprinkled	18·46	6·00 × 6·00	36·00	117,300	3,258	209·5	
	18·40	6·00 × 6·00	36·00	109,200	3,033	195·0	
	18·32	6·00 × 6·00	36·00	124,400	3,456	222·2	203·1
	18·36	6·00 × 6·00	36·00	104,000	2,889	185·8	55·4
Not sprinkled	18·28	6·01 × 6·00	36·00	128,000	3,556	228·7	
	18·00	6·01 × 6·00	36·00	119,020	3,306	212·6	
	18·06	6·01 × 6·00	36·00	121,620	3,378	217·2	212·9
Mixed very dry (rammed) D	17·69	6·00 × 6·00	36·00	103,150	3,004	193·2	48·9
Sprinkled	17·82	6·00 × 6·00	36·00	110,980	3,083	198·3	
	17·90	6·00 × 6·00	36·00	130,050	3,612	232·3	
	17·98	6·00 × 6·00	36·00	136,320	3,784	243·3	228·5
	18·10	6·00 × 6·00	36·00	134,500	3,736	240·4	71·0

roportions: 4 cubic ft. Thames ballast (passing ¾-in. and retained on ¼-in. mesh). 2 cubic ft. sand. (25 per passing ¼-in. and retained on ¼-in. mesh, 75 per cent. passing ¼-in. mesh.) 1 cubic ft. "Ferrocote" Cement lb.).

tensile strength, etc., of cement used for above, see Report dated 9th Nov., 1910.

		Galls.	Qts.	Pts.	
Water added to above quantities.	Group A	5	1	1	(53·75 lb.)
	,, B	4	2	0	= (45·0 ,,)
	,, C	4	0	0	= (40·0 ,,)
	,, D	3	2	0	= (35·0 ,,)

Percentage of Voids.

SS4780	Ballast passing ¾-in. and retained on ¼-in. mesh			41·3 per cent.
,, 4779	Sand ,, ¼-in. ,, ,, ¼-in.	,,	40·5	,,
,, 4778	Sand ,, ¼-in.	,,	29·1	,,

99, Southwark-street, London, S.E.
2nd Dec., 1910.

DAVID KIRKALDY & SON.

ENGINEERING NOTES.

The Design of High Dams. A meeting of the Concrete Institute was held at Denison House, 296, Vauxhall Bridge-road, Westminster, S.W., on March 14, when Mr. Reginald Ryves, Assoc.M.Inst.C.E., F.R.Met.Soc., M.C.I., read a paper entitled "The Design of High Dams." The paper was limited almost entirely to the consideration of dams more than 150 ft. clear of the ground in height, and of such length of this height that the part under consideration may be regarded as receiving no support from the parts beyond it on higher ground. The author briefly considered four types of masonry dams, one of which is the mass gravity dam, and the other three dams of spans. Of these three two are gravity dams, in which the moment of the water load is balanced by the moment of the weight of the masonry. In one of these, which the author calls the parallel slice dam, the theory of the mass gravity dam is strictly followed, with more or less concentrated water loads; in the other the weights of the spans are wholly or partly counted in calculating moments, and the application of the theory is perhaps affected by the form given to the piers. The third type of dams of spans is the author's thrust buttress type, first designed for a height of 200 ft., but suitable, it is submitted, for much greater heights. It differs essentially from the other types, for instead of balancing moment against moment the author balances direct thrust in the masonry against the direct thrust of the water load.

The Drainage of Egypt. The correspondent of the *Times* sends to our contemporary information of the new scheme of drainage in Lower Egypt inaugurated by Lord Kitchener. As a result of the discussions of the projects which had been prepared—discussions in which, among others, Sir William Garstin and Mr. Webb, former advisers to the Ministry of Public Works, took part, it was decided that a start should be made in the western portion of the Province of Behera and in Central Gharbieh. Schemes dealing with these two portions of the great work have been approved by the Council of Ministers, and the first sod of the first new drain has just been turned by Lord Kitchener. The principal object in view is the improvement of lands where a system of drainage already exists. Incidentally, the execution of the work will lead to the reclamation of nearly 130,000 acres of land at present under water. It is reckoned that the work will be completed in four years, and the cost of execution for each of the two districts is estimated at 1,250,000*l.* This sum suffices only for the work of drainage, and does not include the cost of irrigation of the new lands which will have been dried.

THE BUILDING TRADE.

ACCIDENT POLICIES.

THE case of Allen *v.* London Guarantee and Accident Company, Ltd., recently heard in the King's Bench Division, is of considerable importance to those insured against accidents. The plaintiff, a builder, was insured under what is known as a third party policy—that is to say, against claims by third persons from accidents caused by the plaintiff's servants. An accident occurred, caused by a cart driven by one of the plaintiff's servants, and two men were injured, who both instituted proceedings against the plaintiff to recover damages for the personal injuries which they had sustained.

Under the policy the plaintiff was insured "whenever the insured or a paid and duly authorised driver in the regular employment of the insured was in charge of any horse or horse-drawn vehicle, and injury or damage was caused by such horse or vehicle. . . ." But the policy also contained clauses to the effect that the total aggregate liability of the company was to be limited to the sum of 300*l.* for all claims to compensation and costs, charges, and expenses paid either to the assured or any claimant in respect of any one accident or occurrence, and the company was enabled either to pay down the maximum sum in respect of such liability or at the election of the insured to defend any action, in which case all costs and expenses occasioned by the defence were to be borne by the insured.

The jury awarded 200*l.* to one injured person and 175*l.* to the other, and the legal costs of these persons amounted to 218*l.*

The questions raised in the case were—(1) Whether there was one accident under the policy so that the liability of the company was limited to 300*l.*, or whether the insured was liable for the extra 75*l.* (2) Whether the insured could recover the 218*l.* costs from the company. The Court held that there were two accidents, but only one occurrence, and that the limit on the liability of the company therefore applied. As regards this point, in 1891, the Court of Appeal in South Staffordshire Tramways Company, Ltd. *v.* The Sickness and Accident Assurance Association, Ltd., held that where the overturning of a vehicle had injured several persons there was more than one accident under a policy where the insurance was against "accidents by vehicles," but a limit was expressed to "one accident." The policy we are considering was, however, especially worded with a view to exclude that decision, and the Court has held that that object was attained.

As regards the second point, the Court held that, as the company had defended the actions on its own initiative without the consent of the assured, they were liable to pay the costs incurred by the third parties.

The Insurance Company had not pressed their counterclaim for the extra 75*l.*, so in the result the plaintiff succeeded, but this case illustrates the necessity for careful consideration of the terms of insurance policies—a point which we are always impressing upon our readers.

SAFETY SCAFFOLDING FOR STEEL-FRAME BUILDINGS.

IN an article published on March 10, 1911, we described various improved types of scaffolding for steel-frame buildings, including one devised by the Patent Scaffolding Company, of New York. There is nothing particularly new in the underlying principle, as the scaffolding is merely a development of the well known painter's boat. However, the manner in which this form of scaffolding has been evolved from a rudimentary appliance is quite ingenious and deserving of commendation. The two illustrations now produced will enable our readers to realise the convenience of the apparatus to builders, and the security it affords to bricklayers and labourers.

Fig. 1 represents the construction of curtain walls at two different levels by the aid of suspended scaffolding, and Fig. 2 is a view along the latter, showing the working platform, guard ropes, and winches used for adjusting the height of the platform. The scaffold is formed of sections, each 10 ft. long, suspended by wire ropes bolted at the top to outriggers, and secured at the bottom to a pair of hand winches. To the drum of each winch, ratchet wheels are fitted, these being actuated by a lever enabling the men to raise or lower the section of scaffolding as required. Thus the scaffold is virtually equivalent to a connected series of painter's boats, forming a continuous working platform, providing ample space and conducing to safety and economical construction.

THE FAIR WAGE CLAUSE, CARDIFF.

A DEPUTATION of the Cardiff Master Builders' Association waited upon the Cardiff Public Works Committee recently to protest against the new fair wage clause in Corporation contracts proposed by the Cardiff Trades and Labour Council. The deputation was headed by Mr. J. Gibson, the President of the Association, the other members of the deputation being Messrs. J. E. Turner, William Thomas, T. Price, and Isaac Watkins, the Secretary.

The deputation contended that the proposed alterations were unreasonable and unnecessary, and that there existed at present ample machinery for settling any grievances that might exist as between the master builders and their employees.

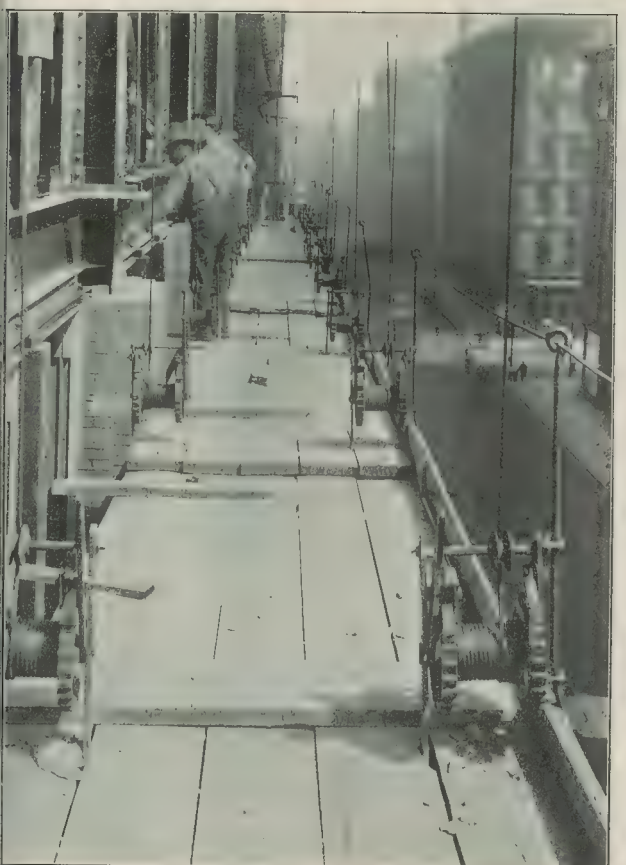
Mr. Gibson, who was the first speaker, dwelt upon the first clause, which stipulates that the contractor shall employ only *bonâ-fide* trade unionists for the purpose of executing the works contracted for. This clause, declared Mr. Gibson, was tantamount to asking the master builders to become agents for trade unions, to which they strongly objected. The proposed alterations were unnecessary and unjust.

Mr. William Thomas said that they as builders strongly objected to be made a machine for the purpose of increasing the number of trade unionists, and he did not think that any contractor of any standing would accept a contract under such conditions. There was already in existence a Board of Conciliation set up for South Wales and the West of England, and also a National Board to deal with disputes, and he could not recall a single case where an amicable agreement had not been arrived at by one or other of the Boards since their establishment in 1905.

Mr. J. E. Turner said that the ground upon which the master builders took their stand was that (1) the present clause in the contract agreements met all reasonable requirements; (2) the inspection of the employers' books was altogether unnecessary; (3) that the stipulation that notices of wages should be posted up was also unnecessary; and (4) that to allow the recognised trade union to be the sole arbitrator in cases of dispute was totally unreasonable. The deputation further informed the Committee that new regulations governing



Fig. 1. Patent Safety Scaffolding.



[Photo. by Fuller & Osborne.

Fig. 2. Patent Safety Scaffolding.

ges and conditions of employment would e into operation in May.

aving thanked the Committee for hearing r objections, the deputation withdrew, and matter was referred to a sub-committee for sideration and report at the proper time.

GENERAL BUILDING NEWS.

NEW CHURCH, ROTHERHAM.

r. James Totty, of Rotherham, is the archi- for this church which has been erected in ard-road at a cost of about 3,675*l.* The ding is in the Gothic style, and provides mmodation for over 500 persons.

NEW BUILDINGS IN LONDON.

veloping estate, Putney-hill, S.W.; Messrs. Parry & Co., contractors, Howard's-lane, ney, S.W. Proposed building for East ney High School, Putney-hill, S.W.; ney Public Day School Trust, Ltd. Exten- to Isolation Hospital (3,000*l.*), Barnet, N.: Pill, architect, of Messrs. White, Son, ill, 13, High-street, Barnet, N. Public dry, Kensal-road, Paddington, W. 0*l.*); Mr. E. B. B. Newton, Surveyor, n Hall, Paddington, W.

NEW HOTEL, BLACKPOOL.

new building, to be called the York and caster Hotel, is to be erected on the Pem- e Estate, Claremont Park, and is expected ost about a quarter of a million sterling. architects for the work are Messrs. Charles g & Son, of Spring-gardens, Manchester.

TRADE NEWS.

essrs. Jno. Birch & Co., Ltd., of 2, London -buildings, London Wall, E.C., have ntly secured the order for materials in exion with a new drainage scheme for the City of Fortaleza, Ceará, Brazil. The order includes some 16,000 tons of cast-iron pipes and about 4,000 tons of stoneware pipes, together with the requisite valves, sluice gates, and accessories. The value of the contract is, approximately, 160,000*l.*

Under the direction of Mr. Harold R. Hooper, architect, Ipswich, Boyle's latest patent "air-pump" ventilators have been applied to the theatre, Harwich.

The additions to the Farnham Workhouse are being supplied with Shorland's patent Manchester grates, by Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester.

We are informed that Messrs. Stephens & Carter, of Paddington Green, ladder and barrow makers and scaffolding contractors, have purchased the old-established business of Messrs. Ell & Co. They are transferring the business recently carried on by Messrs. Ell & Co., at Bridge Wharf, Paddington, to their Paddington Green-yard, but are keeping on and enlarging the yard at Kennington-road.

APPLICATIONS UNDER LONDON BUILDING ACTS, 1894 to 1909.

At Tuesday's meeting of the London County Council the following applications under the London Building Acts were dealt with. (The names of the applicants are given in parentheses) :—

Finsbury, East.—Erection of a building on the eastern side of Dingley-road, Finsbury (Messrs. Yetts, Sturdy, & Usher for Messrs. T. Wallis & Co., Ltd.).—Consent.

Finsbury, East.—Erection of buildings upon a site abutting upon the southern side of City-road, the western side of Nelson-street, and the eastern side of Dingley-road, Finsbury (Messrs. Yetts, Sturdy, & Usher).—Consent.

Fulham.—Bay-windows and porches to houses on both sides of Ellaline-road and Larnach-road, Fulham (Mr. F. L. Poole for Messrs. Allen & Norris).—Consent.

Hampstead.—Erection of buildings on the south-western side of Haverstock-hill, Hampstead, south-eastward of Belsize-lane (Messrs. W. Woodward & Sons).—Consent.

Hampstead.—Erection of a motor garage at the rear of No. 53, Hollycroft-avenue, Hampstead, next to Ferncroft-avenue (Mr. S. C. Lathbridge for Captain G. A. Ballard, R.N.).—Consent.

Hampstead.—Addition to a one-story motor house at No. 8, Lindfield-gardens, Hampstead (Messrs. L. Solomon & Son for Mrs. B. Rosenfeld).—Refused.

Islington, West.—One-story shop in front of No. 257, Caledonian-road, Islington, abutting also upon the northern side of Freeling-street (Boot's Pure Drug Company, Ltd.).—Consent.

Islington, West.—Projecting entrance gateway at the entrance to Albion-yard, on the western side of Albion-street, Islington (Mr. G. Langford).—Consent.

Kennington.—Three one-story shops on the southern side of Lansdowne-road, Kennington (Messrs. Hulbert & Haysman).—Consent.

Marylebone, East.—Iron and glass hood at No. 21, New Cavendish-street, St. Marylebone (Mr. J. P. Williams for Dr. Forbes Ross).—Consent.

Norwood.—Addition to the General Post Office sorting office building on the northern side of Cornwall-road, Brixton (Messrs. E. Evans & Sons).—Consent.

St. George, Hanover-square. — Projecting clock at No. 34, Old Bond-street, Westminster (Greenwich Time, Ltd., for Messrs. Dodson).—Consent.

Wandsworth.—Erection of porches and gables, with bargeboards, in front of twenty-three houses on the south-eastern side of Longstone-road, Streatham (Mr. H. H. Foster for Messrs. Humphreys & Allen).—Consent.

Wandsworth.—Bay-windows and gables to houses on both sides of Salterford-road, Wandsworth, southward of Welham-road (Messrs. Swain & Selley).—Refused.

Westminster.—Projecting one-story shop at No. 165, Victoria-street, Westminster (Messrs. Z. King & Son for Mr. R. T. Raikes, Mr. H. Hiscox, and Louise Lean).—Consent.

Width of Way.

Bethnal Green, South-West.—Erection of buildings on the western side of Coventry-street, Bethnal Green (Mr. P. K. Allen for Messrs. Allen & Hanburys, Ltd.).—Consent.

Lines of Frontage and Projections.

Chelsea.—Erection of a cottage at the rear of Nos. 111 to 115, Fulham-road (Messrs. Elms & Jupp).—Consent.

Chelsea.—Erection of a building on the western side of Little Cadogan-place, Chelsea, at the rear of No. 65, Cadogan-place, and at less than the prescribed distance from the centre of the roadway of Little Cadogan-place (Messrs. W. D. Hodges & Co., Ltd.).—Refused.

St. George.†—Two one-story buildings on the eastern side of Hungerford-street, Commercial-road East (Mr. A. Calver).—Consent.

Width of Way and Lines of Frontage.

St. George, Hanover-square.—Addition at No. 9, Lyall-mews, Westminster (Messrs. C. Bowden & Co.).—Refused.

Width of Way and Construction.

Greenwich.—Open shed of a temporary character on the northern side of North-street, Charlton (Mr. F. Elleston).—Consent.

Lines of Frontage and Construction.

Holborn.—Iron and glass shelter at the entrance to the British Museum Tube Station, High Holborn (Mr. E. P. Grove for the Central London Railway Company).—Consent.

Mile End.†—Projecting crane at Crown Works, Bancroft-road, Mile End (Mr. J. M. Knight).—Refused.

Line of Frontage, Space at Rear, and Projections.

Kensington, North.—Erection of houses on the western side of Highlever-road, Kensington, northward of Oxford-gardens, with a flank abutting upon Oxford-gardens (Mr. G. Holmes for Mr. W. Osborn).—Consent.

Alteration of Buildings.

Chelsea.—Additional story at No. 103, Cheyne-walk, Chelsea (Messrs. Webster & Cannon).—Consent.

Kensington, South.—Alterations at No. 21, Church-street, Kensington (Messrs. C. Spreckley & Co., Ltd., for Messrs. Hookins & Johnson).—Consent.

Deviation from Certified Plans.

City of London.—Re-erection of No. 7, Lovelane, City (Mr. H. E. Quick for Mr. H. P. Edwards).—Consent.

Formation of Streets.

Kensington, South.—Formation or laying-out of a street for carriage traffic in continuation northward of Abbotsbury-road, Kensington (Messrs. Drivers, Jonas, & Co., for the trustees of the Holland Park Estate).—Refused.

Newington, West.—Formation of a new street for carriage traffic to lead from Albertastreet to Delverton-road, Newington (Messrs. Briant & Son).—Consent.

Cubical Extent.

Marylebone, West.—Conversion of the Portman-market, Church-street, St. Marylebone, into a garage (Mr. P. C. Middleton).—Refused.

Uniting of Buildings.

Camberwell, North.—Use of double doors of special construction in lieu of double iron doors to openings in a division wall at premises in Blucher-road, Camberwell, adjoining the London, Chatham, and Dover Railway (Messrs. G. Trollope & Sons and Colls & Sons, Ltd.).—Consent.

City of London.—Formation of an opening between Nos. 7 and 8, Aldgate High-street, City, at the first-floor level (Messrs. C. Spreckley & Co., Ltd.).—Consent.

City of London.—Uniting of No. 6, Edmundplace and No. 11, Hamsell-street, City (Mr. J. Farrer for Messrs. W. Wood & Son, Ltd.).—Consent.

Clapham.—Formation of openings between Nos. 26 and 28, High-street, Clapham, at the ground, first, second, and third floor levels (Mr. J. W. Stevens for Messrs. Williamson & Cole).—Consent.

Hampstead.—Uniting of Nos. 247 and 249, West End-lane, Hampstead, at the basement level (Mr. J. Luck for Messrs. Morrell Brothers).—Consent.

Holborn.—Formation of openings in the party walls at the first, second, third, and fourth floor levels between Nos. 100 and 101, and between Nos. 101 and 102, Hatton-garden, Holborn (Mr. J. Sawyer for Mr. A. W. Gamage, Ltd.).—Consent.

Hoxton.—Uniting of Nos. 265 and 267, Hoxton-street, Shoreditch (Mr. H. Shienberg).—Consent.

Kensington, South.—Uniting of Nos. 3 and 5, Bedford-gardens, Kensington (Mrs. I. Barrett).—Consent.

Marylebone, West.—Formation of openings in the party wall, between Nos. 75 and 76, High-street, St. Marylebone, at the ground and first floor levels (Mr. A. J. Hopkins for Messrs. J. A. Michell, W. Eastman, and Messrs. Biscuits Guillout).—Consent.

Paddington, South.—Uniting of Nos. 44 and 46, Inverness-terrace, Paddington (Mr. W. L. Gimson).—Consent.

Strand.—Uniting of Nos. 57 and 59, Regent-street, so far as relates to alterations with regard to the staircases and staircase approaches (Messrs. Emden, Egan, & Co.).—Consent.

The recommendations marked † are contrary to the views of the Metropolitan Borough Councils concerned.

PROJECTED NEW BUILDINGS IN THE PROVINCES.*

ALDERSHOT.—Hippodrome; Mr. Bertie Crewe, architect, 75, Shaftesbury-avenue, W.C.

Bangor.—Workhouse infirmary (15,000*l.*); Mr. B. Lumb, builder, Todmorden.

Bedford.—Rebuilding furniture warehouse; Messrs. Usher & Anthony, architects, 81, St. Paul's-square, Bedford.

Bognor.—School; Mr. W. T. Barlow, architect, Arcade-chambers, Bognor.

Bournemouth.—Savoy Hotel; Messrs. Creek, Gifford, & Oakley, architects, Hinton-chambers, Bournemouth; Messrs. George & Harding, builders, St. Paul's lane, Bournemouth.

Bradford.—Proposed extensions to Central Baths Hall (9,000*l.*); Mr. R. G. Kirkby, architect, Town Hall, Bradford.

Brighton.—Workhouse nurses' home; Mr. J. W. Hawker, Court-chambers, North-street, Brighton. Picture palace, also additions to hotel; Mr. A. Carden, architect, 75 and 76, North-street, Brighton.

Caerphilly.—Council offices; Mr. J. H. Phillips, architect, Pembroke-terrace, Cardiff.

Clydebank.—Carnegie library (10,000*l.*); Messrs. Gardner & Whyte, architects, Glasgow.

Croydon.—Extensions to mental hospital (35,000*l.*); Mr. George F. Carter, Engineer, Town Hall, Croydon.

Doncaster.—Lecture hall (2,650*l.*); Messrs. Sprakes & Sons, builders, 37, East Laithgate, Doncaster.

Dunblane.—Hospital and gymnasium at Queen Victoria Military School (6,500*l.*); Mr. Bernard Reynolds, builder, 27, Randolph-terrace, St. Ninians, Stirling, N.B.

Easington.—Extensions to Thorpe Hospital; Mr. J. M. Lougden, Surveyor, Easington Rural District Council.

Eccles.—Extensions to boiler house at Electricity Works (2,035*l.*); Mr. N. H. Hacking, architect, Derby-chambers, Blackfriars-street, Manchester.

Folkestone. — Harvey Grammar School (7,510*l.*); Messrs. G. Castle & Son, builders, 2, Broadmead-road, Folkestone.

Hastings.—Medical baths; Messrs. Richardson & Gill, architects, 46, Great Russell-street, W.C.

Hove.—A plan has been passed for alterations and additions to No. 201, Church-road for Messrs. J. Parsons & Sons for the London and Provincial Bank. Plans have been lodged for a theatre, Holland-road, by Messrs. Gilbert & Constanduros, and for a bakery, Kingsthorpe-road, by Messrs. Price Brothers.

Ilfracombe.—Free library (2,000*l.*); Mr. O. M. Prouse, Surveyor, Town Hall, Ilfracombe.

Langley (Bucks).—Bacon factory; Messrs. Fassnidge & Son, builders, 42-4, St. Andrew's, Uxbridge.

Leatherhead.—School (8,090*l.*); Messrs. Roll & Taylor, builders, High-street, Epsom. School; Messrs. Jarvis & Richards, architects, 10, Queen Anne's-gate, S.W.

Liverpool.—Cathedral chapel, Blackburn-place (10,000*l.*); Mr. Matthew Honan, architect, 36, Dale-street, Liverpool.

Manchester. — Enlargement of Council chamber; Mr. Henry Price, architect, Town Hall, Manchester.

Rotherham.—The following plans have been passed:—Seven houses, Albion-road and William street, for Dr. J. W. Fox; alterations and additions to 306, Doncaster-road, for Messrs. Tennants Brewery Company, Ltd.; Empire Palace, Masborough-street, for the Masborough Empire Palace Syndicate; variety theatre, Masborough-street, for the Masborough Palace of Varieties, Syndicate. A plan has been lodged for six houses, Hatherley-road and Selwyn-street, for Mr. J. H. James.

Rutherglen.—Manse, Parish Church (2,500*l.*); Mr. H. E. Clifford, architect, 225, St. Vincent-street, Glasgow.

Salford.—Extensions to workshops, stores, and booster-room (1,075*l.*); Mr. John Ramsbottom, builder, Church-street, Pendleton.

* See also our list of Competitions, Contracts, etc., on another page

LONDON COUNCILS.

Battersea.—The tender of the Acme Flooring and Paving Company (1904), Ltd., has been accepted for a supply of ¾-in. sectional hardwood blocks at 12*l.* 5*s.* per 1,000 for paving the carriageway of St. John's-road between Northcote-road and Messrs. Arding & Hobbs' premises. The estimated cost of this work is put at 2,075*l.* The footways of the portion of the road mentioned are to be repaved with 2-in. artificial stone at an estimated cost of 448*l.* The Borough Surveyor has been instructed to prepare an estimate with a view to the making-up and paving part of Clapham-common, West Side, with tar slag macadam for the carriageway, and 2-in. artificial paving and tar-paving for the footpaths. Repairs are to be carried out to a portion of Wycliffe-road at an approximate cost of 100*l.*

East Ham.—Plans submitted by the Engineer have been approved for constructing an underground convenience at the junction of Barking-road and Green-street at an estimated cost of 1,800*l.* Plans have been passed for Messrs. Clemens Brothers for the conversion of premises, Poulett-road, into a factory. Mr. G. A. Smith and the Rev. Chapman have lodged plans for an addition to "Denmark Arms" public-house, High-street North, and for an assembly hall at the rear of St. Edmund's Church, Halley-road, respectively.

Greenwich.—The London County Council is to be asked to consider as to preparing a town-planning scheme to embrace the whole of the undeveloped land within the Borough. Plans have been passed for Mr. E. Mills for the erection of additions to the Kentish Steam Laundry, Charlton-lane.

Hackney.—Plans have been passed for Messrs. Edmondsons, Ltd., for four houses in Stamford-hill. For the erection of a building at No. 210, Lower Clapton-road, plans have been lodged by Messrs. J. Garey & Son on behalf of Messrs. F. W. Glover & Son.

Lewisham.—Tenders are to be invited for paving and forming Sangley-road-passage. The tenders of Mr. J. T. Gloag and the Atlas Stone Company, Ltd., have been accepted, the former at 489*l.* for kerbing, channelling, and making-up the roadway of Collingtree-road, Sydenham, and the latter for paving the footways of such road with artificial stone at 3*s.* 9*d.* per yard super. Plans have been passed for Mr. G. H. Paine for the erection of four houses in Perry Rise.

FOREIGN AND COLONIAL.

Building in Austria-Hungary.

The following notices are taken from the *Zentral Anzeiger für das öffentliche Liefer ungswesen* (Vienna) of March 3:—The Town Council of Vienna have approved the plans for the erection of a large mixed school in the 14th district at a cost of 960,000 kronen (40,000*l.*). A company has been formed, under the ægis of the Anglo-Austrian Bank, with a capital of 5,000,000 kronen (208,300*l.*), for the purpose of erecting a sugar factory in Cservenka (Hungary). Work is to be begun in the autumn.

Business Opportunities in Western Canada.

The following remarks form part of a letter from a well-known municipal official in one of the largest and most progressive towns of Western Canada, which was received lately by Mr. Beecher Smith, of Manchester:—"Our building for 1911 exceeded five million dollars, and I am safe in saying that this year building will be considerably greater. Now, in the past, our chronic difficulty has not been to provide work for men, but to provide men for the work, and the problem promises to be more acute than ever during the coming season. We can do with all the good tradesmen that you can send. There is always a good opening for a good tradesman in this western country, and his best plan would be to come out here and call upon me immediately he arrives. I shall then have pleasure in taking him by the hand and doing what I can for him. He is quite safe in coming. Our Home Re-Union Association reduces to quite a trifling consideration the separation from his wife and family of the honest working man who has only sufficient means to bring himself out here. Lots of men have children of working age who could earn in this country five or six times the wages paid them at home. In addition to his own good wages and sure work, a tradesman can now bring his family here, and by means of the united effort make a very handsome living and save a great deal of money. We know that you will send us nothing but the right class of people, and I feel satisfied that you know that these people will be helpfully handled into good situations."

Opera House, Wellington.

H.M. Trade Commissioner for New Zealand reports that arrangements are being made for the erection of a new opera house at Wellington, at a cost of about 25,000*l.* Plans are being prepared for the construction of an up-to-date theatre, capable of accommodating between 1,700 and 2,000 people, at Wanganui.

Theatre, Russia.

With reference to the notice on p. 580 of the *Board of Trade Journal* of December 21 last relative to the proposed construction of a theatre at Yurieff (Dorpat), H.M. Consul at Riga (Mr. V. H. C. Bosanquet) reports that according to the local press, the Artisans' Union at Yurieff have resolved to construct a new building, including premises for a theatre, at an estimated cost of about 210,000 roubles (about 22,000*l.*). The address to which communications should be sent may be obtained by British manufacturers on application to the Commercial Intelligence Branch of the Board of Trade, 73, Basinghall street, London, E.C.

Building in British Columbia.

The Imperial Trade Correspondent at Vancouver (Mr. P. G. Shallcross) reports that by-laws have been passed in a town in British Columbia authorising expenditure as follows:—High school building, 103,000 dollars (about 21,000*l.*); public schools, 97,000 dollars (about 20,000*l.*); general purposes, 165,000 dollars (about 34,000*l.*); sewerage works, 115,000 dollars (about 23,600*l.*). The name of the municipality in question may be obtained by British manufacturers and contractors on application to the Commercial Intelligence Branch of the Board of Trade, 73, Basinghall-street, London, E.C.



WING SECTION C-D.

SOUTH ELEVATION

WING SECTION A-B

SCALE OF FEET

OPOSED RESIDENCE FOR UNIVERSITY MEN.

has been suggested that the bachelor ent of Oxford and Cambridge men in Hon might be profitably drawn together he provision of a residence on the out- s of the metropolis similar in plan and estic administration to that of the col- s, and in which the cost of living would omparable with the average cost of board lodging in London. The social advan- s of the community system, the oppor- ty for athletics, the freedom from the ries of catering and a foreknowledge of expenses involved, would, it is believed, al to many undergraduates about to com- their university careers, to whom the tion and uncertain character of lodgings ent an outlook that is by no means active.

ne improved and extending facilities for sit in London and its suburbs admit at present time of considerable freedom in choice of a place of residence, and there- the field for the venture in question is h wider than has hitherto been the case.

order to obtain information as to the ncial status of the scheme it has been ssary to prepare more than usually com- e sketch plans to a scale of $\frac{1}{8}$ in. to 1 ft., ing the floors and elevations of the ding throughout. Initially a design was ared in the Tudor style of architecture, finally a quiet Georgian treatment was ted. The buildings, simple and sym- ical in arrangement, form three sides of urt 170 ft. square, open on the south, consisting of two floors above the nd. The main entrance is upon the n front, and on this façade, some ft. in length, are placed the adminis- ve and public rooms, while facing the on the south, and extending the e length of the building, is a cloister to the hall, smoking-room, and common- , and therefore forming an agreeable enlargement of these rooms in the summer months. The first floor of this block is occupied by sets of residential apartments. On the attic floor some similar suites and a billiard-room containing two tables find a place on the west, while, duly isolated, on the east are the servants' quarters and porter's flat.

The two wings of the building, entirely devoted to residential quarters, contain sixty out of the total seventy-five suites of apartments. These rooms are approached by staircases from the court, and resemble in arrangement ordinary college buildings, good sanitary accommodation and separate access to the bedrooms being provided. The desirability of a lavish supply of bathrooms throughout has been realised, and the supply of hot water direct to the bedrooms should do much to reduce the cost of domestic service.

All the rooms contain open fireplaces, though a limited amount of supplementary heating will be effected, where necessary, by hot-water radiators.

The kitchen premises adjoin the hall on the ground floor, and the necessary cellarage is provided under the servants' hall and pantry on the north-east.

The area occupied by the building, including a margin of 10 ft. between the boundaries and the building frontages, is $1\frac{1}{4}$ acres, and the court laid down with grass will provide for three lawn tennis courts and for bowls.

One and a half acres are, however, included in the estimates, the additional ground giving room for two cricket nets and a fives court to be subsequently erected if required.

The building includes seventy-five sets of keeping and bedrooms, the former averaging about 13 ft. by 12 ft., and the latter, perhaps, 12 ft. by 12 ft. Bathrooms in the proportion of nearly two to every three residents, some private, others common to two suites, adjoin these rooms. The dining-hall and common-room each measure 38 ft. by 18 ft.; the smoking-room 26 ft. by 16 ft.; the billiard-room 38 ft. by 24 ft., and the remaining provisions include some spare rooms for guests, rooms for the bursar and housekeeper, and good kitchen and servants' quarters. The cost of furnishing throughout has been considered, but it is thought that it might perhaps be desirable to let unfurnished a certain small proportion of the residential apartments.



NORTH ELEVATION

Proposed Residence for University Men. Design by Messrs. A. W. S. Cross, F.R.I.B.A., and Alan E. Munby, A.R.I.B.A.

THE ENGLISH HOUSE FROM THE NORMANS TO THE TUDORS.*

Houses of the XIVth Century.

"The majority of the lesser houses of the XIVth century are built upon the same or similar lines to those that preceded them.

That at Markenfield, Yorks, an almost perfect example, for which the licence to crenellate was granted in 1310, somewhat resembles Little Wenham. It consists of two blocks built at right angles to each other. The one has the kitchen and cellars on the ground floor and a hall and great chamber above, with appendant garderobe block, and the other the servants' department, with a chapel and another chamber above. This chamber, which can also be reached by a vice from the courtyard, seems in later times to have been made into two stories, and the same has happened to the great chamber. But the original aspect of the house is otherwise maintained, and the beautiful tracceried windows that lighted the hall and the chapel are still quite perfect.

Another house, somewhat later in date, but of similar plan, exists at Meare, in Somerset. In one block is the hall, over a cellar and servants' hall, and in the other the kitchen, with a large solar above. Brinsop Court, Herefordshire, is another interesting house with a fine upstairs

* In continuation of a lecture by Mr. W. H. St. John Hope, delivered at Carpenters' Hall, London-wall, recently, the first part of which was given in our last issue, p. 303.

hall of early XIVth century date, but it is at present somewhat obscured by later additions. The open timber roof is of peculiarly striking character.

The prior's house at Ely, now the Deanery, is an example of intermediate date, having been built by Prior John Crauden in 1325-6. Its principal remaining features are the hall, etc., and a very beautiful chapel, all raised upon sub-vaults disposed at right angles to each other.

The house, now also the Deanery, of another Benedictine dignitary, the Abbot of Westminster, belongs to the class under notice. It consists of the Norman solar and chapel, raised above the vaulted entry to the cloister, and having attached to it on the south-west the old hall and its kitchen. The latter now serves the new hall, built over cellars along the west side of the court by Abbot Nicholas Litlington, between 1370-80; the house was at the same time remodelled and connected by a gallery with the Jerusalem or great chamber at the north end of the new hall. The Jericho parlour and rooms over, now forming the north side of the court about which the house is built, were added by Abbot John Islip early in the XVIth century.

The type of house of which a hall on the ground level is the principal room continues to be found, especially during the first half of the XIVth century.

An example at Northborough, Northants, of a date *circa* 1330, has a hall, 36 ft. long, which, though masked by modern divisions, still retains its original traceried windows, now blocked, and a beautifully crocketed gable with ornate chimney shaft. The doorways within the screens are also more ornate than usual.

At Sutton Courtenay is another XIVth-century house of the same plan as that at Meare, though with the hall upon the ground floor. This has a fine open roof, but was sorely maltreated a few years ago, when the original windows and other features were destroyed. At right angles to its upper end is a contemporary wing with rooms on the ground floor, and the solar and other rooms above. The solar retains its windows and roof, but is now sub-divided, and the roof is in the last stage of decay through being eaten by worms. There is a corresponding wing of later date at the opposite end of the hall, which contains the kitchen and offices, with chambers over, but these have been much altered.

Penshurst.

Lord de Lisle's magnificent house at Penshurst has for its heart an almost complete dwelling of the middle of the XIVth century. It consists of a fine hall on the ground floor, intact even to its roof and the hearth for the fire, with porches covering the doorways at each end of the screens. The north porch has a chamber over. The south porch contains a large staircase to the great solar over the buttery and pantry, which occupy the block athwart the east end of the hall. The kitchen was semi-detached beyond this, but has disappeared. Across the dais end of the hall is another block with a vaulted basement, and over it the chapel, and formerly other rooms, reached by a staircase from off the hall dais. Licence to crenellate this mansion was granted in 1341.

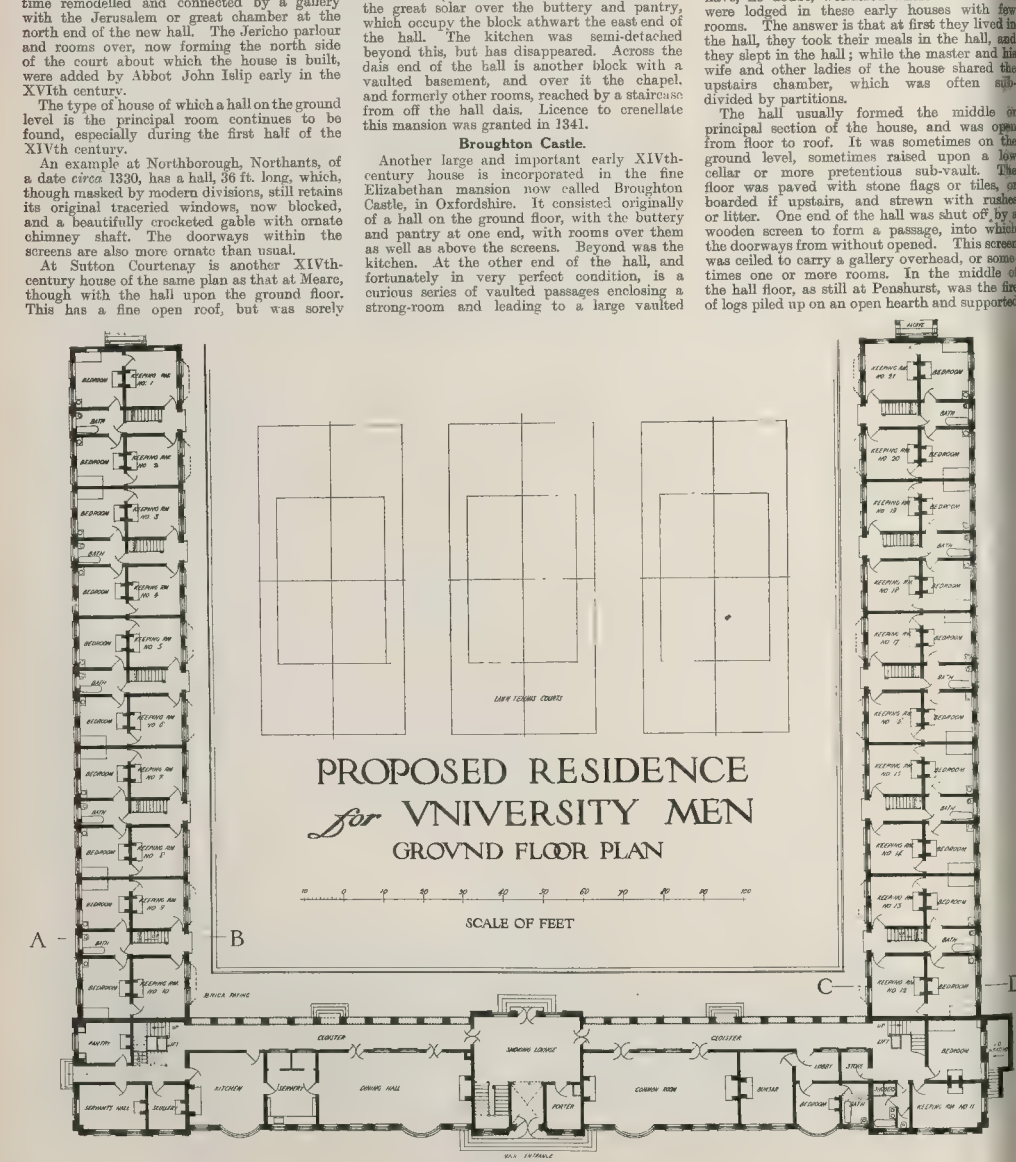
Broughton Castle.

Another large and important early XIVth-century house is incorporated in the fine Elizabethan mansion now called Broughton Castle, in Oxfordshire. It consisted originally of a hall on the ground floor, with the buttery and pantry at one end, with rooms over them as well as above the screens. Beyond was the kitchen. At the other end of the hall, and fortunately in very perfect condition, is a curious series of vaulted passages enclosing a strong-room and leading to a large vaulted sub-hall beneath the great chamber. Next to this is a broad flight of steps up to the chapel, which joins on to the north end of the great chamber. The chapel has a beautiful east window, and retains its stone altar. The great chamber has rooms west of it, over the vaulted divisions below, and another block on the south-east with garderobe tower attached. All this end of the house, except the chapel, which is carried up to the full height, has an upper story as well, and on the space, formerly open, east of the chapel staircase another three-storied block was added in the XVth century. The upper part of the hall has given place to an added Elizabethan story, and has been otherwise altered.

How Houses were Used.

This seems a convenient moment for saying a few words about the way in which such houses as I have described were used. Some of you have, no doubt, wondered where the servants were lodged in these early houses with few rooms. The answer is that at first they lived in the hall, they took their meals in the hall, and they slept in the hall; while the master and his wife and other ladies of the house shared the upstairs chamber, which was often sub-divided by partitions.

The hall usually formed the middle or principal section of the house, and was open from floor to roof. It was sometimes on the ground level, sometimes raised upon a low cellar or more pretentious sub-vault. The floor was paved with stone flags or tiles, or boarded if upstairs, and strewn with rushes or litter. One end of the hall was shut off by a wooden screen to form a passage, into which the doorways from without opened. This screen was ceiled to carry a gallery overhead, or sometimes one or more rooms. In the middle of the hall floor, as still at Penshurst, was the fire of logs piled up on an open hearth and supported



Design by Messrs. A. W. S. Cross, F.R.I.B.A., and Alan E. Munby, A.R.I.B.A. *(See previous page.)*

fire-dogs, or burnt in a metal brazier; the ke ascended to the roof and escaped as best ould through an open lantern above the fire. he lesser halls there was a chimney for the in one of the side walls, having over it a e or plaster hood, or sometimes an orna- ntal "chimneypiece." At the upper end of larger halls was the dais, a platform one or steps high, on which stood the high table the master and his family and persons of lity. The other tables were arranged along side walls, and were long and narrow, tding upon trestles and set in front of nches against the walls. The hall roof was pen carpentry work, according to the fashion he time, and covered with tile, shingle, or ch. The windows were generally of two oled lights, with tracery in the head, and ded part way up by a transom. Above this openings were glazed, either in frames ged into a rebate or, in later times, in grooves in the stonework, while the lower part was ttered only. The sill had a deep recess cut of the middle, so as to form a seat on each . The walls were plastered and lime- hed or ochred, and sometimes decorated n colour, or covered up to some height n wainscoting, which was almost always uted.

r the entrance passage, or "screens," as it and still is called, were doorways opening the buttery and pantry, with a passage ween leading to the kitchen; the kitchen f was generally semi-detached in order to in plenty of room with ample height and t. Over the buttery and pantry was the r or great chamber of the master and his ily; but in course of time this was transferred he other end of the hall and enlarged in ous ways, and its former place taken by a n or rooms for the servants.

Fortifications.

uring the XIIIth, XIVth, and XVth uries few houses of importance were built out being fortified in some way, either by houses or walled enclosures or by merely ing battled parapets. Before this could be a formal "licence to crenellate," or fortify building with *crenelles* or battlements, had e obtained from the Crown. Since these n refer to buildings still existing they are pecial interest as giving the approximate s when such were bogun.

Castle-like Houses.

the last quarter of the XIVth century ngs a group of large castle-like houses built n an entirely new plan, consisting of ranges chambers disposed about a rectangular tyard, with lofty towers at the outer corners. earliest in date seems to be Scotney, in t, the owner of which obtained licence to ellate in 1377. Other notable examples are on, in Wensleydale, dating from 1379-80; ling, in Kent, and Wressle, Yorks, from 1380; iff Hutton, in Holderness, from 1381; ham, in Kent, from 1385-6; and Lumley, Durham, from 1392-3. It is interesting ote that the moated Kentish examples have ded corner towers, while all the north- try unmoated examples, like Bolton, ssle, and Lumley, have the corner towers angular. Middleham is another example e type, but singular in having the ranges of nbers built about the great tower of the nan castle. This contained a fine hall and r good rooms on the first floor, which inued in use. Whether and in what way e fine and well-defended houses were ved from great towers like those at Middle- and Hedingham it would take too long now iscuss, but they were certainly a great nce in the direction of more comfort and acy, and carefully planned to that end. of them, unhappily, are more or less ruined, penalty for the part they were able to play ng the Great Rebellion, but Lumley has s been lived in, and is still perfect. Bolton, is nearly perfect, and in part retains its s and roofs. In the east side is a strong ouse, and the basement stories about the were massively vaulted throughout. hall occupied all the north side of the first and had the kitchen in the tower east of Opposite the hall was the chapel. The es were three stories high, and the towers ined four stories of chambers above the ed basements. There was thus ample for the lord and his family, his guests, he servants.

land, in his "Itinerary," writes of Bolton "the castell standithe on a roke syde; and all the substaunce of the lodgyngs in it be included in four principall towres. Yt was an eighteen yeres in buildynge, and the expencis of every yere came to 1,000 marks," or 12,000*l.*, an enormous sum for the time. Leland continues: "One thinge I much notyd in the haulle of Bolton, how chimeneys were conveyed by tunnells made on the syde of the wauls betwixt the lights in the haull, and by this meanes, and by no lovers, is the smoke of the harthe of the hawle wonder strangely convayed." This curious contrivance, which may yet be seen, does not seem to have been tried elsewhere, and henceforth the great chimney in the side of the hall became general. The contract for building one-half of Bolton still exists, and was made between Sir Richard le Scrop and John Lewyn, mason, in 1379. The work was to cost 100*s.* a perch, measured by 20 ft. to the ell.

Houses of the XVth Century.

The lesser houses of the XVth century differ but little from those of the preceding period, except in the greater importance of the ranges of chambers at either end of the hall and the frequent addition to the hall itself of a new feature in the form of the bay window. This was usually built out at one end of the dais, but in large houses a second was often added opposite the other. The bay was square or half octagon in plan, and its ceiling frequently a richly-groined vault. The recess contained a sideboard for the display of plate and for carving at, and often served also as a passage to rooms behind the hall or to the cellar beneath it.

The oriel window was another charming architectural feature which became common in the XVth century, though introduced earlier. Two beautiful examples may be seen at Great Chalfield. It was perhaps suggested by the sill seats of the XIIIth and XIVth century hall and solar windows, and the mere corbelling out of such windows would produce a common type of oriel. Rounded and half hexagon oriels also occur; but, whatever their plan, they are always, like the bay, most ornamental features to the outside of a house.

We have, happily, an abundance of examples of XVth century houses of all dates, and it is somewhat difficult to pick out typical illustrations of them.

Houses of the hall type are still to be found. Great Chalfield, Wilts, is a beautiful example, *circa* 1440, as is the similar planned house at Norrington in the same county. South Wraxall, another fine Wiltshire house, was built about 1450, and has a detached chapel and later additions. The gatehouse has a good oriel.

The Courtyard House.

In the XVth century is also to be found, in its full development, the courtyard house. This delightful type, in which our country is so rich, was brought about by an interesting process of evolution.

Starting with the early form of house of simple rectangular plan, of which the principal room was the hall, we have seen it expanding into a T-shaped or L-shaped block by the growth of the chambers over the buttery and pantry. Next comes the transfer of the solar with its undercroft to the far end of the hall, and its extension by the addition of a chapel and other rooms. We thus get a house occupying three sides of an open court. The joining of the ends of the wings by a wall turned the court into a courtyard, which was often entered through a gatehouse. It only needed the addition to this of flanking chambers extending to the side wings to complete the type of courtyard house at which we have now arrived.

This type differs materially from the Bolton and Bodiham group in being more strictly domestic, for though the larger houses continue to be protected by walls and gatehouses, or by moats and ditches, the invention of artillery had long made these but a pretence at fortification. Even the frowning front of Hurstmonceux could not have withstood for long the destructive pounding of cannon shot.

The size of these houses varied with the social status of the owner, and many had entrance gateways of considerable architectural merit.

Haddon Hall.

The most fascinating, perhaps, of all our courtyard houses, apart from its delightful situation, is surely Haddon Hall, in Derbyshire.

It had its beginnings in a Norman chapel, which still occupies its southern angle. This chapel adjoined the house of the lord of the manor, who had leave from King John to enclose both with a wall. The original house was apparently taken down in the XIVth century, and the courtyard sub-divided by building across it the existing hall and its perfect set of offices. The entrance was through a strong gatehouse on the north, and by degrees both courts were built about with two-storied ranges of XVth and XVIth century lodgings, forming as a whole such a combination as cannot easily be paralleled.

Winfield Manor House.

Another fine house of similar plan also exists in Derbyshire, at South Winfield. Unlike Haddon, which is still perfect and quite habitable, though not so used, Winfield Manor House is only a ruin, but it is nevertheless of very considerable interest. It has a large outer court, entered through a gatehouse, and built about with stables and farm buildings, some of which are standing. The inner court is entered through a second gatehouse set in the middle of a transverse range. Opposite to this, and forming the north end of the house, is the great hall and its adjuncts. The hall has a beautiful porch, and an equally fine bay window, within which is the stair down to a vaulted cellar extending under the hall. Within the screens are the usual doorways to the buttery and pantry, above which was the great chamber, reached from a vice attached to a second porch beyond the screens. The kitchen is in the usual place, but surrounded by buildings of several stories, all full of lodgings. Other ranges of lodgings occupied the east and west sides of the court; but the former have disappeared, and of the latter only the outer wall and a lofty garderobe tower remain. A fragment of the chapel, which was semi-detached, as at Haddon, is left at the north-east angle. This fine house was built by Ralph Lord Cromwell, and Lord Treasurer, about 1450, and deserves to be better known than it is, especially since it is all of one date, and was planned by a master mason who must have been a notable craftsman.

Hurstmonceux.

Hurstmonceux Castle, in Sussex, is another great courtyard house, begun before Winfield Manor House, but not finished till long after. Unlike all the houses hitherto described, this was built wholly of beautiful brickwork. It consisted of three courts, within a quadrangular enclosure, set about with towers and surrounded by a moat. The entrance was through an elaborate gatehouse, reached by a drawbridge. The house is now a mere shell, all the buildings within it having been destroyed about 1800 to gratify the spite of a lady!

Icomb Place.

Icomb Place, Gloucestershire, is a good example of the application of the courtyard type to lesser houses; it is, moreover, as complete as Haddon Hall. The entrance is through a gatehouse of quite modest pretensions, leading into a small courtyard having the hall opposite the entrance. On the right is a parlour, with a bay window in the corner which masks a doorway into the gatehouse block. On the left are offices joining on to the rest of this block. The hall has a fine open roof, with two large windows on one side, and on the other a window and a chimney. The screens contain the usual doorways to the buttery and pantry, and form a passage to a second court beyond, surrounded by the kitchen, brewhouse, bakehouse, etc. All the ranges except the hall are two-storied, and there is no lack of proper accommodation for the master and his household. The gatehouse front has a fine open roof like that upon the hall. Icomb Place dates from the middle of the XVth century.

Oxburgh and Falkbourne Hall.

Oxburgh Hall, Norfolk, is another fine example of a late XVth-century courtyard house, built throughout of beautiful brickwork. The licence to crenellate is dated 1482. The house is still surrounded by a moat, but the hall range was pulled down about a century ago. The most striking part now is the stately gatehouse.

Falkbourne Hall, in Essex, began probably on the issue of the licence to crenellate it in 1439, was originally a small courtyard house, peculiar in having a large and prominent tower of good brickwork at one corner.

There are two other houses of this period of remarkable plan and construction that must be described, if only to show how completely the mediæval masons could surmount difficulties.

The tower that originally crested the Norman mount of Warkworth Castle, Northumberland, was replaced early in the XVth century, probably between 1435 and 1440, by a cruciform house of three stories, which, though a mere shell, is still practically complete throughout. The King's Commissioners in 1538 described it as "a marvellous proper dongeon of eight towres all joned in one howsse togethers," and a survey of 1567 says it "ys buyld as a foure square; and out of every square one towre . . . and in the same conteyned, as well a fare hall, kychinge, and all other houses of offices, verie fare and aptely placed, as also great chambre, chapell, and lodgings for the lord and his trayn. In the middle thereof is a peace voyd, which is called a lanterne, which both receyveth the water from diverse spowtes of lead, and hath his conveyance for the same, and also geveth light to certaine lodgings in some partes. And on the part of the same at the top ys raysed of a good hight above all the houses a turret, called the watch-house; upon the top whereof ys a great vyew to be had, and a fare prospect, as well towards the sea as all parties of the land."

Tattershall Castle.

The other house to which I desire to call your attention is the noble brick tower of Tattershall Castle, perhaps the finest of its kind in existence. It was built for the same Ralph Lord Cromwell who owned Winfield Manor House, and it is instructive to compare his Derbyshire mansion of stone, quarried from the hill on which it stands, with the great tower of brick in the Lincolnshire fens. The latter is oblong in plan, with an octagonal tower at each corner, and an internal area of about 50 ft. by 25 ft. Although floorless and roofless, it was, until a few months ago, structurally complete from top to bottom. It consists of a low basement, with four stories of chambers above and a low lantern-like top-story projecting between the towers as a gallery carried on a four-fold series of corbels. The height thus far is about 100 ft. The towers were carried up a stage higher and capped by conical spires. The ground story is entered by a doorway at the same level, and the other floors by a vice, or spiral staircase, in the south-west turret, with doorways opening into a wall gallery on each floor. The four principal stories formed each a separate room, with its own richly-carved chimneypiece, but there were also smaller chambers opening from them into the corner turrets. The tower thus contained four large rooms and at least sixteen small rooms, exclusive of garderobes, or the five divisions of the basement, wherein was also the well. The kitchen and offices were in a semi-detached building to the south-west, now destroyed, communicating with the tower by a doorway on the first floor. All the brickwork is of the highest excellence, but the doorways and windows are wrought in stone, as are the splendid chimneypieces which were so scandalously torn out and sold a few months ago.

So few of you probably have ever been to Tattershall Castle that you will no doubt be interested in seeing the chimneypieces in question. You may also wonder, with me, why the National Trust, which so easily raises enormous sums for buying headlands and fields such as abound on every side of us, thought 2,000*l.* too much to pay for one of the stateliest and most perfect brick towers in Christendom.

The fine brick tower, which, with the inner gatehouse, is practically all that is left of the once magnificent palace of the Bishops of Lincoln at Buckden, was obviously copied from the great Tattershall tower by Bishop Russell (1480-94), who, no doubt, had often seen it and admired it. This gatehouse is remarkable for having the Bishop's arms over the arch worked also in brick with coloured glazes, and the roses carved in stone.

Both Warkworth and Tattershall, with but little alteration, could be made into what would be deemed comfortable residences, even under modern conditions, and the same may be said of the majority of XVth-century houses. In proof of this one may point to the number that have been continuously lived in since they were built.

Carpentry Work.

The wooden halls and houses of early Norman times for which we have historical evidence have long since perished, as have the lesser dwellings of the same period. The tradition of them, nevertheless, continued after the introduction of stone buildings in the wooden pillars that formed the divisions, and if those once at Waverley and Kirkstall, and Westminster and Wells, have gone, a Norman fragment remains at Farnham and the whole construction in the Norman hall of Leicester Castle. Even so late as the XVth century there were set up the wooden pillars still to be seen in the Guildhall at York. On the manor of the Moor, near Uxbridge, formerly belonging to the Knights Templar, is a complete wooden hall, *circa* 1230, now converted into poor tenements, and at Tiptofts, in Essex, are some interesting remains of a pillared hall, likewise wholly of carpentry work, of the end of the XIIIth century.

Of the continued use of carpentry work in the XIVth century, in districts where stone could not easily be had, some useful examples exist. At Solihull, in Warwickshire, is a complete wooden house, *circa* 1330, with a hall and porch, and a transverse kitchen wing with solar, etc., over, reached by a stair within the porch. At Baggiley, in Cheshire, is a fine hall of carpentry work, *circa* 1330-40, and another good early example at Malvern was destroyed so lately as 1838. In Windsor Castle there are still considerable remains of a long and narrow cloister, set about with ranges of two-storied lodgings, all of carpentry work, built in 1351-2 for the thirteen canons of the Order of the Garter and their vicars. At Nursted, in Kent, there was till lately another instance of a stone hall, *circa* 1330, with a good open roof carried by wooden pillars. The general absence of early kitchens and offices belonging to stone halls that have survived suggests that they were usually only of half-timbered construction.

In Lancashire and Cheshire, and in Shropshire, Herefordshire, and Worcestershire, as also in Suffolk and Essex, and to some degree in Sussex and Kent, and in other districts where stone was scarce and timber easily obtainable, houses built wholly of carpentry abound. They range from those of the largest size to the humblest cottage, and extend in date throughout the XVth, XVIth, and XVIIth centuries. Those in the West Country, as at Bramhall, often have the intervals between the main timbers filled in with quatrefoils or other ornamental forms, or with a number of curved braces. In the eastern and south-eastern counties the construction is much simpler, but ornament is supplied by traceried barge-boards and carved and moulded beams, and by carved corner posts and spandrels.

The fine XVth-century manor house at Ockwells, Berks, is another good instance of half-timbered construction, and the style prevalent in Suffolk throughout the XVth and XVIth centuries is well exemplified by the guildhall at Lavenham, which has also a good carved corner post and oriel windows. The actual construction of these buildings can be seen in an interesting house at Boxford, also in Suffolk, which has lately been partly dismantled, preparatory, I fear, to its "restoration," a fate it does not deserve."

LEGAL COLUMN.

Compulsory Purchase.

Sect. 92 of the Lands Clauses Consolidation Act, 1845, provides that "no party shall at any time be required to sell or convey to the promoters of the undertaking a part only of any house or other building or manufactory if such party be willing and able to sell the whole thereof."

In the case Regent's Canal and Dock Company *v.* London County Council, the County Council, for an improvement scheme, served notices to treat on the plaintiffs for two pieces of "land and wall," which consisted of a narrow strip running parallel with the Regent's Canal and certain approaches to New North Road Bridge. The plaintiffs claimed 822,000*l.*, and unless this sum was agreed to they required the Council to take the whole of the canal and lands and works appurtenant thereto, which they valued at some 2,030,057*l.*, on the ground that the land which the Council sought to acquire formed part of a "building or manufactory" within the meaning of the above section. The Court held that the land sought to be acquired did not form part of a "building" within the section; but the learned Judge pointed out that there appeared to be no decided case on the meaning of the word "building" in this section.

Illegal Action by Societies: The Trade Disputes Act.

In the present crisis of the coal strike the Press are commenting on the peaceable attitude of the men and the absence of outrage. We are far from wishing in any way to belittle the conduct of the men, but the fact must be pointed out that this absence of outrage is really due to the strike being universal and there being no necessity for the exercise of "peaceful persuasion." Only two small mines continued working after the declaration of the strike, and at these two mines there were scenes of violence, the strikers, under pretence of "peaceful persuasion," intimidating the few men working, by hostile demonstrations in force. It would be a serious mistake to consider that the present strike in any way weakens the case made by nearly all classes of employers against the Trade Disputes Act. If the strike ceases to be universal, if some workers in mines desire to return to work and to dispose of their labour as they have a right to do, the demon of "peaceful persuasion" will at once be raised, the men will be intimidated, and the property of their employers will be damaged, and sect. 4 of the Trade Disputes Act will serve to protect the funds of any union which has incited the men to acts of violence from being attached to answer for the damage done.

In this connexion we may point out that the case for the repeal of the Trade Disputes Act has received support from an unlooked-for quarter. A political society, "in contemplation or furtherance" of its objects, has seen fit to "peacefully persuade" the citizens of the metropolis by indiscriminately breaking shop windows. The Government have recognised the seriousness of such a conspiracy, and universal approval has been given to the principle that the funds of the society should be made liable for the damage done. Public sympathy has at once been accorded to common sense and common law redress being applied to such criminal action. Surely the public may now also ask that common sense, common law, and common justice may again apply in the case of trade unions? No wonder that a large section of the community is asking why these trade societies should be so privileged.

LAW REPORT.

COURT OF APPEAL.

(Before the MASTER OF THE ROLLS and Lord Justices FLETCHER MOULTON and BUCKLEY.)

Painter's Claim against Builders and Decorators under Workmen's Compensation Act: Richards *v.* Sanders & Son.

THIS case was heard on Saturday, the 16th inst., upon the appeal of the respondent from the award of his Honour Judge Selfe, sitting at the Marylebone County Court, as the arbitrator under the provisions of the Workmen's Compensation Act.

Mr. Ellis Hill appeared for the appellants and Mr. Jacobs for the applicant, the workman.

Mr. Ellis Hill said his clients appealed from the award of the County Court Judge upon two grounds—first that there was no evidence before the learned Judge entitling him to hold that the applicant was incapacitated by the accident; and, secondly, appellants asked for what was practically a new trial upon the ground that the learned County Court Judge admitted certain statements in certificates as evidence which were not evidence and which induced the learned Judge to believe that a *bonâ-fide* accident had happened to the applicant, and that the man was really suffering from the effects of the alleged accident.

The facts of the case were these:—William Richards, the applicant, alleged that on May 8, 1911, he was working for the respondents, a firm of builders and decorators, in a kitchen of a house in Bryanston-square. Richards was a painter, and on the day in question he was working with another man in the kitchen of the house. Richards' story was that the work being high up a painter's tressle was put near the wall, that a board was put through the tressle, and that the other man with whom he was working got up the tressle and on to one end of the board that projected, and that he was instructed by the foreman to hang on to one end of the board as a counter-weight and while hanging on in that way he (applicant) strained his heart and was taken very ill. Richards was undoubtedly taken very ill at the time, but his own story was contradicted by nearly everybody at the hearing. He made no complaint until after he had been to St. Mary's Hospital. If it was a *bonâ-fide* case the evidence from the hospital was of primary importance as to how Richards was treated. He (Counsel) could not help feeling that the applicant's advisers must have thought that the evidence from the hospital would have put an end to the applicant's case, because they subpœnaed Dr. Wilcox, one of the physicians at the hospital—a gentleman in a very high

LAW REPORT—*continued on page 346.*

List of Competitions, Contracts, etc.

For some Contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) are advertised in this number:** Competitions, —; Contracts, iv. vi. viii. x.; Public Appointments, xviii.; Auction Sales, xxiv.

Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Competitions.

MARCH 25.—**Colchester.**—SCHOOL.—Limited to architects practising in the borough.

MARCH 30.—**Edinburgh.**—MEMORIAL TO KING EDWARD.—Limited. See Competition News, p. 151, February 9.

MARCH 31.—**Manitoba, Canada.**—PARLIAMENT BUILDINGS.—The Government of Manitoba invite designs for the new Parliament buildings to be erected in the City of Winnipeg. See advertisement in issue of February 9 for further particulars

APRIL 13. — **Ormskirk.** — CLUB-HOUSE.—Competitive plans are invited for proposed clubhouse for Ormskirk Golf Club. See advertisement in issue of March 1 for further particulars.

APRIL 20.—**Birmingham.**—BLUE COAT SCHOOL.—Limited to local architects. Assessors, Mr. J. H. Hunt, F.R.I.B.A., and Mr. C. E. Bateman, F.R.I.B.A. Particulars from the Secretary, the Blue Coat School, Birmingham.

MAY 1.—**Rhos Ruabon.** FAIR OF WORKMEN'S COTTAGES.—Premiums of 10*l.* and 5*l.* Assessor, Mr. Raymond Unwin, F.R.I.B.A. Particulars from Mr. G. Meirion Griffiths, Rhos Ruabon.

MAY 1. — **Wombwell.**—SWIMMING BATHS.—The Wombwell U.D.C. invite designs in competition for public swimming baths, to be erected in Hough-lane, Wombwell, Yorkshire. Three prizes of the value of 40*l.*, 30*l.*, and 20*l.* respectively are offered for the designs placed first, second and third respectively by the assessor. See advertisement in issue of February 16 for further particulars.

MAY 15.—**Portland.**—COUNCIL OFFICES.—The Portland U.D.C invite competitive designs and plans for Council Offices. See advertisement in issue of March 8 for further particulars.

JUNE 1.—**Dunfermline.**—INSTITUTE AT NETHERTOWN. Cost not to exceed 7,000*l.* Premiums of 150*l.*, and 100*l.* Assessor, Mr. E. A. Jamieson. Particulars from the Secretary, Carnegie Trust, Abbot-street, Dunfermline.

JUNE 28. **Hale, Cheshire.**—TOWN PLANNING SCHEME.—Premiums 50*l.* and 25*l.* Particulars from the Council Offices, Hale

JUNE 30.—**Padiham.** TOWN HALL, BATHS, ETC. Premiums 40*l.* and 20*l.* Particulars from Mr. Gregson, A.M.Inst.C.E., Surveyor's Office, Padiham.

JULY 1. — **Dusseldorf.** — A plan for the extension of the City of Dusseldorf. Premiums of 1,000*l.* to 375*l.* Conditions on application to the Chief Burgomaster, Dusseldorf. A translation appeared on page 365, September 29.

AUGUST 30. — SAXON SNELL PRIZE. — Fifty guineas; with medal, is offered for essay on a hospital subject. Particulars from the Sanitary Institute, 90, Buckingham Palace-road, S.W.

NO DATE. — **Cardiff.** — FOOTBALL STANDS.—Premiums 30*l.*, 20*l.*, and 10*l.* Particulars from Mr. C. S. Arthur, 53, Queen-street, Cardiff.

NO DATE.—**Jordanhill, Glasgow.**—PROPOSED TRAINING COLLEGE.—Limited to six firms, named Competition News, December 1, page 685.

NO DATE. — **Shefield.** — CRIPPLES' HOME. — Limited to local architects. Mr. E. M. Gibbs, F.R.I.B.A., and Mr. F. E. P. Edwards, A.R.I.B.A., assessors.

NO DATE. — **Warrington.** — SCHOOL. — The Warrington Education Committee invite competitive plans for the erection of a public elementary school. See advertisement in issue of February 16 for further particulars.

Contracts.

BUILDING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

MARCH 22. — **Darlington.** ALTERATIONS.—For alterations to the Assembly Hall. Architects, Messrs. Kitching & Lee, Houndgate-chambers, Darlington.

MARCH 22. — **Great Yarmouth.** — ADDITION.—For addition to offices, for Messrs. Palgrave, Brown. & Son, Ltd. Plans and specifications with Messrs. Olley & Haward, architects, Queen-street, Great Yarmouth.

MARCH 22. — **Winchester.** — REPAIRS.—For the repairs to the Abbey House. Specifications at the City Surveyor's Office, Guildhall, Winchester.

MARCH 23. — **Draycott.**—HOUSE, ETC. -Erection of a dwelling-house, additions to a cottage, erection of new farm buildings, and alterations to existing farm buildings, sinking well, etc.; also for certain road works. Drawings, specification, and form of contract with Mr. H. T. Chapman, County Surveyor, County Surveyor's Office, Wells, Somerset. Deposit of 2*l.* 2s. for quantities.

MARCH 25. — **Barnsley.**—STORY.—For erection of an additional story, construction of strongroom, and internal alterations at the Society's offices in Regent-street, for the Barnsley Permanent Building Society. Plans and specifications seen, and quantities from Mr. J. Clegg, surveyor to the Society, Barnsley.

MARCH 25.—**Batley.**—HOUSE.—For erection of a dwelling-house at top of Carlinghow-lane, Batley. Plans and specifications seen, and quantities from Mr. John H. Brearley, architect, 68, Commercial-street, Batley

MARCH 25.—**Londonderry.**—ALTERATIONS.—For alterations and improvements to premises in Bishop-street. Plans and specifications with Mr. J. M. Robinson, architect, 7, Market-buildings, Strand, Londonderry.

MARCH 25.—**Marlow.**—ADDITION.—For building an addition at Marlow, near Goolds Cross. Plans and specification with Messrs. W. H. Hill & Son, architects, 28, South-mall, Cork.

MARCH 26. — **Bradford.** -HOUSE.—For erection of house, Winburgh-road and Green-lane. Drawings and conditions seen, and quantities and form of tender from the City Architect, Town Hall, Bradford.

MARCH 26.— **Clayton.**— BATHROOM.—For erection of additional bathroom, etc., to the sanatorium at the Workhouse Quantities from the architect, Mr. J. H. Bakes, M.S.A., Calverley-chambers, Victoria-square, Leeds.

MARCH 26.—**Sheffield.**—PURIFYING HOUSE.— The Sheffield United Gas Light Company invite tenders for the erection of a brick and stone purifying house. Drawings seen, and specifications and quantities from the Engineer, Mr. J. W. Morrison, M.Inst.C.E., at the company's offices, Commercial-street, Sheffield.

MARCH 27.—**Aberystwyth.**—HOUSE.—Erection of a house at Llanrhystyd-road. Mr. Arthur M. James, architect and surveyor, 8, Powell-street, Aberystwyth.

MARCH 27.— **Cottingham.**—SCHOOL.—For erection of an elementary school for boys. Plans and conditions seen, and forms of tender from the Building Surveyor, County Hall, Beverley. Deposit of 1*l.* 1s. for quantities

MARCH 27.— **Eastrington.**—HOUSE. Erection of a house. Plans and specifications with Mr. W. H. Blackburn, architect, Howden.

MARCH 27, **Gabalfa.** -INSTITUTE.—Erection of a church institute at Gabalfa, near Cardiff. Plans and specifications at the Vicarage. Mr. H. B. Farr, Briar Dene, Whitchurch-road, Cardiff.

MARCH 27.—**Holyhead.**—ADDITIONS.—For the erection of additions to the Market Café, Stanley-street. Plans and specification with Messrs. Jos. Owen & Thomas, architects and surveyors, Exchange-chambers, Holyhead

MARCH 27.— **Howden.**—SCHOOL.—For erection of an elementary school. Plans and conditions seen, and forms of tender from the Building Surveyor, County Hall, Beverley. Deposit of 1*l.* 1s. for quantities.

MARCH 27.— **Longwood.** — HOUSES.—For erection of seven dwelling-houses, Church-street. Plans seen, and quantities from Mr. J. Berry, architect and surveyor, 3, Market-place, Huddersfield.

MARCH 27. — **Morley.**—ADDITIONS.—For alterations and additions to finishing mills, for the Morley Cloth Finishing Company, Ltd. Plans and specifications seen, and quantities from Mr. T. A. Buttery, architect, Queen-street, Morley.

MARCH 27. —**Norton Malton.**—ADDITIONS, ETC. —For alterations and additions to the Council school, Commercial-street. Plans seen, and forms of tender from the Building Surveyor, County Hall, Beverley. Deposit of 1*l.* 1s. for quantities.

MARCH 27. — **Pontypridd.**—ALTERATIONS, ETC.— Erection of an additional storey and other alterations to the Clarence Hotel. Plans and specification seen, and quantities, on deposit of 2*l.* 2s., from Messrs. A. O. Evans, Williams, & Evans, architects, Pontypridd.

MARCH 27.— **Stowmarket.** — ADDITIONS, ETC.— For alterations and additions to the bathing place, for the Stowmarket Swimming Club. Specification from Mr. G. W. Lingwood, 28, Temple-road, Stowmarket. Deposit of 2*l.* 2s.

MARCH 27. — **Turriff.** — ADDITIONS.—For additions to steading, Bogside, King Edward. Plans and specifications with Mr. W. L. Duncan, architect, Turriff, Scotland.

MARCH 27. — **Willerby (Staxton).** — REPAIRS, ETC.—For alterations and repairs to the teacher's house at the Council school. Plans seen, and forms of tender from the Building Surveyor, County Hall, Beverley. Deposit of 1*l.* 1s. for quantities

MARCH 28. — **Burnley.**—LODGE, ETC.—For erection of registrar's lodge, offices, and conveniences. Specifications and quantities from the Borough Engineer and Surveyor.

MARCH 28.—**Gelligaer.**—RECONSTRUCTION.—For the reconstruction of the Harp Inn. Plans and specifications seen, and quantities from Mr. Sidney Williams, architect, Wharton-street, Cardiff.

MARCH 28.—**Huddersfield.**—CONVERSION.—For the conversion of the present latrines at the Paddock Council Schools into water-closets. Plans, specifications, and general conditions seen, and quantities and forms of tender from Mr. K. F. Campbell, M.Inst.C.E., Borough Engineer and Surveyor, 1, Peel-street, after the 20th inst.

MARCH 28. —**Stockport.**—WALL, ETC.—Erection of a boundary wall, with railings and gates, at Edgeley-road, Cheadle Heath, Stockport. Plans and conditions of contract seen, and specification, quantities, and form of tender from Mr. John Atkinson, A.M.Inst.C.E., Borough Surveyor, Town Hall, Stockport.

MARCH 28. — **Walton-on-the-Naze.** — CONVENIENCES.—For additions to public conveniences. Plans, specification, and quantities from Mr. Henry W. Gladwell, A.I.S.E., District Surveyor, Town Hall-buildings, Walton-on-Naze. Deposit of 1*l.*

MARCH 29. — **Donaghadee.** — HALL.—For erection of new Orange Hall, Donaghadee. Plans, specifications, etc., with Mr. Chas. A. Aicken, architect, 20, Rosemary-street, Belfast.

MARCH 29. — **Salop.**—ALTERATIONS.—For alterations to the cloakrooms and lavatory at the Ketley Bank Council Schools. Plan and specification seen, and forms of tender at the school. Mr. H. E. Wale, Secretary, County-buildings, Shrewsbury.

MARCH 29. — **Shepshed.** — ALTERATIONS.—For alterations, etc., to the Shepshed Council School. Conditions of contract, quantities, and form of tender from the architect, 33, Bowling Green-street, Leicester, on deposit of 5*l.* 5s.

MARCH 30. -**Griffithstown.**—ADDITIONS, ETC.— For alterations and additions to St. Hilda's School. Plans and specification with Mr. Harold Griffiths, Arcade-chambers, Newport, Mon. Deposit of 1*l.* 1s.

MARCH 30. — **Rhymney.** — STABLES, ETC.—Erection of new stables and motor-house, etc. Plans and specification with Mr. Thomas Roderick, architect, Clifton-street, Aberdare.

APRIL 1.—**Manchester.**—BUILDINGS.—Erection of buildings forming workmen's messroom, kitchen, lavatories, etc., together with steel roof over same, at Bradford-road Station. Specification, quantities, and tender form from Mr. Fredk. A. Price, Superintendent, Gas Department, Town Hall. Deposit of 2*l.* 2s.

APRIL 1. —**Southampton.**—REPAIRS, ETC.—For the repair and reconstruction of culverts in the New Forest, on the Southampton and Christchurch and the Southampton and Fordingbridge main roads. Plan and specification and general conditions from Mr. W. J. Taylor, County Surveyor, The Castle, Winchester. Deposit of 1*l.* 1s.

APRIL 1. — **Tipperary.**—HOUSES.—For erection of twenty-four two-story stone houses. Plans, specification, and conditions by the Town Surveyor from Mr. T. Dawson, Town Clerk, Emmet-street, Tipperary. Deposit of 1*l.*

APRIL 1. — **Cardiff.** — STORES.—For the erection of stores at the Trade-street Depôt. Drawings and specification seen, and form of tender, with quantities, from the Waterworks Engineer, Mr. C. H. Priestley, M.Inst.C.E., City Hall, Cardiff. Deposit of 2*l.* 2s.

APRIL 2. — **Church.**—OFFICES. Erection of new Council offices in Blackburn-road. Plans seen, and forms of tender, with specification and quantities, from Mr. Henry Ross, architect, Cannon-street, Accrington.

APRIL 3.—**Bradford.** SHED, ETC.—Erection of a spinning-shed, warehousing, etc., at Lower Wyke, Bradford. Plans, specifications, and quantities with Messrs. Chas. F. L. Horsfall & Son, architects, Lord-street-chambers, Halifax.

* APRIL 4.—**Bognor.**—THREE SHOPS.—Tenders are invited for three shops at Camden-gardens, London-road, Bognor, Sussex. See advertisement in this issue for further particulars.

APRIL 4. — **Towie.** — BRIDGE.—For strengthening the girder bridge over the River Don at Towie. Drawings and general conditions of contract seen, and specification and quantities from Messrs. Walker & Duncan, C.E., 3, Golden-square, Aberdeen.

APRIL 5.—**Brierley.**—SCHOOL.—For erection of Grimethorpe new school. Plans seen, and specifications, with quantities, from the Education Architect, County Hall, Wakefield. Deposit of 1*l.*

APRIL 5.—**Maesteg.**—HOSPITAL.—Erection of a cottage hospital, together with boundary walls and other works, adjoining Neath-road, Maesteg. Plans seen, and specifications, quantities, and

BUILDING—*continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

form of tender from the architect, 32, Commercial-street, Maesteg.

APRIL 6. — **Briston.** — COTTAGES.—Erection of three pairs of cottages. Plans, specifications, and conditions with Mr. J. T. Wilks, Deputy-Clerk to the Council, Cromer-road, Sheringham.

APRIL 9.—**Isle of Wight.** COTTAGE, ETC.—For erection of cottage and outbuildings at Bleakdown, Round Manor Farm, Godshill. Plans and specifications with Mr. S. E. Tomkins, architect, 43, High-street, Newport, Isle of Wight.

✱ APRIL 13. — **Abingdon.** — ALTERATIONS TO POST-OFFICE.—The Commissioners of H.M. Works and Public Buildings invite tenders for alterations to post-office. See advertisement in this issue for further particulars.

✱ APRIL 15.—**Tonbridge.**—SCHOOL.—The Kent Education Committee invite tenders for erection of a new girls' school. See advertisement in this issue for further particulars.

APRIL 18. — **Cadney.** — ADDITIONS, ETC.—For alterations and additions to the Council school at Cadney. Quantities and form of tender from Messrs. Scorer & Gamble, architects, Bank-street-chambers, Lincoln. Deposit of 1*l.* 1s

✱ APRIL 19.—**Basingstoke.** — FOUNDATIONS.—The Hampshire Joint Asylums Visiting Committee invite tenders for foundation works for new asylum at Park Prewett, near Basingstoke. See advertisement in this issue for further particulars.

NO DATE. —**Flawborough.** — ADDITIONS.—For additions and alterations to Church Farm House, Flawborough, near Newark, with three cottages, etc. Deposit of 1*l.* to Mr. G. A. Wilson, architect and surveyor, Hartshead-chambers, Sheffield.

NO DATE. — **Great Harwood.** — SHOPS, ETC.—Erection of three shops and one cottage in Park-avenue. Specifications and quantities from Mr. Robert Mercer, architect and surveyor, Park-lane, Great Harwood

NO DATE. —**Headfort.**—CONVENT.—Erection of a new presentation convent at Headfort, Co. Galway. Drawings and specification with Messrs. Doolin & Butler, architects, Mansion House-chambers, 27, Dawson-street, Dublin.

NO DATE. —**Ilkley.**—POST-OFFICE.—Erection of a new post-office in Chantry-drive. Deposit of 1*l.* 1s. to Messrs. Howorth & Howorth, architects, etc., Old Bank-chambers, Cleckheaton.

NO DATE.—**Ipswich.**—CHAPEL.—For erection of Bethesda Baptist Chapel. Deposit of 1*l.* 1s. with the architect, Mr. F. G. Faunch, 76, Cranbrook-road, Ilford, London, E.

NO DATE. — **Kennford.** — RESTORATION.—For restoring the farmhouse at Higher Brenton, Kennford, near Exeter. Messrs. Ellis, Son, & Bowden, F.S.I., surveyors and architects, Bedford-chambers, Exeter.

NO DATE.—**Knottingley.**—HOUSES.—For the erection of seven dwelling-houses in Aire-street. Names to Messrs. Garside & Pennington, architects and surveyors, Pontefract

NO DATE.—**Pittenweem.**—SCHOOL.—Erection of new school. Quantities from Messrs. Haxton & Walker, architects and surveyors, 3, High-street, Leven, Fife. Deposit of 1*l.* 1s.

NO DATE.—**Staveley.**—SCHOOLROOMS.—Erection of new schoolrooms. Plans and specification with Mr. Frank Windle, architect and surveyor, 183, Chatsworth-road, Chesterfield.

NO DATE.—**Wakefield, etc.**—ADDITIONS, ETC.—For making alterations and additions to the Old Dusty Miller Inn, Kirkgate, Wakefield, and the reconstruction of the Rose and Crown Inn, Ingbirchworth, near Penistone. Messrs. Massie & Holdsworth, architects, Town Hall-chambers, King-street, Wakefield.

NO DATE.—**Wetherby.**—VILLAS, ETC.—For erection of two villas and a motor-house. Names to Mr. C. H. Brooke, Lic.R.I.B.A., architect, 7, Cookridge-street, Leeds.

NO DATE.—**Whitby.**—BUNGALOW.—Erection of a bungalow at Sleights. Mr. George S. French, architect, Normanby-terrace, Whitby.

ENGINEERING, IRON, AND STEEL.

MARCH 26. — **Farnham.**—BRIDGE.—Erection of an oak bridge over the River Wey, in the Gostrey Meadow Recreation Ground. Drawings and specifications with the Surveyor, Council Offices, South street, Farnham.

APRIL 5.—**Brongwyn.**—BRIDGE.—Erection of a new footbridge at Porth, Bronqwyn. Plan and specifications at the Post-office, Ponthirwen. Mr. Thomas Evans, Surveyor, Pantyrlis, Llechryd

FURNITURE, PAINTING, MATERIALS, etc.

MARCH 23.—**Aberdare.** PAINTING.—For painting seventeen villas, Elm-grove, for the Waynes Building Club. Specifications with Mr. Alec. S. Cameron, architect, 1, Glanant-street, Aberdare.

✱ MARCH 26. — **Willesden.** — VANS. — The Willesden D.C. invite tenders for supply of slop vans and water vans. See advertisement in this issue for further particulars.

✱ MARCH 28. — **Leytonstone.** — AIR-LIFT PLANT AND CLEARING BOREHOLE.—The West Ham Guardians invite tenders for clearing the borehole of an artesian well and provision of temporary air-lift plant, and also for supply of permanent air-lift plant, together with fixing, etc. See advertisement in this issue for further particulars.

MARCH 29.—**Ealing.** PAINTING.—For external painting of municipal cottages in North and South roads, South Ealing. Specifications seen, and forms of tender from Mr. C. Jones, M.Inst.C.E., Borough Engineer, Town Hall, Ealing, W. Deposit of 1*l.* 1s.

✱ APRIL 3. — **Hammersmith.** — DISPOSAL OF SANITARY FITTINGS.—The Hammersmith B.C. invite tenders for purchase and removal of fittings and fixtures and part demolition of sanitary convenience. See advertisement in this issue for further particulars.

✱ APRIL 8.—**Windsor.**—DEMOLITION, ETC.—The Secretary of State for War invites tenders for the demolition of two blocks of soldiers' quarters and part of latrines; also filling basements, making-up premises, gravelling, etc. See advertisement in this issue for further particulars.

ROADS, SANITARY AND WATER WORKS.

✱ MARCH 27. — **Cheshire.** — MACADAM ROAD.—Messrs. Lever Brothers, Ltd., Port Sunlight, invite tenders for macadam road (length about three miles) on Storeton Estate. See advertisement in this issue for further particulars.

MARCH 27. — **Enfield.** — ROAD.—For making-up the private street known as Jasper-road. Plans and specifications seen, and forms of tender from Mr. Richard Collins, Public Offices, Enfield, Middlesex.

APRIL 26.—**Brighton.**—SEWERS.—For the construction of sewers. Specifications and forms of tenders at the office of the Borough Surveyor at the Town Hall, Brighton. Deposit of 1*l.* 1s.

✱ APRIL 3.—**Hammersmith.**—WOOD-PAVING.—The Hammersmith B.C. invite tenders for repaving, with creosoted deal blocks, portion of Hammersmith-road. See advertisement in this issue for further particulars.

Public Appointment.

Nature of Appointment.	By whom Advertised.	Salary.	Application to be in
*BUILDING INSPECTOR	Plymouth Borough Council...	100*l.* per annum	April 10

Auction Sales.

Nature and Place of Sale.	By whom Offered.	Date of Sale.
*FREEHOLD BUILDING LAND, CATFORD, S.E. Plough Hotel, Lewisham	Jesse W. Jones	Mar. 26
*STOCK AND PLANT OF STONE MERCHANTS, STOCKWELL, S.W.—On the Premises	J. T. Skelding & Holland	Mar. 27
*BUILDERS' & CONTRACTORS' STOCK & PLANT—At Scrafton-road Works, Ilford-lane	H. W. Smith	Mar. 28
*STKS. OF ELECTRICIAN & BLDR.'S MERCHT. & ENGR.—86, Banner-st., Golden-la., E.C.	Fryett, White, & Co.	April 2
*HOUSE AND SHOP, ST. PANCRAS—At the Mart	Rutley, Son, & Vine	April 2
*HOUSES, SHOPS, ETC.—At the Mart	Rutley, Son, & Vine	April 2
*LEASEHOLD PROPERTY, PLANT, MACHINERY, & BUILDER'S STK. On the Prems.	Bradshaw, Brown, & Co.	April 11

LAW REPORT—*continued from page 344.*

position in the medical profession—who would not be likely to and could not be expected to attend upon a 1*l.* 1s. subpœna. Dr. Wilcox did not attend, and then, on behalf of the applicant, the certificates were tendered as evidence, and although he (Counsel) objected, the learned County Court Judge admitted them as evidence. There was no reason why the house-surgeon who acted at the hospital under Dr. Wilcox could not have been called as a witness. If their Lordships ordered a new trial he (Counsel) would undertake to call Dr. Wilcox as a witness. The County Court Judge held upon the evidence that Richards was incapacitated by an accident arising in the course of his employment, and made an award in his favour for 17s. 6d. a week compensation during incapacity. He submitted that in the circumstances the case ought to be remitted to the County Court and be retried.

Mr. Jacobs, for the applicant, said he could not contend that the certificates were properly admitted as evidence by the County Court Judge. He submitted, however, that there was ample evidence to justify the finding of the County Court Judge. It was due to the solicitors instructing him to say that they had done all they could to get Dr. Wilcox to give evidence; but the latter was prevented from doing so on account of being compelled to attend an inquiry at the Home Office.

In the result their Lordships held that in the circumstances the case must be referred back to be reheard by the learned County Court Judge.

Order accordingly.

PATENTS.

APPLICATIONS PUBLISHED.*

3,937 of 1911.—Frederick William Campbell: Removable cores for forming hollow piles, columns, and the like, and for forming holes in concrete structures generally.

4,421 of 1911.—Frederick George Jones: Conveyor rollers.

4,906 of 1911.—John Hugh McCoy: Concrete water tanks.

5,000 of 1911.—Alfred Charles Blackmore: Mechanism for connecting doors so that the opening of one simultaneously effects the opening of the other.

5,402 of 1911.—Herbert Abraham and Harold Woodbury Haines: Waterproof cement, mortar, and miscible pastes for making the same, and processes of making such pastes and making waterproof cement, mortar, and concrete.

7,016 of 1911.—Fred Watson: Back boilers for use in connexion with domestic fireplaces.

7,047 of 1911.—Frederick Marshall: Fire-escapes.

7,929 of 1911.—James Henry Birtwistle: Grates and fuel holders.

8,186 of 1911.—Frank Wilford Mellows and William Arthur Price: Mode of and means for use in glazing windows and the like.

8,689 of 1911.—John Alexander Parker and John Wright: Chimney and ventilating shaft tops.

9,310 of 1911.—Herbert Linwood Sleigh: An attachment for use in connexion with motor-car and other doors, and folding windows, to prevent rattling and slamming.

9,350 of 1911.—Alfred Acroyd, Percy Churchfield Larmuth, and John Reynolds: Ventilators and the like.

9,382 of 1911.—James Henry Bennett and George Richard Leadsom: Apparatus for operating casements, fanlights, and the like.

* All these applications are in the stage in which opposition to the grant of Patents upon them can be made.

SOME RECENT SALES OF PROPERTY: ESTATE EXCHANGE REPORT.

March 8. By WINTERTON & SONS.

Burntwood, Staffs.—Pipe Grange Farm, 23 a. 0 r. 26 p., c.	£870
March 12. By HUNTER & HUNTER.	
Notting Hill.—Hazelwood-cres., f.g. rents 42*l.*, reversion in 54 yrs.	850
Adair-rd., f.g. rents 65*l.*, reversion in 54 yrs.	1,190
St. John's Wood.—Cavendish-rd., l.g. rents 67*l.* 10s., u.t 84 yrs., g.r nil.	290
Belgravia.—Wilton-st., l.g. rents 45*l.* 10s., u.t. 9 yrs., g.r. 4s.	170
Paddington.—Clarendon-st., l.g. rents 49*l.*, u.t. 40 yrs., g.r. 1*l.* 18s.	670
11 and 12, Star-st., u.t. 9 yrs., g.r. 12*l.* 12s., y.r. 105*l.*	260

Contractions used in these lists.—F.g.r. for freehold ground-rent; l.g.r. for leasehold ground-rent; i.g.r. for improved ground-rent; g.r. for ground-rent; r. for rent; f. for freehold; c. for copyhold; l. for leasehold; p. for possession; e.r. for estimated rental; w.r. for weekly rental; q.r. for quarterly rental; y.r. for yearly rental; u.t. for unexpired term; p.a. for per annum; yrs. for years; la. for lane; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; cres. for crescent; av. for avenue; gdns. for gardens; yd. for yard; gr. for grove; b.h. for beerhouse; p.h. for public-house; o. for offices; s. for shops; ct. for court.

CES CURRENT OF MATERIALS.

r aim in this list is to give, as far as possible, the e prices of materials, not necessarily the lowest. y and quantity obviously affect prices—a fact should be remembered by those who make use of nformation.

BRICKS, &c.

Per 1000 Alongside, in River. £ s. d.

Stocks.....	1 14 0
d Stocks for Facings	2 10 0

Per 10(Delivered at Railway Depôt.

	£ s. d.		£ s. d.
ons.....	1 13 0	Best Blue Pressed Staffordshire...	3 15 0
Fareham	3 12 0	Do. Bullnose.....	4 0 0
ded Pressed bon Facing	5 0 0	Best Stourbridge Fire Bricks ...	4 0 0

D BRICKS—

White, ry, and Salt		Double Headers	13 17 6
t Str'tch'rs	11 7 6	One Side and two Ends	17 17 6
rs	10 17 6	Two Sides and one End	18 17 6
s, Bullnose, 4½ in. Flats	14 17 6	Splays & Squints	16 7 6
Stretchers	16 17 6		

econd Quality £1 10s. per 1000 less than best.

	s. d.	
es and Pit Sand	6 9	per yard, delivered.
es Ballast	5 6	"
Portland Cement	31 0	per ton, "
Ground Blue Lias Lime	19 0	" "

E—The cement or lime is exclusive of the ordinary charge for sacks.

Stone Lime ..... 13s. 0d. per yard delivered.
bridge Fireclay in sacks 27s. 0d. per ton at rly dpt.

STONE.

Per Ft. Cube.

	s. d.
STONE — delivered on road waggons, dington Depôt	1 6½
o. delivered on road waggons, Nine Elms ôt	1 8½

LAND STONE (20 ft. average)—

wn Whitbed, delivered on road waggons, addington Depôt, Nine Elms Depôt, or imlico Wharf	2 3
ite Basebed, delivered on road waggons addington Depôt, Nine Elms Depôt, or imlico Wharf	2 4½

Per Ft. Cube, delivered at Railway Depôt.

	s. d.		s. d.
ter in blocks..	1 10	Closeburn Red	
n blocks	1 6	Freestone	2 0
shill in blocks	1 10	Red Mansfield	
y Dale in		Freestone	2 4
ks	2 4	Talacre & Gwespyr	
Corsehill in ks	2 3	Stone	2 4

STONE—*Robin Hood Quality.*

Per Ft. Cube, Delivered at Railway Depôt. led random blocks	2 10
Per Ft. Super., Delivered at Railway Depôt. sawn two sides landings to sizes (under super.)	2 3
ubbed two sides ditto, ditto	2 6
awn two sides slabs (random sizes).....	0 11½
o 2½ in. sawn one side slabs (random sizes)	0 7
to 2 in. ditto, ditto.....	0 6

YORK—

Per Ft. Cube, Delivered at Railway Depôt. led random blocks	3 0
Per Ft. Super., Delivered at Railway Depôt. awn two sides landing to sizes (under 40 ft. r.)	2 8
ubbed two sides ditto	3 0
awn two sides slabs (random sizes)	1 2
elf-faced random flags	0 5

SLATES.

Per 1000 of 1200 at Railway Depôt.

	£ s. d.		£ s. d.
best blue gor	13 2 6	In. In. 20×10 best Eur'ka unfading green	15 17 6
ditto	13 17 6	20×12 ditto	18 7 6
1st quality o.....	13 0 0	18×10 ditto	13 5 0
ditto	13 15 0	16×8 ditto	10 5 0
ditto.....	7 5 0	20×10 permanent green	11 12 6
best blue madoc.....	12 12 6	18×10 ditto	9 12 6
itto.....	6 12 6	16×8 ditto	6 12 6

TILES.

At Railway Depôt.

	s. d.		s. d.
lain red roof- per 1000).....	42 0	Best "Hartshill" brand, plain sand-faced (per 1000) ...	45 0
p and Valley (per doz.).....	3 7	Do. pressed (per 1000)	42 6
Broseley (per	50 0	Do Ornamental (per 1000)	47 6
namental (per	52 6	Hip (per doz.)...	4 0
p and Valley per doz.).....	4 0	Valley (per doz.)	3 6
Ruabon red, n, or brindled 'ds) (per 1000)	57 6	Staffords. (Hanley) Reds or Brindled (per 1000)	42 6
namental (per	60 0	Hand-made sand-faced (per 1000)	45 0
p (per doz.)...	4 0	Hip (per doz.)...	4 0
lley (per doz.)	3 0	Valley (per doz.)	3 6

WOOD.

BUILDING WOOD.	At per standard. £ s. d.	£ s. d.
best 3 in. by 11 in. and 4 in.		
9 in. and 11 in.....	14 0 0 ...	15 10 0
best 3 by 9	13 10 0 ...	14 10 0

WOOD (*Continued*).

BUILDING WOOD (*Continued*)	At per standard. £ s. d.	£ s. d.
Battens: best 2½ in. by 7 in. and 8in., and 3 in. by 7 in. and 8 in.	11 10 0 ...	12 10 0
Battens: best 2½ by 6 and 3 by 6...	0 10 0	less than 7 in. and 8 in.
Deals: seconds	1 0 0	less thn best.
Battens: seconds	0 10 0 "	"
2 in. by in. and 2 in. by 6 in. ...	9 10 0 ...	10 10 0
2 in. by 4½ in. and 2 in. by 5 in.	9 0 0 ...	10 0 0
Foreign Sawn Boards— 1 in. and 1½ in. by 7 in.	0 10 0	more than battens.
¼ in.	1 0 0	"
Fir timber: best middling Danzig or Memel (average specification)	At per load of 50 ft. 5 0 0 ...	5 10 0
Seconds	4 10 0 ...	5 5 0
Small timber (8 in. to 10 in.) ...	3 17 6 ...	4 0 0
Small timber (6 in. to 8 in.).....	3 5 0 ...	3 10 0
Swedish balks	2 12 6 ...	3 0 0
Pitch-pine timber (30 ft. average)	5 5 0 ...	6 0 0

JOINERS' WOOD.

	At per standard.	
White Sea: first yellow deals, 3 in. by 11 in.....	24 10 0 ...	25 10 0
3 in. by 9 in.	22 10 0 ...	23 10 0
Battens, 2½ in. and 3 in. by 7 in.	17 0 0 ...	18 0 0
Second yellow deals, 3in. by 11in.	19 0 0 ...	20 0 0
" " 3 in. by 9 in.	18 0 0 ...	19 10 0
Battens, 2½ in. and 3 in. by 7 in.	14 0 0 ...	15 0 0
Third yellow deals, 3 in. by 11 in. and 9 in.	14 0 0 ...	15 0 0
Battens, 2½ in. and 3 in. by 7 in.	11 10 0 ...	12 10 0
Petersburg: first yellow deals, 3 in. by 11 in.	21 10 0 ...	22 10 0
3 in. by 9 in.	18 10 0 ...	19 10 0
Battens	14 0 0 ...	15 0 0
Second yellow deals, 3 in. by 11 in	16 10 0 ...	17 10 0
Do. 3 in. by 9 in.	15 0 0 ...	16 0 0
Battens	11 10 0 ...	12 10 0
Third yellow deals, 3in. by 11 in.	13 10 0 ...	14 10 0
Do. 3 in. by 9 in.	13 0 0 ...	14 0 0
Battens	10 10 0 ...	11 0 0
White Sea and Petersburg— First white deals, 3 in. by 11 in.	15 0 0 ...	16 0 0
" " 3 in. by 9 in.	14 0 0 ...	14 10 0
Battens	11 10 0 ...	12 10 0
Second white deals, 3in. by 11in.	14 0 0 ...	15 0 0
" " 3 in. by 9 in.	13 0 0 ...	14 0 0
Battens	10 10 0 ...	11 0 0
Pitch-pine: deals	19 0 0 ...	21 0 0
Under 2 in. thick extra.	0 10 0 ...	1 0 0
Yellow Pine—First, regular sizes	48 0 0	upwards.
Oddments	32 0 0	"
Seconds, regular sizes	33 0 0	"
Oddments	28 0 0	"
Kurai Pine—Planks per ft. cube.	0 4 6 ...	0 6 0
Danzig and Stettin Oak Logs— Large, per ft. cube.....	0 3 0 ...	0 3 9
Small " "	0 2 6 ...	0 2 6
Wainscot Oak Logs, per ft. cube	0 6 6 ...	0 8 0
Dry Wainscot Oak, per ft. sup. as inch	0 0 10 ...	0 1 0
½ in. do. do.	0 0 8½ ...	—
Dry Mahogany—Roundras, Tabasco, per ft. super. as inch..	0 0 10 ...	0 1 1
Selected, Figury, per ft. super. as inch	0 1 6 ...	0 2 6
Dry Walnut, American, per ft. super. as inch	0 0 10 ...	0 1 0
Teak, per load	18 0 0 ...	22 0 0
American Whitewood planks, per ft. cube	0 5 0 ...	0 6 0
Prepared Flooring, etc.—	Per square.	
1 in. by 7 in. yellow, planed and shot	0 13 6 ...	0 17 0
1 in. by 7 in. yellow, planed and matched	0 14 0 ...	0 18 0
1¼ in. by 7 in. yellow, planed and matched	0 16 0 ...	1 0 0
1 in. by 7 in. white, planed and shot	0 12 0 ...	0 14 6
1 in. by 7 in. white, planed and matched.....	0 12 6 ...	0 15 0
1¼ in. by 7 in. white, planed and matched.....	0 15 0 ...	0 16 6
⅜ in. by 7 in. yellow, matched and beaded or V-jointed brds.	0 11 0 ...	0 13 6
1 in. by 7 in. " "	0 14 0 ...	0 18 6
⅜ in. by 7 in. white " "	0 10 0 ...	0 11 0
1 in. by 7 in. " "	0 12 9 ...	0 15 0

6 in. at 6d. to 9d. per square less than 7 in.

JOISTS, GIRDERS, &c.

	In London, or delivered Railway Vans, per ton. £ s. d.	£ s. d.
Rolled Steel Joists, ordinary sections	7 10 0 ...	8 0 0
Compound Girders, ordinary sections	9 10 0 ...	10 0 0
Steel Compound Stanchions	11 0 0 ...	12 0 0
Angles, Tees, and Channels, ordinary sections	9 10 0 ...	10 0 0
Plitch Plates	9 10 0 ...	9 10 0
Cast Iron Columns & Stanchions, including ordinary patterns ...	7 10 0 ...	8 10 0

METALS.

IRON—	Per ton, in London. £ s. d.	£ s. d.
Common Bars	9 0 0 ...	9 10 0
Staffordshire Crown Bars, good merchant quality	9 5 0 ...	9 15 0
Staffordshire "Marked Bars"	11 0 0 ...	—
Mild Steel Bars	9 5 0 ...	9 15 0
Hoop Iron, basis price.....	10 0 0 ...	—
" " Galvanised.....	17 10 0 ...	—

(*And upwards, according to size and gauge.)

Sheet Iron Black— Ordinary sizes to 20 g.	10 5 0 ...	—
" " 24 g.	11 5 0 ...	—
" " 26 g.	12 15 0 ...	—
Sheet Iron, Galvanised, flat, ordinary quality— Ordinary sizes, 6 ft. by 2 ft. to 8 ft. to 20 g.	15 10 0 ...	—
Ordinary sizes to 22 g. and 24 g.	16 0 0 ...	—
" " 26 g.	17 0 0 ...	—
Sheet Iron, Galvanised, flat, best quality— Ordinary sizes to 20 g.	18 10 0 ...	—
" " 22 g. and 24 g.	19 0 0 ...	—
" " 26 g.	20 10 0 ...	—

METALS (*Continued*).

IRON (*Continued*)—	Per ton, in London. £ s. d.	£ s. d.
Galvanised Corrugated Sheets— Ordinary sizes, 6ft. to 8ft. 20 g.	15 0 0 ...	—
" " 22 g. and 24 g.	15 5 0 ...	—
" " 26 g.	16 15 0 ...	—
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker.....	12 10 0 ...	—
Best Soft Steel Sheets, 2 g. & 24 g.	13 10 0 ...	—
" " 26 g.	15 10 0 ...	—
Cut Nails, 3 in. to 6 in.....	11 0 0 ...	11 10 0

(Under 3 in., usual trade extras.)

LEAD, &c.

	£ s. d.	
LEAD—Sheet, English, 4lb. and up	19 17 6 ...	—
Pipe in coils	20 7 6 ...	—
Soil pipe	23 7 6 ...	—
Compo pipe	23 7 6 ...	—
ZINC—Sheet— In casks of 10 cwt.		
Vielle Montagne	33 10 0 ...	—
Silesian	33 5 0 ...	—

Zinc, in bundles, 1s. per cwt. extra.

COPPER— Strong Sheet .....per lb.	0 1 0 ...	—
Thin "	0 1 1 ...	—
Copper nails..... "	0 0 10 ...	—
Copper wire ..... "	0 0 10 ...	—
BRASS— Strong Sheet ..... "	0 0 11 ...	—
Thin "	0 1 0 ...	—
TIN—English Ingots..... "	0 1 11 ...	—
SOLDER—Plumbers' ..... "	0 0 8½ ...	—
Tinmen's ..... "	0 0 11 ...	—
Blowpipe ..... "	0 1 2 ...	—

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

15 oz. thirds	2½d.	26 oz. fourths	3½d.
" fourths	1½d.	32 oz. thirds.....	5d.
21 oz. thirds.....	3d.	" fourths	4½d.
" fourths ...	2½d.	Fluted Sheet, 15 oz.	3½d.
26 oz. thirds.....	4d.	" 21 oz.	4½d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

¼ Hartley's	2d.	Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white.....	3½d.
⅛ "	2½d.		
⅜ "	2½d.	Ditto, tinted.....	5d.

* Not less than three crates.

OILS, &c.

		£ s. d.
Raw Linseed Oil in pipes	per gallon	0 3 3
" " " in barrels.....	"	0 3 4
" " " in drums	"	0 3 6
Boiled " in barrels.....	"	0 3 6
" " " in drums	"	0 3 9
Turpentine in barrels	"	0 2 10
" in drums	"	0 3 0
Genuine Ground English White Lead, per ton		27 10 0
Red Lead, Dry	"	24 0 0
Best Linseed Oil Putty	per cwt.	0 10 0
Stockholm Tar	per barrel	1 12 0

VARNISHES, &c.

	Per gallon. £ s. d.
Fine Pale Oak Varnish	0 8 0
Pale Copal Oak	0 10 6
Superfine Pale Elastic Oak	0 12 6
Fine Extra Hard Church Oak.....	0 10 0
Superfine Hard-drying Oak, for seats of Churches	0 14 6
Fine Elastic Carriage	0 12 0
Superfine Pale Elastic Carriage	0 16 0
Fine Pale Maple	0 10 0
Finest Pale Durable Copal	0 18 0
Extra Pale French Oil	1 1 0
Eggshell Flating Varnish	0 13 0
White Pale Enamel.....	1 4 0
Extra Pale Paper	0 12 0
Best Japan Gold Size	0 10 6
Best Black Japan.....	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Knotting	0 10 9
French and Brush Polish	0 10 6

TO CORRESPONDENTS.

NOTE.—All communications with respect to literary and artistic matters should be addressed to "THE EDITOR" (and not to any person by name); those relating to advertisements and other exclusively business matters should be addressed to "THE PUBLISHER," and *not* to the Editor.

All communications must be authenticated by the name and address of the sender, whether for publication or not. No notice can be taken of anonymous communications.

The responsibility of signed articles, letters, and papers read at meetings rests, of course, with the authors.

We cannot undertake to return rejected communications; and the Editor cannot be responsible for drawings, photographs, manuscripts, or other documents, or for models or samples sent to or left at this office, unless he has specially asked for them.

All drawings sent to or left at this office for consideration should bear the owner's name and address on either the face or back of the drawing. Delay and inconvenience may result from inattention to this.

Any communication to a contributor to write an article, or to execute or lend a drawing for publication, is given subject to the approval of the article or drawing, when received, by the Editor, who retains the right to reject it if unsatisfactory. The receipt by the author of a proof of an article in type does not necessarily imply its acceptance.

N.B.—Illustrations of the First Premiated Design in any important architectural competition will always be accepted for publication by the Editor, whether they have been formally asked for or not.

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than 6 p.m. on Wednesday.* [N.B.—We cannot publish Tenders unless authenticated either by the architect or the building owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is stated, nor any list in which the lowest Tender is under 100*l.* unless in some exceptional cases and for special reasons.]

*Denotes *accepted.* †Denotes *provisionally accepted.*

BARGOED (Glam).—For the erection of a new infants' school at South Bargoed, for the Glamorgan County Education Committee. Mr. D. Pugh-Jones, M.S.A., County Architect, Cardiff:—

R. Jones, Caerphilly*	£2,792 7 10

BISHOP AUCKLAND.—For erection of a new mortuary at the Workhouse, for the Guardians of the Poor of Auckland Union. Mr. F. D. Livesay, architect, Bishop Auckland. Quantities by the architect:—

J. Braithwaite & Son	£400 0 0	G. W. Hetherington	£373 14 0
F. Sowerby	390 0 0	T. Hilton	367 5 6
W. Hope & Sons	333 15 0	J. T. Douglas & Son, Bishop Auckland*	366 18 0
T. Manners	381 13 0		
G. H. Bell	378 10 0		

BLACKBURN.—For extension of the Town Hall. Messrs. Briggs, Wolstenholme, & Thornely, and Messrs. Stones, Stones, & Atkinson, architects, Blackburn:—

W. J. Woof Cronshaw & Sons, Pump-street, Blackburn*	£32,475

CHRISTCHURCH (Mon).—For erection of seven houses, piggeries, etc. Mr. C. F. Ward, A.R.I.B.A., Borough Architect:—

G. Edwards	£5,583 0 0	C. H. Reed	£4,668 12 3
H. Thomas & Son	5,107 0 0	P. H. Saunders	4,654 10 0
F. Jerrett	5,034 9 0	Morris & Biddle	4,572 18 11
E. E. Jenkins	4,900 8 7	F. W. Powles	4,293 1 7
F. C. Parfitt	4,880 0 0	J. H. Williams	4,280 0 0
Kirby & Westacott	4,816 0 0	H. Smith	4,136 0 0
E. C. Jordan	4,770 14 5	W. Moore	4,072 0 0
G. F. Leadbeter	4,700 0 0	R. W. Moont	3,921 0 0

[Borough Architect's estimate, £4,297.]

GOSPORT.—For extension of Alverstoke Laundries, Ltd., Elson, Gosport, for Alverstoke Laundries Company. Mr. A. E. Cogswell, architect, Portsmouth:—

S. Salter	£811 0	J. Hunt	£712 10
J. Croad	765 0	F. J. Privett	675 0
J. Crockerell	763 0		

HARLESDEN.—For erection of a new police-station at Harlesden. Mr. J. Dixon Butler, F.R.I.B.A., Architect and Surveyor to the Metropolitan Police District, New Scotland-yard, S.W. Quantities by Messrs. Thurgood, Son, & Chidgey, 8, Adelphi-terrace, Strand, W.C.:—

Shurmur & Sons	£11,362	Willmott & Sons	£10,864
Holloway Bros., Ltd.	11,292	Holliday & Greenwood, Ltd.	10,819
Ashby & Horner	11,264	Prestige & Co., Ltd.	10,549
F. & H. F. Higgs	11,159	Sabey & Son, Ltd.	10,397
Mowlem & Co., Ltd.	11,045	Patman & Fotheringham, Ltd.	10,373
Grover & Son	11,043	G. Godson & Sons	10,296
Kilby & Gayford, Ltd	10,948		
W. Moss & Sons, Ltd.	10,940		

HAYES.—For laying-out site, construction of roads, etc., and erection of fifty-one houses at Elder's Field, for the Hayes Urban District Council. Mr. D. C. Fidler, Council Engineer and Surveyor:—

C. F. Kearley	£11,789 0 0	Y. J. Lovell & Son	£9,619 0 0
Holloway Bros., Ltd.	11,500 0 0	A. E. Knight	8,930 0 0
Wood Bros.	10,500 0 0	W. J. Wilkinson	8,671 0 0
C. Watts & Co.	10,467 0 0	C. J. Dusgate, Hayes*	8,455 0 0
A. Winch	9,977 11 4		
G. Porter	9,8 8 0 0		
C. Groom	9,808 5 3		

[Surveyor's estimate, £8,510.]

HOVE.—For erection of a greenhouse in St. Ann's Well Gardens:—

McKellar & Westerman, 136, Church-road, Hove	£34 10

HOVE.—For building shedding, stores, and other works at Erroll-road Depôt. Mr. H. H. Scott, Borough Surveyor, Town Hall, Hove:—

McKellar & Westerman, 136, Church-road, Hove	£989

HULL.—For erection of East Hull Picture Drome. Mr. J. Abbott, architect and surveyor, Hull:—

G. H. Panton & Sons, Ltd.	£2,064 0 0	J. Houlton & Sons	£1,870 0 0
J. T. Levitt	2,000 0 0	G. Houlton & Sons	1,845 0 0
J. H. Fenwick	1,970 0 0	T. Goates & Sons, 39, Brunswick-avenue, Hull*	1,786 0 0
A. Lison	1,963 13 6	T. E. Sugden	1,775 0 0
C. T. Kettlewell	1,958 0 0		
F. Southern	1,888 18 0		

LLANBRADACH (Coedybrain, Glam.).—For the erection of a new boys' school at Coedybrain, for the Glamorgan Education Committee. Mr. D. Pugh-Jones, F.S.I., M.S.A., County Architect, Cardiff:—

Hamilton & Millard, Caerphilly*	£5,826 7 5

LONDON. For erection of a building to contain twelve slipper-baths, with waiting-room, etc., in Fenstreet, Tidal Basin. Mr. John G. Morley, Borough Engineer, West Ham:—

A. H. Fryd	£1,353 0	A. J. & S. E. Allerton	£1,077 0
H. C. Horswill	1,190 0	J. W. Jerram	1,059 0
W. J. Clemans	1,166 6	L. Lown & Co., Crayford-road, N.*	1,041 16
A. E. Symes	1,137 0		
A. Newman, Ltd.	1,126 0		

NELSON (Glam.).—For the erection of a new infants' school, for the Glamorgan Education Committee. Mr. D. Pugh-Jones, M.S.A., County Architect, Cardiff:—

J. Williams, Abertridwr, near Caerphilly*	£2,776

NEW BROMPTON (Kent). For erection of St. Luke's Vicarage House. Messrs. Cutts, Johnson, & Boddy, architects, 14, Southampton-street, Strand:—

West Bros.	£1,729	C. E. Skinner	£1,618
Lovell & Son	1,606	H. E. Phillips, Gillingham*	1,487
F. C. Langley	1,565		
Denne & Son	1,620		

ORMSKIRK.—For alterations at the small hospital block at the workhouse, for the Ormskirk Board of Guardians. Mr. James Dod, architect:—

R. Taylor & Son, Church-road, West Ormskirk	£748 17

PORTSMOUTH.—For alterations at Driver's Restaurant, Edinburgh-road. Mr. A. E. Cogswell, architect, Portsmouth:—

Wakeham Bros.	£1,187 9 0	Tay & Co.	£1,034 0 0
Porter	1,170 0 0	F. J. Privett	1,018 0 0
E. & A. Springings	1,155 0 0	J. Tanner	1,004 0 0
Durrant	1,118 5 6	J. Croad	945 0 0
H. Jones & Sons	1,092 15 0	J. Crockerell	927 0 0

SONNING COMMON. For erection of school and schoolhouse at Eve and Dunsden:—

E. Hughes	£2,868 16	Walden & Cox	£2,504 0
Cadel Bros.	2,765 0	Espley & Co., Ltd.	2,500 0
Wooldridge & Simpson	2,691 0	Franklin, Ltd	2,388 0
Bosher, Sons, & Co.	2,622 0	A. G. Butler	2,387 0
F. Newberry	2,622 0	A. Cox & Sons, Abingdon, Berks*	2,307 0
M. E. Pitt	2,567 0		
J. Smallbone & Sons	2,547 0		

SOUTHSEA. For alterations to business premises, Elm-grove, Southsea, for Messrs. T. A. White & Son. Mr. A. E. Cogswell, architect, Prudential-buildings, Portsmouth:—

Salter	£574	Crockerell	£483
Croad	515	Jones	434
Privett	476		

Ham Hill Stone.
Doulting Stone.
Portland Stone.

The Ham Hill and Doulting Stone Co., Limited
(incorporating the Ham Hill Stone Co. and C. Trask & Son, The Doulting Stone Co.).
Norton, Stoke-under-Ham, Somerset.
London Agent:—Mr. E. A. Williams, 16, Craven-street, Strand.

Asphalte.—The Seyssel and Metallic Lava Asphalte Co. (Mr. H. Glenn), Office, 42, Poultry, E.C.—The best and cheapest materials for damp courses, railway arches, warehouse floors, flat roofs, stables, cow-sheds and milk-rooms, granaries, tun-rooms, and terraces. Asphalte Contractors to Forth Bridge Co. T.N. 2644 Central.

SPRAGUE & CO., Ltd.,
LITHOGRAPHERS AND PRINTERS.
Estate Plans and Particulars of Sale promptly executed.
69 & 70, Dean-street, Soho, W.

J. J. ETRIDGE, Jr.
SLATE MERCHANTS. LTD.
EXPERTS IN
SLATING, TILING.
BEST WORK ONLY.
Telephone 2685 Wall, or write—
BETHNAL GREEN SLATE WORKS,
BETHNAL GREEN, LONDON, E.

PILKINGTON & CO
(ESTABLISHED 1838),
DEPTFORD WHARF,
190 & 192, CREEK ROAD, DEPTFORD, S.E.
Telephone No.: New Cross 1102 (two lines).
Registered Trade Mark.
Polonceau Asphalte.
PATENT ASPHALTE AND FELT ROOFING.
ACID-RESISTING ASPHALTE.
WHITE SILICA PAVING
SEYSSEL ASPHALTE (*Direct from the Mines*).

"Drop Dry" Glazing
ECONOMICAL, EFFECTIVE. THE PERFECT SELF-SUSTAINING BAR.
Copper & Zinc Roofing.
The most Efficient and Economical System in the Kingdom.
Designs and Estimates Free on Application.
Telegraphic Address: "COURTEOUS, LONDON."
F. BRABY & CO., LTD.
Telephone: North 3032 (4 lines).
Chief Offices: 352-364, EUSTON ROAD, LONDON, N.W.
Works: LONDON, LIVERPOOL, BRISTOL, GLASGOW, FALKIRK.

THE BUILDER

VOL. CII.—No. 3808. MARCH 29, 1912.

CONTENTS.

	PAGE
A Lesson from America	349
King Edward Memorial	350
Notes	351
Art Exhibitions	352
The Architectural Association	352
The Carpenters' Hall Lectures	356
The International Smoke Abatement Exhibition	357
Testing of Materials used in Reinforced Concrete	359
Architectural Societies	361
General News	362
Correspondence	363
Telecommunication Column	363
Editorial Summary	364
Meetings	364
The Architectural Association: Fifth Spring Visit	364
Competition News	364
Notes to Illustrations	364
Fifty Years Ago	364
Contemporary Architects and their Work: Mr. Arnold Mitchell (with Illustrations)	365
The Building Trade:—	
The Right to Work	370
London Association of Master Stonemasons	370
The Institute of Builders	370
Incorporated Institute of British Decorators	370
Builders' Clerks' Benevolent Institution	371
Government Contracts	371
London Master Builders' Association	372
General Building News	372
Applications under London Building Acts, 1894 to 1909	372
Projected New Buildings in the Provinces	373
The London Opera House. III. (with Illustrations)	374
Reinforced Concrete in Great Britain.—IV. (with Illustrations)	375
Books	377
The London County Council	377
Legal Column	377
Law Report	378
London Councils	378
Obituary	378
Foreign and Colonial	378
List of Competitions, Contracts, etc., Open	379
Patents	381
Some Recent Sales	381
Prices Current	382
Tenders	383

Illustrations.

The Work of Mr. Arnold Mitchell, F.R.I.B.A.:—
House in Surrey: Garden Front.
Barnett Hill: Entrance Front.
University College School, Hampstead.
Ascot Place: Fireplace.
Combination Room, Caius College.
House in Surrey Entrance Hall.
Ascot Place: Organ Front.



The Vineyards, Great Baddow, Essex: The Entrance Front as altered (Mr. Arnold Mitchell's House). (*See page* 365.)

Mr. Arnold Mitchell, F.R.I.B.A., Architect.

A LESSON FROM AMERICA.

THE contemporary architecture of America is a manifestation of the modern spirit of progress in a newer and less restricted country to which we who live and work amidst more firmly-established traditions might more often direct our attention.

The recent discussion at the Architectural Association showing so much appreciation, and, we think, discriminating appreciation, of the great progress recently achieved on the American Continent is a hopeful sign that we are beginning to realise the necessity of bestirring ourselves.

As Mr. C. C. Brewer points out, a country progressing at the speed of America needs competent and vigorous architects, and forces them to the single purpose of erecting the best possible building in the shortest possible time, and that the architects are rising with almost incredible success not only to meet the practical and commercial needs of the community, but to work out artistic problems with a certainty, a dignity, and a breadth the equal of which it would be hard to find in any other period.

This is probably no exaggeration. Nothing is more interesting and instructive than the way the architects have organised themselves and their methods to cope with the situation. These methods might not suit this country; they may even appear to us to be quite inadequate for the production of those special qualities of design to which we attach so much importance, but there is no doubt they are exactly suited to the special circumstances of the case, and have resulted in what might justly be described as the architecture of efficiency.

Whatever limitations this architecture may have from our point of view, or by comparison with the great periods of the past, it would probably be safe to say that in no other country at the present day does architecture more readily respond to the demands of the moment.

The demands of a comparatively new and rapidly growing community are different, and in some respects may be less exacting than those of an older and more settled civilisation. In the rush of material progress something of value may have to be left behind, subtleties may possibly be overlooked, but the essentials necessary to that progress are demanded, and American architecture never fails to supply them.

It seems to us that so long as the architects of America continue to answer to these demands, to attack every new problem as it arises in the same fearless spirit of practical efficiency, and to keep pace with the progress of the country, there is no fear for the future or for the evolution of a characteristic style. When America finally arrives her architecture will arrive with her.

There are those who consider that a definite style is as much a matter of temperament, of mental standpoint, or of method as of features and details, and expect that the immediate future is more likely to produce a cosmopolitan style with slight national or racial variations, than such differences of form as we have seen in the past. Such may be inclined to think that the first indication of characteristics distinctly and typically American has already made its appearance.

There may be those also who will hold that the very limitations of the conditions under which American architecture has been compelled to develop have not been altogether detrimental to its progress. To the student of every form of art the time study is of inestimable value. Whether in drawing a figure or designing a building, the time limit teaches the necessity of going straight to the heart of the problem, of grasping and expressing its essentials to the exclusion of its non-essentials. A generation or two of practice in such studies, with a short time limit and so exacting an instructor as practical necessity, is no bad preparation for the more leisured maturity which the future seems to promise to American architecture.

Although the time limit is not altogether unknown here, particularly in relation to our commercial work, it would be impossible to say that English architects have so thoroughly learnt the lessons it is capable of teaching, or that the work produced under its influence is comparable in the broad handling of the essentials of a problem to that produced in America.

Making all allowances for the native genius of the American architects, there is no reasonable doubt that their success in rising to the occasion and in turning the disadvantages of their environment to the ultimate advantage of their art is due to their superior education and to the system of training based upon that of the École des Beaux-Arts. Unless we are to own ourselves inferior to the Americans in natural ability, it is only reasonable to suppose that our comparative failure in this respect is due to our lack of a similar training. The pressure of a time limit does no doubt demonstrate the necessity of being able to immediately grasp the essentials of a problem and present them lucidly and forcibly, but only a sound theoretical and technical training such as this will enable us to do it. It is here that we are so lamentably deficient and altogether behind the times.

Nowhere is this deficiency more apparent than in our competitions, yet nowhere is this special facility more in demand.

Here we have a system which, if rightly conducted, is admirably adapted to enable the young architect to obtain that continuous practice in the instantaneous grasp and broad presentation of essentials which is so necessary to ultimate success, yet from lack of proper training in a right method of procedure he is unable to take advantage of it. The result is that the average competition design is chiefly remarkable for the painstaking but useless elaboration of irrelevant and non-essential details.

In no class of work perhaps would the benefits of a Beaux-Arts system of training be more promptly and profitably realised.

It is not a question of "Orders" or of forms and features, it is a question of the whole mental outlook towards architecture, of the right attitude of mind or the right direction from which to approach a problem; a question of principles and of the continual practice of a right method of applying them to every known type of building.

It is here that the English architect is so hopelessly outclassed in international competitions. Pitted against opponents with specially-trained minds, and the general arrangements and main characteristics of every type of building at their finger-ends, English architects under the same time limit have no chance whatever to do justice to their undoubted good qualities.

But, although national vanity may find some consolation in the reflection that for all this we still lead in domestic architecture, it will soon be necessary to ask ourselves how long this consolation will be ours. Domestic sentiment and the love of home are characteristics of every branch of the Anglo-Saxon race. In that branch which is most highly trained will this sentiment find its most complete expression in the future.

KING EDWARD MEMORIAL.

WHEN the site in the Green Park now apparently finally adopted for the King Edward Memorial was first selected we ventured to point out that the Committee were by no means at the end of their troubles, as the site presented inherent difficulties and would create problems not easy to solve.

The report of the recent meeting of the Committee at the Mansion House and the publication of the sketch designs for the Memorial prove that our fears were only too well founded. The difficulty with the vista and with the unfortunate fact that a statue cannot face both ways at once have proved so far insuperable. In answer to Sir Squire Bancroft's objection to King Edward's back being turned on Piccadilly, Sir Vezey Strong could only endeavour to console him by suggesting that, though the monument did turn its back on Piccadilly, that back would be a very attractive one. Should anyone ever be so rude as to turn his back on our late Lord Mayor, we trust it will be an equally attractive one, and that Sir Vezey Strong will find in its attractiveness sufficient justification for the lack of courtesy.

We have already expressed our opinion that the right way to obtain the best design would have been by open competition, and our fear that "unless such a course is adopted it can only be a lucky fluke if the memorial escapes being counted as another of our too numerous failures in this direction." So far as we are able to judge from the sketch designs, our forebodings were not without a certain measure of justification.

But, although it must be admitted that this sketch design is far from successful, and that it hardly represents the best that contemporary talent could produce, it must not be forgotten that it is not the first choice of either the architect or the sculptor, and that no artist is at his best when he has been put off his stroke or has been persuaded to work on lines with which he may not be altogether in sympathy. We understand that a more comprehensive and distinctly architectural scheme was originally submitted, which unfortunately failed to meet with the approval of the Committee.

This, in the circumstances, appears to be particularly unfortunate. If the Committee were influenced in their decision to select artists in whom they had confidence by the hope that they would be able to leave the matter entirely in the hands of these artists, and so save themselves much trouble and anxiety, this hope appears to have been frustrated, and any advantage which the method of selection may be supposed to possess in this respect over that of open competition does not appear to have been realised.

We notice that Mr. Christopher Head suggests that, as the park at Shadwell is the only scheme upon which they were all agreed, they should spend 10,000*l*., instead of 20,000*l*., on a statue only in the West-end, and devote the rest of the money to Shadwell. This is one way of dealing with the problem that has something to commend it. If the site cannot be properly treated, the less that is done the better; and if only a statue is required, it might be more easy to find a suitable site.

In a city like London that has grown up haphazard, however, sites are made, not found. It is perhaps one of the reasons of the present difficulty that the Committee has all along been expecting to find one ready-made, and has not realised that if a satisfactory result is to be obtained a good deal of money must be spent in the formation and preparation of a site. But as Sir Vezey Strong has stated that this site is irrevocably fixed, it is useless to discuss the question further.

The only thing left now is to try and make the best of a bad job. If it is definitely determined to place a monument of this description so that it spoils the vista from Piccadilly to the Queen Victoria Memorial, and turns its back on Piccadilly, it might perhaps be well to

rry the idea to its logical conclusion
r ignoring Piccadilly altogether. We
lieve the suggestion has already been
ade that the monument might close
e vista from Buckingham Palace and
backed up by trees screening it
tirely from Piccadilly, and we think the
ea might be borne in mind.

We do not know whether the fact that
e Committee has to divide its funds
tween the Green Park and Shadwell
d any influence on the rejection of the
tists' original and more expensive
heme. We long ago expressed our
rs that with energies divided between
o schemes justice would be done to
ither, and we seem to see in the ap-
oved design just another example of
at spirit of compromise which is sup-
sed to have such happy results in
blic affairs, but which in art is generally
disastrous.

The result is a monument which is
ither one thing nor the other. Neither
le fine architectural lay-out proposed by
e artist, nor the single statue suggested
Mr. Head; neither the great
vereign of a mighty empire, nor the
mple, kindly friend of the least among
s people.

NOTES.

The Newest Responsibility of Architects.

We have heard a good deal lately about the newer responsibilities of the architect, but, how-
er indefinite they may be, we hardly
nk they can include the architect's
bility to be held up to scorn by
turesque writers in the daily Press
r sins he has not committed. We
ite sympathise with the feelings which
idently prompted Mr. Philip Gibbs to
ite so forcibly in the *Daily Chronicle*
the housing accommodation provided
r the ironworkers of Dowlais. His in-
gnation does him credit, but let him be
st in his wrath. Dowlais, we fear, is
t a pleasant place. "As I climbed up
e steep road," says Mr. Gibbs, "I
mped up a crescendo of awful squalor,
ding in hideous triumph. The devil
uld not have built Dowlais with more
blime effects of ugliness." After this
e are not surprised to hear that "In
owlais it is difficult to be decent, and
me of the people have given up trying.
or here, in narrow streets and alleys,
raggling up the hillside, are rows of
ualid hovels, of two, three, and four
ooms, built eighty years ago, in many
ses, and never repaired since then.
ne stones are loose in their walls. The
ndow-frames have warped. Tiles have
llen from the roofs. Their gutters are
isted. Their front doors hang loosely
their hinges. They were built before
nitation was a word in the spelling-
ook of life. The architect did not
orry about drains. Whoever he was,
his utter callousness to human needs
did not worry about anything better
an a sty in which to herd the slaves of
dustry." Whoever he was, we feel
re he was not an architect in any sense
the word; but whoever he might have
en, the callousness was his employer's,
d he certainly is not responsible for the
esent state of these pigsties after
ghty years of neglect. "Through the
ll-mouths of those blast furnaces,"
says Mr. Gibbs in the final climax to a crescendo of awful indignation, "would I toss the men who built these human pigsties!" If justice demands that anyone be tossed into a blast furnace, we suggest the person who is making a profit out of their present condition, or those who are responsible for the fact given by Mr. Gibbs, though we are not responsible for his statements, that whereas whole rows of them have been condemned by the local authorities as unfit for human habitation, yet "most of those condemned houses are still inhabited, and the tenants take in lodgers." This should interest someone at the Local Government Board.

Old Buildings and Street Widening.

From various parts of the country come appeals from lovers of the fast dwindling old-world buildings against street-widening schemes which, devised chiefly in the interests of the motorists, threaten to abolish all that is characteristic in our country towns, and to reduce everything to the commonplace. Certain of the inhabitants of Lyme Regis are strenuously opposing a scheme for widening the foot of the main street, which will sweep away a well-known old-world building known as the Fossil Shop, situated on a still more ancient bridge, and which will destroy the character of this part of the very picturesque town. The majority of the Borough Council favour this scheme, no doubt only regarding the narrowness of the thoroughfare, but a considerable number of ratepayers are opposed to it, and probably outside public opinion might be invoked in their favour. Nowadays it is not sufficient to advocate the retention of the beautiful on æsthetic grounds alone; the practical side has also to be regarded; but in this instance there are also some practical reasons against the scheme. The piece of the road it is proposed to widen resembles the neck of an ordinary wine-bottle; the road is wider where the body of the bottle would be, and within a few yards there is a very dangerous right-angled corner. At present the narrowness of this short piece of the street compels motor traffic to slow down and approach the corner carefully but if this short neck of the bottle be widened motor-cars can approach the corner rapidly, and a thoroughfare which so far has been the scene of no serious street accident will be rendered more dangerous. Thus for once the æsthetic and the practical seem to combine. If town authorities would only realise in time that in modernising their towns in ways which have no direct bearing on sanitation or health they are destroying one of their most valuable assets we should hear less of acts of vandalism throughout the country.

Up-to-Date Bruges.

Lovers of the old-time charms of Bruges will be distressed to learn that electric trams on the trolley system are being arranged for, possibly on the track of the noisy steam one, or "light railway," between the station and the docks and canal—at least, as a beginning. Should it pay its way, no doubt "widenings" will take place to enable cars to run down the Rues Longue, Ste Cathérine, and Aux Laines, and along the Rue des Pierres, and across the Grand Place, and possibly along the charming old Dijver. One thing in its favour may be mentioned, and that is that many will be glad of a lift over the cobbles. Another less unwelcome item of Bruges news just to hand is that restorations are in progress at the Grunthuys, and a public garden being laid out round it, enabling a splendid view to be obtained of the apse of Notre Dame Church, old houses overlooking the canal, and so forth, which was impossible before. We know those "public gardens"!

The Building and Cost of Manchester Schools.

We gather from a letter by Mr. Geo. H. Willoughby in the local Press that the schools erected for the Manchester Education Committee are not designed by an architect, but are carried out by the Director of Education with the assistance of draughtsmen and a clerk of works, with the natural result that they are below the standard in design and construction, and cost more than similar buildings in the neighbourhood. We must confess that it sounds well-nigh incredible that in a great commercial centre like Manchester such unbusiness-like and inefficient ideas and methods should be tolerated. As Mr. Willoughby pertinently remarks, the University and the Municipal School of Technology both encourage the study of architecture. The Corporation makes itself to some extent responsible for the production and the training of the architect, and yet when produced and trained it denies him the opportunity to work in connexion with its own school buildings. The hardship to the profession is obvious; but Mr. Willoughby, rightly enough, we think, does not unduly press this point. While looking forward to the day when the advantages of a high standard of architectural excellence will be the strongest argument with the public, we have no doubt that in the meanwhile Mr. Willoughby is well advised to concentrate on the question of cost. This argument, at all events, should appeal to Manchester.

Forest Fire Prevention.

On previous occasions we have alluded to the appalling waste caused by forest fires in America, Australia, and New Zealand. Incalculable damage has been and is still being done by the thoughtless actions of settlers, campers, and others. In Montana and Northern Idaho alone the losses from fire in a single year have reached the total of 6,000 million feet board measure, with the estimated value of 4,000,000*l*. The Forest Service of the United States are doing their utmost to prevent devastating fires, and it is satisfactory to learn that considerable success has attended the inauguration of preventive measures. Among the modern aids now being employed for the purpose the telephone has been found most valuable, enabling observers on watch-towers to communicate almost instantly to other members of the service the position of any outbreak within a circle of some 30 miles radius, and so to ensure the prompt concentration of men and material for extinguishing the fire in its early stages. The work to which we allude is of direct interest to architects and builders, who

have good reason for desiring the conservation and intelligent management of the world's timber resources.

Ancient Villages in Lake Gatun.

In autumn next the filling of Lake Gatun for the Panama Canal will submerge several early villages which, although not possessing the same interest as Egyptian ruins which suffered by the construction of the Assouan Dam, are, nevertheless, directly associated with the history of America since the discovery of the Continent. Some of the villages are mentioned in Esquemeling's account of his adventures under Morgan, and through them passed the main route to Peru in the time of the Spaniards. In later days they formed the home of gold diggers, and subsequently were occupied by those engaged on the canal works inaugurated by De Lesseps.

ART EXHIBITIONS.

Of recent art exhibitions there is none more interesting than the display of old glass panels at the Fine Art Society's Galleries. There are altogether 149 pieces of stained and painted glass, which are effectively shown in small groups of panels at a time, so that the light shines through the glass pretty much as it would *in situ* if it were not for a greater sharpness of contrast of dark background. The vast majority of the panels go back to early mediæval, mediæval, and Renaissance times, and the collection as a whole comprises examples of English, Flemish, Swiss, German, and Dutch craftsmanship. If the specimens are observed in chronological order the consideration is almost inevitably forced upon one that the earlier periods of the art were its finest; the quality of the glass possessed a deeper brilliancy, the tones were richer and blended into finer harmonies. It is curious to note that one of the most interesting specimens is one of the earliest—a grisaille taken from Salisbury, an almost perfect example of the art with a pattern evolving out of a geometrical design. We have later designs dealing with religious subjects, also of great interest. And then, as we proceed, the artists seem to strive after the expression of merely anecdotal ideas which have been expressed equally well, or better, in the arts of painting and carving of the same period. Examples such as these, apart from the virtuoso's and collector's point of view, and from the point of view of technical accomplishment, have not the same artistic importance as the earlier pieces. In view of the modern use of stained glass in domestic work the exhibition should not be missed.

At the same Society's galleries there are still a few of Mr. Walcot's pictures remaining on view, which make us regret that we did not see the whole of his recent exhibition. From those which are left—water-colour drawings of the Palais de Justice at Brussels, the old Ashmolean at Oxford, and a view of Messrs. Lanchester & Rickards' new building at Westminster, among other subjects—we were, however, able to discover a talent that apprehends the importance of the essential qualities of architecture and architectural detail in pictorial composition. We understand that Mr. Walcot also exhibited some reconstructions of classical work, which adds to our regret at not having seen the larger collection. Mr. A. Wallace Rimington, whose pictures now occupy the same gallery, is not indifferent to subjects connected with building; he is more definitely absorbed in the traditional view of the picturesque than Mr. Walcot, but this does not lead him to preclude subjects of definite architectural interest. In his more ambitious architectural studies, when he gets away from the quaint bits, we detect the influences of the school of Prout without, however, the precise knowledge which Prout possessed, for his time, of architectural proportion and form. Mr. Rimington's water-colours suggest something of the labour of the processes of the material in which he works; but if he is a little too conscientious in this respect, his sympathies are broad, and he obviously takes a sincere delight in various aspects of nature and portrays them with a certain lyrical appreciation.

So far as architecture is concerned, "The Pencil Society" (at Mr. Paterson's Gallery) has little to tell us. We do not quite know why it is called a society in any case. Millet and many other artists have shown us the possibilities of pencil-drawing. There is plenty of good work here, but it is not very serious. The drawing by Mr. Spurrier of St. Paul's Cathedral is free and correct; the compositions of Mr. Frank Gillett are interesting; Mr. Joseph Simpson is under the influence of certain phases which find expression in the Quartier Latin; Mr. Ross Burnett's attempts to discover an emotion in old cowsheds and old barns, not quite successfully; Mr. Cecil King catches the spirit of Paris in an English manner in two topographical drawings; Mr. Fergusson, in another type of subject, also suggests Paris in three drawings of considerable breadth and power. Mr. Hedley Fitton's "London Bridge" and "Site of the County Council Hall" are characteristic of his admirable work. The drawings of Mr. George Belcher, Mr. H. M. Brock, Sir Charles Holroyd, and others have all points of interest, but they are outside the purpose of the present commentary.



Mr. Gerald C. Horsley presided on Monday at Tufton-street over a combined ordinary general meeting of the Architectural Association and of the Camera, Sketch, and Debate Club.

Mr. Hall, Hon. Secretary, announced that the sixth spring visit will take place on March 30, to the new Wesleyan Church House, Westminster. Members to meet at the building at 2 p.m. He further announced that the annual Smoking Concert and Revel of the A.A. Athletic Club will be held on March 26 at the Pillar Hall, Victoria Station Restaurant. Tickets, price 2s. 6d., may be obtained in the office or from Mr. C. G. Boutcher, 40, Great James-street, W.C.

Scrutineers were appointed in connexion with the election of officers for 1912-13.

The President proposed the following votes of thanks: The R.I.B.A. for the following—Annual grant of 100*l.* towards the educational work of the Association; grant of 25*l.* towards the publication in the Sketch Book of some of the R.I.B.A. prize drawings, and 21*l.* subscription to the Royal Architectural Museum; to Miss Lynam for her kindness in presenting a number of books from the library of the late Mr. T. M. Rickman; to Mr. W. A. Pite for his kindness in providing tea upon the occasion of the fifth spring visit, to King's College Hospital, on March 16, and for conducting the party over the building; and to Mr. G. A. Audsley for presenting three numbers of Allen's Technic and Art Manuals to the Association library.

Mr. C. A. Voysey then read the followin paper on

PATRIOTISM IN ARCHITECTURE.

"If we make no effort to discover t foundations of our taste, we shall be easi borne away on the flood tide of fashio And association appealing more to the hea than the head will override reason a leave sensuous emotion to carry us to t bottomless pit of Post-Impressionism. It only a matter of degree how narrow or based our taste may become if we lose th balance of the senses—that is, the proportio ate use of reason and emotion, whether it on the side of emotionalism or intellectuali of spirituality or materialism.

The human pendulum is for ever slow swinging from one extreme to another, a we are for ever struggling to arrive at happy mean.

The present age shows a strong emotion tendency to swing towards the development our imitative faculty, leading to conformity a collectivism, and away from the individua creative, and idealistic manner.

In this collectivist attitude we see a va amount of deadly conventionalism, which a form of tyranny oppressing the young an old alike. It is too easily assumed that th majority are like sheep to be penned in a controlled, and that it is not safe to lea them free in any direction.

In matters of art conscience is no longer t be our guide, but some Cabinet Ministe with his satellites of self-satisfied adviser In short, a Minister of Fine Arts is to be s up to impose the Order of the Parthenon.

A desperate endeavour is now being ma to dominate men's conduct and to crea what its advocates call a "national style, by imposing a definite Order of architectu on the young, and likewise upon the unfort nate competitor for public buildings.

Foreign Architecture and English Students.

Our educational system is based on th assumption that some foreign architecture a fit study for an English student. And h is given every encouragement to travel foreign lands, and by such means to ga fluency in the language of architectural form without the laborious study of the nationa character and conditions that have given the birth. These are the gentlemen that writ books to prove from whence certain characte istic forms are derived, absorbing attentio in superficial likeness and missing the deepe points of difference, which, when examine in conjunction with climate and characte will be found to constitute the only vita and enduring qualities worthy of our study It cannot be denied that it is far more im portant to know from what general principle good work is produced than to have a know ledge only fitted to reproduce given examples How certain forms and methods have bee introduced by the importation of foreig workmen is important enough, but wha should concern us much more, is how far an importations are fitting and desirable, sincer and true.

Now we must observe that in all the fines examples of architecture throughout th world we find that the qualities we admir are due to the faithful use of local material and conditions, the sincere expression o national character and aspirations; both o which qualities are strongly influenced b climatic and also geological and geographica local character.

The climate of a country affects the ligh and the light affects our enjoyment of tex tures and colours quite as much as of ligh and shade. Who has not felt the unsui ability of highly polished marbles, mosai and highly-glazed surfaces in England, an their absolute fitness under Eastern skies Do we not readily associate bright surface and colours with strong sunshine, and ric sombre colouring with our cloudy skies?

The effect of climate on the character of people has been proved by many scientif writers, and needs no repeating here. It enough to observe the characteristics of loc material as evidenced in our own country Even different counties and districts will sho a marked difference in character. Compar

instance, the colour and texture of the erials in Westmorland with those in t. Let us mark well this characteristic he finest architecture—viz., that it grew nly out of national conditions and national racter, and was never a foreign importa- And a national style can grow up in other way. We must recognise our con- ions, material and intellectual, if we would the Divine law of fitness.

re we working now on this principle? we not setting up a model drawn from ign lands, and endeavouring to squeeze requirements into it? Only recently in lic an architect was holding up to the iration of his audience photographs of erican railway-stations designed (as he) as closely as possible on the lel of ancient Roman Baths. Should therefore, design Roman Baths on model of American railway-stations? at wonder if ignorant people buy old ns and convert them into houses, getting that if they are good barns they st be bad houses, and if good houses very barns! As if good architecture were not direct product of the purpose of the lding. The general custom is to set the rt on a symmetrical façade and then eeze our plan into it, making dark passages lobbies, rather than upset our symmetry. we not often use draughty, rattling wood hes instead of stone windows and iron ements, in order to produce a Renaissance racter in our building? Do we not give same size window to a closet that we give our banqueting hall if it happens to come our main front? How often do we see ny little villas aping the manners of a al palace, porticoes and empty niches, nices and broken pediments provided for villa rented at 70*l.* or 80*l.* per annum! owing clearly that the outside comes first our calculations and the plan afterwards, d that we are wedded to a form that is born of the parent of practical require- nts, but the foster-child of a foreign-bred icy. The structure is designed from with- inwards, not, as it should be, from within wards. I will not plead for either Gothic Classic, but only that conditions and uirements shall dominate inside and out, d, above all, that the expression of thought d feeling shall be national and sincere. do not want Chinese national character pressed in Piccadilly any more than ecian or Italian character. We do not nt the poor man's villa to ape the stately me of the wealthy.

The more we go to Rome the less we shall ow of London. The freshness and charm foreign lands has belittled our reverence our own country. And we are apt to get that our Maker has given us a climate d country different from all other nations. e cannot ignore this fact without loss of triotism and national dignity.

English Thought and Feeling.

Fitness is a Divine law, and the more we vestigate Nature the more we become im- essed by its fitness: therefore we do wisely work on the same lines and strive dili ntly after fitness. Can it, then, be fit to use reign styles to express English thought and eling? The English architect down to the d of the Tudor period was content to learn d understand all the conditions of his own ntry, to understand the character of his n countrymen and to express their emotions d aspirations. He was keen to learn the ssibilities and limitations of his material, d, in order that we may benefit by his periences in this direction, we should study the pure English examples we come across, ver forgetting that it is only unalterable chnical qualities which we most need to arn, and not those accidents of passing shion, or the changing manners and stoms of different periods. It is very portant that we should notice, for stance, the way the stone in different dis- icts was used, rather than the existence battlements or moats, which tell not of e history of building so much as of the anner of life of the people.

In our admiration for ancient examples e are apt to imitate the forms of obsolete atures and miss the practical and essential uths concerning the fitting use of material. e are fascinated by the marbles and osaics of foreign countries, and fail to perceive how they expressed the quality of mind of the nation; the quality of light in their native land, no less than the geographical and geological conditions out of which they have grown. This disregard of national character and national needs and conditions is the foundation of nearly all our unpatriotic conduct and sentiment.

How few of the rising generation know to what extent the old Gothic builders in England revelled in colour and rejoiced in rich displays of harmony and human emotion! Those were the men who had never travelled abroad—never journeyed to foreign lands with any adulterous intention or made love to foreign examples of their craft, but created noble buildings out of the bounty of their own land and the brotherhood of their own national character, and their own history, hopes, and aspirations, exactly as the Greeks and Romans, Italians, Japanese, Chinese, and all the nations that ever produced a national art have done.

But, alas, the later Englishman has been unfaithful; he has turned his back on his own climate, and hardly speaks of it except to abuse it! And he has opened his arms to all the foreign material he can lay his hands on. And he raves about the most un-English architecture he has got, regarding it as so magnificent that all practical considerations must be waived for the purpose of providing an æsthetic approach to it.

Men are quicker to discern likeness than difference, and any trivial likeness between one object and another in our memory is carefully treasured, especially if that memory gives us pleasure. We are content with trivial pleasurable sensations without troubling to look for more sterling qualities of fitness.

The fact that our St. Paul's is well proportioned and gives us a pleasing sense of light and shade, and is big, justifies its existence in many people's eyes. But that it is a clever man's copy of a foreigner's expression of his own national character—albeit a foreigner's wise and clever use of his own conditions and requirements—never seems to be considered as in any way a proof that St. Paul's is an exotic and not a national growth. It is not the product of our climate or the outcome of our national life. It is a theatrical falsehood of the most prolific period of profligacy. The few wealthy who could afford to travel were intoxicated by what they saw, and they quickly lost their hearts to foreign beauties. And the universal law that we strive to reproduce what we love and admire led them to tear down their English houses and erect Italian, Renaissance, French, and other foreign examples in imitation of what they had seen and in boastful proclamation of their foreign experiences. We are only now gradually awakening to the consciousness that the ravishing beauties of foreign architecture are always due to their being true and noble expressions of national character, governed by reverent regard for local conditions and materials.

Nature's Material Qualities.

As a general principle we may reasonably assert that Nature's material qualities are more beautiful than anything that man can produce, though man may add to and enrich the beauty of Nature by the addition of his own beautiful thought and feeling. The recognition of this will vastly strengthen our patriotic feeling, and, while encouraging a true appreciation of our own country, it will likewise help us to appreciate other countries more rationally.

It is of very great importance that we should get at the truth of this matter, because our present method of education and the practice of our profession is steadily leading to an artificial mode of expression independent of the practical necessities of life. Our town halls, banks, public and private houses are all stereotyped bastard children of foreign parentage. And there is an effort being made to coerce the shopkeepers into the same mould. No matter what their trade may be, they must manage their business as best they may behind the Renaissance shirt-front. As if true architecture were the expression of a cultured traveller, rather than a stay-at-home craftsman's endeavour to use local material fitly, to minister to individual needs and requirements.

Town Planning.

The town-planner is a collectivist; his idea is to drill humanity into line and regulate his outward movements regardless of his inward needs. He, too, regards the general aspect and ignores individual necessities. He must have building lines and symmetry, regardless of individual tastes and requirements. He would have our tastes and requirements regulated by Act of Parliament—the deadliest machine ever invented when used to coerce taste. Acts of Parliament we need to protect the weak against the strong—to guard an Englishman's true expression of his love for his own country, not to force him to adopt the language and manners of a foreigner.

The vista may be a fine model to emulate and a suitable place for strutting human peacocks and peahens, but for a strenuous practical Northern people it is not a fit and true expression of their needs to be introduced into every speculative suburb. The revival of any style or period of architecture, whether English or foreign in origin, is an evil which tends to retard the due consideration of fitness in all its aspects.

Planning a House.

If we start a plan for a house with any preconceived example of a Classic temple or a Georgian mansion, a Roman bath, or even a Gothic monastery, we shall be the less influenced by the peculiar characteristics of the site, the building owner, or the purpose of our building. And it is from the consideration of these conditions alone that all the finest architecture throughout the world has ever sprung. Moreover, consider how immensely stimulating it is to all human powers to have to evolve your building from such sources. The delight, too, of searching for moral qualities worthy to be stimulated by our building is untold, necessitating also an interest in contemporary life and feeling, so keeping our work alive and growing, and avoiding the stagnation of stereotyped conventions of ancient times. But the present method is to accept first a Renaissance conception and then ingeniously squeeze your accommodation into and behind the shell, and classify your requirements to suit your thirst for symmetry. It is like a Chinese puzzle, a *tour de force*, a clever exercise in cunning, leading to all manner of subterfuges, and as such demoralising to all concerned.

English Domestic Work.

It is generally admitted that our English domestic architecture of recent years has advanced much more than the architecture of our public buildings and monuments. And I fearlessly assert it is because much of our domestic work has been produced by the method herein advocated, whereas our public buildings are invariably produced on the method condemned. And why? Mainly because the authorities who have to vote the money to pay for them are trying to please their electors, and they know that if they put up a hall-marked building—that is, something colourably like St. Paul's—no one will venture to criticise their choice or their taste. The word has gone round that St. Paul's is all right, and it has been repeated so often that Mr. Brown and Mr. Robinson find it a very convenient sample of good taste by which to gauge their public buildings; the architecture, according to the Alderman, being the outside jacket, and the added inside embellishments the gilt on the gingerbread, in fact, not one of them ever dreaming of the question—Is St. Paul's English? Is it a patriotic expression of our national character?

Public Buildings and Dirt.

If the importance of a careful study of national character and conditions were fully realised a student would have little time for travelling abroad; and if by the time he reached the age of forty-five he had made good use of his own country, foreign travel could do him no harm. But forty-five years is not enough time in which to learn everything about the resources and history of our own country. The more intelligent a man is the more he will feel how much more there is to learn than he can ever accomplish. If our modern public buildings are the outcome of foreign travel, who can defend it? Surely they are the deadest, uninspiring piles of wasted labour and material that any country can

show. Successful as dirt-traps and dust-catchers, emphasising the grimy nature of our town atmosphere. Here, then, we surely find in the rustications of our wall surfaces clear proof that the desire to adapt foreign detail has outweighed all considerations of fitness to our dirty town atmosphere. Innumerable are the examples of similar conformity to foreign styles, preventing due consideration of practical fitness; durability and cleanliness are sacrificed to imitative convention. The true mathematical proportion and placing of the Orders is regarded as far more important than the adequate lighting or convenient placing of our chambers. We ought no more to teach the five Orders to students than to train them in Chinese. Many will say that without the five Orders no sense of proportion can be taught. I do not think that with any Orders you can teach proportion. Proportion is a matter of feeling dependent on general culture and temperament. You may notice that every man's sense of proportion varies as much as the proportions of his body and limbs; and when he is sincere in the expression of his sense of proportion it is a reflection of his own bodily frame.

We can very well teach the character of materials and their proper use and limitations, but the less we try to teach art the better. Teach ethics instead, and make men think, and art will take care of itself.

It would surprise many of us if we were to consider the amazing effect on modern architecture the one study of cleanliness would produce. If we are to avoid dirt-traps inside and out we must concentrate our ornament and produce breadth and simplicity, both of which qualities demand good material and good workmanship. So by omitting conventional Renaissance detail we should be driven to devote much thought and feeling to the enrichments we have, and in the plain broad surfaces we should feel the necessity of well-chosen, genuine material and a high quality of workmanship.

Tyranny of Styles.

We can never arrive at these qualities if we are working to a definite style of the past. Use the past to supplement your experience of the use of materials, their possibilities and limitations, but do not be a slave to it. Do not depress young students by telling them they cannot possibly excel the noble men of old. Our increased experience ought to make us more able to excel anything that has gone before. The cultivation of patriotic feeling should make us devote more attention to English material, English conditions, and English character, and free us from the stigma of being called the most inartistic nation on the face of the globe.

Art, being the manifestation of human thought and feeling, must always be individual and national. Furthermore, the emancipation from the tyranny of styles would open the door to brother-craftsmen. We should feel the necessity for the work of the painter and sculptor in our buildings if we omitted the acres of machine-made Renaissance ornament. And brotherhood between the arts is what we need to stimulate, and it must necessarily follow the growth of patriotism in architecture.

The strongest argument in favour of creating buildings from requirements and conditions, rather than in obedience to any preconceived style or mode of expression, is that it opens the way for the appeal to our higher nature and stirs up the emotions and moral sentiments. It forces us to consider moral principles and work on definite lines of truthfulness, fitness, and fidelity. We at once see the necessity for investigating and making full use of local materials, or the economic conditions that justify imported goods. We are stirred to investigate all new inventions and fresh methods. This state of mind is one of perpetual alertness—on the look-out to seize every new advantage of modern times—and this healthy living condition is the most fitting wherein to recognise the true enduring qualities of life, viz., the moral sentiments. In our admiration for ancient buildings we forget that it is their manifestation of the spirit wherein they are great. The material we see is perishable and illusory. But in the spiritual significance and expression of moral sentiments they are indestructible. In our familiarity with materials we forget that it is always the spiritual essence that is the life and soul of our work. Not the form of our expression so much as the deep thought and feeling it betrays.

Can we not emulate Shakespeare in our architecture, and by patriotic feeling express and encourage what is best in our national character?"

Mr. Arthur Keen also contributed a paper, and said:—

"Let me say first how much Mr. Voysey's presence here this evening is appreciated by us. He has not hesitated before now to tell us frankly that he did not approve of our methods of education, but by coming to speak to us to-night he shows that he is moved by no narrow or dogmatic spirit, but is anxious to help us in our study of the art for which we share his affection. The position he takes up is a strong one, for, although he perhaps will not admit it, his appeal is to our feelings rather than to our judgment; and he speaks with the seriousness of conviction because it is well known that to the extent of his opportunity he has carried into effect in his own practice the views that he holds of the possibilities and limitations of architectural art in the present day. But that he is right in his main contentions I cannot agree. If he had put them forward thirty years ago they would have been received with enthusiasm, for the spirit of the mediæval past had a strong hold on the architectural imagination at that time; but the Gothic Revival has passed. And what has it taught us? It has taught us that it had to fail because we are no longer Gothic; that the Gothic tradition ended long ago, and cannot be conjured back to infuse our work with the vitality and personal quality that belongs to the old because our character and disposition have changed, our social conditions have altered, and our attitude towards all things has become one of doubt and inquiry in the place of submission and faith. Why should we live in a fool's paradise and imagine that things are other than they are? It never has been any use, and it never will be. We are eager and self-seeking we have acquired education, we have travelled and seen the world; we have facilities for the interchange of ideas and commodities; our methods of life and industry, our political views, our very religion has altered—we are the products of an eager, ambitious civilisation, dominated by science, by competition, by individual liberty, and by aspirations, hopes, and ideals different from, and opposite to, those of the past.

In many directions, however, there seems already to be a more general concensus of feeling, a broader basis of authority, a more definite conviction as to wide principles; and is not this coming about in the matter of art as in other things? Are we not already weary of each man doing that which is right in his own eyes, and is not the cry for a Ministry of Fine Arts the outcome of a desire for peace and good order, sobriety and restraint?

Convention.

Convention, social restraint—call it what you will—is it possible, human nature being as it is, to get away from it for long? Man is a social animal, and is, and always has been, ruled by convention, by the general acceptation of right and proper usages. It is an inborn sense, and collectively he cannot get away from it. However much an individual here and there may kick against the pricks, our architecture must be conventional if it is to represent us truly; and it should be of such an order that it can yield good results to a formal, academic method of expression that is able to associate itself with science and orderly civilisation, and with the commercial and social conditions that now obtain. An architecture that depended on the detached and original attitude of each individual would be intolerable. Wise restraint is almost always to be preferred to uncontrolled individualism. In the best days of architectural art and of the development of that art convention was universal—buildings, whether temples or churches, as much as ships and fortifications, were made on orthodox lines. Growth along those lines, not departure from them, was the constant characteristic. Indeed it is difficult to reconcile the design of a Greek temple with what one knows of the artistic aspirations of the Greeks, except on the principle of overmastering convention. A somewhat rude, ungainly type of building, impressive and dignified in its simplicity, but lacking the resource and imagination that we associate with Gr sculpture and decorative design.

There certainly seems now to be a desire impose a definite and generally recogni method of architectural treatment, because struggle has gone on long enough, and we that in unity of effort lies our only hope achieving in any worthy way a form of exp sion that can be considered national; so t by these forms and these methods shall th who follow us know that this was the work of British nation in the XXth century.

Revivals.

What is the logical outcome of the object to sending the young man out to see the wor This, as well as the suggestion that he sho work only in the material of his district, is echo of the time when no facilities for travel traffic existed. It would make the student i a kind of ancestral beaver, secure in his lod protected by his dam, snug and self-satisfi without incentive or imagination or horiz Are we not to take the world as it is, and are to try and force our part of it back into position it has left long since? I agree w Mr. Voysey that the revivals that he deprecat are lamentable enough, although in a meas they express faithfully the national attitu towards things; but I submit that the cou we have had our attention directed to by h involves a greater revival than any we have h before—a revival of former social conditio rather than one of mere architectural form and I think that to be successful it involves t architect in becoming a mason, or a sculptor, a carpenter again; for, if I understand aright t qualities that Mr. Voysey desires, they are to obtained in no other way. We have had ca enough, and to weariness, of endeavours aft texture and local character, and the appearan of "craftsman" art, obtained by laborio detailing and by close supervision of the wo man, and I say, without hesitation, that su efforts are wrong artistically.

We have to produce our architecture at t drawing-board and by means of specificatio and letters and bills of quantities; for Heaven sake let us be honest and admit it, and not t to pretend that we are treading in the steps our ancient brethren when we are beset abo with contracts and by-laws, with Coun Council applications, with party walls, and wi all the appliances and products of science a commerce. I was shown recently on a lante screen two pieces of brickwork—one a genui piece of XVth-century work with all the char of irregularity and texture upon it and in t the other was confidently put forward by t lecturer as the best bit of modern brickwork had ever seen; it aped the characteristics of t old work in its irregularity, but to me it was slovenly, untidy, rough bit of work that wou have been a disgrace to the bricklayer if one ha not known that the poor man, no longer fr to work in the accepted way, had been made do it, by the architect, as a deliberate piece affectation. We are not mediæval bricklaye or masons; why should we pretend that we are I do not think that Mr. Voysey wishes us to so, but I do submit that what he suggests to really involves us in something of this kind, f he claims that architectural character is to gro again out of the nature of the material, and right uses in order to meet the needs of t time and express the ideals of the individual: I understand it, this is the mediæval attitud and involves the mediæval method.

We are to make our work national again, b when was it ever national in the sense of exclu ing foreign influence? It has been in a consta state of change since the beginning of o civilisation, and I think it would not be difficu to show that most of the change has been due foreign sources.

The Saxons came from over the sea; o Norman architecture was an importation Westminster Abbey itself is on a French mode Mr. Lethaby has been making startling sugge tions lately as to architectural beginnings, a the transfer of features and of methods of co struction from one part of the world to anothe And why should not this transference tak place? Does the delightful little bridge Prior Park fit less well into the English land scape because it is in a sense an exotic? A not the bridges at Cambridge or Bath home and natural, although they may be based foreign models? Is not Stamford a chara teristic English town, although it is full Palladian work? In every age and place th art of the native craftsman has been tinged ar

used with the foreign influence. Here in gland it has proceeded side by side with that he professional architect for many genera- is, "stealing and giving" charm.

National Character and Style.

The "sincere expression of national character aspirations"—what is it? What does it an in these days? I am reminded of a oon that appeared in *Punch* some years ago wing a servant coming to Lord Beaconsfield h the announcement of a deputation below iring information as to the Conservative gramme. "Tell them," was the reply. at we propose to rely on the sublime incts of an ancient people." It was a well- nding phrase, but had it any real meaning? d what does the sincere expression of ional character mean? And what does atriotism in Architecture" really mean in se days? Does it really mean anything ept that we are to use everything that comes us in a reasonable way to suit our own ticular needs?

Ve need be under no misapprehension that a le of architecture that does not faithfully e the national need will endure. Mr. sey is severe on our town halls and banks railway-stations, but to the extent that ir architecture does not meet its require- nts it already stands condemned. Is he not tuly severe with these buildings? He seems deprecate symmetry in design, but surely a n hall is essentially a building that calls for h design; its plan must be simple and ular; the requirements of it suggest and ose uniformity and repetition. The axial tment is the right one. And is not metry in the design of domestic buildings a at factor of beauty? Are such houses as ntacute and the great Jacobean mansions the house in West-street, Chichester, the se for it? I submit that house planning never more sound and serviceable than to- ; but when have we had more striving after larity and balance than at the present time?

ecognition of Materials and Conditions.

Ir. Voysey says that a national style can grow up by a recognition of our con- ons, material and intellectual; that we must y the Divine law of fitness. Nothing can be e true or better expressed; but this does not us off from foreign influence; on the con- y, it leads us to it, for we are Cosmopolitan these days—not hide-bound, prejudiced nders. No doubt an architect may be ng if he makes his railway-station resemble Roman bath he has seen in his travels; but is no argument against travel. He would be ally reprehensible if he made it resemble ham Cathedral; but, on the other hand, a sound conception like the front of King's ss Station may be the direct outcome of ething seen in Spain or Constantinople.

think it is a fair claim that most architec- al students are, as a matter of fact, being ght to recognise all material and intellectual ditions, and to observe particularly the reme law of fitness. But it is on this point t the issue really depends, for the schools ocate the use of certain well-known archi- ural forms and features in design that is to ply with these principles, and Mr. Voysey ms that these forms and features are not issible; that they have no connexion with onable design, and that in fact they used for their own sake. I think he is it here to a very great extent, and that ures are commonly used in a wrong and itous way; but surely features of some are admissible, and why should not suitable s be adopted from old work, either native or ign.

fully agree that we must master, as far as can, as Mr. Voysey says, the unalterable anical qualities, the uses and character of erials, and the essential truths relating to r handling; but, as we have been told before , this leads us only to "pleasant building"; but a small part of architecture. Indeed, is architecture at all? Is not architecture ething added to building, something ressed through building, but in no way ntial to it?

Education, etc.

Ve have been told that our present methods ducation are steadily leading to an artificial de of expression, independent of the practical essities of life. Now, I doubt this very ch. I believe our education is endeavouring keep step with other education, and to equip the student to meet what must be regarded as the practical necessities of modern life. I do not want to be misunderstood or to put myself in a false position. I admire and love the old things; I would rather go out of my way than let an old bridge or a Whitgift Hospital be pulled down; I would look through wavy old glass rather than have it replaced by plate; but the methods and the ways of life that produced them belong to the time that is gone for ever, and can no more be called back than the Psalms of David can be written again.

I think Mr. Voysey is quite sound when comparing the past with the present. It is too true that, while we have gained knowledge, we have lost insight; we have got experience, but lost imagination; good taste is no longer spontaneous; the unerring instinct and judgment of the craftsman are gone, and we can no more work with the methods of the past than we can regain the blind unreasoning faith of our Calvanistic forefathers.

There are all sorts of questions about durability and cleanliness and colour on which I should have liked to join issue with Mr. Voysey if there had been time; let me merely interject here that in places where smoke and soot predominate the rougher and not the smoother a building is the better; for even soot will reflect light if it is in irregular lumps, but not when it is a smooth greasy skin over a polished marble or smooth ashlar surface.

It is to the main characteristics of sound and scholarly design that we must look in these days, not to the touch of the craftsman. To breadth and proportion, to light and shade, to balance and composition and contrast, to sound and obvious construction, to fitness, to beauty of detail, to cheerfulness and light. We are not German, or Italian, or American, or French, and everything will be done in our own English way; if we are all soundly taught, and taught on similar lines, our architecture will be worthy and dignified, free from vulgarity or untruth, and we need not fear that it will not be national. But to begin the whole thing anew and invent our architecture again or evolve it anew out of methods of building, while turning our backs on what the past has to offer us, merely because it may not be of English origin, seems to me to be to invite disaster and chaos; just as wrong as to destroy all our pictures and to learn painting again.

But let me conclude as I began, by expressing appreciation of the service Mr. Voysey has rendered to us by what he has been saying. He has initiated the discussion of a mater of great interest. He has condemned all that is mean or vulgar, sordid or dishonest; he has held up to us an ideal of the highest kind—an ideal that I believe myself to be incapable of realisation by reason of the conditions that now control us, but an ideal that he has put forward with sincerity and conviction; an ideal that we may always keep before us to correct our judgment, to form our character, and improve our aims. If we do not perhaps see eye to eye with him in the method of its attainment, we all share his hope that the architecture of our future shall be noble, pure, and inspired, worthy of its past, and in the highest sense national and expressive of national aspirations."

Mr. Harrison Townsend

said he thought Mr. Voysey would have done well to have given a definition of "patriot" at the beginning of his paper. Dr. Johnson said that a patriot was one whose real passion was a love of his country, and, although the dictionary might give that definition, it did not quite read into the word what Mr. Voysey had read into it, nor did it read out of the word that which Mr. Voysey had excluded. A patriot was a lover of his own country, but he was not necessarily a despiser of another country. Dr. Johnson had also said that "that man is little to be envied who would not gain force upon the plain of Marathon." There was a wider patriotism which did not exclude what could be gained from the teaching of other countries. He once asked a gentleman to go to Italy, and he said that the work was dreadful. His reply was, "If you don't go to look for what is good in it, go and see what is bad in it." The more evils one left uncommitted the more virtuous one was, and the more evils one sought to avoid in our work the better the working. After all, the whole sum of their knowledge was not great, and if they were to confine their knowledge to their own country, why not go further and make it a parochial thing and simply confine it to a district? He held that if they could increase their sum of knowledge by travelling abroad the better Englishmen they would be when they came back and knew how to apply their knowledge. It had been said that "Home-keeping youths have ever homely wit." Mr. Voysey might score on him by saying that was exactly what he wanted, but it was not the sense in which Shakespeare used the word. He did not think Mr. Voysey could have put a worse witness in the box for his own case; but out of thirty-nine plays which Shakespeare wrote not a third of them dealt with English subjects. Shakespeare went to Greece and Rome, and he transmuted what metal he brought back into a finer metal of his own English thought. Shakespeare did exactly what they wanted their young men to do when they went abroad; they wanted them to come back richer for what they had seen, but none the less Englishmen.

Mr. A. T. Bolton

said he was afraid the sentiment of the meeting was very much against Mr. Voysey's attitude, but at the same time they ought to realise the great influence which Mr. Voysey's work had had on people. It was extraordinary how men like Mr. Voysey with his intense convictions, and doing work of the character he did, had influenced the work of other people. When Mr. Voysey's work first attracted attention it raised great interest in him personally, because so much of it seemed to him influenced by the grand old cottages there were in Sussex. But much as one admired Mr. Voysey's buildings, he did not think they could accept his gospel. What may have answered very well in his own case might not answer in the case of others, and the basis of the whole thing, which was that they might do work without reference to what had been done in the past, was historically untrue. The more they came into contact with old buildings the more they realised that right into the heart of the Middle Ages the influence of Rome existed to a considerable extent. Many of the Romanesque builders were trying to do real Roman work. The remains of Roman work scattered all over Europe haunted the imagination of these builders. They went to Rome and came back, and thought they were building things in the Roman manner, and the importation of marbles and things of that sort went on constantly. Kent was a very bad county for Mr. Voysey to mention, because they had only to scratch the soil to find Rome. Seriously he believed that those students who had travelled most were those who best understood their native work. When they had spent any time in a country, as a rule they found out the local attitude and understood how certain features were the outcome of local conditions, and when they came back to England they generally understood better what the English peculiarities were. He thought foreign travel was positively beneficial in enabling people to understand their own country. The question of climate was a difficult one, and seemed much more plausible than it really was, because in France, for instance, the climate varied enormously, and so it did to a considerable extent in this country, and therefore they could not classify climate and say there was a definite English climate and an Italian climate, and so on. When one honestly tried to do a building which simply met the requirements of the case, giving the light and convenience, and using the material at hand, as a rule, people would say the general effect was dull, and they wanted something more. It was like the question put as to the arcades to old cathedrals. They were simply put there because people liked them. It was the same with these Orders and things which were introduced. It was easy to say they were not necessary, but if people liked them, and they gave a certain flavour to a building which did not otherwise exist, and they found they were used everywhere, then they must come to the conclusion that there was some human necessity for them. He could not sympathise with Mr. Voysey in his dislike to St. Paul's Cathedral, and he thought that gentleman had made an unhappy selection, because it derived its plan from Ely. Wren had a knowledge of Gothic architecture, for which he was not sufficiently accredited, and he understood the spirit and ideas of Gothic architecture. In St. Paul's Cathedral they had an extraordinary adaptation of English ideas with true Renaissance detail, and Wren was triumphantly justified in what he did, because St. Paul's

received the homage of a third of the population at the present day. When Turner said that St. Paul's made London he was expressing the sentiment which every Londoner had always felt. St. Paul's was not a mere copy of some Renaissance church, but it was in its way a very English design. The reason why they taught the five Orders was just this, that they taught the student a great deal about proportion. The Orders by thousands of years' use had arrived at certain results, and no student could possibly lose anything by studying a system of Orders which had been practised by so many distinguished men in succession. They taught also a certain independence for the moment of dimensions, and it was not a bad thing for the student to work out a design which was all related to one figure as it were. He obtained the idea that all details were related to the general result, and he learned a great deal if by applying the Orders to a design he learned to bring all the parts of the design in relation to a certain standard. As to the teaching of ethics in relation to architecture, Ruskin had tried to do it, and where he failed he did not think they would do much good.

Mr. Allan Potter

said he had a great deal of sympathy with Mr. Voysey's point of view if he read it aright, viz., that he was up against students going abroad and being struck with something pretty, coming back here and reproducing it in England with no direct relation to English architecture. That was as far as he went in sympathy with Mr. Voysey. When Mr. Voysey said they ought not to teach the Orders, he believed he was absolutely wrong. They ought to teach the Orders of architecture just as they taught Latin and Greek. It was not that they should write Dog-Latin, but that they should write good English. They wanted free thought and logical and scholarly study of the architecture of the past. They did not want to study either the Parthenon or St. Paul's in order to copy them. Westminster Abbey was inevitable in its day, and so St. Paul's also was inevitable in its day, owing to changed circumstances and changed social conditions. But because St. Paul's was suitable to its day it did not mean that it would be suitable for to-day. They ought to look to St. Paul's and to Westminster Abbey in order that they might produce equally fine architecture and suitable to the present day, as were these buildings to the day in which they were built. The Greeks started with what their ancestors left them, and discarded that which was inharmonious and unsuitable, and the result was that they produced style. An intense study of Greek architecture would teach them what was meant by style.

Mr. H. W. Brittain observed that what Mr. Voysey was really against was the spirit of the times.

Mr. A. E. Bullock

remarked that in all things this country depended largely on foreign importations, and if they had to depend solely on their own productions they would starve. They had adopted a great deal in classical architecture, but there was one thing they had yet to adopt, *i.e.*, interior decoration. If they could treat style of foreign work, thoroughly understood and produced, they would find their architecture would put on clothing which would make it more presentable and satisfactory.

Mr. C. G. Boutcher

said Mr. Voysey had told them that fitness was an essential. That being so, if they depended for their teaching on this country alone they would have to adopt the old Moot Hall for their town halls, and he thought Mr. Voysey would hardly say the old Moot Hall was suitable for the new London County Council offices. They had no tradition of their own in public buildings, and therefore they must go abroad and get the best they could.

Mr. A. Smithers

asked what would be considered local material in London, and also if Mr. Voysey would allow ferro-concrete to be faced up.

The President

said he must admit that his sympathies were really with Mr. Keen. Mr. Voysey, in the expression of his strong individuality, had really quite over-ridden some facts of history. He did not think they could argue from the local material standpoint so strongly as Mr. Voysey endeavoured to do, because the Greeks always disguised their materials. The early English craftsman always whitewashed his church or cathedral. He thought, however, that they would all agree with the noble ideals the author had put before them.

Mr. Voysey,

in reply, said he was surprised at the courtesy he had received, seeing that he had come to throw mud at their idols. They had all shot at him, but he did not feel the least killed. The point he wanted to make was that they should get their architecture from within, and not apply it from without. It was true that there was always chance except in one thing, and that was in moral sentiments, and those were the things they had to hold on to if they wanted to help one another, and it was out of those moral sentiments that the finest architect had ever come and ever would come. The whole trend of the discussion seemed to be that they had far better go on crutches than try to walk alone; and if they had only one leg perhaps they had better.

It was announced that the next meeting would be held on April 15 when Mr. Laurence Weaver will read a paper on "Some Scottish Houses of the Renaissance," and the election of officers for the Session 1912-13 will take place.

THE CARPENTERS' HALL LECTURES:

THE CRAFT OF THE BRICK AND TILE MAKER.

THE ninth of the present series of lectures at Carpenters' Hall on the Arts Connected with Building was delivered on Wednesday last week at Carpenters' Hall, London wall, by Mr. W. R. Hoare, whose subject was "The Craft of the Brick and Tile Maker."

The lecturer, who showed a collection of bricks and tiles, said:—In considering effects of brick and tile he would presume that his hearers were only interested in what can produce a true artistic effect, and he would therefore eliminate all methods of producing bricks and tiles by machinery on the ground that, while it may be possible to produce a building or a group of buildings with machine-made bricks or tiles, which may have a not unpleasing effect at a distance in a dull light, it is only in the hand-made goods that the craftsman's art appears; he would therefore deal with the hand-made, sand-faced brick and tile as it had been made in the South of England since the days of the Romans

Materials.

To deal first with the materials, clay exists in varying quantities in big beds or in "pockets" in a great many places in the South. The best clays for the hand-maker are those on the surface, which are mined to a depth varying from 6 ft. to almost 40 ft. The clay is dug in the winter, exposed as much as possible to the disintegrating forces of the weather, must be totally free from any gravel or lime, and, when fit for use, must be tempered with water by hand or machinery to about the consistency of mortar, when it is fit for use in the mould.

The other main material is sand. This was used, in the first instance, quite dry and sharp, in order to enable the moulder to disengage the warp of the clay from the mould without damage to the sharpest arris of his brick. It plays a very important part in the subsequent colour and texture of the brick. It is perhaps necessary to point out that where the best clays are used no sand is mixed with the clay; it is only applied to the surface of the brick in the mould.

The moulds are all made of the finest beech of at least four or five years in plank, shod with hoop-iron. In the old days wood and gorse were almost exclusively used for burning, but with dearer labour and improved transport coal has become the only possible fuel.

In making, bricks can be divided into two classes—those which can be made and dried in the open air from about April 1 to October 10, and those which must be made in the sheds and dried evenly without extreme variation of temperature. The first class includes all bricks which are used in the main body of a building from 1¾in 2⅜ in. thickness.

These are made in a slip mould which no bottom or top, only a case with four s fitted on to a stop on the brickmakers' ta The "frog" is on the stop, which is sand face of the brick, the surplus clay b struck off the top of the mould with a woo strike; it follows that if bricks are requ to be laid flat showing a sand face they r be specially made in a mould with no f a fact which is not always borne in m These bricks are then put down to dry in open air on long wooden hack boards protected from the sun, wind, and rain "caps" and "lewe" boards until they dry enough to stand the weight of n tiers in the kiln; generally speaking, it quires about a month for this. Needles say, frost is the one enemy against w it is impossible to guard in the outdoor cess, as it ruins any bricks which are comparatively dry.

Any bricks or tiles thinner than this to be made in sheds, because too rapid ing, either from heat or wind, causes t to crack.

This also applies to delicate-mou bricks in which the thin edges, if allo to dry more rapidly than the body of brick, crack and spoil.

Under the stress of modern conditions effect of the brickwork in the main of the building is quite as important as finish of the detail, and in one respect moulder's work is perhaps the most portant.

Texture is produced entirely by moulder; in the first place, the way in w the warp of the clay is handled, giving big wavy lines, and secondly in the free of dry sand, which produces the mino equalities on the sand surface of the to be seen after burning when the free comes away. Apart from this, it is n sary that every brick should be the r of a uniform amount of pressure into mould, or else there will be an uneven sh age in the drying and burning.

In a stack of bricks sixteen courses it is quite easy to identify those made big, strong man using much force those made by a small man; there wi 2 in. or 3 in. difference in the height o stack. It is also essential to guard ag sand flaws; a slovenly workman in shapin warp will allow the sand face to get r into the brick, at which point the brick be unsound and part.

The other all-important feature is colour of the brick, and this lies in department of the manufacturer. C depends upon three things—judicious m materials (clay and sand), the kind of and the amount of fire given to each vidual brick in the kiln.

Colour Effect of Materials.

Roughly speaking, it is the amount of of iron present in the clay and sand w determines the colour of red bricks, an this varies with the beds of clay, the b maker has to adjust the other circumsta to suit the materials. We have been u to determine how far sand, used only ternally for moulding, can effect the c of the bricks. This much is certain, th is possible by use of a good sand to colour an appreciable distance into an ini clay; further, that, by using a great different sands for moulding, you can pr quite distinct shades of colour in the kiln, but there is no evidence to show what lapse of time this colour effect wear off the brickwork. In any case, quite clear that the prime necessity is a foundation colour in the clay itself, v will stand the test of all time and onl prove with age. Whatever sand be use body of colour in the clay will show w ever a brick is chipped, and predom eventually in a large face of the brick We look, therefore, to the inherent colo the clay for the main effect of colour can vary it to a limited extent by th of sand.

Pigments.

Perhaps this is the right place to me the use of pigments. It may be possible these to produce an effect which is fo time pleasing. There are in particular

ned tiles which seem to stand the test of e, but the whole question turns upon a 'h larger one, *i.e.*, the period at which architect wishes his building to arrive naturity. Often it may be necessary, for ance, to match old work in an addition to existing building; or the juxtaposition mellow brickwork may make it impera- to anticipate nature. At the same time, submit that fire judiciously applied can an effect which will satisfy the require- nts of the present and be infinitely more utiful to the generations to come. For reason he passed over as unworthy of highest craftsmanship the use of pigments rickmaking.

Kilns.

There were three classes of kilns which d be considered (burning bricks in clamps ht be dismissed from consideration as aining solely to the realm of cheapness hout a chance of beauty) :—The Scotch , which was a square case with fire-holes el with the ground, the fire passing up- ds through the bricks; down-draught kiln, h a domed roof, in which the fire, applied ough fire-holes as in a Scotch kiln, is ried up in chimneys inside the kiln above bricks, and descends through them to a in the centre of the kiln, thence under- und to a shaft close by; continuous kiln, which the main principle was a succession chambers, the heat from one chamber ng used to dry the bricks in the next with reat consequent economy in fuel.

There are still in existence a few old kilns which wood can be used for burning, with result that you obtain a fine glaze on brick, which is accentuated by the use furze in the final stages. But these are uneconomical that they have practically d out; one man can only burn about 000 bricks at a time, where he can burn 000 to 60,000 in a Scotch kiln, and a much ater number in a continuous kiln.

till, we must recognise the fact that the k, if not all, of the beautiful old brickwork the South of England was produced from is fired with wood at the time when the nsport of coal must have been a serious blem. Now, however, coal is the uni- sal fuel.

n dealing with this question of colour, by the best results are obtained from Scotch domed kilns, which do not suffer from deleterious effects of steam from the dry- bricks. The bricks in the kiln nearest fire will contain a large proportion of ed bricks, which can be set so as to ive the flare upon either the header or tcher side. Through the middle of the a are obtained good dark and medium- oured bricks, while there must always be ertain proportion of light bricks furthest m the fire.

t follows that when a certain range of our is required it can be obtained by ulating the place of the bricks in the n, and great variety can be obtained in the ual setting of the bricks, as, for instance, bars of flare which come when the bricks placed crosswise over the fire-holes.

f the bricks put into a kiln are reason- y dry, the first part of the burning, "the ing," should not take more than forty- nt to seventy-two hours. This is done wly with small fires until all the steam been driven out of the bricks. The burn- proper then begins and may take any- ng from fifty-six to 100 hours, till the ole kiln is one incandescent mass of light rnrose fire. At the proper moment the -holes are damped down with clay, as cold entering a hot kiln will crack everything h which it comes in contact. The kiln ains closed for about forty-eight hours, after this time is cooled quickly.

A Scotch kiln can be emptied within one k of burning, kilns with domes or mbers taking neessarily longer to cool.

rom what has been said it will be seen t the whole process, allowing for about three s to set a kiln, takes between six and en weeks. This applies to normal weather circumstances. In the winter, when all ks have to be dried artificially, or when the beginning or end of the season there ery little drying weather, longer time will required. Any order for bricks requiring cial attention should be given ten weeks dvance. This should allow time for them to be given their proper place in the right kiln.

Shrinkage.

There is another question in view in that of colour, *i.e.*, the shrinkage of the brick. Happy is the brickmaker who has to work only one class of clay with shrinkage at a constant ratio.

The bulk of the shrinkage takes place before the brick reaches the kiln. To take the case of my own bricks, these will have shrunk from 13½ in. as they leave the mould to 12½ in. when they are fit for kiln; fired to medium colour, they will emerge from the kiln at 12 in. Should it be necessary, however, to fire them harder, anything up to an extra ½ in. will be added to the shrinkage.

Many clients who desire bricks with all the various shades of blue that fire will give are apt to forget that this involves a greater contraction.

It is especially necessary to note that if perfectly true results are required in moulded bricks they must all be burned to one colour on the light side of medium.

Any attempt to impart special colour to moulded bricks burned over a series of kilns will inevitably involve some inequality in shrinkage. Uniformity is quite easily obtainable, but at the expense of appearance. He was personally of opinion that the slight play given to a medium-covered brick through the centre of the kiln rather adds to than detracts from the charm of the gauged brickwork.

Moulded Bricks.

The slip mould is a square box, costing from about 5s. to 30s. The difficulty of dealing with moulded brickwork lies in its complexity. To start with, we make bricks in varying thickness from 1 in. to 2⅝ in. In many of the ordinary patterns we have to stock these in various thicknesses with internal and external angles of different degree, of which very few will be used at a time. A moulder, however heaven-born a genius, always takes some time to adapt himself to each fresh mould.

It is very much cheaper to make each section by the 1,000 than the 100, or by the 100 than in units. The cost of moulds also becomes a much less serious consideration if 100 are made out of a mould costing 1*l.*, than if only four are, as is sometimes the case. What I am driving at brings me on to difficult ground, but the whole future of moulded brickwork seems to me to turn upon it—that is, the recognition by architects of the fact that the interests of their clients demand some alterations in the etiquette of the business. It is extremely difficult, with the best intentions, to draw the line at what is or is not the private copyright of any man ordering a design. The time will come, if brick designing is to go ahead, when each designer will feel justified in accepting designs in existence and not, as often now, go through the farce of some trifling alteration which may involve a whole set of new moulds.

Limits of Moulded Bricks.

It may be desirable at this point to mention what are the reasonable bounds of possibility in moulded bricks; whereas plain straight bricks and tiles can be made 18 in. long, and made quite true and sound, it is not desirable to make ordinary moulded bricks more than 14 in. in length. The dimensions are finally governed by the weight of clay that a man can lift to put into the mould.

It is difficult to realise how seldom the moulder has the opportunity to see his handicraft in the building when complete. In one of the first moulded houses we undertook the lady client invited all the party to tea and see the work. It was quite touching to see the pleasure given to old moulders in tracing their bricks through the building and seeing how they came in.

It is regrettable to find that the old race of hand-moulders is dying out; whereas it used to be the custom for all the boys of the family to help the fathers in the yard from very early years, it is now the rarest thing to find a boy. There will in ten years be a great scarcity of men coming on. The life is a hard one, but a good man can earn good money at it.

Some system of apprenticeship will be necessary if the trade is to survive.

Matching Old Work.

It would be impossible to pass over what is a most important feature of the craftsman's work, *i.e.*, the suiting of his material to its surroundings. It is quite a common thing nowadays to ask the brickmaker to match a building 100 to 200 years old. This is all very right and proper where an addition has to be made to an existing building, but it is open to doubt whether it is a sound art to aim at producing ready-made what is really the effect of centuries. It provides the brickmaker with much of his most interesting work, but often taxes his ingenuity and the resource of his yard and district beyond endurance.

THE INTERNATIONAL SMOKE ABATEMENT EXHIBITION.

An International Smoke Abatement Exhibition, organised under the auspices of the Coal Smoke Abatement Society, was formally opened on Saturday last week at the Royal Agricultural Hall, Islington, by the Duke of Argyll, the President of the exhibition.

At the subsequent Luncheon, at which Sir William Richmond presided,

Sir William Ramsay, K.C.B., LL.D., D.Sc., F.R.S., President of the British Association, in proposing "Success to the Exhibition," suggested that just as deposits of salt were worked, not by mining the salt, but by pumping in water which was recovered as brine, so it would be ideal, instead of mining coal to have retorts in the bowels of the earth for the production of gas. A boring might be put down to the coal strata, the coal might be lighted where it was, and air and water might be passed down so as to produce hydrogen and carbon monoxide. The resulting gases might be used in gas engines at the pit mouth for the production of electricity, which might be distributed by high-tension currents to any desired point. That would settle the strike problem, and he suggested that the miners should consider very carefully what they were doing, lest it should be found that the country could do without them. The resources of science were not exhausted, and a plan such as he had suggested might enable electricity to be used for heating, at a price of perhaps one-hundredth of a penny per unit.

Sir William Richmond, K.C.B., R.A., President of the Coal Smoke Abatement Society, in reply, said what we had to do was to enlist public opinion upon the subject—to interest it and to remove if possible a certain apathy which belonged to the strength of the English character. The Exhibition ought to enlighten the public, for the appliances shown were numerous and ingenious and not unlovely. However firmly they might be attached to science, they would admit that Beauty had, independently of other things, a great function to perform in the world—a function which was ennobling and refining. The English people once had it in a large measure, and he believed they would again possess it. Through their efforts we should have again a white city and a healthy people.

Dr. H. A. Des Voeux then proposed the toast of "The Visitors," which was responded to by Mr. Goff, L.C.C., Dr. Shaw, Director of the Royal Meteorological Council, and Dr. Bostock Hill, President of the Medical Officers of Health.

SMOKE AND BUILDINGS.

In connexion with the Exhibition during the present week a series of conferences have been held dealing with the whole subject of smoke prevention and abatement. The first sitting was held on Tuesday, under the Chairmanship of Mr. W. Whitaker.

Mr. L. W. Chubb (the Secretary of the Smoke Abatement Society) said there were seventy-one public authorities taking part in the conference, of whom twenty-one were Metropolitan Borough Councils. There were also representatives from the London County Council, from the Swedish and Dutch Governments, and from America. They had arranged visits to the Becton Works of the Gas Light and Coke Company, which was the largest gasworks in the world; to the Lots-road generating station of the Underground Railways Company; and to the Greenwich power house of the London County Council.

D

Effect of Smoke on Building Stones, etc.

Sir Wm. Church, in a paper on "The Action of Coal Smoke on Building Stones and Mural Paintings," said it might be affirmed that whatever be the injurious effects of the carbon and mineral waters in smoke upon the processes and functions of organic nature, it was not to these constituents, were they unaccompanied by other substances, that the damage done by coal smoke to building stones, to mural paintings, and to objects of metal could be attributed. They soiled and disfigured, but they did not, *per se*, corrode and disintegrate and alter. The offending constituents of soot were those which were associated with having been absorbed by the carbon which formed its basis. It had been estimated that the sulphur present in the coal annually burnt in London gave rise to an amount of oxidised sulphur compounds corresponding to half a million tons of sulphuric acid, or oil of vitriol. This compound soon oxidised with sulphuric acid, which was the chief destructive agent present in urban atmospheres. He might cite many instances of decayed stonework to prove this pointby the analysis of samples from buildings in Oxford, Canterbury, and London. For instance, the outer face of the Sheldonian Theatre at Oxford contained no less than 19 per cent. of gypsum, all save the veriest trace formed from carbonate of lime by the attack of atmospheric sulphuric acid. Magdalen College tower gave him more than 11 per cent. The interior walling of Westminster Chapter House contained just 18 per cent. of the same product, while St. Paul's Cathedral furnished a most striking instance of the destruction wrought by the suphuric acid in London air and rain. There was a blackish stalactitic incrustation hanging to the under side of the cornice above the colonnade and below the dome. This was some inches deep in places, and contained nearly 74 per cent. of gypsum or hydrous calcium sulphate. Whence did this deposit derive its sulphuric acid constituent if not from the sulphuric acid wasted out of the London air by falling rain. Soot falling upon some stones other than those which contained or consisted of calcium carbonate exerted upon them also a destructive action. If granite or other allied stone practically escaped corrosion, stones like serpentine, of which the main part was a hydrous magnesium silicate, were rapidly corroded, soluble magnesium sulphate being found to be washed away in the first shower. Sulphuric acid, again, was the chief culprit where paintings in true fresco were concerned, but there was one advantage which fresco enjoyed in comparison with the methods of oil and spirit fresco, viz., that when besmirched with tarry matter from soot and smoke this discoloration might be removed without interfering with the pigments. To show how the most solid gilding failed to preserve metal from corrosion, he might cite the gilt bronze screens at either end of the reredos at St. Paul's. These had been subjected to an atmosphere polluted with sulphurous acid escaping from stoves burning coke in the basement of the Cathedral. Modern research had shown how difficult and how well-nigh impossible it was to form an absolutely non-porous and continuous coating of one metal upon another. If cracks and other breaks in continuity were at first imperceptible, yet the unequal expansions of the two metals in consequence of temperature changes might soon develop them. In some such way one might account for the thick bluish-green crust, containing copper sulphate, which disfigured the gilt bronze grilles or gates in St. Paul's.

Mr. Noel Heaton

then dealt with the actual effect of damage from smoke on decorations which had come under his own practical knowledge. With regard to windows, stained glass should be little affected by smoke if properly executed. The gradual decay of the glass which was so noticeable in old windows was due to several causes, and although these were decidedly aggravated by contamination of the atmosphere, there was no real excuse for the premature decay one noticed in some modern windows, which was due to the use of improper materials and the improper use of materials. Both the glass and enamels used in properly executed modern windows were extremely resistant to decay, and the constant changes of temperature necessitated by modern needs in the way of warmth and light were far more potent factors in decay than smoke, the effect of which was practically limited to the dimming effect of the actual dirt. Passing to the question of the effect on the exterior painting of houses, he pointed out that the National Association of Master House Painters recently conducted a series of practical tests of paints, and whilst these tests could not be looked upon as in any way final, yet the general conclusion one arrived at was that smoke is by no means the most potent factor in the actual disintegration of the paint film which took place more rapidly in pure air and bright sunshine of the seaside than in the great cities. They must, however, remember that the surface of oil paint was by no means impervious to moisture, and smoke might under such conditions exercise a very insidious destructive action on the pigments mixed with the paint and the surface which the paint film was intended to protect, whilst leaving the paint itself undamaged. The effect of the smoke was more clearly felt in the case of works of art which form the permanent decoration of a building. In order to be seen properly in the comparatively dim light of the interior, mural paintings must be clean, and in a smoky atmosphere constantly depositing dirt this necessitated constant washing. The smooth, varnish like surface which alone would resist the adhesion of dirt and admit of being washed without mechanical injury was, however, extremely objectionable in a work of mural painting decoration; and, on the other hand, the matt absorbent surface which enabled the design to tell to the best advantage offered such a foothold for dirt of the adhesive nature derived from smoke that it was practically impossible to clean it efficiently. Decay of the pigments of a mural painting should not fairly be attributable to smoke, however, for it is quite possible to execute any internal painting or decoration with pigments that were perfectly stable and proof against attack, given sufficient technical knowledge and experience on the part of the artist. When they considered paintings executed on the plaster of the wall itself, either in oil or tempera, the effect of smoke was more disastrous, for the active agents of corrosion passed through the paint and attacked the plaster behind, with the result that one frequently saw such paintings peeling from the wall in places owing to the disintegration of the surface of the plaster. The destructive effect of smoke was, however, seen at its worst in the case of fresco paintings, for there they had of necessity a surface composed almost wholly of carbonate of lime in a porous condition, to which the dirt adhered so tenaciously as to be almost impossible to remove, and which was, moreover, attacked by the dilute acids in the same way as limestone, only more readily, because of its comparatively soft condition. Under normal conditions fresco was the most permanent, as well as the most beautiful, form of decorative painting, but under modern conditions some preservative treatment, such as impregnation with wax, which inevitably resulted in the loss of some of its charm, was absolutely necessary to protect it from rapid decay. It was scarcely too much to say, in fact, that the smoke nuisance had in towns rendered the execution of a satisfactory and permanent work of decorative painting one of the most difficult problems of applied chemistry.

Mr. H. Redfern, F.R.I.B.A.,

said the architect knew very well from experience that if he built in the country, right away from towns, his building from the time it was finished began to improve in appearance, and so long as it stood continued to improve, for Nature, if left alone, harmonised everything with herself. On the other hand nowadays he knew also that if he built in a town, his building never looked so well as when it was just finished. Legal prohibition of the use of sea coal in towns continued in force up to the middle of the XVIth century, and after the lapse of these Acts limewhite and pure colour little by little disappeared from towns, and so at length they came to take on the dingy, sooty, and dejected aspect which they now presented, for the use of either pure white or colour was impracticable in the towns of to-day. As in towns, the exercise of man's function of colour vision on natural features was im possible. He instinctively made an effort t supply the deficiency by applying to the sur faces of his buildings fresh and brigh colours, low-toned in large masses, and high toned in small, but always luminous. Fo many years now, however, the effort ha been abandoned in despair, for in towns to day no colour, however bright or highl glazed, would keep its purity for more tha a brief season. For the architect coal smok made pure colour effects impracticable, and fo the expression of his art he was confined both in mass and detail, to play of light an shade and variety of outline. But even i these means of expression he was, by th curse of coal smoke, very straightly limited In London no less than 650 tons of soot fe per annum on the square mile. To the archi tect the news came with no surprise, bu he had always been conscious that it was thing which constituted a serious facto among the many things which imposed re strictions upon his use of the means of ex pression of his art. It was evident, from th example they had had in such cases as th York Water Gate on the Victoria Embank ment Gardens, that soot deposited on archi tectural features must in time cause a con siderable alteration of their original form filling up recesses and marring the purity o the outlines. A much greater evil, however was that of erosion arising from the by products of coal combustion. From th moment the live stone was exposed to th influence of smoke-polluted atmospheres began to deteriorate. It was clear that th architect who considered the future appear ance of his stone buildings must take int consideration the two factors of soot depos and erosion, and that unless he made up h mind to forego all effects which might b attained by undercutting, delicacy of incise line, and sharpness of angular forms, hi building would very soon lose its origina force of expression, and would degenerat into a mere mass of dirty and shabb masonry. It was in stone that the trouble were chiefly in evidence, but woodwork an metalwork was affected, and in this regar the appearance of their public statues an monuments would speak for him. He sub mitted that by this curse of coal smoke th architect and the sculptor suffered the mo grievous restrictions in the exercise of h art, for not only was he subjected to th malign influence of the smoke on hi materials, but by the smoke pall he wa robbed of light of the quality required fo definition of form. Dealing with what th architect was doing to mitigate the evi which arose from coal smoke, Mr. Redfer said the method at present chiefly in u for limestones was the Baryta treatment. fir advocated by Sir Arthur Church, and it wa the method advocated by the Society fo the Protection of Ancient Buildings, an lately used by the Architect of the Londo County Council in consultation with th Chief Chemist of that body. The Societ for the Protection of Ancient Buildings al advocated the use of repeated coats of th limewash, made by slaking lias lime wit boiling water. Fourteen years ago M Thackeray Turner coated decaying stone Hatfield Church with slaked lime in a th liquid state, and so far it had shown no sig of further decay. When Baryta was use the Society strongly advocated finishing wi one or two coats of limewash, particularly i porous stones, and in cases where the u of Baryta had resulted in an unpleasa colour. The author spoke at some length o the methods adopted with regard to the Yo Water Gate, where recourse had to be ha to watering with a solution of caustic so and spraying with a jet of steam to get r of the bituminous deposits on the ston After cleansing, Baryta water was appli until the stone would take up no more; t average number of coats given was eightee About four weeks after the completion the work an analysis of the stone disclos that the Baryta had entered into combinati with the stone for a depth of at least ½ i from the surface, having the effect of co verting the decayed stone into a weathe resisting substance. Building stones oth than limestones were not so much affect chemically as mechanically by the soot, whi encouraged the absorption of rain water in the joints and held it under projecti features, with the result that frost caus

amage. To these stones the Baryta water reatment was not applicable, and water-roofing must be resorted to. Most of the ompositions on the market for this purpose ere not permanent, but the old method of coat of soft soap followed by a coat of lum dissolved in water was efficacious. nother method was a solution of ceresin ax in petroleum solvent, applied whilst ne stone was warm and dry. Statuary was idly affected by smoke, and all that could e done was to keep it clean by washing, nd protect by a thin layer of some water-roofing solution, such as the ceresin wax ith perhaps a little copal added to prevent ickiness; but in these cases surface tex-ures had to be carefully considered. In onclusion, Mr. Redfern directed attention the obstacle presented to an appearance f cleanliness by the presence of the bitumin-us deposits, and said the effect of the deposit as plainly apparent in cases where white-azed brick surfaces on painted buildings ad been washed down. Therefore, so long s coal smoke continued even building in azed brick or faïence could not, in the long m, retain it original purity of colour.

r. S. Rideal

ollowed with a paper on "The Effects of own Air on Metalwork," in which he ealt with a number of remedies for the ril adopted in this country and abroad.

Ir. Walter Reid, F.I.C.,

ought that architects were to be blamed mewhat for using the materials they did nder the existing conditions. There had een a good deal of money raised lately for onuments to King Edward, and he was rry to see that most of the designs included ich things as bronze and marble, which ere the very things which should be oided, for their climate was not fit for ch materials. He remembered when the ivoli, in the Strand, was built there were me beautiful marble columns and some onze work above, but in a year it could ot be recognised. They could also see that e limestone on which the Gladstone statue the Strand stood was turning a bright een. In Berlin they had carried out a rious movement with regard to building ones and bronzes, and had taken a leaf ut of the book of the ancient Greeks, who evoted two days in the year to rubbing eir statues with oil. As the result of the periment in Berlin they had found that imal oil was the thing which gave the best sults. Paraffin wax was very well while lasted, but it did not last long on metal. was better for stone, and he preferred it Baryta water. He understood that at anterbury Cathedral they had experimented ith arsenic acid to protect the stone with ccessful results.

r. Kinnaird,

the Battersea Borough Council, said he as a practical builder, and only the previous ay he had been called to see the side of a ouse which had been painted and which d turned black owing to the effect of the lphur in the air. There could be no doubt at the great loss of money arose from the tion of sulphuric acid on paint in London the way of changing the colour.

r. Watling (Bedford)

id that most of the public build-gs in the West Riding of Yorkshire ere of sandstone, and there had been a nsiderable amount of blackening. He ould like to know what Sir A. Church ould suggest should be done to restore them their original colour without damaging e surface of the stone.

r A. Church

id he did not know whether the process of turation would be of any use with sand-one, but with paraffin wax they could render e surface non-absorbent.

At succeeding meetings a large number of pers were read on different aspects of the estion of smoke prevention. These in-ded the following:—"Progress of the noke Abatement Movement in Germany," Herr I. Wies; "Smoke Abatement in nerica," by Mr. T. E. Donnelly; "Solid okeless Fuel," by Mr. W. D. Scott-Moncrieff; "Proposed Legislation," by Mr. J. W. Graham; and "Smoke and Fog," by the Hon. Rollo Russell.

[*** Some notes of the exhibits will be given in our next issue.—ED.]

TESTING OF MATERIALS USED IN REINFORCED CONCRETE.*

IN our last issue we gave the first part of a paper by Mr. A. Alban H. Scott on the Testing of Materials used in Reinforced Concrete, read before a meeting of the Society of Architects. We now give the remainder of the paper and some notes of the discussion which followed:—

TABLE 4.—RESULT OF GRADING OF SAND.

Sand.	Retained on 30 × 30	Passed 30 × 30, Retained on 50 × 50	Passed 50 × 50	TOTAL.
Sample 1	29·0 p.c.	15·5 p.c.	55·5 p.c.	100·0
Sample 2	48·2 p.c.	14·0 p.c.	36·8 p.c.	100·0

Effect of "Flour" in Concrete.—The question has often arisen as to the effect of very fine sand, or so-called sand, on concrete, and we have had two series of tests carried out on materials of this nature.

Table 4 shows the result of the grading of sand. Table 5 shows the test on cement used for the specimen pieces.

Table 6 shows the result of tests to ascertain the resistance of thrusting stress on standard sand and cement.

Table 7 shows the result of tests on the briquettes containing the very fine materials.

TABLE 5. TEST ON CEMENT USED FOR TENSILE TESTS.

Briquettes 1 in. by 1 in.

Neat Cement.	3 parts Standard Sand to 1 part Cement.
Lb.	Lb.
572	196
527	238
570	206
551	192
556	191
Mean of 5 tests, 555·2 lb. per square inch.	Mean, 204·6 lb.

Age 7 days

Residue upon sieve 50 by 50, 0·0; upon 76 by 76, 0·0; upon sieve 180 by 180, 10·5 per cent. Time of initial set (25 per cent. water), three hours; set hard, nine and a half hours. Pats remained sound in air and cold water, also in water kept at a temperature of 115-120 deg. Fahrenheit for forty-eight hours.

Le Chatelier Test for Soundness:—Cement ærated for twenty-four hours, expansion 3·5 mm.; after seven days' aeration, expansion 1 mm.; weight of cement per cubic foot:—

1. 89·56
2. 86·28
3. 85·11
4. 85·80
5. 94·10
6. 95·25

} Various methods of filling cubic measure.

TABLE 7.—TEST ON BRIQUETTES CEMENT AND SAND SAMPLES 1 AND 2 FOR TENSILE STRENGTHS.

Briquettes 1 in. by 1 in.

Sand Sample No. 1.

Lb. per sq. in.
112
108
102
103
110

Mean 105 lb. per square inch.

Sand Sample No. 2.

Lb. per sq. in.
178
180
170
191
164

Mean 177·4 lb. per square inch.

Proportions. 3 Sand 1 Cement.
Age. 7 Days.

It will be observed from these tests that the average strength of briquettes with standard sand and cement gave a mean of 204·6 lb. at seven days, whereas the sand (Sample No. 1) gave only 105 lb. per square inch, and sand (Sample No. 2) which contained a less amount of flour gives an average result of 177·4 lb. per square inch.

On Table 5 the extraordinary different weights per cubic foot of cement is given. The same cement was used, but different methods of filling were adopted. It certainly confirms the necessity of most carefully considering whether the cement for all work should be measured by weight and not by cubic measure.

Another test made, as shown on Table 8, shows that with standard sand we get 182·2 lb. at seven days and 234·6 lb. at twenty-eight days; whereas with the test on "flour" sand as described on the Table we only get 53·2 lb. at seven days and 104 lb. at twenty-eight days.

A word with reference to the testing of the finished structure may not be out of place.

Specifications often provide for the work to be tested with one and a half times the load for which the work has been designed to carry. A factor of safety of four is taken in the calculations to provide for inequalities of workmanship and materials, for allowance for fatigue of material under strain, and for isolated accidental excess loading; considering that with one and a half times the safe load the concrete in compression is working up to 900 lb. per square inch, adhesion 150 lb. per square inch, 120 lb. in shear, and steel varying up to 22,500 lb. per square inch in tension; that by the application of such loads the parts so tested may be permanently injuriously affected.

If the materials are tested as suggested in this paper, and professional supervision is given

* Continued from page 337.

TABLE 6.—RESULT OF EXPERIMENTS TO ASCERTAIN THE RESISTANCE TO THRUSTING STRESS OF CUBES OF STANDARD SAND AND CEMENT.

Description.	Dimensions.	Base Area.	Crushed.	
			Total.	Per sq. in.
	Inches.	Sq. in.	Lb.	Lb.
From bin No. 22.	3·00 3·00 × 3·01	9·03	41,440	4,589
	3·00 3·00 × 3·00	9·00	43,480	4,831
Neat cement.	3·00 3·00 × 3·00	9·00	42,240	4,693
Age 7 days.	3·00 3·00 × 3·01	9·03	41,320	4,576
	3·00 3·00 × 3·02	9·06	41,000	4,525
	Mean	9·02	41,896	4,643
	3·00 3·00 × 3·00	9·00	10,420	1,158
3 parts standard sand.	3·00 3·00 × 3·00	9·00	11,080	1,231
1 part cement (by weight).	3·01 3·00 × 3·01	9·03	12,080	1,338
	3·00 2·00 × 3·01	9·03	10,440	1,156
Age 7 days.	3·00 × 3·00 × 3·01	9·03	11,400	1,262
	Mean	9·02	11,084	1,229

Not sufficient quantity of material of "sample sands."
Nos. 1 and 2 to make comparative experiments to ascertain the resistance to thrusting stress.

TABLE 8. — RESULTS OF EXPERIMENTS TO ASCERTAIN THE TENSILE STRENGTH, ETC., OF CEMENT AND ROCK DUST, AND CEMENT AND SAND.

Twenty specimens moulded here, immersed in water and tested at the ages of 7 and 28 days.
Briquettes, sectional area 1 sq. in.

CEMENT AND ROCK DUST. (3 parts Rock Dust to 1 part Cement, by weight.)						CEMENT AND SAND. (3 parts Standard Sand to 1 part Cement, by weight.)					
Age 7 days.			Age 28 days.			Age 7 days.			Age 28 days.		
Test No.			Test No.			Test No.			Test No.		
QQ.		Lb.	QQ.		Lb.	QQ.		Lb.	QQ.		Lb.
4586	...	64	4591	...	135	4603	..	194	4606	...	264
4588	...	56	4590	...	100	4599	...	184	4605	...	259
4587	...	50	4593	...	100	4602	...	183	4604	..	243
4584	...	48	4589	...	97	4600	...	177	4607	...	208
4585	...	44	4592	...	88	4601	...	173	4608	...	199
Mean of 5 tests...		53·2	Mean of 5 tests ..		104·0	Mean of 5 tests		182·2	Mean of 5 tests...		234·6

Received 8th Oct.

The Rock Dust used was that which passed through the 30 × 30 sieve. The Standard Sand was passed through 20 × 20 sieve, and retained upon 30 × 30 sieve.

The tensile strength of the Cement used in making the above briquettes was 480·0 lb. per square inch at 7 days and 583·0 lb. at 28 days.

Residue upon sieve 50 × 50, 0·0; upon sieve 76 × 76, 0·9 per cent.; and upon sieve 180 × 180, 15·9 per cent.

99, Southwark-street, London, S.E.
Nov. 6th, 1908.

DAVID KIRKALDY & SON.

to the work, tests on the finished structure are not necessary; if it is desirable, then only the safe load should be applied; and if no undue deflection takes place no further loading can serve any useful purpose."

Professor Henry Adams, M.Inst.C.E.,

in proposing a vote of thanks, said when they spoke of a factor of safety of 4 to 1 there was really no such thing existing; the factor was merely to provide for things that one knew would happen but which could not be exactly measured, and he was of opinion that in at least 50 per cent. of cases a factor of safety of 4 to 1 was in reality only 2 to 1. The author was to be commended for emphasising the need for tests being made in accordance with actual practice rather than under laboratory conditions. It was for practical use that tests were wanted, and in such cases the conditions in actual practice should be taken into consideration. The testing of aggregate to ascertain its specific gravity was only required as an alternative means of estimating the amount of voids, otherwise he did not know that it was of any practical value. The testing of the water, too, he thought, was only necessary when the source of supply was doubtful or when there was some reason to suspect the impurity of the water. In paragraph 14 the author had stated that the cement for each six sets of specimens should be taken from the same consignment. He (the speaker) thought that that should read "each set of six specimens," because it was necessary in all tests to have a number in order to get a reasonable average; a single test would not do. The perfect set of tests would include such a number of specimens as would give practically a continuous curve passing through each of the groups, which was one of the values of putting tests down to curves. He supposed that the welds referred to in the paper were end welds, *i.e.*, for the purpose of lengthening a bar; but there could be no possible objection to the electric welding in the crossing of the various bars. It was where tension came in that welding was objectionable. As a rule, the strength of a weld was 80 per cent. of the original bar. The 30 per cent. referred to by the lecturer must have been an exceptional case. With regard to the consistency of concrete, the general preference among specialists was for it to be in such a state that, after being tamped, the water just floated on the surface and no more, and the concrete itself was in a quivering condition. The author apparently advocated a drier mixture, but there would then be a greater difficulty in getting it into actual contact with the rods, especially underneath them. A cubic foot of "Ferrocete" cement was said to weigh 76·2 lb., and the weight of standard cement, the author stated, was 90 lb. The specific gravity was specified to be 3·1, which meant 3·1 times the weight of an equal quantity of water; so that if a cubic foot only weighed 90 lb., 3·1 times sixty-two and a half was 180 lb., then there must be 50 per cent. of voids in "flour" cement, although it seemed to lie quite close. The mode of filling in the measure affected very considerably the weight of cement, and that was the reason why it was desirable to take it by weight rather than by measure. The figure of 76·2 would probably have been increased to ninety if the measure had been filled in the standard manner. The author had referred to the rate of testing briquettes of cement, and had stated that there was an increase in strength obtained by putting the load on suddenly. He (the speaker) thought Mr. Scott should have said "an apparent increase," as there was no more strength in the briquette than if the weight were put on slowly. The indication of greater strength by adding the load rapidly was more remarkable in the testing of steel, and he remembered that in the earlier days, with the old-fashioned testing machines of the long lever and scale-pan type, the operator was supplied with a number of weights of various sizes, and it required a great amount of dexterity on the part of the operator to change the small weights for a large one of equal value before going on again with the small ones, the object being to get on as many of the weights as possible before the metal gave way. That was at a time when there was no recognised rate of applying the load.

Mr. E. C. P. Monson (Vice-President) seconded the vote of thanks.

Mr David Kirkaldy

said he was quite in accord with Mr. Scott in his remarks about the coating of grout, and he was very glad to hear from Professor Adams that the point would be got over in the final rules.

Mr. S. Bylander

said he had personally found it a very difficult matter to submit the various materials to tests. In the construction of the Automobile Club some hundreds of tons of cement were used, and he was very anxious that it should be properly tested. He therefore arranged that the cement at the works should be placed in bins and sealed, and then samples taken and tests made, and when found satisfactory the cement was to be taken to the job. The principal difficulty in carrying out more exhaustive tests seemed to be the question of cost. With regard to the testing of finished concrete, he thought it would be an advantage to have some rule to work by, and he hoped that the Engineering Standards Committee, or some such body, would take up the matter and issue some sort of rule. With regard to the form of the test pieces, he certainly thought 4 by 4 was not satisfactory, the aggregate used being too large in size to be properly placed; a 6 by 6 would be much better. The strength of steel being 62·272 lb. per square inch, he would like to know why Mr. Scott limited the tensile strength to 72,000 lb. He did not understand the author's reference to the elastic limit of steel. His (the speaker's) idea was that it was necessary to have a high elastic limit, because it was really that which determined the safety of the structure, and not so much the ultimate strength of the material. They did not wish to have a very hard steel, because it was brittle.

Mr. G. A. T. Middleton

said it had rather surprised him that both Mr. Scott and Professor Adams had remarked upon the fact that cement was now tested by weight per cubic foot, and he thought it would be very much better to test by specific gravity.

Mr. P. M. Frazer

said he thought that they did not quite realise that cement and steel could only be tested under laboratory conditions, which argued that the testing of made concrete was mor valuable than the testing of cement an steel. No means had been devised, so fa as he was aware, for testing reinforced con crete blocks, and it had often occurred t him that there should not be much difficult in testing a 12-in. cube of concrete slightl reinforced. As to the speed of testing an the running up of the apparent strength a few weeks ago he had been present at som testing operations at the makers'; he ha asked permission to use one of the machines as it was obvious that the men were testin too quickly. Upon easing the rate of load ing he obtained much lower results, wit the obvious retort that he knew nothin about testing. With regard to the weigh of cement and concrete, some added b weight and some by volume, but he, in h specifications, got over the difficulty b weighing the cement on the job and alterin the size of the gauge-box to accommodat 90 lb.

Mr. J. Herbert Pearson and Mr. H. T Cover having spoken,

The Chairman

said he had had very little experience in th use of reinforced concrete, but what he ha done had not turned out very satisfactory, no had he found it cheap. He had recentl had occasion to use it to carry a surfac drain where the foundations were too bad t support it in the ordinary way, and the loca authority had required him, on a 14-ft. spa with a beam 18 in. square, to use 2 in of steel. He might just as well have use steel joists. The supervision of reinforce concrete work put additional responsibilit on the architect, who, if he undertook suc work, should be paid not only for his pro fessional services, but for acting as clerk o works also.

The vote of thanks having been heartil agreed to,

Mr. Scott,

in reply, said with regard to the question o the weight of cement he believed that i the original Report of the R.I.B.A. Sub Committee on Reinforced Concrete the weigh was specified 76 lb. per cubic foot, and th tests in the tables referred to were mad under the same conditions, and since ther the 90 lb. had been adopted. The questio of the weight or measure of cement was fa from satisfactory, however, and, as Mr. Frase had said, they always adopted a method o testing the weight of cement per cubic foot and they would see at the bottom of one o the tables the extraordinary results they obtained. They so increased their cubi measure as to accommodate not less than 90 lb It was a fairer way both to the contractor an to the client, and it certainly got rid o carelessness on the part of workmen i throwing aggregate into the scales. There was enormously hard wear on any form o weighing machine; the scales must be out o truth within two or three days of their use The only real test on the job was a test o the structure, and that he was dead against unless they could load to the superimposed load for which the structure was designed and he hoped that when the L.C.C. regula tions came into force that some of the work which would be subjected to a test of 1 would collapse (without loss of life), because in his opinion it was asking for trouble, an weakened the structure. He was glad t hear that Mr. Bylander did not agree wit the 4 by 4 cube for testing. It was no sufficiently large for testing with th aggregate they were using, namely, ¾ in The reason he advocated a 6 cube was tha it was not better made and was more of a shape which was adopted in work generally and with a circular column they were all th time tending to get a very much better an consolidated mixture than they did with th square one, because in the former they coul ram so much better than with the latter, an with the square one they could not get art ficial results. With a 6 by 6 by 12 a double quantity of material would be required, an on a big job the cost of material submitte for testing was quite considerable. He di not think a 6 by 6 by 12 would serv any further purpose than a 6 cube. Th former was apt to bind the material fo perhaps one hundredth part of a second longe than the latter, which was quite large enough to give them results which they coul

reasonably expect to get in a job. Mr. lander had asked why he limited the ngth of steel to 72,000 lb. His answer s that if they got it above that there uld be a tendency to increase the carbon. hey increased the strength of steel beyond 000 lb. there was a tendency eventually increase the safe load. It was impossible, thought, to increase the basis of 60,000, and gave the rolling mills a range of 12,000 lb., ich was ample. If they allowed them a nter range than that it opened up the ssibility of makers using a foreign loom, ereas with British steel they had a better ance of getting evenness of the metal. ir Chairman had spoken of the financial nt of view, and he, the speaker, could ure them that reinforced concrete would er have been used in England by industrial is if the financial question had not entered it to a very large extent. Flat roofs e infinitely cheaper and floors of reasonable n could always be done cheaper in re-rced concrete than in steel or wood. linary ship sheds were cheaper, and the ole matter was a question of proper ign. A beam 18 in. by 18 in. was probably most uneconomical section one could have reinforced concrete. A 9 by 20 or 9 by would probably give the same strength h much less material, and the 2 in. metal mentioned did not seem very essive. Architects' supervision was a very point. Reinforced concrete was work ich should be done properly or not at all. personally never employed a clerk of rks, but sent out trained assistants who erintended the work with the help of an pector. By such means they got infinitely ter results; their clients paid their assistants inspectors while on the job, and it got over the difficulties of supervision. After all, architect was only responsible for reason-e care and attention, and he had never n a job where the architect had given sonable care and attention come to any m.

RCHITECTURAL SOCIETIES.

Nottingham Architectural Society.

hrough the kind invitation of Mr. Arthur rshall, A.R.I.B.A., the members of the hitectural Society had the opportunity on rch 14 of inspecting the New Eye irmary on the Ropewalk, Nottingham. he premises have cost nearly 10,000*l.* e irregular site upon which the Infirmary nds, with a fall of 18 ft., presented con-erable difficulties in planning, but these e been most satisfactorily overcome. The ge out-patient department is entered on lower level from Oxford-street. A step-entrance leads into the waiting-hall, ich is capable of accommodating about , and is fitted with specially-designed seats. A little marble fountain is built the wall at one end. Two doors lead ectly from this hall into the large con-ing-room, an apartment equipped with k-rooms, microscopic-room, and a dis-sary, by which the patients pass out after mination or treatment. he service entrance is also approached m Oxford-street, where a special yard is vided for the delivery of coals, food supply, ndry, etc., and where the general business uirements of the Institution are attended The kitchen, scullery, larders, meat-e, etc., are adjacent to the service en-nce. The former is a model of equipment cooking for a considerable number, gas ng used. A food lift commences in the very, and communicates with each floor. e committee-room is on this floor also. he whole of the Ropewalk level is taken by in-patients and casualty departments. s divided into male and female sections, h having two wards for eight and six beds pectively. The main entrance opens into ainscoted hall, which is fitted with seats the requirements of a small casualty-n, for here minor accidents to the eye attended to. The two female wards ch open out of this are capable of being tionally darkened by a system of blinds shutters, features to which very careful sideration has been given. The colouring he wards, and the glass, which is green, such as will prove most restful and quiet he eyes.

A central corridor leads direct to the male wards, and midway between, on the north side, are the operating, sterilising, and clinical rooms. The walls of the former are black.

The dayrooms are designed to be utilised as open-air balconies; by a system of patent sliding windows the whole room can in a few seconds be converted into a sun balcony. Each ward is fitted with a glow-light for night use on a new system, by means of which one switch only is used for giving a light of varying degrees of strength from the faintest glow to the full strength. The roofs, which are flat and covered with Val de Travers asphalt, are utilised as airing-courts for males and females, and shelters are provided for each.

The whole of the staff is accommodated on the floor above the wards. There are a servery or kitchen, nurses' dining and sitting room, matron's sitting-room, and nurses' and servants' bedrooms, each with their separate bathrooms, lavatories, and conveniences. This floor is so constructed that, in the event of an extension of accommodation being required, an additional story may be built without interfering with the working of the Institution.

The entire structure is fireproof, the floors and roofs all being of reinforced concrete. Each ward has its own sanitary annexe and fire-escape staircase. All soil pipes are lined with glass, and all drains are in cast-iron with porcelain lining. No earthenware pipes are used. A boiler in the basement supplies 176 gallons of water per hour at 160° Fahr. The building is heated with low-pressure hot water by radiators of a special hospital pattern devised by the architect.

The entire work has been carried out under the personal supervision of the architect, Mr. Arthur Marshall, A.R.I.B.A.

At the conclusion of the visit Mr. Sutton, Vice-President, conveyed the thanks of those present to Mr. Marshall for so kindly taking them round.

Northern Architectural Association.

The annual general meeting of the Northern Architectural Association was held at the offices in Higham-place, Newcastle, recently, Mr. H. C. Charlewood, F.R.I.B.A., President, occupying the chair.

In their report the Council expressed regret that the depression in the building and allied trades continues. The membership was 224 as compared with 233 last year, the decrease being chiefly in the class of Associates. Mr. F. W. Rich and Mr. J. Oswald had been appointed to attend meetings of the Sub-Committees of the Corporation formed for the purposes of Part II. of the House and Town Planning Act. The Council recorded with regret that it had not been possible to arrange for the exhibition of the designs and drawings in connexion with the Royal Institute competitions in March, as usual. Arrangements had, however, been made to hold the exhibition during the week commencing June 10. The Council had made representations to the Royal Institute suggesting that the appointments of clerks of works should in future be made by the architects.

Prizes had been awarded as follows:—Measured drawings (age limit, twenty-five), Mr. W. Holden; (age limit, twenty-one), Mr. H. St. J. Harrison; architectural sketches (age limit, twenty-five), Mr. S. W. Milburn; (age limit, twenty-one), Mr. H. St. J. Harrison; Glover studentship, Mr. A. E. Lowes; design for a pavilion to be erected in an Italian garden in England, Mr. M. K. Glass and Mr. K. Glover. Some of the drawings submitted were well worthy of reproduction.

The General Fund opened with a balance of 29*l.* 7*s.* 9*d.* and closed with a balance in hand of 53*l.* 1*s.* 9*d.*

On the motion of Mr. G. T. Brown, F.R.I.B.A., the report and accounts were adopted as eminently satisfactory.

Prizes were presented to successful students by the President.

The following nominations for officers and Council have been received for the ensuing session, and the gentlemen named will be declared duly elected to the respective offices for which they have been nominated:—President, Mr. Wm. Milburn; Vice-President, Mr. R. Burns Dick; Hon. Treasurer, Mr. J. T. Cackett; Hon. Secretary, Mr. C. S. Errington; Hon. Librarian, Mr. J. Bruce, Assistant Hon. Secretary, Mr. C. I. Greenhow; Council: Mr. G. T. Brown, Mr. H. C. Charlewood, Mr. F. E. Dotchin, Mr. W. T. Jones, Mr. J. Oswald, Mr. A. B. Plummer, Mr. F. W. Rich, Mr. A. K. Tasker, Mr. J. W. Taylor, Mr. C. Walker, Mr. W. H. Wood, Mr. S. Ash, Mr. M. G. Martinson, Mr. H. A. Wilson, Mr. J. Hall, Hon. Local Secretary for Sunderland; Mr. J. H. Morton, Hon. Local Secretary for South Shields; Mr. W. J. Moscrop, Hon. Local Secretary for Darlington.

The new President (Mr. William Milburn) having been installed, spoke in acknowledgment, saying that if he handed the chair of office to his successor with the Association in the same healthy condition as it was at the close of the second term of Mr. Charlewood's service he should be delighted. He moved a vote of thanks to Mr. Charlewood for his devoted work.

Mr. R. Burns Dick (Vice-President) also spoke, and the thanks were heartily accorded to the retired President.

The Hon. Secretary (Mr. C. S. Errington) was also complimented upon his work and thanked.

Birmingham Architectural Society.

In connexion with the Birmingham Architectural Association, Mr. Lawrence Weaver lecture on the 21st inst. on "The Development of the Renaissance in Scotland." Mr. C. Bateman presided. Mr. Weaver pointed out that, although most learned works had been written on the baronial buildings of Scotland, no attention had been given to the later work that coincided in date and general treatment with that of Sir Christopher Wren and his followers in England. It was notable that the first impact of the reborn classical taste reached Scotland direct from France, whereas England owed it to an Italian first, and later to Germans and Flemings. At Falkland Palace and Stirling Castle the first evidences of the new manner were to be seen. Sir William Bruce, the architect of the additions made to Holyrood Palace in 1671, was to be regarded as the Scottish Wren, though he fell far behind Wren in personal genius. Still, he was the man who established the full Palladian manner in Scotland, and he was ably followed by William Adam, the father of the famous Brothers Adam.

Leicester Architectural Students.

On Tuesday evening, March 26, Mr. S. Perkins Pick, F.R.I.B.A., gave his ninth annual criticism of the works executed during the session by the students attending the classes in architecture and building construction.

The classes have been conducted on "the principle that construction is the basis of architecture, and its correlative principle that architecture is the interpretation of construction into forms of æsthetic value."

Mr. Pick adjudicated the drawings submitted for the David M. Nesbit prizes, value 10*l.* Mr. Nesbit, a former student, was also present, and made an encouraging speech to the students.

On the proposition of Mr. Fletcher votes of thanks were accorded to Mr. Pick and to Mr. Nesbit.

Architectural Association of Ireland.

A general meeting of this Society was held on the 19th inst., at eight o'clock, in the Lecture Hall, 15, South Frederick-lane. The President, Mr. Page L. Dickenson, M.R.I.A.I., occupied the chair.

The minutes of the last general meeting having been read and signed, Professor C. H. Reilly, M.A., of the Liverpool University, read a paper on "The Monumental Qualities in Architecture," which was illustrated by numerous lantern slides of the principal buildings of ancient Greece and Rome, and also of many modern buildings in America. Professor Reilly made a strong point of the absolute necessity of taking a broad view of all architectural problems, and attributed the success and beauty of the Dublin Custom House to the cultured and broad outlook on life which Gandon, the architect of this building, possessed. During the course of his paper Professor Reilly defined the monumental quality in architecture as composed of four constituents, viz., unity, mass, scale, and refinement; this definition was shown to be very comprehensive by illustrations of Roman and Greek buildings of monumental character which possessed

these four qualities. At the conclusion of Professor Reilly's paper a vote of thanks was proposed by Mr. Albert E. Murray, President of the Royal Institute of the Architects of Ireland, seconded by Professor W. A. Scott, M.R.I.A.I., and supported by Mr. R. M. Butler, M.R.I.A.I., Mr. R. O'Brien Smyth, M.R.I.A.I., and Mr. Connor O'Brien, M.R.I.A.I.

The Guild of Architects' Assistants: Scale of Salaries.

From the Annual Report of the Guild of Architects' Assistants, one of the objects of which is to secure a recognised scale of salaries for Architects' Assistants, we take the following, adopted by the Council on December 17, 1911 :—

"One hundred cases, gathered from London and the provinces, of conditions of the employment of Architects' Assistants have been examined by us, and from them we arrive at the following facts :—

1. The present average salary

	s. d.
At the ages of 19 to 21 is	21 0 per week.
,, ,, 21 ,, 25 ,,	31 0 ,, ,,
,, ,, 25 ,, 30 ,,	49 3 ,, ,,
,, ,, 30 ,, 40 ,,	61 8 ,, ,,
,, ,, 40 and over	65 0 ,, ,,

2. We find no difference between assistants possessing examination qualifications and those without them. This position is corroborated by the statement of Professor Reginald Blomfield in his notes on the recent changes in the R.I.B.A. examinations :—"In the opinion of many competent authorities, the standard hitherto reached in the R.I.B.A. Examinations has been lower than it should have been."

3. Age and experience are uniformly inseparable, their averages being constant. In addition, the definition of "experience" involves the difficulty of distinguishing between the experience of a pupil and that of a scholar from a technical institution.

4. We therefore adopt age as the sole standard, other conditions as to personal character and work remaining equal.

5. Exceptional men and exceptional work will always find exceptional markets, and therefore are absolutely excluded from our consideration, dealing as we do with the normal, unexceptional assistant.

6. We desire to record our strenuous opposition to the existence of unpaid assistants, other than duly articled pupils.

7. The scale of minimum salaries for a week of thirty-nine working hours which we propose is as follows :—

	Age.	Salary.
Improvers ..	19 to 21.....	25s. per week.
Assistants .	21 ,, 25	35s. ,, ,,
,, .	25 ,, 30 ..	50s. ,, ,,
,, .	30 ,, 40	65s. ,, ,,
,,	40 and over .	70s. ,, ,,

Deduced, as these salaries are, from current rates, we regard assistants below twenty-five years of age to be excessively badly paid at present, and some of the minimum salaries throughout are remarkably low. We regard 35s. as a necessary minimum for the age of twenty-one in comparison with the wage paid in almost any trade. In conclusion, none of these proposed figures are in any way absurd or chimerical; they are paid by many principals, and we are actuated only by the desire to bring the current rates of assistants' salaries to those paid by the average conscientious practitioner."

GENERAL NEWS.

Good Friday Week.

In consequence of the Easter Holidays, we go to press a day earlier than usual next week, the *Builder* being published on Thursday. All communications must reach the Editor by first post on Wednesday morning.

Professional Announcements.

The address of Mr. Percy J. Westwood, A.R.I.B.A., is now 7, Adam-street, Adelphi, W.C. His telephone number will remain the same—1217 City.

Mr. Sydney Jeffree, F.S.I., has changed his address to 27, Chancery lane (17, Lower Ground Floor).

Mr. Alfred Cox, F.R.I.B.A., has removed his offices from 4, Adam-street, Adelphi, W.C., to 34, Henrietta-street, Covent Garden.

Messrs. Gale, Durlacher, & Emmett, architects and surveyors, have removed their offices from No. 33, New Bridge-street, Ludgate-circus, to No. 15, New Bridge-street (opposite). Their telephone number will in future be City 6888, and telegraphic address, "Galdono, London," as hitherto.

King Edward Memorials.

At a meeting of the executive committee of the King Edward Memorial Fund on March 7 at the Mansion House, under the presidency of Sir Vezey Strong, the Chairman, it was announced that the fund now amounts to about 68,000*l.*, and that, 20,000*l.* being allocated to the statue in Green Park, a sum of 48,000*l.* is available towards the cost of the proposed Shadwell riverside park, for which a further sum of 5,000*l.* is offered by the Reginald Poulter Trust: it is suggested that an acre be added to the site by taking in the foreshore to low-water mark.

The Theosophical Society's New Buildings.

For the erection of the Society's buildings, at an estimated cost of about 40,000*l.*, after designs prepared by Mr. E. L. Lutyens, on the site near the north-eastern corner of Tavistock-square, a lease for 200 years has been granted by the Duke of Bedford of the land which abutted, eastwards, upon the west side of Burton street, by Tavistock House. The St. Pancras Borough Council have resolved to support the Society's application to the magistrates for a closing of the *culs-de-sac* in both directions, which have hitherto existed by reason of the garden ground between Burton-street and Upper Woburn-place, Tavistock-square.

New Government Buildings.

The offices of the Crown Agent for the Colonies, at present situated in Whitehall-gardens, will be removed eventually to a new building. The site virtually decided upon, subject to the approval of the Secretary of State for the Colonies, is in Millbank, near the offices of the Ecclesiastical Commissioners. Mr. J. W. Simpson, F.R.I.B.A., is preparing plans.

Art Museums and Picture Galleries.

Mr. Edwin T. Hall will read a paper on "Art Museums and Picture Galleries" at the general meeting of the R.I.B.A. fixed for April 1. The illustrations will include a fine collection of slides specially prepared for the paper. Mr. Hall's paper is in substitution of that on "Modern Methods of Construction," which Mr. Dunn is unable to read

Charing Cross Tube Station.

The Playgoers' Club has just removed from Clement's Inn into the premises erected over the station, where they will occupy the upper three floors. The dining-room, lounge, and reading-room are on the fourth floor; on the fifth floor are the billiard-room, card-room, and Secretary's office, and above are the kitchen and Steward's quarters. A reference and lending library and theatrical museum will be shortly opened.

Jewish Memorial to King Edward VII.

The memorial to King Edward VII. in Mile End-road, opposite the London Hospital, was unveiled on March 14. The fountain, designed by Mr. W. S. Frith, embodies a stone column carrying a bronze figure of Peace, with bronze groups of Liberty and Justice, and a medallion portrait of the King. The memorial has been erected at a cost of more than 800*l.*, subscribed by all classes of the Jewish community.

New Telephone Exchanges, London.

Three new telephone exchanges will shortly be provided in London. They will be opened in Clerkenwell, to relieve the London-wall and Central exchanges; in Tottenham Court-road, to be known as the Museum Exchange, in relief of the Gerrard, Central, and Mayfair exchanges; and at Notting Hill-gate, to be known as the Park Exchange, in relief of the Mayfair and Western exchanges.

International Gas Exhibition, Amsterdam.

An exhibition of applications, instruments, and appliances using gas for lighting, heating, industrial, and scientifical purposes will be held on September 14 to October 6 in the Paleis voor Volksvlijt, Amsterdam. The manager of the municipal gasworks will organise the Exhibition; the address of the Committee of Management is 29A, Amstel, Amsterdam.

Statue of Bacon for Gray's Inn.

Mr. F. W. Pomeroy, A.R.A., is the sculpt of the bronze statue of Sir Francis Bac that will be set up in June in South-squar Gray's Inn. The design embodies a Renai sance pedestal, 6 ft. high, supporting figure of the Chancellor in his robes and hol ing the Great Seal, in its case, the costum being in accordance with that of the seate effigy in St. Michael's at St. Albans an portraits preserved in the Inn.

French School of Archæology in Athens.

M. Homolle, member of the Institute France, has been appointed a Director the French School of Archæology, at Athen for a term of six years, *vice* M. Hoklea resigned. M. Homolle thus resumes a pos tion he formerly occupied until he wa appointed Director of the Louvre.

The Church Building Society.

The Incorporated Church Building Societ held its usual monthly meeting on the 21s inst. at the Society's House, 7, Dean's yar Westminster Abbey, S.W., the Rev. Cano C. F. Norman in the chair. Grants of mone were made in aid of the following objects, viz building new churches at South Norton, St Michael and All Angels, Co. Durham, 100*l.* Dawdon, St. Hilda and St. Helen, Co Durham, 185*l.*; Goodmayes, St. Paul, Essex 120*l.*; and Goole, St. Paul, Yorks, 125*l.* rebuilding the Church of St. George, Leicester 150*l.*; and towards enlarging or otherwis improving the accommodation in the churche at Charlestown, St. Thomas, near Halifax 20*l.*; Norbury, St. Stephen, Surrey, 50*l.*; Ry Harbour, The Holy Spirit, Sussex, 50*l.*; an Walton-on-the-Hill, St. Mary, Lancs, 120 Grants were also made from the Specia Mission Buildings Fund towards buildin mission churches at Manningham, St. Luke near Bradford, 50*l.*; and Ynismeudw, St Mary, Glam, 50*l.* The following grant were also paid for works completed :—West cliff on-Sea, St. Saviour, Essex, 100*l.*; Soutl Wimbledon, St. Peter, Surrey, 150*l.*; Grange town, St. Aidan, near Sunderland, 100*l.* Pembrey, St. Illtyd, Carmarthenshire, 80*l.* Holmer, St. Mary, near Hereford, 25*l.*; an Caergeiliog, St. David, near Holyhead, 40 In addition to this the sum of 320*l.* was paid towards the repairs of thirty-one churche from Trust Funds held by the Society.

Civil Service Estimates: Public Works and Buildings.

Class I. of the Estimates, for public works and buildings, shows that for the current year 3,638,080*l.* will be required, being a ne increase of 171,384*l.*, as compared with the amount, 3,466,696*l.*, for 1911-2. There ar items of 71,300*l.* (a decrease of 4,400*l.*) fo the Royal Palaces; 50,800*l.* (a decrease o 3,370*l.*) for the Parliament Buildings; 125,700*l.* (a decrease of 7,833*l.*) for Royal parks and pleasure gardens; and 215,300*l.* (an increase of 75,300*l.*) for Labour Exchange and Insurance buildings. Up to the end of last year 41,649*l.* was expended upon the hire of Labour Exchange buildings, and 9,537*l.* was spent upon purchase of premises.

The Old Chapter Library, St. George's Chapel, Windsor.

In the course of some alterations of the interior of the office of the Chapter Clerk, which was originally part of the library of the Dean and Canons in the Dean's Cloisters, have just been discovered the panel-work of the ceiling, which at one time formed the canopy of the entire library. The panels, of oak, have bosses delicately carved. The central boss, in form of a chalice upon an altar, bears the letters "T. B.," which, it is supposed, are the initials of Thomas Brode, who was Canon and Treasurer of St. George's Chapel in 1490 3. The Chapter records evince that the building was begun in 1483. Other bosses present cognisances of the Royal House of York, one consisting of the sun shining in glory at the back of a shield charged with a pierced heart and surrounded with a crown of thorns. Embedded in the wall, to the north-east, has been found a window with oaken framework of ten lights.

Duke of York's School Buildings, Chelsea.

At an outlay of nearly 30,000*l.*, the buildings vacated by the Duke of York's School have been adapted for the Headquarters of the County of London Territorial Association, and will so provide for a force of 5,000 men. The top floor

f the main building is reconstructed to fford eighteen complete and self-contained uarters for the permanent staff; on the econd floor are the offices of the Associa- on; the London Irish are quartered on the rst floor, and the Army Service Corps are n the ground floor. There are two riding chools, stabling for thirty horses, six rifle anges, a large restaurant, recreation-rooms, wimming-bath, etc. Each regiment has its wn messing quarters and canteen. The nedical units will be housed in the left wing, hich is now being remodelled for their use.

Street Improvements, Hendon, N.W.

Major J. Stewart, R.E., one of the In- pectors of the Local Government Board, eld an inquiry on the 26th inst. at the rban District Council offices into the ouncil's application to construct kerbing, hannelling, and paving works in Golder's reen-road, etc., from the London County ouncil boundary at Hampstead to Hendon. Ir. S. Slater Grimley, M.Inst.C.E., the ouncil's Engineer, gave evidence in upport, and stated that the distance overed by the proposed improvement as about two miles, his estimate being 0,835*l*. The proposed expenditure was rimarily due to the large building develop- ents which have taken place in the district, articularly since the opening of the Golder's reen Station of the Hampstead Tube Rail- ay. The latter railway is about to be xtended to old Hendon, and then, no doubt, is picturesque suburb of London will grow ven more rapidly, the want of railway cilities with London being greatly felt in ie past.

The Late Mr. G. E. Pritchett, F.S.A.

In the course of next June will be sold by uction the collection formed by the late Ir. G. E. Pritchett, of Oak Hall, Bishop's tortford, architect. The collection includes ak panelling, old Spanish leatherwork, rints, engravings, etc., and examples of acobean, William and Mary, Queen Anne, nd Chippendale furniture. An obituary otice of Mr. Pritchett appeared in our sue of March 8.

Bombay and the Durbar.

The Government of India have agreed to ontribute one-fourth, and the Bombay overnment will subscribe 20,000*l*., towards he estimated cost, 800,000 rupees (53,333*l*.), f carrying out in white marble the designs, fter the Saracenic manner, of the temporary avilion which was erected on the Apollo Bunder, Bombay, for the landing of King eorge V. upon the occasion of his recent isit to India. The King, it is stated, has xpressed a wish that his entry into India, nd the previous Royal associations of the Apollo Bunder, should be commemorated ith a building worthy to symbolise the Gate f India.

CORRESPONDENCE.

Practical Patriotism.

SIR,—The unparalleled confusion in in- ustry brought about by the coal strike leads s to point out two pieces of practical atriotism which, if generally followed at nce and for the immediate future, would o much to mitigate the after effects of this isaster. As a firm employing thousands of en, we view with anxiety the inability o railway companies to transport our stone and ranite products from the quarries—many f them inland to their destinations. All ailway companies have issued notices in- olving the total cessation of such traffic till he conclusion of the strike. This places us t a disadvantage with foreign competitors, who, in foreign vessels with foreign coal, an ship to a British port giving the shortest ossible land journey to site, and can supply aterials for the completion of contracts for hich, through no fault of our own, our aterials are not at present available.

As this difficulty is shared, we believe, by large number of British firms supplying ll sorts of building and engineering aterials, we venture to urge on all archi- ects, surveyors, engineers, and builders that, s far as possible, except in the case of bsolutely necessarily urgent work, an agree- ent be made to waive the time clauses of ontracts, as far as is reasonably possible, in rder to preserve as much work as possible or British firms and British workmen when he crisis is over.

The abnormal conditions also warrant us in urging that, during the period of depression which must follow the present crisis, the Government departments, also public bodies, such as municipal corporations, as well as architects, surveyors, and engineers, stipulate that, so far as possible, British materials only be used in work under their control until normal trade is again obtained. A system of voluntary patriotic action of this nature is sure to find favour at the present time among responsible persons of every shade of political thought, and we therefore venture to make these two suggestions.

UNITED STONE FIRMS, LTD.
(WALTER BRYANT, General Manager).

The East Sussex Hospital Competition.

The following letter has been addressed to the Chairman and members of the East Sussex Hospital Committee, Hastings, by Mr. William Henman, from whom we have received a copy:—

GENTLEMEN,—Trusting that past experience with the existing hospital would compel every precaution being taken to secure a design which would meet modern hospital requirements in a practical and sanitary manner, I ventured to apply experience, gained during the last thirty years, in the design and construction of a number of provincial hospitals, to solving the somewhat intricate problem of planning a hospital to detailed requirements on a difficult site.

Realising that others capable as myself would be competing, I was prepared to accept the decision which presumably was acquiesced in by your assessor, until I had the opportunity to-day of examining the selected plans published in the *Builder*. So faulty are they in so many and important particulars that, in the interests of the undertaking, I respectfully submit it would be advisable, before instructions are given for carrying them into execution, that the following questions should receive most careful consideration:—

1. Did not the conditions properly limit the height of pavilions to two stories?

2. Are the gradients of roadway to the casualty and in-patients' entrance and to the main entrance to administration building practicable?

3. Is it a satisfactory arrangement to have the casualty department and in-patients' receiving-room so far from the out-patients' department? In provincial hospitals new patients frequently mistake one for the other, and it is not an unusual occurrence for some to wait for hours in the wrong place without receiving attention, when one department is away from the other.

4. Are the casualty and in-patients' receiving-rooms arranged so that patients on ambulance waggons or stretchers can conveniently be received or transferred to the wards?

5. How could a patient be conveniently conveyed on ambulance, trolley, or stretcher from the out-patients' department to the wards? Such occasionally becomes necessary.

6. Where are baths, lavatories, and water-closets, sinks, etc., for the two eye wards, and for the four and two bed, surgical and medical, male and female wards?

7. Where is bath accommodation for gynæcological ward?

8. Where is bath accommodation for two isolation wards?

9. How can patients on ambulance trolleys or stretchers be conveyed into the two and four bed wards?

10. Is it advisable that staircases should give air communication between the two and three stories of main pavilions?

11. Where are the cleaners' and trolley rooms to any of the five floors of wards?

12. What is the practical utility in providing external stairways for escape in case of emergency if it is impossible to convey patients in beds or on stretchers to and down same?

13. How is the out-patients' department to be economically supplied with hot water and heating with the boilers at a considerably higher level?

14. How can foul linen from the wards, etc., be conveniently conveyed to the disinfector and thence to the laundry? Or even to the laundry direct from the wards, except past kitchen and store-rooms?

15. Is it convenient when medicines are required for the wards from the dispensary that they should have to be conveyed up a stairway and a considerable distance along a corridor to the lift, and then, for most of the wards, again along a corridor?

16. Is it a sanitary arrangement that foul water from the operating department should have to be discharged into the small areas, three stories deep, near the kitchen department, and thence to be conveyed under the buildings?

17. How can foul water and rain water, as well as snow occasionally, otherwise be removed from these small areas, the depth of three stories?

18. Is it desirable that house coal should be shot down in a narrow passage close to kitchen entrance off an enclosed yard, too small in which to turn a cart round?

19. Is the provision for getting in coal for boilers practicable?

20. Is it good to shut out sunlight by wide balconies at ends of wards and to have the sides of wards overshadowed by projecting sanitary turrets?

21. Is it advisable that tradesmen and stores should enter close to the mortuary and out-patients' department?

22. Is the isolation block conveniently placed for supplying meals? How would patients be conveyed there? And how would they be visited by medical men, particularly in the event of the additional pavilion being erected?

23. Will the ophthalmic surgeon consider it a convenient arrangement that he will have to traverse 250 ft. of corridor to get from three male to three female patients?

24. How is a corpse to be conveniently transferred from a ward to the mortuary?

25. Is the requirement reasonably fulfilled that the hospital should be designed so that portions can be erected as funds permit?

The foregoing questions imply serious faults in planning which appear in the selected design, not one of which, I can confidently state, is to be found in the design I had the honour of submitting, and I doubt if many other designs so flagrantly disregard undoubted essentials in hospital planning.

Whatever may be the result of investigation on the above points, I trust it may, at least, prevent heavy expenditure on faulty lines.

WILLIAM HENMAN, F.R.I.B.A.

Stafford and Portland Competitions.

SIR,—We learn that the competition now advertised at Portland is for Council offices, to cost 4,000*l*. This is the same figure for which the Stafford Library is to be erected. Are we to see again a scramble of 200 men for 200*l*.? Are competitions such as these likely to enhance the dignity of the profession?

We understand the President of the Institute is to be asked to appoint an assessor, and to confer his official sanction on this exploitation of the profession.

Cannot some limitation, either by district or otherwise, be insisted on? Open competitions such as these not only result in monetary loss to the profession as a whole many times more than the fees accruing, but serve to lower the value of architects' services in the eyes of the public, and so the loss is unqualified.

D.

Combined Heating and Power Plant.

SIR,—We think your correspondent Mr. S. Whitmore Robinson must have been misled by your summary of Professor R. J. Durley's paper on the combined centralised heating and electrical installation at the McGill University, Montreal, Canada.

Had he heard the paper read he would have understood that no reflection was intended on English architects and engineers, but that it was simply a description of the system as applied to the institute in question.

An application of the system was installed by ourselves at the Camberwell Infirmary, London, under the instructions and supervision of Mr. Edwin T. Hall, F.R.I.B.A.

For DARGUE, GRIFFITHS, & CO., LTD.,
J. ALFRED DARGUE.

INTERCOMMUNICATION COLUMN.

Plaster Painted Dado.

SIR,—Could you tell me which is the correct way to lay off a plain plaster painted dado on staircase 2 ft. 4 in. high, whether up and down or long way? W. J. SHARP.

BOOKS RECEIVED.

THE WORKS OF MAN. By Lisle March Phillips. (London: Duckworth & Co. 7s. 6d. net.)

HOUSING AND TOWN PLANNING CONFERENCE, 1911. (London: E. & F. N. Spon, Ltd. 10s. 6d. net.)

EDITORIAL SUMMARY.

"A Lesson from America" is the title of the leading article, in which reference is made to the recent Architectural Association discussion on the subject.

An article on the King Edward Memorial appears on p. 350.

In "Notes" columns (p. 351) will be found comments on: "Forest Fire Prevention"; "Ancient Villages in Lake Gatun"; "The Building and Cost of Manchester Schools"; "The Newest Responsibility of Architects"; "Up-to-Date Bruges."

Some art exhibitions are noticed on p. 352.

A meeting of the Architectural Association was held on Monday, when Mr. C. A. Voysey and Mr. Arthur Keen read papers on "Patriotism in Architecture" (p. 352).

The Ninth Carpenters' Hall lecture on the "Arts Connected with Building" was delivered on Wednesday last week by Mr. W. R. Hoare, whose subject was "The Craft of the Brick and Tile Maker" (p. 356).

A report of the International Smoke Abatement Exhibition is given on p. 357.

On p. 359 we give the second part of the paper by Mr. Alban H. Scott, on the "Testing of Materials Used in Reinforced Concrete," read before the Society of Architects, together with some notes on the discussion which followed.

Our reports of "Architectural Societies" (p. 361) include: "Northern Architectural Association"; "Architectural Association of Ireland"; "The Guild of Architects' Assistants"; "Nottingham Architectural Society."

In Correspondence columns (p. 363) will be found letters on: "Stafford and Portland Competitions"; "Practical Patriotism"; "The East Sussex Hospital Competition."

A report of the fifth spring visit of the Architectural Association, to the new buildings of King's College Hospital, Denmark Hill, is given on this page.

An illustrated article on the work of Mr. Arnold Mitchell is given on p. 365 under the heading of "Contemporary Architects and their Work."

The Building Trade Section (p. 370) includes: "The Right to Work"; "The Institute of Builders"; "The Institute of British Decorators"; "The Builders' Clerks' Benevolent Institution"; "Projected New Buildings in the Provinces"; "Applications under the London Building Acts," etc.

A third article on the "London Opera House," with illustrations, is given on p. 374.

An illustrated article on "Reinforced Concrete in Great Britain" is given on p. 375.

MEETINGS.

FRIDAY, MARCH 29.

Glasgow Architectural Craftsmen's Society (The Technical College).—Business meeting. 7.45 p.m.

SATURDAY, MARCH 30.

The Royal Institution.—Professor Sir. J. J. Thomson, M.A., LL.D., D.Sc., F.R.S., on "Molecular Physics"—VI. 3 p.m.

MONDAY, APRIL 1.

Royal Institute of British Architects.—Mr. Edwin T. Hall on "Art Museums and Public Galleries." 8 p.m.

The Society of Engineers.—Mr. Gerald O. Case on "Liguo-Concrete." 7.30 p.m.

Royal Society of Arts.—Mr. Noel Heaton, B.Sc., F.C.S., on "Materials and Methods of Decorative Painting"—III. 8 p.m.

Liverpool Architectural Society.—Annual general meeting. 6 p.m.

TUESDAY, APRIL 2.

Institution of Civil Engineers.—Paper on "The Works for the Supply of Water to the City of Birmingham from Mid-Wales," by Messrs. L. Mansergh and W. L. Mansergh, MM.Inst.C.E. 8 p.m.

WEDNESDAY, APRIL 3.

The Institution of Municipal Engineers.—Mr. Sidney Palmer on "The Design and Planning of Working-Class Dwellings." 7 p.m.

Edinburgh Architectural Association.—Associates' meeting. 8 p.m.

THE ARCHITECTURAL ASSOCIATION:

FIFTH SPRING VISIT.

THE new buildings of King's College Hospital at Denmark-hill were visited by the Architectural Association on March 16, precisely two years after the previous visit. In the interval great progress has been made, though much yet remains to be done before the hospital can be opened. The general plan, which has been scarcely varied from the competition scheme, was fully described in the report of that visit, but may be briefly outlined as a main "backbone" corridor running east and west lengthwise of the site, with nine ward pavilions southward of this, overlooking Ruskin Park, and various administrative, educational, and special buildings northward of the same corridor next Bessemer-road; the Outpatients', Casualty, Bathing, and other departments, necessarily within easy reach from outside, occupying the angle nearest to Denmark-hill. An important influence on the formation of the scheme was exerted by the rise of about 15 ft. in the level of the site from north to south, which places the ground floor of the ward pavilions on a level with the first floor of the Administrative buildings. The visit of inspection was chiefly confined to the Administrative Block and Ward Pavilions, which two years ago had only been commenced. The former is now structurally complete. It is six stories in height, the whole of the upper portion above the first floor being devoted to the Nurses' Home and Servants' Department, each self-contained. The building consists of a front block parallel with Bessemer-road, with three wings running southward at right angles, the outer wings accommodating nurses' bedrooms, and the central one servants'; nurses' sitting-rooms are arranged facing the road. Each bedroom is generally similar and contains a built-up wardrobe of the same material as the partitions. All angles are rounded, and a hollow skirting of granolithic is formed at the floor level, slightly raised to finish flush with the floor, which will be of linoleum laid direct on cement. No heating is provided in the rooms, all the necessary radiation being in the corridors, whence it is admitted by opening fanlights, but each room is provided with an extract flue carried up to the top of the building. The present accommodation is for 200 nurses, but the west wing (as yet unbuilt) will extend this to a total of 300. The Nurses' Dining Hall, seating 150, is a fine room on the ground floor, served directly from the main kitchen, which is in the basement between the east and centre wings of the Administrative Block, the various stores being also situated here, readily approached from a sloping roadway for goods delivery.

The public parts of the Administrative Block, comprising offices, boardroom, etc., are well grouped around a charmingly designed central hall, two stories in height, from which groined corridors radiate. In the rear of the Administrative Block, at the intersection of the cross axes of the whole institution, the chapel is in course of construction. This projects between the two central pavilions, approached by a low vaulted cloister, and is a lofty building with aisles separated by reinforced concrete piers or stanchions, which rather curiously change above springers into steel lattice-framed trusses for the vaulted ceiling. Beyond the chapel at a lower level is the central power-station and shaft. Three Lancashire boilers 30 ft. long will be installed, but Diesel oil engines will be used for driving the electric dynamos.

Six ward blocks of the ultimate nine are now in course of construction, with accommodation for 372 beds, the two central pavilions, three stories high, being already in carcase. The remainder will be of only two stories. All are similar in plan and comprise a day-room for patients and a sister's room next the "backbone" corridor, with an octagonal "blow-through" lobby interposed between these rooms and the rest. Next are two single-bed wards, duty-room, larder, linen, and clinic, and the main twenty-four-bed wards, with sun-balconies their south ends between sanitary towe projected at oblique angles. The wards w contain several novel features in design a construction. Midway in their length small octagonal bay projecting on each si will contain lavatories for the medic officers' use. The sashes, of a very ingenio yet simple design known as the "Austral upon the improvement of which a great de of though has been expended by the architec will be fixed almost flush with the intern wall face, avoiding window-ledges. Evei hospital architect knows the unfortuna complications of heating and other pipe which tend to disfigure his wards and gi rise to objections of a hygienic nature al Here all pipes are excluded and will r outside the building in specially-prepare conduits run in the wide window-splays a branching direct to each floor through flu provided.

In the construction ferro-concrete on t Hennebique system has been adopted f floors, stanchions, beams, staircases, a lantern-lights. The floors are filled between the beams with hollow fireclay tube and are sufficiently thick to avoid projectin beams and contain the descending flues fro central ward stoves. The building work, b Messrs. Foster & Dicksee, Ltd., appears be excellent, and the architect, Mr. W. Pite, F.R.I.B.A., who kindly arranged an conducted the visit, paid a generous tribute t them, as well as to the clerk of work (Mr. Thomas Simpson) and to his own sta for the excellent help he had received from a When completed the hospital will evidentl be a notable one; the ingenuity with whic the complex mechanism of interrelate departments has been brought in contact a various points, while yet preserving t apparent architectural directness of lay-out and the equal ingenuity with which forms e detail usually abandoned as frankly hopeles have been persuaded into shapeliness, al give cause for congratulation. If a criticism may be made, it is that the site is rather closely covered with buildings—mor space would be desirable, but it is understood that neither for this nor for the placing of th Nurses' Home in a position not now generall favoured is the architect really responsible.

COMPETITION NEWS.

Municipal Offices, Bulawayo.

The first prize in connexion with the de sign for the new municipal offices at Bula wayo, which are to cost 35,000*l.*, has been awarded to Messrs. Gibson & Robertson, o Johannesburg; the second to Messrs Hawke & McKinlay, of Cape Town; and the third to Mr. Stanley G. Hudson, of Durban.—*South Africa.*

ILLUSTRATIONS.

The Work of Mr. Arnold Mitchell.

OUR illustration plates this week are given in connexion with the article on the next page, on the work of Mr. Arnold Mitchell. The illustrations are referred to in the course of the article.

FIFTY YEARS AGO.

From the *Builder* of March 29, 1862.

The Thames Embankment Bill.

IN moving last week for leave to bring in the Thames Embankment Bill, Mr. Cowper stated that the powers contemplated by the Bill would be committed to the Metropolitan Board, without any control or interference, except that the coal dues were at present in the hands of the Treasury. The Bill would empower the Treasury to pay the money to the Board, who, however, would be left free and unfettered in executing the purposes of the Act. The Bill was described as one for embanking the north side of the River Thames from Westminster Bridge, and for making new streets in and near thereto, and from Blackfriars Bridge to the Mansion House. After some discussion, leave was granted to bring in the Bill.



Sprague & Co., Ltd., Printers, 69 & 70, Dean St., Soho, W.



Sprague & Co., Ltd., Printers, 69 & 70, Dean St., Soho, W

UNIVERSITY COLLEGE SCHOOL, HAMPSTEAD.—Mr Arnold Mitchell, F.R.I.B.A., Architect.



Sprague & Co., Ltd., Printers, 67 & 70, Dean St., Soho, W.

HOUSE IN SURREY: GARDEN FRONT.—Mr. Arnold Mitchell, F.R.I.B.A., Architect.



Sprague & Co., Ltd., Printers, 69 & 70, Dean St., Soho, W

BARNETT HILL: ENTRANCE FRONT.—Mr. Arnold Mitchell, F.R.I.B.A., Architect.



Sprague & Co., Ltd. Printers 69 & 70, Dean St. Soho, W

ASCOT PLACE FIRE-PLACE.—Mr. Arnold Mitchell, F.R.I.B.A., Architect.



HOUSE IN SURREY: ENTRANCE HALL.—Mr. Arnold Mitchell, F.R.I.B.A., Architect.



Spottiswoode & Co., Ltd., Printers, 69 & 70, New Street Square, E.C.

ASCOT PLACE: ORGAN FRONT.—Mr. Arnold Mitchell, F.R.I.B.A., Architect



Entrance Front: University College School, Hampstead.
Mr. Arnold Mitchell, F.R.I.B.A., Architect.

CONTEMPORARY ARCHITECTS AND THEIR WORK:

MR. ARNOLD MITCHELL.

MR. ARNOLD MITCHELL, F.R.I.B.A., the subject of our present notice, was born in 1863. is technical training commenced in the fice of Messrs. George & Peto, but he was t articled in the ordinary way. He also tered the Royal Academy Schools, being a ntemporary of Mr. E. Guy Dawber, and mpeted for prizes and studentships at e Royal Institute and the Architectural ssociation. Mr. Mitchell confesses that his holastic successes were not won at the st attempts or without much hard work, spite his abilities as a draughtsman; but a winner of the Institute Silver Medal, the ane Medallion, and the A.A. Medal he n claim a record of which any architect ight be proud. At a later stage he acted clerk of the works for a year, and he also rved in the Architect's office of the old ondon School Board, and acknowledges at the experience he got from these two cupations has been invaluable. At the ondon School Board he got a thorough ounding in the intricacies of school planning, d school design has formed a considerable rt of his practice. In the early years of his actice he collaborated with Mr. Alfred tler in school competitions, and several of eir designs have been illustrated in our ges.

For some years Mr. Mitchell played a conderable part in the doings of the Architecral Association. He was a member of the uncil in the year 1902-3, and again in the ar 1905-6. In 1903-4 he became one of the ce-Presidents, during Mr. Henry T. Hare's occupancy of the Presidential chair. The "sweets of office" had perhaps small attraction for him; the large amount of extra work entailed, and possibly the controversial matters inseparable from an official position, together with the insistent claims



Oak Gallery Brackets in Great Hall: University College School, Hampstead.
Mr. Arnold Mitchell, F.R.I.B.A., Architect.



[Portrait by Reginald Haines.

Mr. Arnold Mitchell, F.R.I.B.A.

of a large practice, combined to weary him of these honours, which he soon after relinquished without much regret. The country has a strong call for Mr. Mitchell; his acquisition of a fine old country house and the delight of his own fireside—an Adam fireside, with an Adam ceiling above it proved stronger than the call of late sessions and protracted Council meetings. And to the delights of his home Mr. Mitchell adds the pleasures of a beautiful garden, in the upkeep of which he finds one of his principal recreations.

Since that time the London architectural world has—to its loss—seen comparatively little of Mr. Mitchell. He has a distaste for publicity; and thus very little of his work has been published. Indeed, we can only call to mind two of his recent important buildings that have been illustrated—the University College Schools at Hampstead, won in competition, 1905, and the Agricultural Schools at Cambridge University. Mr. Mitchell is, however, the designer of a very large number of houses, many of which are at Harrow, Northwood, Rickmansworth, and the surrounding districts. Drawings of these have been hung at the Royal Academy, where Mr. Mitchell has been a regular exhibitor. One of the works which Mr. Mitchell says gave him much pleasure was the additions and alterations to Tissington Hall, Derbyshire, a fine old stone mansion. A drawing of this appeared our issue for May 18, 1901. Of the buildings illustrated in this issue—mostly domestic—we can give little information, since their author will say little, except that they speak for themselves and are typical examples of his present work. Mr. Mitchell has been accorded Royal patronage, and his design for a Royal Villa and Golf Pavilion at Le Coq-sur-Mer, near Ostend, for the late King of the Belgians, was exhibited in 1903.

Mr. Mitchell is a great believer in the value of sketching to the student. Himself a distinguished draughtsman, he thinks it unequalled as a training for the hand and eye, and for tuition in composition. But the kind of sketching he advocates would probably be found a severe test of skill by any draughtsman. No rough notes or memory aids to be worked up in the studio afterwards; but straightforward freehand work on the spot. Of his own prowess in this field there are many pages of the *Builder* to testify. Some of Mr. Mitchell's drawings were included in "The Cathedrals of England and Wales" series, among them being Lichfield, west front (January 5, 1889); Peterborough (April 4, 1891); and Durham (June 3, 1893). Among other drawings of Mr. Mitchell's that we have published are the following:—1887: Chalons Cathedral (December 3, 17). 1888: Layer Marney Church, Essex; a corner of Peterborough Cathedral; and Feering Parish Church, Essex (July 21). 1889: The Triangular Bridge, Croyland (January 26); some Marshland Churches of Norfolk (August 10); and Senlis Cathedral—south-west Tower (December 21). 1890: Wrexham Church Tower (February 22). 1891: Choir Stalls, Amiens (January 10); XIIth-century Chapel, Houghton-le-Dale, Norfolk (May 3); Sketches at Peterborough (April 11). 1892: More Sketches at Peterborough (April 2). 1893: A.A. Excursion Sketches, Diss, Ipswich, and Bury St. Edmunds (August 19). 1894: A.A. Excursion Sketches, Wells and Glastonbury (August 18). 1895: Sketches in Normandy (January 5). 1901: Examples of Brickwork, Feering Parish Church, Essex (September 21). An examination of these drawings will show not only Mr. Mitchell's catholicity in choice of subject, but his great abilities in draughtsmanship. As a student he was accustomed to go out sketching for hours—sometimes twelve hours at a time in the long summer days—and confesses to often returning home thoroughly fagged-out. A cartridge block and a small T-square he considers essentials for good solid work, and drawing the subject out completely on the spot is not only fine training, but is a great aid to the study of perspective. Working on such lines means, in Mr. Mitchell's own words, "downright art."



Oak Carving in Great Hall: University College School, Hampstead.
Mr. Arnold Mitchell, F.R.I.B.A., Architect.

A fine set of drawings of Laver Marney vers secured for Mr. Mitchell the R.I.B.A. old Silver Medal in 1886, and these were blished in our issues for April 3 and 10 in that year. Mr. Mitchell's design for a Bank in a Country Town won him the A.A. Medal in 1885. The front is somewhat unusual, and both this and his Soane Medallion drawings are in a modern Renaissance style, showing some of the influence of his Principals, and of the terra-cotta period then flourishing. The Soane



West Front of Rheims Cathedral.

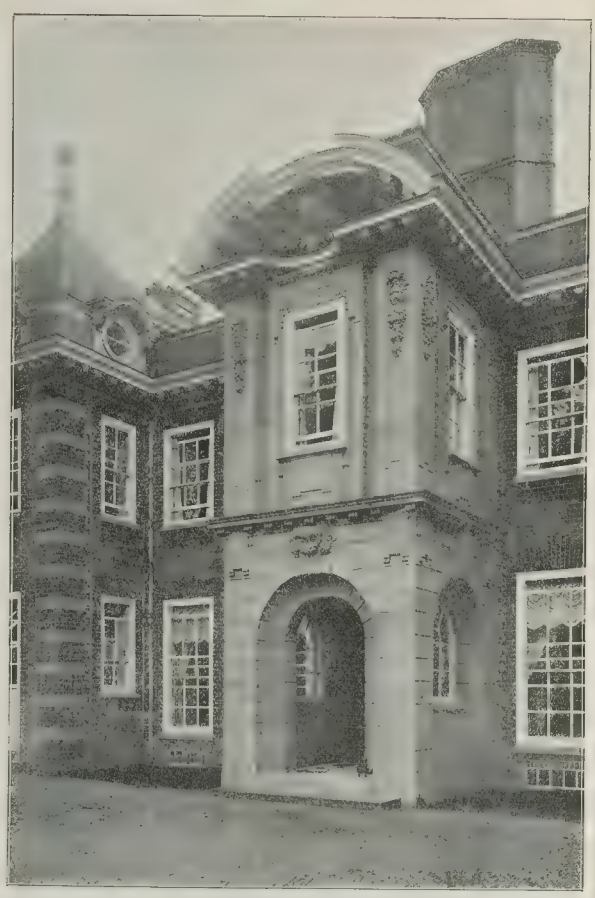
From a drawing by Mr. Arnold Mitchell, F.R.I.B.A.

subject for the year 1885, when Mr. Mitchell won it, was a design for a Municipal Mansion, a building designed for civic entertainments and hospitality, and presumably as an official residence for a mayor. Mr. Mitchell says frankly he would recast these designs if he had to do them at the present day.

Mr. Mitchell spoke of his practice as one on pleasant lines, and referred to friendly relations with clients. This provoked a discussion on that well-worn topic of the average client and his irritability over extras. We put it to Mr. Mitchell that the architect, above and beyond technical qualifications, required unerring tact and a certain amount of magnetic influence to steer safely through the shoals of practice. We cited the case of the client with a definite sum to spend who, with the common failing of clients, wants a great deal too much for his money. This is not the kind of client that Mr. Mitchell is often troubled with; but he agreed that much unpleasantness generally ensues if the architect appears to be in the wrong. The first thing to do is to get the client's wishes and desires and show him the house he wants, deferring any question of cost or responsibility for cost until afterwards. It is extremely difficult for any architect to give an off-hand price. When the client has seen and approved the plans, tenders may be invited, and the lowest one may be tens or hundreds of pounds above the price the client is prepared to spend. It is then explained to the client that the plans show him the house he really wants, and the tender the amount it will cost. Is he prepared to pay for what he really wants? Mr. Mitchell's experience is that the great majority of men are prepared to enlarge their ideas of cost if they get what they really want. But if the client labours under the idea that the architect is designing a building to cost a certain sum, and the lowest estimate is far above it—moreover, if the architect looks aghast at the amount of the tender, murmurs the figure apologetically, and talks vaguely about "cutting down"—it is hardly surprising that the client takes his cue from the architect and attributes the whole difficulty to the latter's shortcomings. In Mr. Mitchell's opinion, the onus of cost must always rest with the client. The architect's function is to obtain for the client what he wants and see that he gets it.

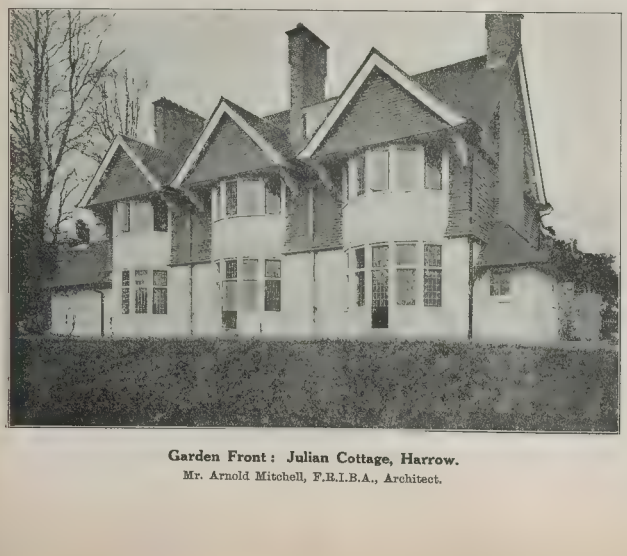
We obtained some views of Mr. Mitchell on matters of practice. He believes in doing your job yourself, and then you know all about it. He advocates roughing out on cartridge paper, and in starting on the ½-in. details before commencing on the ⅛th-scale drawings. There are innumerable little points in the details which may affect dimensions in the smaller-scale plans; but with the procedure suggested the ⅛th-scale sheets work out smoothly straight away and require no alteration. Mr. Mitchell will not have "extras." It requires some organisation to avoid them, but by the thorough working out of a job before it is commenced he thinks they can be avoided. With his smaller houses he contrives generally to have only one contract drawing on which all the plans, sections, and details are given; and this makes for simplicity in working. If details are only supplied as the job proceeds, openings for "extras" to come in are multiplied. Builders much prefer this complete working out of the job beforehand; and thus Mr. Mitchell finds his business relations with builders work very smoothly. In fact, he states he has designed eleven houses for builders for their own occupation.

Another maxim Mr. Mitchell enjoins is that you should not worry your brains with two things at once. Work one thing out and finish it, and then start on the other. He has done a good deal of competition work and believes in getting well ahead with this branch of practice. He showed us a set o



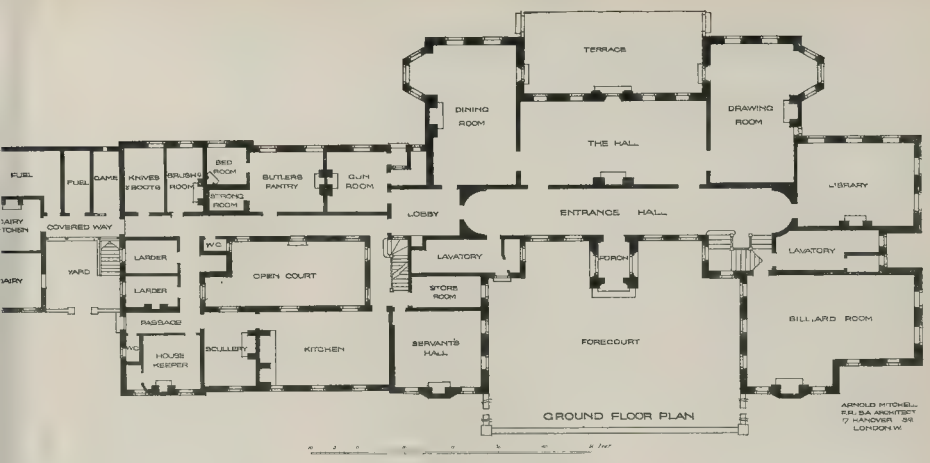
The Porch: Barnett Hill.

Mr. Arnold Mitchell, F.R.I.B.A., Architect.



Garden Front: Julian Cottage, Harrow.

Mr. Arnold Mitchell, F.R.I.B.A., Architect.



House in Surrey: Ground Plan.

Mr. Arnold Mitchell, F.R.I.B.A., Architect.

ngs to be submitted in a limited tition, completely finished three weeks sending-in day; and he stated that his usual practice to get competition forward. Mr. Mitchell has many big in hand at the present time; among them a big office building in the North, of which we saw complete plans, also a number of country houses. In spite of the calls of a large practice, Mr. Mitchell is a firm believer in not worrying. By organising his work on the lines indicated, and by ruling out all the unessentials, he manages, as he himself confesses, to find life very endurable, and to secure much pleasure in the home and garden of which he speaks with so much enthusiasm and affection.



House in Surrey: The Staircase Ceiling.

Mr. Arnold Mitchell, F.R.I.B.A., Architect.

THE BUILDING TRADE.

THE RIGHT TO WORK.

IN recent years the trade unions introduce a Bill known as the Unemployed Workmen Bill, the object of which was to affirm a general principle that every workman possessed the inalienable right to work, and that, if he could not obtain work, employment must be found for him, with the important proviso that he was not to be employed at less than the standard wages ruling in the district. This Bill became known as the "Right to Work" Bill. This expression is somewhat unfortunate, as the trade unions are the very last societies to recognise the inherent right in each man to work as he wills, and they really only recognise a right to work with the permission of the unions. If any man attempts to work without their leave and licence he is at once termed a "blackleg," and the special powers the trade unions obtained in the Trade Disputes Act are brought to bear upon him or his family in the form of "peaceful persuasion."

It is the public who are now beginning to call for a Bill which shall recognise the right to work, and for adequate protection for those who wish to exert that right. The strike in the coal trade, universal as it is, has held up industries in no way connected with the particular dispute, and thousands of workpeople, through the action of one trade federation, have been denied their right to work. Thus the zeal of the trade unions for the principle of the right to work has been proved to be "skin deep," and, in fact, their attitude presents no principle at all. Had the employers in the coal trade resorted to a lock-out universal in its nature on the scale of this strike it can easily be imagined how the trade unions would have characterised such action on their part, and how the principle of the freedom of action would have been invoked. The Chancellor of the Exchequer in the first day's debate on the Minimum Wage Bill indignantly asked, "Can a man be compelled to work?" The answer is, of course, in the negative, but a man can be compelled to allow others to work, and it is for compulsion of this nature that the nation is now calling. A disastrous strike such as that we have been experiencing would never occur in an exceedingly well-paid branch of employment involving no very great special training were the right to work but recognised. Even in the railway strike the companies could have filled the places of the strikers three times over had it not been for the intimidation of the unions concerned. It is now quite clear that it is essential to the welfare of the nation that the right of each individual to ply his avocation on such terms as he may deem fit must be restored and maintained, and that methods of intimidation practised by organised bodies, be they associations of masters or men, are inconsistent with the liberty of a commercial nation, and that the whole country must now assert its freedom and curtail the privileges of such societies, which, after all, but represent a minority, and a small minority, of the population.

LONDON ASSOCIATION OF MASTER STONEMASONS.

THE annual meeting of this Association was held at Cannon-street Hotel, E.C., on March 14, when the following were present:—Mr. Fred Corben (President) in the chair; Mr. C. W. Courtenay, J.P. (Vice-President); Mr. F. J. Barnes, C.C.; Mr. T. Beckley, Mr. J. Bysouth, Mr. W. Bryant, Mr. William Bryant, Mr. E. J. Fox, Mr. E. Grice, Mr. H. J. E. Lucas, Mr. Frank Mortimer, Mr. E. Morris, Mr. W. Pangbourne, Mr. Ernest E. Way, Mr. J. Way, Mr. Walpole Collins, Hon. Secretary and Treasurer.

A cordial vote of thanks was accorded to Mr. Fred Corben for the services rendered by him to the Association during the past year, and Mr. C. W. Courtenay, J.P., was unanimously elected President for the coming year. Mr. Fred Corben, on relinquishing the office of President, becomes ex-President. Mr. Stephen Collins, M.P., and Mr. T. Sturge Cotterell, J.P., were elected Vice-Presidents, and the following were chosen to serve on the Committee:—Mr. T. Beckley, Mr. E. Grice, Mr. F. Mortimer, Mr. W. Pangbourne, Mr. Ernest E. Way, Mr. J. Bysouth. Mr. Walpole Collins was re-elected as Hon. Secretary and Treasurer.



THE INSTITUTE OF BUILDERS.

THE twenty-eighth annual general meeting of the Institute of Builders was held at the offices, Koh-i-noor House, Kingsway, W.C., on the 20th inst.

The minutes of the last annual general meeting were read and confirmed, and the audited accounts of the Institute and of the Institute Benevolent Fund were submitted by the Treasurer (Mr. J. Carmichael, J.P.), and were adopted.

The following officers were elected for the ensuing year:—

President—Mr. H. Arthur Bartlett (Messrs. Perry & Co. (Bow), Ltd.).

Vice-Presidents—Mr. Ernest J. Brown; Mr. F. G. Rice (Messrs. Rice & Son); Mr. E. J. Strange (Tunbridge Wells); Mr. Leonard Horner (Messrs. Ashby & Horner).

Treasurer—Mr. F. L. Dove, London County Council.

To fill vacancies on the *Executive Council*—Mr. A. B. H. Colls (Messrs. Trollope & Colls, Ltd.); Mr. Walter Lawrence, jun. (Messrs. Walter Lawrence & Son); Mr. F. M. May (Messrs. Holland, Hannen, & Cubitts, Ltd.); Mr. James F. Parker (Messrs. Patman & Fotheringham, Ltd.); Mr. E. S. Rider (Messrs. T. Rider & Son); Mr. William Willett.

Hon. Auditors—Mr. Eric M. May (Messrs. Holland, Hannen, & Cubitts, Ltd.); Mr. G. C. Hudson (Messrs. Hudson Brothers).

A hearty vote of thanks was given to Mr. James S. Holliday (Messrs. Holliday & Greenwood, Ltd.) for his services during the past year.

The following report from the Council was approved:—

"The Council, in presenting the Annual Report, regrets that, although the building trade has to a certain extent improved, it still continues to be in a very unsatisfactory condition. For some years past the competition has been particularly acute, and this, coupled with the general unrest in the country and the prospective heavy burdens about to be imposed on employers by the Legislature, render the prospects of a desirable change anything but promising.

Attention has been given to Parliamentary matters affecting the building trade; steps have been taken to try to effect such changes as are desirable in existing Acts, and to judiciously modify Bills of importance before the House of Commons. In these matters the Council has been glad to co-operate with other bodies.

The Council has given much time and care to the formulation of an agreement for sub-contractors who are specified by architects, and to the alterations which this document entails in the agreed form of contract. The proposed form of sub-contractor's agreement was submitted to the National Federation, being one of the signatories of the agreed form, and was practically approved. It was then brought informally before the R.I.B.A. at a Conference on the subject, and it is now under the consideration of that body.

The President, Colonel George Hawse, Mr. Trollope, and Mr. J. Styles, kindly gave evidence before the Home Office Departmental Committee, which Committee was appointed to investigate the dangers attending the use of white-lead in the preparation of paints. Having considered the matter most closely, the Council came to the conclusion, in the interests of the trade, that it would be preferable to endeavour to exclude altogether the use of white-lead than to have exacting regulations introduced by the Legislature which would be very irksome to employers.

Mr. F. G. Rice is the representative of the Institute on the Home Office Committee, and the building trade is under great obligations to him for his close and valuable assistance in the matter.

The movement to re-establish a system of apprenticeship has occupied the attention of the Council, and suggestions have been submitted to the London County Council, which are now under consideration.

The existence and utility of technical schools, proper discipline, payment of premiums, etc., are matters which affect this question and need careful consideration.

Your Council and the Council of the London Master Builders' Association jointly took part in the consideration of suggestions made by the Quantity Surveyors' Association on the question of items to be embodied in the preliminary bills. The results of the Council's comments on the suggestions were forwarded to the Quantity Surveyors' Association in due course, and it is to be hoped that good will be derived in consequence. . . .

Many thanks are due to Mr. Frank May, J.P., Mr. Joseph Randall, Mr. G. Haworth, Mr. A. T. Pollock, and to the India Public Works Department for contributions to the Institute Library.

The following grants were made from the Institute Benevolent Fund:—Builders' Benevolent Fund, 100*l.*; Builders' Clerks' Benevolent Institution, 10*l.* 10s.; Provident Institution of Builders' Foremen and Clerks of Works, 10*l.* 10s.

It is with deep regret we report the death of Mr. Joseph Bell, J.P. (President, 1907-8), and of the retirement of Mr. F. J. Dove. Both these gentlemen have done yeoman service to the Institute and were personally much respected and esteemed by a large number of friends in the trade. . . ."

INCORPORATED INSTITUTE OF BRITISH DECORATORS.

ANNUAL DINNER.

THE annual dinner of this Institute was held on Monday at the "Trocadero," Piccadilly-circus, Mr. J. D. Crace, President, in the chair, supported by Mr. H. Drummond, President Association of Master House Painters in Scotland; Mr. T. N. Richards, President of the National Association for England; Professor Reginald Blomfield, A.R.A., and Messrs. H. D. Searles Wood, J. C. Nicholson, M. C. Cowtan, A. B. Cowtan, W. H. Pitman (Treasurer), W. Stewart-Greene, A. Mackay, E. Graham Simpson, F. Jones, J. W. Garson, W. G. Sutherland, F. Carpenter, J. Sanderson, F. De Jong, H. N. Hornsby, W. N. Bridges, J. R. Chappell, F. G. Dear, A. S. Jennings, P. A. Jones, F. W. Englefield (Secretary), and others.

The loyal toasts having been suitably proposed by the President and honoured,

Mr. W. Hayward Pitman

proposed the toast of "The Incorporated Institute of British Decorators and its President." He said the Institute was incorporated in 1899, but he was sorry to say that in London there had not been that development in regard to membership as they would have liked, and London did not seem to appreciate the work they were doing as much as was the case in the North and in Scotland, where they seemed to appreciate the advantages and benefits of the Institute, for they helped the Institute in every way. The Institute was very much indebted to the Northern and the Scotch branches. The Institute had been able during the last year to revive the Travelling Studentship very much because of the help of the President. Nineteen sets of drawings had been sent in, and as one of the judges he could

that a better collection of works of art by
ig people could not have been brought
ther. The winner of the Travelling Student-
was Miss Dora Bard. It was hoped to
inue the Studentship next year and other
s. The Institute had been very fortunate
ts President, and they had been glad to
him at their head from the beginning
s existence.

President,

ply, said he had been President for twelve
s, and he began to think that was too long,
that the Institute wanted a new President.
Institute did not exist with the object of
porting trade interests; its *raison d'être* was
ncourage and forward the artistic side of
ration. He thought that the artistic use
olour and decoration should be more studied
encouraged. Colour was one of those things
ch might do much to improve or much to
roy if badly used, and it was not unnatural
clients and architects should look with
siness to the approach of the decorator
ss they knew what he was capable of, and
that must be partly attributed the un-
promising use of white as a ground. The only
in which we got white in nature was in a
watorm, and that could not be said to convey
idea of comfort, and even then the chance
that the sky had something of colour in it.
ought to be able to make use of colour, and
rejoiced that they had been able to send a
lent abroad to study the artistic and beauti-
y-adapted colour decorations of Italy.
taly one was surrounded by a great deal that
bad as well as good, but a very little
ning ought to enable a student to recognise
t was worth studying and what should be
ided. The first object of the Institute
to encourage social intercourse among the
nbers and the exchange of ideas. Then the
ouragement of the study of decoration as
art was a self-evident object of the Institute,
to assist the coming generation of decorators
qualify themselves for the pursuit of the
utiful was in itself a good and noble object
pursue. The work of the Institute did not
ude watching over the trade interests of
orators, because that was already admirably
e by the National Association of Master
nters, but it was concerned with those objects
ch made for the honour and welfare and the
acity and efficiency of the decorator of
day.

e President

sequently proposed the toast of "The
ional Association of Master Painters of
gland and Wales, Scotland and Ireland,"
remarked that these Associations had done
reat deal for the master painters of the
ntry in many ways. The Associations had
ught together men engaged in the same
k and had given them an opportunity of
ussing their interests together, and had given
ide outlook to the business and calling of
nting generally, and had done much for the
ucation of the younger members and
prentices of the trade.

. Richards,

o responded for the National Association of
gland and Wales, referred to the excellent
rk being done by youths as the result of
instruction received by the Schools of Art
l by other methods.

. Drummond,

e responded for the Association for Scotland,
ke of the excellent work carried on by the
titute, and of the energetic work of Mr.
thorpe in connexion with the Association.
Mr. Sutherland also responded.

The President then proposed the toast of
The Guests," coupled with the name of
ofessor Reginald Blomfield, A.R.A.

ofessor Blomfield

d that at one time and another he had
en a great deal of trouble to explain the
ference between architecture and decora-
n, and some of his critics had said
t because he had said that decoration
s not architecture and architecture not
coration that therefore he did not care
out decoration. That was a ridiculous libel,
decoration was one of the primitive instincts
humanity; but, apart from that, it was really
last and, if he might say so, the fine flower of
hitecture itself. Of course, there was always
awkward question of who was to superin-
d the work, viz., the decorator or the architect?
ars ago an eloquent Frenchman wrote a book
"Primaticcio" to show that the arts could
ver go right till the painter took charge of
the decorative arts. He did not think that was quite right, because, much as he regarded and admired the painter and the decorator, he did not feel that they were the men who ought to control the ship. Besides the painter and decorator there was the sculptor to be considered, and he had to play a very important part in decoration. The only man who stood apart was the architect, in so far as he held an independent position between the arts, and was a man who ought to know where he wanted emphasis and when to call on the decorator to help him—how he wanted his panels treated, etc. The architect was the man who set the time and the tune, though he did not feel that this question of leadership was so important as that they should all pull together. What we all suffer from in this country—and elsewhere, too—was a certain isolation of the arts the unconscious jealousy of one art to another, and he felt sure they would agree with him that this was quite wrong, and that they should all try to pull together. He believed from what he had heard that the Institute was doing admirable work, and they were fortunate in their President, who held a name well known in the list of English decorators.

BUILDERS' CLERKS' BENEVOLENT INSTITUTION.

THE thirty-fourth annual dinner of the Builders' Clerks' Benevolent Institution, was held on Tuesday, March 26, at the King's Hall, Holborn Restaurant, the President, Mr. R. Dudley Bartlett, of Messrs. Perry & Co. (Bow), Ltd., in the chair. About 400 were present.

The Chairman, in proposing the toast of the "Builders' Clerks' Benevolent Institution," said that when he looked down the long list of Past-Presidents of the Institution he saw that it comprised the names of practically all the great men of the building trade. His father occupied that chair some twenty-one years ago, and he was proud to follow in his father's footsteps. He, however, was bound to say it was the first time his father had consented to be overshadowed by one of his sons. He, himself, found that the position of President of that Institution was no sinecure, but necessitated the giving up of a great deal of leisure time. The Institution was founded in 1866, which was forty-six years ago, and its objects were to provide pensions to aged clerks and those who were incapacitated; and also to provide for their widows. It seemed to him that there was a very large number of charitable institutions in the country, and consequently it was necessary to make sure they were supporting the most worthy objects. It was argued, and he thought quite rightly so, that a man who spent his life at his work should have saved enough to keep him in some sort of comfort for the rest of his life. It was the men who were incapacitated or their widows they had to deal with. The Institution had good reason for feeling proud of itself in that respect. Last year they paid 776*l.* to thirty-one pensioners out of an income of 790*l.*; however, the expenses brought the total payments to 870*l.* They were consequently dependent upon the generosity of those present to put them on the right side. The Institution had paid 10,000*l.* in pensions, besides several hundred pounds in temporary relief. They had also given 1,000*l.* to the charitable schools. In these days, when trade was practically as bad as it could be, it seemed to him an extraordinary thing that the merchants and others had come forward and assisted them in such a generous way. He thanked them all for the way they had helped the Institution.

Mr. H. A. Bartlett (President of the Institute of Builders) said the toast he had to propose was that of "The Architects and Surveyors." It was a time-worn and time-honoured toast. He thought, however, that instead of being called architects they should be called the compendium of useful knowledge. It seemed to him that there was not much room in the world for anybody but architects. They fulfilled so many useful positions nowadays—not only were they architects, but they were undoubtedly financiers, diplomatists, and a dozen other things. It very often happened that when a client went to an architect he had decided to have a 5,000*l.* house built, but after seeing the architect and having a quiet chat with him he was firmly of the opinion he could not do with a house of less than 10,000*l.* value. The architect then went to the builder and showed him the plans of a very beautiful house, and expected him to build it for about 2,000*l.* He objected rather to the architects entering the field of building which they seemed to do nowadays. They not only did all the planning, etc., in connexion with their profession, but they practically arranged the whole of the building operations, and consequently the builder would soon cease to exist, or, at any rate, become a mere subcontractor. He sincerely hoped the architects would soon begin to realise that builders could do a little bit of joinery and a little digging without getting an expert to do it. Regarding the surveyors, he looked upon them as being an extraordinary set of men, as they always seemed to satisfy all parties. He coupled with the toast the names of Mr. Chas. Frankiss and Mr. Walter Lawrance.

In reply, Mr. Frankiss said he felt it a privilege to respond after what had been said about them by Mr. Bartlett. He could assure them it had given him great pleasure in hearing of the progress reported by the Chairman. He hoped the Institution would continue to maintain that successful state, and he thanked them for the way they had received the toast.

Mr. Walter Lawrance, F.S.I., who also responded, said he was quite surprised when he saw the report of the Institution in the *Builder* of their wonderful success, especially in these days when they were all struggling to make both ends meet. There had always been a very nice feeling between the architects and the builders' clerks, as they had to look to them for many details of their business, and they were often very difficult points. He was speaking from an experience of over thirty-six years, and he was sure the Institution would receive all their support.

Mr. F. S. Oldham then proposed the toast of "The Builders and Builders' Merchants," and said that he was coupling with the toast two names, one was Mr. Thomas F. Rider, who, as they all knew, was the only gentleman who was President for two years running, viz., in the years 1878-1879.

Mr. Rider, in reply, said he had been connected with the Institution for the last thirty-four years, and he could remember the time when he presided at a meeting of the Institution at which only the members of the Committee were present. He had prepared a very elaborate speech for the occasion, but that was consigned to the waste-paper basket, and the Committee then unanimously proceeded to re-elect themselves. The building trade at the present time could be described as the one which required more trouble to get the work, less profit when that had been done, and after it was the greatest difficulty to get the money. Nowadays it required the wealth of a Cræsus and the patience of a Job.

Mr. Alexander Ritchie, who also responded, said he wished the Institution every success, but he hoped that soon there would not be any need for it. If only the terrible strikes could be done away with it would be a step towards that, as the strikes were the curse of the country.

Mr. John Austin, A.C.I.S. (the Secretary), announced that the total list of donations that evening was 414*l.* 2s. 6d.

GOVERNMENT CONTRACTS.

THE following tenders have been accepted during the past month by the Government Departments named:—*Admiralty, Works Department:* Paving slabs for H.M. Dockyard, Chatham—Patent Victoria Stone Company, Ltd., 11-13, Hamilton House, Bishopsgate-street, E.C.; steelwork for aerial ropeway, Cape of Good Hope—The Butterley Company, Ltd., Butterley, near Alfreton; works service: extensions of gun-mounting shop, H.M. Dockyard, Portsmouth—Messrs. Perry & Co. (Bow), Ltd., 56, Victoria-street, S.W. *War Office:* Works services: additions to gymnasium, Lichfield—Mr. A. Robinson, Woodbine Works, Idle, Bradford; additions and alterations to right wing, Duke of York's headquarters, Chelsea—Messrs. Holliday & Greenwood, Ltd., Loughborough Park Works, Brixton; construction of reservoir, Royal Gunpowder Factory, Waltham Abbey—Mr. J. A. Ewart, 21, Old Queen-street, Westminster; drainage work, Wool Camp, Dorset—Messrs. Jesty & Baker, Castlestown, Portland; drill and gymnastic hall, Bordon -Messrs. Thomas & Edge, Anglesea-avenue, Woolwich; improvements to married soldiers' quarters, etc., Guildford—Messrs. W. F. Blay, Ltd., Dartford; improvements to married soldiers' quarters, etc., at Weedon—Mr. W. W. Roberts, High-street, Weedon; installation of electric light, right wing of Duke of York's headquarters, Chelsea Messrs. W. G. Heath & Co., 35, George-street, Plymouth; plunge baths and field practice ranges, Willsworthy, Devon—Messrs. Woodman & Son, Batholomew-street, Exeter; remodelling and extending military hospital, Fort Pitt, Chatham—Mr. C. E Skinner, Railway-street, Chatham; supply and

erection of shed for gun drill, etc., Shoeburyness—Messrs. G. Sands & Co., Ltd., Colwick, Nottingham. *India Office, Store Department:* Bridgework—Brandon Bridge-Building Company, Motherwell; bricks—Messrs. J. Grayson, Lowood, & Co., Deepcar, Sheffield; cement—Associated Portland Cement Manufacturers, Portland House, Lloyd's-avenue, E.C. *Crown Agents for the Colonies:* Bridgework—Sir William Arrol & Co., Ltd., 32, Victoria-street, S.W., The Horseley Company, Ltd., Tipton, Staffs; cement—Wouldham Cement Company, Ltd., 55, Great St. Helens, E.C. *Office of Works:* Builders' work: construction of subway at Birmingham Parcel Office—Mr. E. Crowder, Farm-street, Birmingham; demolition of old buildings and erection, East Ham Branch Post Office—Messrs. J. Chessum & Sons, 7A, South-place, E.C.; extension of Hampstead S.O.—Messrs. R. A. Lowe & Co., Chislehurst, Kent; extension, Haverfordwest Post Office—Messrs. W. Bowers & Co., Bath street, Hereford; extension, Hinckley Post Office—Messrs. Walter Moss & Son, Coalville, near Leicester; adaptation, Liverpool temporary parcel office—Mr. G. L. Desoer, Everton-road, Liverpool; demolition of old buildings and extension of Portsmouth Post Office—Mr. J. Privett, Cottage-grove, Southsea; work in connexion with hydrants, Queen Victoria Memorial—Messrs. John Mowlem & Co., Ltd., Grosvenor Wharf, Westminster, S.W.; erection of kiosk, Primrose-hill, Regent's Park—Messrs. Pasterfield & English, Sunnyhill-road, Streatham, S.W.; repairing and covering reservoirs and constructing cascading arrangement, Windsor Great Park—Messrs. Holloway Brothers (London), Ltd., Belvedere-road, Lambeth, S.E.; drainage: stud house, Hampton Court Park—Messrs. S. Kavanagh & Co., Surbiton-hill, S.W.; Windsor Castle—Messrs. Matthew Hall & Co., 88, Wigmore-street, W.; engineering works: heating apparatus, Birmingham new parcel office—Messrs. Cannon & Hefford, Stanbury-road, Peckham, S.E.; heating, Leeds Head Post Office—Messrs. J. F. Phillips & Son, Ltd., Mark-lane, Leeds; heating, hot water, and fire mains, Royal Courts of Justice—Messrs. Ashwell & Nesbit, Ltd., 12, Great James-street, W.C.; heating, Park (Western) Telephone Exchange—Messrs. Cannon & Hefford, Stanbury-road, Peckham, S.E.; water softening plant, Windsor Castle—Mr. C. J. Haines, "Rogorte," Worple-road, Wimbledon, S.W. *General Post Office:* Laying line of pipes and Sykes ducts, London-Watford, Section II.—Messrs. Bennie & Thompson, 80, Liverpool-road, Warrington; laying line of pipes, Woodford—Messrs. W. & C. French, Buckhurst-hill, Essex. *Metropolitan Police:* Reconstruction of Hammersmith Police-station—Messrs. Adamson & Sons, 129, High-street, Putney. *Commissioners of Public Works, Ireland:* Building works: erecting and furnishing Aille National School, Co. Galway—Mr. Patrick Burke, Turlough, Bellharbour, Co. Clare; erecting and furnishing Carrownaganonagh National School, Co. Donegal—Mr. William Mooney, Milford, Co. Donegal.

LONDON MASTER BUILDERS' ASSOCIATION.

THE Council of the London Master Builders' Association met on the 21st inst., when Mr. James S. Holliday (President) presided.

The Report of the Bricklayers' Conciliation Board meeting, held on the 14th inst., was read, and the Finance Committee's Report was read and approved.

The rate of subscription to the Association for the year 1912 was determined upon.

Certain legal cases were reported and were referred to a special Committee for consideration and report.

The various Committees and representatives on other bodies were chosen.

Matters were considered connected with a petition to the Prime Minister against the Trade Disputes Act (1906). The petition was presented by Mr. Basil Peto, M.P.

Applications for proposed alterations in working rules agreements with the Amalgamated Society of Carpenters and Joiners and Stonemasons were received, together with an application for the formulation of a working rule agreement with the labourers. They were referred to a Special Committee for consideration and report.

Various other trade matters of interest and importance were discussed.

New members of the Association were elected:—

(1) Ordinary member—Messrs. Allen, Fairhead, & Son, Enfield.

(2) Associate member—Messrs. John Daymond & Son, Westminster.

New member nominated:—

(1) Associate member—Messrs. Messers, Ltd.

GENERAL BUILDING NEWS.

CHURCH, HOVE.

This church has been erected at a cost of 6,000*l.* from the designs of Mr. E. Proctor, architect, of London. The contract was carried out by Messrs. W. A. Field & Cox, builders, of Brighton.

ENGLISH CHURCH, VERSAILLES.

The foundation-stone was laid on March 15, by Dr. Bury, Bishop for Northern and Central Europe, of the new English church at Versailles, which replaces the church which was built fifty years ago, and was destroyed by fire on January 29, 1911. The architect is M. Vye-Parminter, of Paris, whose designs are after the Gothic style. The ground on which the church is being built is of a certain historical interest. An English church or place of meeting existed on this site as far back as during the reign of the Roi Soleil, Louis XIV., but was abandoned after the Edit de Nantes, when the English residents left Versailles. The building was then used by the military authorities as a bakehouse, and later on became the property of Admiral Touchard, whose family graciously returned the property to the resident chaplain of Versailles some fifty years ago. A small church was built, and the ground and building transferred to the Colonial and Continental Church Society, which is now undertaking the building of the new church. The style will be Gothic, simple in form, but of good effect. The chaplain, Rev. Vivian Evans, is obtaining the stained glass windows from Munich, and the pulpit is being carved by the "Christ" who takes part in the Passion Play at Ober-Ammergau.

CO-OPERATIVE BUILDINGS, WHEATLEY HILL.

These new premises for the Sherburn Hill Co-operative Society have been erected at a cost of about 6,000*l.* The architect for the work was Mr. J. W. Taylor, of Newcastle, and Mr. J. Morris, of Felling, was the contractor.

COAL AND SHIPPING EXCHANGE, CARDIFF.

The central hall of this exchange has been renovated from the designs prepared by Mr. Edwin Seward, architect, and the sculpture work has been executed by Mr. Tom A. Jones.

PAVILION, NEWQUAY.

Messrs. Cowell & Cowell, of Newquay, are the architects for this pavilion, which is being erected at the lower end of Harbour-crescent at the corner of Beach-road. The auditorium is to have a sloping floor, but a second floor will be provided for dances, etc., and will hold 800 people. Round the auditorium a raised promenade is to be erected to seat an additional 700 people. There will also be a promenade outside facing the sea. The builder is Mr. G. Miners, of Penzance.

NEW BUILDINGS IN LONDON.

Extensive rebuilding, Waterloo-place, S.W.; Messrs. Higgs & Hill, builders, South Lambeth, S.E. Extensions to United Service Club, Pall Mall, S.W.; Mr. F. G. Winter, builder, Putney, S.W.

TRADE NEWS.

Under the direction of Messrs. Yeates & Jones, architects, Worcester, the "Boyle" system of ventilation (natural), embracing Boyle's latest patent "air-pump" ventilators and air inlets, has been applied to Redhill School, Worcester.

The Wycliffe Memorial Church and Schools, Preston, are being supplied with Shorland's patent exhaust roof ventilators, by Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester.

APPLICATIONS UNDER LONDON BUILDING ACTS, 1894 to 1909.

AT Tuesday's meeting of the London County Council the following applications under the London Building Acts were dealt with. (The names of the applicants are given in parentheses):—

Lines of Frontage and Projections.

Dulwich.—Erection of six houses upon a site on the western side of St. Aidan's-road, Peckham, and fronting upon Peckham Rye (Mr. A. J. C. Ewen for Mr. J. H. Coxon).—Refused.

Hackney, Central.—Addition to Devonshire hall, abutting upon the western side of Frampton Park-road, northward of Devonshire-road, Hackney (Mr. C. G. C. Payne for Mr. H. Goldstein).—Consent.

Hackney, Central.—Erection of a buildin on the western side of Chatham plac Hackney, to abut also upon the southern sid of Belsham-street (Messrs. Rowlandson Co.).—Consent.

Hampstead.—Retention of a shop fron erected under the projecting landing at N 150, Finchley-road, Hampstead (Messrs. Saunders & Son).—Consent.

Kensington, South.—Erection of a sho front, door head, and cornice at Nos. 3 and Church-street, Kensington, without the erectio of corbels in front of the party walls (Messr Simpson & Annett).—Consent.

Lewisham.—Erection of houses on th western side of Mayow-road, Sydenham, soutl ward of the Sydenham recreation groun (Edmondsons, Ltd.).—Consent.

Lewisham.—Erection of porches to t houses on the western side of Perry-ris Lewisham (Mr. G. H. Payne for the Perry rise Land Company).—Consent.

Marylebone, East.—Projecting balconies i front of Nos. 379 and 381, Euston-road, St Marylebone, at the first, second, and thir floor levels (Mr. F. M. Elgood for Mr. J. A Michell).—Consent.

Marylebone, West.—Projecting balcony i front of No. 92, Gloucester-place, St. Maryle bone (Mr. F. White).—Consent.

St. George, Hanover-square.†—Illuminate sign erected upon a builder's platform i front of No. 289, Vauxhall Bridge-road, West minster (Mr. J. Carmichael for Messrs. Parnel & Son).—Consent.

St. George, Hanover-square.—Refacing o No. 33, Grosvenor-street, Grosvenor-square, an the erection of a porch and balconies (Mr. C Ansell).—Consent.

Strand.—Projecting illuminated sign at No 53, Strand (Mr. J. J. Bye).—Consent.

Walworth.—Iron and glass shelter at th entrance to a cinematograph theatre on th site of Nos. 42 and 44, Old Kent-road Walworth (Messrs. Z. King & Son for Mr E. M. Barker).—Refused.

Wandsworth.—Erection of buildings on th south-eastern side of New Park-road, Wands worth (Messrs. H. F. Buchan & Co.).—Refused

Woolwich.—Erection of bay-windows to fou houses on the southern side of Glenlyon-road Eltham Park (Mr. J. J. Bassett for Lord Rowallan).—Consent.

Width of Way.

Bethnal Green, North-East.—Erection of building to abut upon the southern side o Green-street, the western side of Baker-street and the northern side of Digby-walk, Bethna Green (Mr. F. E. Harris for Mr. H. H Bartlett).—Consent.

Kensington, North.—Erection of an additio at the rear of No. 139, Portobello-road, Ken sington, at less than the prescribed distance from the centre of the roadway of Vernon mews (Mr. S. Newcombe for Mr. J. Smith).— Consent.

Rotherhithe.—Erection of buildings on both sides of Rotherhithe-street, Bermondsey, be tween Gillham's-court and West-lane (Mr H. D. Searles Wood for Mr. R. Hyde).— Consent.

Walworth.—Erection of a building on the southern side of Westmoreland-road, Walworth (Mr. W. Wadman for Messrs. G. Carter & Sons).—Consent.

Width of Way and Lines of Frontage.

Limehouse.—Erection of a building to abut upon the north-eastern side of Parnham-street and the south-eastern side of Tomlin-terrace, Limehouse (Mr. H. Riches for Mr. J. Lusty).— Consent.

Paddington, North.—Erection of a building on the northern side of Woodchester-street, Paddington (Messrs. Beazley & Burrows for the Managers of St. Mary Magdalene School) —Refused.

Line of Frontage and Construction.

Lewisham.—One-story shop of a temporary character between Nos. 296 and 300, High street, Lewisham (Mr. G. Court).—Consent.

Paddington, South.—Erection of a covered way in the basement area at No. 94, Lancaster gate, Bayswater-road, Paddington (Messrs. W. T. Lord & Co.).—Consent.

Strand.—Retention of two showcases at No 27, Shaftesbury-avenue (Messrs Pollard & Co for Mr. H. Goodman).—Refused.

Wandsworth.—Retention of the showcase in front of No. 79, Streatham High-road, Wandsworth (Mr. G. Rogers).—Consent.

Width of Way, Line of Frontage, and Construction.

Poplar.—Motor-car shed of a temporary character on the eastern side of Finch-court, High-street, Poplar (Mr. H. Heckford for the Poplar Metropolitan Borough Council).—Consent.

Space at Rear.

Bethnal Green, North-East.—Re-erection of "The Camel" beerhouse, Globe-road, Bethnal Green (Messrs. W. Bradford & Sons for Messrs. Taylor, Walker, & Co., Ltd.).—Consent.

Space at Rear and Alteration of Buildings.

Deptford.—Alterations at No. 9, Knott street, Deptford (Mr. A. Roberts for Mr. G. Catt).—Consent.

Cubical Extent.

Chelsea.—Additional cubical extent in respect of a proposed warehouse building upon a site abutting upon Pavilion-road, Charlotte street, and Cross-street, Chelsea (Mr. C. W. Stephens for Harrod's Stores, Ltd.).—Consent.

City of London.—Erection of a printing office and factory building to abut upon Shoe-lane and Plumtree-court, City (Messrs. J. W. Beaumont & Son for Messrs. E. Hulton & Co., Ltd.).—Consent.

Kensington, South.—Conversion of the second floors of blocks 3, 4, and 5, at the premises of Harrod's Stores, Ltd., fronting upon Brompton-road, from residential flats to trade premises, and erection of additions on the second, third, and fourth floors of a division at the rear of block 2 (Mr. C. W. Stephens for Harrod's Stores, Ltd.).—Consent.

Uniting of Buildings.

Bermondsey.—Uniting of Nos. 96 and 98, 100 and 102, 104 and 106, 108 and 110, and 112 and 114, Tanner-street, Bermondsey, by openings at the first and second floor levels (United Kingdom Temperance and General Provident Institution).—Consent.

City of London.—Uniting of Nos. 3 and 4, New Union-street, Moorfields, by means of an opening at the basement level (Messrs. W. G. Clarke & Sons for Messrs. L. Farmer & Sons).—Consent.

City of London.—Formation of a further opening between Nos. 30 and 31, Bouverie-street, City, at the ground-floor level (Messrs. Trollope & Sons and Colls & Sons, Ltd., for *News of the World*, Ltd.).—Consent.

Finsbury, East.—Formation of an opening between Nos. 65 and 67, Banner-street, St. Luke, at the second floor level (Mr. C. Watkins for the City and Westminster Properties, Ltd.).—Consent.

Fulham.—Openings between Nos. 869 and 871, and between Nos. 873 and 875, Fulham-road, Fulham, at the basement, ground, and first floor levels (Mr. A. Dawkins).—Consent.

Islington, South.—Uniting of Nos. 361-3, and Nos. 365-9, City-road, Islington (Mr. F. M. Phillips).—Consent.

Strand.—Uniting of Nos. 38 and 39, Chandos-street, and No. 30, St. Martin's lane (Mr. F. W. Oatley for Messrs. J. Lyons & Co., Ltd.).—Consent.

Westminster.—Uniting of Nos. 56 and 58, Victoria-street, Westminster, by means of a corridor at the third-floor level (Messrs. Perry & Co. (Bow), Ltd.).—Consent.

† The recommendation marked † is contrary to the views of the Metropolitan Borough Council concerned.

PROJECTED NEW BUILDINGS IN THE PROVINCES.*

ALDERSHOT.—Extensions to factory, Station-road, for Messrs. Allen & Lloyd.

Ayr.—Diphtheria block; Mr. J. Young, Surveyor, Burgh-buildings, Ayr.

Ballymoney.—Housing scheme; Messrs. J. & J. Smith, architects, care of the Surveyor, Town Hall, Ballymoney.

Barrow-in-Furness.—Public baths (3,000*l.*); Mr. A. Race, Surveyor, Town Hall, Barrow.

Bedford.—Factory adjoining London and North-Western Railway for Messrs. Peek, Frean, & Co., biscuit manufacturers, Drummond-road, S.E.

Benfieldside.—Hospital; Mr. J. Eltringham, architect, Blackshill, Co. Durham.

Berwick.—Parochial buildings (2,300*l.*): Messrs. Harrison & Ash, architects, Newcastle-on-Tyne; Messrs. Gray & Sons, builders, 25a, Eastern-lane, Berwick.

Birkenhead.—Flour mill, West Float, for Messrs. J. Rank, Ltd., Hull.

Birmingham.—Atlas Insurance Offices, Colmore-row; Mr. W. Bishop, builder, King's Heath, Birmingham. Theatre, Dudley-street; Mr. C. H. Robinson, architect, Cherry-street, Birmingham.

Bishopwearmouth.—Church hall, site of Low-row Mission; Messrs. W. & T. R. Milburn, architects, 20, Fawcett-street, Sunderland.

Blackburn.—Extensions and alterations to Town Hall (32,475*l.*); Messrs. W. J. Woof, Cronshaw, & Sons, builders, care of Mr. W. Stubbs, Engineer, Town Hall, Blackburn.

Bournville.—Mission chapel; Mr. A. T. Dunn, architect, Waterloo-street, Birmingham.

Bradford.—Bank, Westgate, for the Bradford and District Bank, Ltd.; Mr. W. Carby Hall, architect, Prudential-buildings, Park row, Leeds.

Bridgend (Glam.).—Council offices and fire-station; Mr. W. F. Tudor, Surveyor, Town Hall, Bridgend.

Burghclere (Hants.).—School: Mr. J. W. Taylor, architect, The Castle, Winchester.

Canterbury.—Laundry (2,000*l.*); Mr. J. Plummer, Clerk, Guardians' Offices, Canterbury.

Castle Dykes.—School; Messrs. Scorer & Gamble, architects, Bank-chambers, Lincoln.

Chelmsford.—Proposed county buildings, Duke-street; Mr. F. Whitmore, County Architect, Chelmsford.

Clarkston.—Proposed police-station (900*l.*); Mr. Hugh Inglis, Surveyor, Town Hall, Airdrie, N.B.

Cluny.—School; Mr. G. Gray, architect, Inverurie, N.B.

Conisborough (near Doncaster).—Extensions to isolation hospital (5,000*l.*); Mr. H. M. Marshall, Clerk, Doncaster and Mexborough Joint Isolation Hospital Board.

Coventry.—Proposed public abattoir (20,000*l.*); Mr. J. E. Swindlehurst, Surveyor, Town Hall, Coventry.

Crickhowell.—Conservative club, near Town Hall; Mr. J. V. Richards, architect, Crickhowell.

Croydon.—School (14,495*l.*); Messrs. W. Smith & Son, builders, London-road, Croydon.

Cwm.—Fifty houses (6,375*l.*); Messrs. J. Marles & Son, builders, care of Mr. Marcus Hoskins, Estate Agent, Town Hall, Swansea.

Dellingburn.—Offices (1,200*l.*); Mr. J. A. Robertson, electrical engineer, Burgh buildings, Greenock.

Doncaster.—Conversion of premises, High-street, into bank for the National and Provincial Bank Company; Mr. C. H. Brodie, architect, 15, Bishopsgate, E.C.; Messrs. H. Arnold & Sons, builders, Printing Office-street, Doncaster.

Dumbarton.—Swimming-baths (10,000*l.*); Mr. M. C. Denny, architect, 17, High-street, Dumbarton.

Dundee.—School (1,910*l.*); Messrs. Spiers, Ltd., builders, Glasgow.

Eastbourne.—Picture theatre, St. Aubyn's-road; Mr. A. Ford, architect, Gildredge-road, Eastbourne.

Exeter.—Additions to Royal Deaf School (2,900*l.*); Mr. J. Jerman, architect, 1, Bedford-circus, Exeter.

Gillingham (Kent).—Offices at Electricity Works (900*l.*); Mr. H. E. Phillips, builder, Livingstone-road, Gillingham. Mineral water factory, Napier-road, for Messrs. White & Son; Mr. J. J. Freeland, architect.

Glasgow.—Washhouse (5,200*l.*); Mr. A. B. M'Donald, Surveyor, Town Hall, Glasgow. Alterations and additions to buildings, Lochburn-road, for Glasgow Magdalene Institution.

Gravesend.—Church, Pelham-road South: Vicar, Wycliffe Church, Gravesend.

Grays.—School (2,735*l.*); Messrs. Brown Brothers, builders, Grays.

Halifax.—Works, Skircoat New-road, for the Trinity Garage Company, Ltd.

Harrogate.—Additions to pump-room, etc.: Mr. F. Bagshawe, Surveyor, Town Hall, Harrogate.

Holmfirth.—Warehouse, etc., Ford Mill, for Messrs. Wood & Burtt.

Ightham.—School; Mr. W. H. Robinson, Caxton House, Westminster, S.W.

Invercowie.—Additions to premises for Messrs. James Jack & Sons, Ltd., net manufacturers.

Kidderminster.—Extensions to Pike Mills for Messrs. Watson Brothers.

Kirkintilloch.—Proposed parish church; the Heritors, Parish Church, Kirkintilloch.

Leeds.—Clubhouse (2,500*l.*); Secretary, Moortown Golf Club, Leeds.

Letchworth.—Proposed public hall corner of Eastcheap and Town-square; Secretary, Howard Hall Association.

Lonend.—Additions to mills for Messrs Smith Brothers & Co., shawl manufacturers.

Lowestoft.—The following plans have been passed:—Six houses and shop, London-road South and Kendal-road, for Messrs. Woolnough Brothers; four houses, Carlton, for Mr. F. W. King; bottling store and warehouse, Harvey-street, for Mr. H. G. Lawrence; four houses, London-road South, for Mr. W. Beaumont.

Lye (near Stourbridge).—Theatre; Mr. J. Shaw, architect, 39, Newhall-street, Birmingham.

Macclesfield.—Receiving wards; Mr. Bradburn, architect, Macclesfield.

Maesteg.—Bank, Talbot-street, for the London and Provincial Bank.

Monaghan.—Twenty-four houses (4,315*l.*); Mr. J. Hanna, builder, Terenure.

Newmarket.—Technical institute (1,035*l.*); Mr. H. J. Linzell, builder, Newmarket.

Nottingham.—Proposed rehousing scheme (140,000*l.*); Mr. F. B. Lewis, Architect, Town Hall, Nottingham.

Penrhwtyn.—Infirmary (21,600*l.*); Mr. Evan Thomas, builder, Seven Sisters.

Ramsgate.—Concert hall; Mr. A. D. Sackett, builder, Broad-street, Ramsgate.

Raunds.—Extensions to factory, Park-road, for Messrs. Neal & Gates.

Reigate.—School; Messrs. T. R. & V. Hooper, architects, Market Hall-chambers, Redhill.

Ripley.—School; Mr. G. Widdows, architects, St. Mary's-gate, Derby.

Rochdale.—Extensions to infirmary (18,000*l.*); Mr. H. Healey, architect, of Messrs. Horsall & Healey, Rochdale.

Rochester.—Garage and workshops, High-street, St. Nicholas, for Messrs. Robins & Day.

Royton.—Cotton mill, for the Park and Sandy-lane Mill Company.

Rugby.—Drill hall (5,000*l.*); Mr. T. Willard, architect, Market-place, Rugby.

Scallsceugh.—Farm buildings, etc.; Mr. J. Matindale, architect, Castle-street, Carlisle.

Sheffield.—The following plans have been passed:—Twenty houses, Clarence-road, for Mr. H. E. Fern; additions and alterations, Salutation Inn and White Hart Inn, St. Philip's-road; Franklin Hotel, Franklin street; Lord Nelson Inn, Arundel-street, for Messrs. W. Stones, Ltd.; alterations and additions, "Swan with Two Necks" public-house, Eyre street, and Fore Tavern, Mill sands, for Messrs. T. Berry & Co., Ltd.; four houses, Murray-road, for Mr. A. J. Belton; extensions to foundry, Newhall-road, for Messrs. Cammell, Laird, & Co., Ltd. Extensions, Town Hall; Mr. F. E. P. Edwards, Architect, Town Hall, Sheffield.

Southampton.—The following plans have been passed:—Four houses, Ampthill-road, for Messrs. Weston & Burnett; cinematograph theatre, house, and shop, Shirley-road, for Messrs. Jurd & Sanders; additions, South Hants Waterworks Offices, Shirley-road, for Mr. H. Cawte.

South Ockenden.—School (2,800*l.*); Messrs. Burtwell, builders, Romford, Essex.

Spennymoor.—Town Hall (15,000*l.*); Mr. G. T. Wellburn, architect, Middlesbrough.

Stoke-on-Trent.—Extensions to hospital (3,626*l.*); Messrs. Bennett Brothers, builders, Newcastle-street, Burslem.

Stretford.—Plans have been passed as follows:—Forty houses, etc., Derbyshire-lane, for Mr. John Maunders; extensions to power-station, Trafford Park, for the Trafford Power and Light Supply, Ltd.; school, Montague House, for the Royal Schools for Deaf and Dumb.

Swansea.—Y.M.C.A. headquarters, St. Helen's-road (11,500*l.*); Messrs. Lloyd Brothers, Argyle-yard, Oystermouth-road, Swansea.

Tamworth.—School (6,145*l.*); Mr. Ernest Dent, builder, Aldergate, Tamworth.

Torquay.—Medical baths, etc.; Mr. Taylor, architect, care of Mr. H. A. Garrett, Engineer, Town Hall, Torquay. Plans have been passed for a garage in Teignmouth-road for the Torquay Chelston Steam Car Company.

Vaenor.—School (960*l.*); Mr. J. J. Meredith, builder, Llanidloes.

Wakefield.—Enlargement of infirmary; Messrs. Simpson & Firth, architects, Southgate, Wakefield.

Walker.—Buildings, etc. (40,000*l.*), near Mitchell and Foster streets, for Sir W. W. Armstrong, Whitworth, & Co.

Wednesbury.—Baths and Town Hall extensions; Mr. E. M. Scott, Surveyor, Town Hall, Wednesbury.

Whalley (Lancaster).—Asylum (359,500*l.*); Messrs. Parkinsons, Ltd., builders, Kent-road, Blackpool.

Willington Quay.—Additions to works for Messrs. Hood, Haggie, & Son, rope manufacturers.

Woodhouse.—Mining institute; Mr. J. Hutchings, County Architect, Stafford.

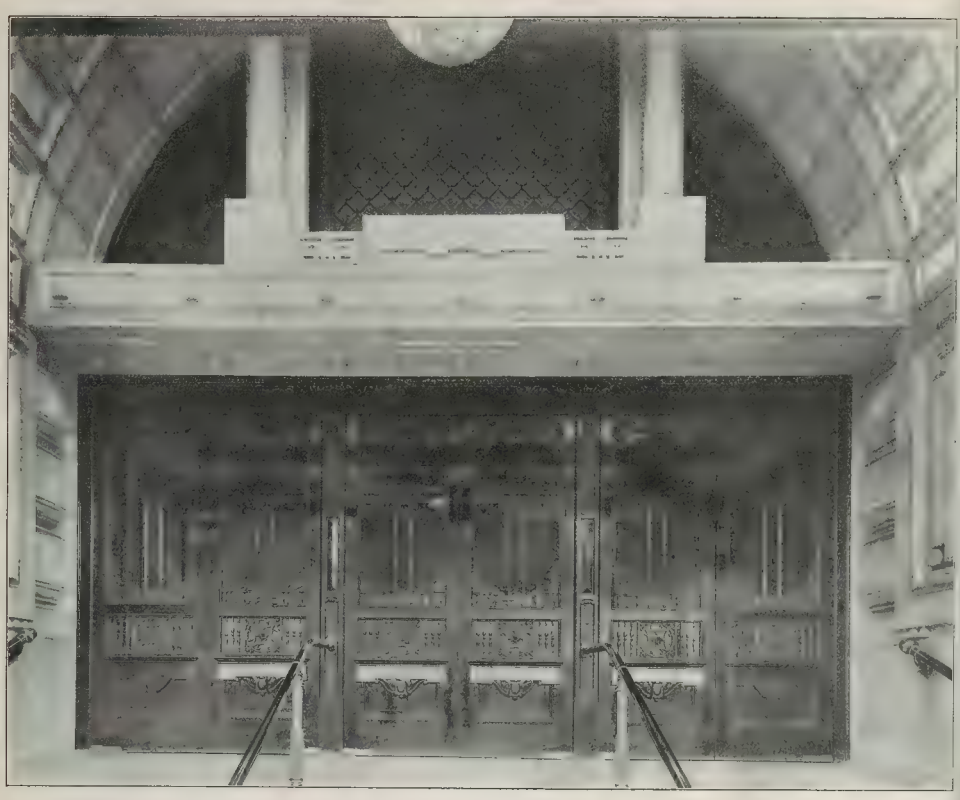
Wyke.—Buildings for Messrs. Roby & Edgar, worsted spinners, Wyke Mill.

Ystradowen.—School; Mr. V. Morgan, architect, Spelman-street, Carmarthen.

* See also our list of Competitions, Contracts, etc., on another page

PICKETS AND TRADE DISPUTES.

It is stated that on behalf of members of the London Master Builders' Association a petition has been presented to the Prime Minister praying for legislation limiting the number of pickets during trade disputes to two.



The London Opera House: Cast-Bronze Grillage to Entrance Door.

THE LONDON OPERA HOUSE.—III.

Electrical Installation.

THE electrical equipment of the Opera House was installed by Messrs. Malcolm & Allan, Ltd., of Kingsway House, W.C., under the direction of the consulting electrical engineer, Mr. F. J. Humphrey, of 39, Charing Cross-road, the interior fittings having been specially design by Messrs. Veritys, Ltd.

Current is supplied by the Charing Cross, West End, and City Electricity Supply Company and the Metropolitan Electric Supply Company. In each case the supply is in the form of continuous current at 200 volts pressure.

The Charing Cross Company furnish current to the main stage switchboard for stage and part of the general lighting, and to one of two other switchboards at the front of the house.

The Metropolitan Company supply current to switchboards on the stage for power, heating, and special effects, to the dressing-rooms switchboard, and to the second switchboard at the front of the house.

For lighting purposes the three-wire system has been adopted, giving a potential difference of 100 volts between the outer conductors and the middle wire, while the power and heating circuits are on the two-wire system at 200 volts pressure.

The main switchboard for the stage, on the "prompt" side, is at some height above the floor, and enables the attendant to obtain a view of the entire stage. The switchboard comprises four circuit panels and one panel for "black-out" switches, rapidly cutting out the stage and auditorium lights controlled from this point.

The four panels mentioned control seventy-eight circuits with the aggregate capacity of 1,500 amperes, all connexions being placed on the front to comply with the regulations of the London County Council.

Of the seventy-eight circuits, twelve supply stage arc lights, thirty-two are ordinary stage circuits with "dimming" resistances, twenty are auditorium circuits also with "dimming" resistances, and fourteen are stage general lighting circuits. The regulators for the dimmers are on the same platform as the panels, and the resistances are placed directly above on an iron and teak platform.

For the lighting of the dressing-rooms twenty-four circuits are provided from a switchboard near the stage entrance.

The stage lighting system includes about 2,300 metallic filament lamps in eight battens of 200 lamps each—white, red, blue, and amber. The battens of lamps are suspended over the stage, and their height can be regulated as desired by means of hand winches. The footlights include 250 lamps in four colours, and the proscenium is illuminated by fifty lamps in three tints. Among special lighting arrangements for scenic purposes there are fourteen lines of twenty-four lamps, six bunches of twelve lamps, and numerous wall-plugs for arc and incandescent lamps. In addition there are six arc-lamps for lightning effects, all controlled by a special switch at the "prompt" side, and eight projecting arc-lamps with scissor shutters for sunrise, sunset, rainbow, cloud, storm, and waterfall effects.

Illuminated signal-boards are fitted in the flies and "prompt" corner, all controlled from a twelve-switch operating board for the use of the stage manager.

The power installation includes two 100 ampere circuits, one for ventilating-fans and the other for a deep-well pump and a 25-ampere circuit for power on the stage. The main switchboard for these circuits is situated in the intake chamber.

Circuits for general lighting proceed from two switchboards placed at each side of the main entrance. One board controls thirty-seven circuits and the other seventy-eight circuits.

One of the most interesting features of the auditorium and other public departments of the house is the reflected system of diffused light, to which the lights attached to exposed electroliers and other fittings serve the auxiliary purpose of furnishing more brilliant local illumination.

Suspended from the ceiling of the auditorium, a large centre fitting of circular form contains 400 lamps with reflectors. This fitting weighs 1 ton, and can be lowered to the stalls floor for lamp renewals, cleaning, or repair. The other exposed lights are placed on electroliers, pendants, flambeaux, and brackets.

The verandah over the foot-pavement in Kingsway is lighted by some 300 lamps, and other high candle-power lamps are employed for the exterior illumination of this building.

To provide a reasonable safeguard against the risk of interrupted service the dual system of lighting has been applied in every part of the house, so that if a temporary breakdown should occur in one source of supply the circuits served by the other source would still furnish ample light.

More than 5,000 incandescent metallic filament lamps are included in the lighting installation, which is one of the best examples of the kind in the metropolis.

The switchboards, cables, wires, and reflectors were made by Messrs. Siemens Brothers and Co., Ltd., and Messrs. Malcolm & Allan supplied their special wiring boxes in connexion with the screwed, solid drawn-steel conduit tubes through which the wires are drawn on the looped-in system. The wrought-iron brackets for lamps on the

terior of the building were made by Messrs. T. W. Vaughan & Co., Ltd. (late Vaughan & Brown).

Heating and Ventilation System.

The warming and ventilation of the building is effected partly on a modification of the plenum system and partly by means of direct radiators and exhaust fans, the whole of the work having been carried out by Messrs. Goode & Co., of Osnaburgh-street, N.W.

Steam for both parts of the installation is generated at 5 lb. pressure and reduced to atmospheric pressure for use in radiators through which and the service mains it is circulated by means of pumps.

For warming and ventilating the auditorium, air drawn from the exterior is forced through a steam-heated battery by means of a 40-in. diameter air blower of the enclosed pressure type, and after having been filtered and washed is distributed through openings in ducts below the level of the stalls floor. Small branch ducts of concrete or galvanised iron with outlets in the stalls, box tier, grand circle, lower gallery, upper gallery, and all other parts of the house open to the public.

Instead of relying upon the main blowing-in for the ejection of vitiated air from the building as in the plenum system properly so called, auxiliary exhaust fans are employed, placed in the roof of the auditorium and two others for the extraction of air from the entrance hall and other apartments of the same part of the house. Thus the result is a combination of the plenum and exhaust systems of ventilation, and has the advantage of providing very effectively for the removal of vitiated air. The installation is capable of maintaining a temperature of about 70° in the auditorium. The stage and various rooms in the same part of the building are warmed by means of steam-heated radiators applied without mechanical ventilation. The steam generating plant is also employed for heating water in calorifiers for the hot water services to the dressing-rooms and elsewhere.

Artesian Well.

Following the example which has been set by the proprietors of numerous important buildings in London in consequence of the excessive rates demanded under the rateable value basis of charges, Mr. Hammerstein has sunk an artesian well of 7 in. internal diameter to the depth of 460 ft. 5 in. below the surface, and is thus enabled to obtain a supply of 3,000 gallons per hour if required at exceedingly moderate cost.

The well was sunk by the Artesian Well Boring Company, of Pentonville, and passes through the following strata:—Basement 3 ft., made-up ground 3 ft., gravel 5 ft., brown clay 1 ft., London clay 19 ft., sandy blue clay 2 ft., London clay 91 ft., mottled clay 25 ft., black clay 4 ft., mottled clay 4 ft., pebble bed 4 ft., brown sands and pebbles 5 ft., green sands 30 ft. 6 in., Thanet sand and flint 2 ft., chalk and some flints 247 ft. 11 in., making up the total depth of 460 ft. 5 in.



Artesian Well Boring Plant.

The standing water level is 220 ft. below the surface, and water is raised by means of the air lift system.

We are informed that examination by an eminent analyst shows the water to be of great purity organically, it being almost free from salts of lime or magnesia, and containing sodium salts in notable proportion.

Conclusion.

The general building contractors were the Building Construction Company, Ltd., of Cockspur-street, S.W., and Mr. G. Sheen was the clerk of works. In addition to the plaster-work executed by Messrs. J. Tanner & Son, the fibrous plaster decoration of the auditorium was carried out by Messrs. A. R. Dean & Co., of Birmingham, and the fire-resisting partitions throughout were supplied by Messrs. A. & S. Wheater, of Stoke Newington. Ornamental bronzework, including the handsome entrance grilles, was manufactured by Messrs. T. Brawn & Co., of Birmingham, and Messrs. T. W. Vaughan & Co., Ltd., of Islington, supplied brass rails and the exterior torch brackets. The whole of the sanitary fittings were provided by Messrs. John Jones, Ltd., of Chelsea, and the wood-block flooring was laid by the Acme Flooring and Paving Company, of Hackney. Mr. F. G. Minter, of Putney, was responsible for the joinery work, and Messrs. Hammond & Champness, of Old Kent-road, supplied the goods lift for the stage department. The foregoing names, as well as those of specialist firms previously mentioned, serve to suggest the enormous mass of details which had to be considered by the architect in addition to the artistic and structural features of this important building.



Fig. 1. Small Section Kahn Bar.

Fig. 2. Large Section Kahn Bar.

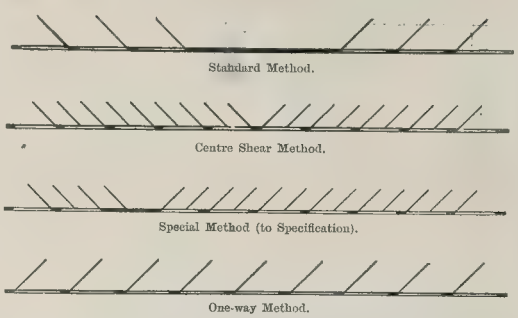


Fig. 3. Various Shearings of Kahn Bars.

REINFORCED CONCRETE IN GREAT BRITAIN.—IV.

BY W. NOBLE TWELVETREES.

(*Continued from page 332.*)

Systems of Class (b).

AS PREVIOUSLY stated, most of the firms supplying special forms of reinforcement are prepared to supply designs for the application of their specialities, exactly in accordance with the practice of firms whose systems come under Class (a), and it should be noted that the general arrangement of the reinforcement is usually similar to the arrangements adopted by designers who make use of ordinary commercial bars and forms of steel. As in the case of systems under Class (a), we deal with the various systems now to be considered as far as possible in the order of their introduction in this country.

Kahn System.—This system was originated in 1903 by Julius Kahn, of Detroit, U.S.A., and was largely adopted in the United States and Canada before its introduction here in 1906. The English company was formed in March, 1907, under the style of the Trussed Concrete Steel Company, Ltd., with offices at Caxton House, Westminster.

The British patent granted to Mr. Kahn, in 1903, was amended in the same year in accordance with the decision of the Comptroller-General of the Patent Office. The amended specification contains a large number of claims which we need not mention individually. Therefore, we summarise briefly the main features of the invention, which has for object "the obtaining of trussed members in which a part of the truss consists of metal of novel construction and arrangement, and the remaining part of the truss either in integral cementitious substance or a plurality of blocks. It is the further object of the invention to obtain

the maximum of strength with the minimum of metal by so constructing and arranging the metallic part that the main body and arms thereof will lie in the direction of and along the lines of the tension stresses, while the body material . . . . will resist the compression stresses."

Fig. 1 is a perspective view of the Kahn bar as usually sheared for beam construction, the diagonals alternating on each side of the bar, the diamond section shown being that of the ½-in. and small ¾-in. beam bar. Larger sections are rolled, as in Fig. 2. It will be seen that flanges extend on either side of the body; these are sheared with L-shaped cuts so that strips may be bent up to form diagonal shear members being rigidly attached and part of the main tension member. This is the distinctive feature of the Kahn bar. Various types of shearing are shown in Fig. 3.

Kahn bars are produced in the following standard sizes:—

Dimensions of Body.	Thickness of Wings.	Overall Width.	Weight per Foot.
	In.	In.	Lb.
½ in. square	¼	1¼	1·4
¾ in. ,, ...	5/16	2⅛	2·7
1 in. irregular	⅜	2⅝	4·8
1¼ in. ,, ...	½	3¼	6·9

The Kahn bar can be used equally well in beam, cantilever, lintels, and in floor construction both of solid and tile type.

Fig. 4 represents a typical method of using the bars in beams and floors. In the case of continuous beams and slabs, inverted bars of suitable length are placed in the upper part of the member over the intermediate supports, the above members of diagonals pointing downward. These are termed continuity bars, and provide for negative bending moments.

A similar arrangement is adopted where steel is required to assist the concrete in compression, the inverted bar lying in the area of compression, while the upward and downward diagonals inclined at an angle of 45 deg. form a latticed web.

Fig. 5 illustrates the adaptation of the Kahn bar to hollow tile floors, the reinforcement being embedded in wide concrete joints between rows of hollow tiles, the main beams being as already described. This type of floor can be used in spans up to 36 ft. without secondary beams, thus giving a flat soffit over large areas.

Column footings are reinforced by two series of bars crossing each other at right angles as illustrated in section and plan by Fig. 6.

The advantages claimed for the Kahn trussed bar are the following:—

(1) That the shear members are rigidly attached in accordance with theoretical requirements, thereby obviating the risk of misplacement or omission.

(2) That the diagonals, bent up to 45 deg., intersect the planes of both horizontal and vertical shear.

(3) That the bar is economical, as the shear members are cut out of surplus steel and the middle third of the bar being unsheared the flanges are available for resistance to tens stress where necessary.

(4) That the labour of shaping, fixing, a holding the bars in position while the concr is placed is eliminated.

The Trussed Concrete Steel Company, Lt supply another type of reinforcement in t form of a mechanical bond bar known as t Kahn Rib Bar, illustrated in Fig. 7. T differs from some deformed bars in that t metal has not been distorted from a straig line, and it is claimed that whereas distort bars previously used waste some 25 per ce of metal, the loss of section in this bar is r more than 5 per cent., as the only mater lost is that in the transverse ribs. The b is rolled in sizes from ⅜ in., rising by ⅛ in. to 1½ i the cross-sectional area corresponding with t area of a square bar of the same designatio Bars of this type are used for vertical and pa reinforcements, and can be applied to a system of reinforcement. Where applied columns the vertical bars are bound w steel of round or flat section.

Fig. 8 illustrates the Kahn Hy-Rib sheeti manufactured from single sheets of steel so as form a steel lath surface stiffened by fold projecting ribs. Applied vertically it obvia the use of studding, and used horizontally saves the cost of centring. This type of re forcement is applicable to the construction floors, roofs, walls, partitions, and kind structures. In floors and roofs it is used conjunction with reinforced concrete or oth beams, and itself forms centring for the depo tion of concrete. In walls and partitions it

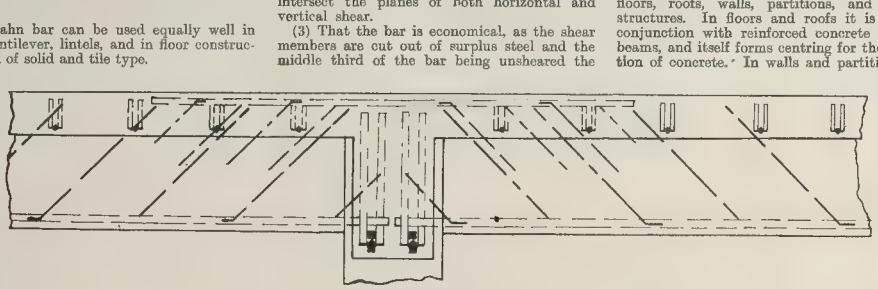


Fig. 4. Typical Beam and Slab Reinforcement.

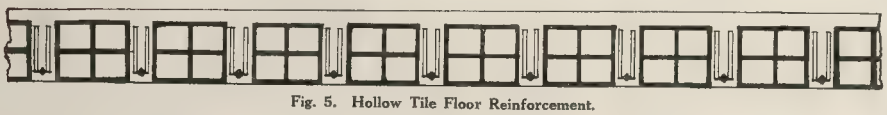


Fig. 5. Hollow Tile Floor Reinforcement.

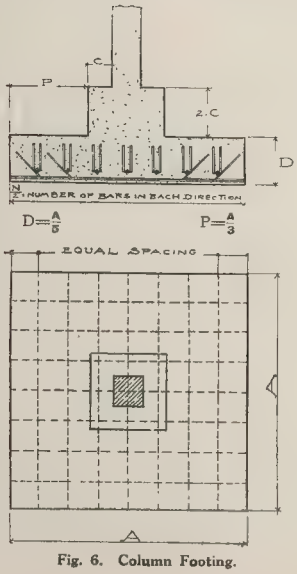


Fig. 6. Column Footing.

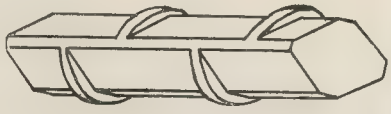


Fig. 7. Rib Bar Profile.



Fig. 8. Hy-Rib Sheeting.

ILLUSTRATIONS TO KAHN SYSTEM OF REINFORCED CONCRETE.

place and rendered in cement, the rigid making studs unnecessary. Clips and plates are supplied, as well as cutters and es to facilitate operations.

products of the Trussed Concrete Steel any are supplied at rates which cover royalties, specifications, and detailed ng drawings. No charge is made for s, providing the Kahn system is specified given work. All types of reinforcement by the company are sold freely to builders thers: there are no licensed contractors, special contractors are not necessarily yed.

Piketty System.—Messrs Paul Piketty o., 14, 16, and 18, Bloomsbury-, W.C., write us that in the article on system, in our issue of last week, no on is made as to their patent method ncreasing the limit of elasticity of ry mild steel intended for use as ls and stirrups, by stretching, so as to the quality of a higher steel resistance en the limit of resistance of elas- thus procuring a higher tension esistance at the price of ordinary mild By this means all the resistance that etal is able to give between the limit sticity and the limit of resistance is d, with the advantage that any crack- concrete can only be reached in the stresses.

(*To be continued.*)

BOOKS.

es on Cement. By BERTRAM BLOUNT, C. (The Institute of Chemistry of nt Britain and Ireland. London: 1912. 64. 2s. 6d.)

ectures delivered by the author at College last year, and now issued in let form, deserve to be in the hands ement-users and architectural students. an historical outline of the evolution aceous cements, the author discusses emical reactions and physical changes ing in the production and setting of s, modes of testing, and the standard- of tests, which are necessarily of ry character. A particularly service- art of the pamphlet is that where on is drawn to the errors that may n consequence of the unintelligent use ents, the causes of failure in cement ures, and the importance of discrimi- in the selection of aggregate employed ing mortar and concrete. The pam- concludes with four appendices, two ng to analytical methods, and the last rising certain significant clauses of the standard specification for Portland

lay Uses of Portland Cement. Second ion. (Published by the Associated land Cement Manufacturers (1900), London. Pp. 348. Paper covers, d.; stiff covers, 2s. 6d.)

UGH published by a manufacturing ly, this exceedingly useful and inter- book is fully equal in literary and al merit to many of the treatises on e and reinforced concrete now so ul. The information conveyed as to nposition, preparation, and deposition rete, the construction of moulds, con- block practice, and other matters is ully selected and expressed, and the ted examples of the uses of concrete robably lead many readers to make ed employment of that excellent ral material.

bique Ferro-Concrete: List of Works uted in the United Kingdom. 1897-1911. nd Edition. (Published by L. G. hel & Partners, Westminster. Pp.

pamphlet brief particulars are given than a thousand ferro-concrete struc- n the British Isles, together with the of the persons or authorities for whom ere built, and of the architects or rs responsible. The list, which is d in counties and districts, ought to reat convenience to architects desiring ect works carried out on the system concerned. Most of the structures mentioned in the pamphlet relate to building construction, but it is interesting to note that the list includes some 100 reservoirs and tanks, eighty wharves, jetties, and quays, and 100 highway and other bridges. Bearing in mind the large number of reinforced concrete works executed on the many other systems now available, it is evident that the new method of construction has been very widely adopted in the United Kingdom.

The Clayworker's Hand-Book. By ALFRED B. SEARLE. Second Edition. Thirty-two Illustrations. Revised and rewritten. (London: Charles Griffin & Co., Ltd. 1911. Pp. 416. 6s. net.)

SINCE publication of the first edition of this work considerable developments have taken place in the clayworking industries, and much additional information on the subject has been accumulated. The objects of the author are to make clear the characteristics of the various materials used, to explain the operations of obtaining and preparing the clay, and to describe manufacturing processes in such manner as to enable the clayworker to secure the most satisfactory work possible out of the machinery and plant available. These aims have been carried out in a thorough and essentially practical manner, and in its revised form the book should gain fresh popularity among the class to whom it is addressed.

British Clays, Shales, and Sands. By ALFRED B. SEARLE. With ten plates and fifty-three figures in the text. (London: Charles Griffin & Co., Ltd. 1912. Pp. 451. 7s. 6d. net.)

THE chief purpose of this book is to set forth in proper order the characteristics of the clays, shales, and sands occurring in the United Kingdom, together with information as to the localities where they are to be obtained in remunerative quantities. The attempt has not been made to describe the beds in question with the minuteness of a geological survey, but the author has evidently made a point of denoting, as far as possible within the limits of a relatively small volume, the areas where deposits of present or future commercial value may be found. The practical utility of such a book becomes evident when it is remembered that in most geological works palæontology receives far more attention than the more mundane considerations which lead clayworkers and other industrial classes to study geology. The task undertaken by the author has obviously involved an immense amount of labour, and he is to be congratulated on the encyclopædic collection of data now placed at the disposal of industrial firms and professional men interested in deposits of the kind indicated by the title of his new book.

Simple Calculations for Sanitary Officials and Students. (London: The Sanitary Publishing Co., Ltd. Pp. 34. 1s. net.)

THESE calculations are so very simple that we are a little inclined to wonder why it should be necessary to publish them. They relate chiefly to the computation of area, volume, the flow of water, and other elementary arithmetical operations. Those who require guidance in such work will find this little book all that can be desired.

Report on the Gypsum Deposits of the Maritime Provinces. By WILLIAM T. JENNISON, M.E. (Ottawa: Government Printing Bureau. 1911. Pp. 171.)

PREPARED for the Canadian Department of Mines, this report is in the form of a monograph on the gypsum deposits of Nova Scotia, New Brunswick, and the Magdalen Islands. By description, photographs, and maps, it shows the vast extent of the deposits, the processes and cost of manufacturing commercial gypsum, and the uses of the material. The report makes interesting reading matter and is of special value to all engaged in manufactures involving the employment of gypsum products.

Theory and Practice in Designing. By HENRY ADAMS, M.Inst.C.E., late Professor of Engineering at the City of London College. (London: Constable & Co., Ltd. 1911. Pp. 240. 6s. net.)

PROFESSOR ADAMS has written many helpful books on the design of structures, and the present work comes under the same category, although intentionally or inadvertently the title does not indicate what kind of designing is discussed.

As a text-book the treatise may be taken up by the mere beginner, for everything is explained in perfectly clear language, and the text is unencumbered by complicated mathematical formulæ. Moreover, it ought to be found of practical utility as a book of reference to architects and engineers engaged in structural design. The subjects treated include the design of beams, columns, roofs, steel-framed sheds, bridges, arches, and retaining walls. Steel preponderates as the material of construction, but timber, cast-iron, and stone also find a place in various chapters. The illustrations throughout are prepared from drawings and form a valuable feature of this useful work.

THE LONDON COUNTY COUNCIL.

THE usual weekly meeting of the London County Council was held on Tuesday in the County Hall, Spring-gardens, S.W. Captain G. S. Swinton, Chairman, presiding for the last time prior to his departure to India as a member of the Delhi Town Planning Committee.

LOANS.—The Finance Committee recommended and it was agreed to make a loan of 8,768*l.* to the Battersea Borough Council for an electricity generating plant; and a loan of 14,029*l.* to the Hackney Borough Council for improvements.

NEW SCHOOL.—It is proposed to erect, if necessary, a new school to accommodate 768 children on the Victory-place site, Bermondsey, and to enlarge the Paragon School, Bermondsey, to provide accommodation for an additional 240 children.

GREENWICH PIER.—It was recommended by the Highways Committee that owing to the condition of the river berth in front of the pier at the Greenwich generating station it was desirable to make an efficient and stable berth by driving a row of piles along a portion of the frontage and to lay concrete and chalk up to the piles to make a level bed.

LEGAL COLUMN.

Workmen's Compensation.

Some curious accidents have come to the notice of the Courts under the Workmen's Compensation Act, of which the recent case, Peel *v.* William Lawrence & Sons, Ltd., furnishes an example. A man employed in a cotton mill sprained a tendon of his finger whilst removing one of his socks. It is common knowledge that such accidents will sometimes occur in performing some quite simple and ordinary daily operation, but the question for the Court was whether the man was entitled to compensation from his employers.

It appeared that the men, for their own convenience and possibly even to render themselves more efficient, were in the habit of removing their socks; but the Court of Appeal has held that there was no special risk of such an accident incidental to the employment, and therefore the accident did not arise out of the employment. The accident happened ten minutes before actual work commenced, but as the man was preparing himself for the work this did not affect the case, as had the accident been connected with the employment it would have arisen "in the course of it."

There is a legal axiom, *de minimis non curat lex*, but under the Workmen's Compensation Act the law has to take notice of trivial incidents, as a considerable sum in compensation may arise out of them. A man may snap a tendon on his leg whilst merely walking, or he may strain his finger in undressing; if he is ascending a particular ladder, or if he is

assuming a dress necessary to his employment, very awkward questions may arise as to the connexion between the accident and his employment.

Patent Law.

In the case *re* Taylor's patent, recently tried before Mr. Justice Parker, the working of sect. 27 of the Patents Act, 1907, had to be considered. The patent in question related to mechanical underfeed "stokers," and on the application of the Erith Engineering Company the Comptroller had made an order under sect. 27 for its revocation. The owners had acquired the patent in 1908, and, even before assignment, had advertised it here and written to engineering firms about it. There was, however, in this country a patent, Daley's patent, now in the hands of the Erith Company, and in America there were two patents, one corresponding to Taylor's patent (that which had been revoked), and another corresponding to Daley's patent, and in 1909 there was litigation in the United States, and it was decided that Daley's patent was the master patent, and it was therefore admitted that Taylor's patent could not be worked here without infringing Daley's patent. Then the owners ceased further to exploit the patent.

The position, therefore, was this:—The only persons who could enable Taylor's patent to be worked here were the owners of Daley's patent, who were applying for its revocation. If they had granted a licence under their patent they could not subsequently take proceedings under sect. 27; but they contended that the owners of Taylor's patent should have applied under sect. 24 for a compulsory licence.

The Court held that the applicants for revocation had made out a *prima facie* case under sect. 27, but the owners of the patent had rebutted it by showing that the only persons who could enable it to be worked were the applicants themselves, and the non-application for a voluntary or compulsory licence was not in the circumstances of this case a sufficient reason for revoking the patent.

LAW REPORT.

West Kirby Sailing Club: County Court Case.

At the Birkenhead County Court on the 15th inst. his Honour Judge Yorke Stanger gave judgment in the case of Messrs. E. F. Blakeley & Co., engineers, of Liverpool, who sued the West Kirby Sailing Club for 87*l.* 15s. 9d. in respect to the erection of the clubhouse supplied to the defendants.

Mr. Layton (instructed by Messrs. Oliver Jones, Billson, & Co.) represented plaintiffs, and Mr. A. R. Kennedy (instructed by Messrs. Simpson, North, Harley, & Co.) was for defendants.

The case was partly heard in December last, when it was said by Mr. Layton that his clients were a firm of engineers. The defendants were respectively President and Commodore of the West Kirby Sailing Club.

On the suggestion of his Honour, the case was adjourned and sent to an arbitrator, Mr. Henry Hartley, architect and surveyor, of Liverpool. The arbitrator found that defendants were due to pay to plaintiffs 60*l.* 10s. 8d. for extra work and material supplied, and that plaintiffs were due to pay to defendants the sum of 63*l.* 2s. 10d. on account of defective material and workmanship, inasmuch as the weather boarding supplied was not weather boarding, the internal lining boarding was not seasoned timber, and was not properly fixed, the sills of window casings were defective, also the floors were uneven for want of proper footings to the brick piers supporting the building.

His Honour was of opinion that the action was one which should never have been brought into Court.

He gave judgment for defendants with the general costs on Scale C

LONDON COUNCILS.

Barnes.—An offer to give up land for road widening off Temple Sheen-road has been accepted by the Council, and kerbing and channelling works are to be carried out at an estimated cost of 160*l.* Plans by the Surveyor have been approved for making-up Washington-road.

Barnet.—At the last meeting of the Barnet Hospital Committee Mr. Pill, of Messrs. White, Son, & Pill, was appointed architect in connexion with extensions to be carried out to the isolation hospital. The estimated cost of the work is put at 3,000*l.*

Croydon.—The tender of Messrs. W. Smith & Sons, London-road, at 14,493*l.*, has been accepted for the erection of the boys' school.

Ealing.—For making-up a portion of Midhurst-road, West Ealing, with indurated Victoria stone, the tender of Messrs. Clements, Knowling, & Co., at 627*l.*, has been accepted by the Town Council.

Lambeth.—During the ensuing year repairs are to be carried out in various roads throughout the Borough at an estimated cost of 18,371*l.*

Richmond.—Wood-paving is to be laid in Kew-road at an estimated cost of 20,500*l.*, which sum includes relaying a part of the existing kerbing.

Shoreditch.—Electricity mains are to be extended in the Bethnal Green area at an estimated cost of 230*l.* Westmoreland-place is to be opened up into Murray-street by the demolishing of Nos. 48-50, Murray-street. The cost of the whole work, including paving, etc., is put at 1,800*l.*

Southwark.—The tender of Mr. W. Vanstone, 61, Chandos-street, Strand, W.C., at 523*l.*, has been accepted for carrying out alterations and decorations at the Central Library.

Stepney.—The tenders of Messrs. Ashby & Horner, at 410*l.* and 354*l.*, have been accepted for carrying out redecorations and structural alterations, and supplying fittings respectively at the Mile End Library; as has also the tender of Messrs. J. H. Sankey & Son, Ltd., for the annual supply of Portland cement, at 1*l.* 8s 11d. per ton.

Thames Ditton.—Imber Park-road is to be made up at an estimated cost of 901*l.*

Tottenham.—The following tenders have been accepted by the Urban District Council:—Mr. E. T. Bloomfield, Tottenham, at 131*l.* and 127*l.*, for making-up Castle Wood-road and Moundfield-road respectively; Mr. J. Adams, Wood Green, at 105*l.*, for making-up part of Holcombe-road; Mr. E. Knifton, Edmonton, at 385*l.* 3s. 3d., for making-up the remainder of Hampden-road. Plans have been passed for Mr. F. Brooking, 4, St. Anne's-road, for the erection of three shops and houses in High-road; also for Messrs. Brand, Pettitt, & Co., for the erection of a garage at the rear of 200, High-road. Mr. H. S. Couchman has lodged plans for the erection of a shop and warehouse in Bruce-grove.

Wandsworth.—That part of Upper Richmond-road, Putney, between Priory-lane and Priests'-bridge, is to be paved in three sections:—(1) With Cormastik road material: (2) with Durax armouring; and (3) with granite macadam with Plascom binding material. For carrying out the work of sections 1 and 2, the tenders of the British Trust Corporation, Ltd., and the Durax Dustless Roads, Ltd., have been accepted at 5s. and free maintenance for three years, and 7s. 5d. and free maintenance for five years, respectively. The work for the third section is to be carried out by the Borough Engineer at an estimated cost of 4s. per yard super. Tenders are to be invited for flagging the footway of a portion of Upper Richmond-road. A 12-in. pipe sewer is to be constructed in a portion of Wimbledon Park-road, Southfield, at an estimated cost of 360*l.* The tender of Mr. Thomas Adams, at 687*l.*, and schedule prices for extras or omissions, has been accepted for paving Normanhurst-road, Streatham; as has also the tender of Mr. J. Mears, at 230*l.*, and schedule prices for extras or omissions, for paving a portion of Upper Richmond-road, Putney. In both cases the footways are to be paved with Aberdeen adamant. Plans have been passed for Messrs. Swain & Selley for the erection of eight shops in Upper Tooting-road, also for Messrs. Holliday & Stanger for fourteen houses in Woodbourne-avenue, Streatham.

West Ham.—Portions of Saville-road and Leonard-street are to be made up as new streets. The following plans have been passed:—Messrs. F. & F. J. Wood, additions to offices, at Messrs. Suter, Hartmann, & Co.'s premises, Silvertown; Messrs. Clemens Brothers, four houses, Capel-road, Forest Gate; Mr. W. Sweetingham, alterations and additions to cinematograph hall, Rathbone-street, Canning Town. Plans have been lodged by Messrs. W. & T. R. Milburn, Mr. S. Knight, and Mr. F. Parnell to erect a workshop and store at the rear of the Empire Theatre, Broadway, Stratford; to adapt the Salisbury Hall, Romford-road, Stratford, as a cinematograph theatre; and to make alterations to the cinematograph theatre, Adamson-road, Custom House, respectively. The Education Committee have approved plans prepared by the Architect for the erection of two schools and a handicraft centre, and for the enlargement of the Water-lane and Harold-road handicraft centres.

Westminster.—The north-east corner of the garden enclosure in Parliament-square is to be rounded off at an estimated cost of 130*l.*

OBITUARY.

Mr. F. W. Albury.

The death, on March 23, at Parkside, Re[ading], is announced of Mr. Frederick Willi[am] Albury. Mr. Albury was elected in 1866 Associate, and in 1875 a Fellow of the Ro[yal] Institute of British Architects. In Februa[ry] 1910, he took into partnership Mr. H. Whi[te]man Rising, F.R.I.B.A. (1903), of Norfo[lk] street, Strand, and also his old pupil [and] friend, Mr. E. P. Morgan, who had been his office for the past twenty-five years, un[der] the style of Messrs. Albury, Rising, & Morg[an] of No. 154, Friar-street, Reading, [and] Oswaldestre House, Norfolk-street, Stra[nd] W.C. In 1907 Mr. Albury was nominated a competition, limited to three architects, submit designs for the public library [and] reading-rooms in Oxford-road, West E[nd] Reading, and his designs, in the Renaissa[nce] manner, were chosen. The building is of brick with oolitic stone dressings, with a m[ain] frontage of 120 ft., erected by Messrs. Kingerlee & Sons, of Oxford, at a cost nearly 4,000*l.*, and all the public rooms upon the ground floor. He was the archit[ect] of the Palmer Memorial Building and T[em]perance Institute in West-street, built by Whiting on a contract for 4,750*l.*; A. H. Bull's premises in Broad-street; Saviour's Church Sunday-schools; and, Mr. George W. Webb (1898), of the Wellington Club, Reading. The funeral was fixed Thursday, 28th inst., at Christchurch, Whit[ley] Reading.

FOREIGN AND COLONIAL.

Y.M.C.A. Buildings, Toronto.

With reference to the notice on p. 279 the *Board of Trade Journal* of February 1911, relative to the proposed construction a new central building for the Young M[en's] Christian Association at Toronto, the Imper[ial] Trade Correspondent at that place (Mr. F. Field) reports that the plans of the propo[sed] building, the cost of which is estimated 529,000 dollars (about 109,000*l.*), have now b[een] approved. Some further particulars regard[ing] the construction and furnishing of the bu[ild]ing, together with a plan, may be seen, the name and address of the firm of archite obtained, by British manufacturers at Commercial Intelligence Branch of the Bo[ard] of Trade, 73, Basinghall street, London, E.C.

Building in Servia.

The *Nachrichten für Handel* (Berlin) February 26 announces that proposals allocating the following sums for the purpo[ses] indicated have been discussed in the pres[ent] session of the Skupschina:—800,000 din[ars] (32,000*l.*) for University requirements, inc[lud]ing the erection of a building for the techn[ical] section; 400,000 dinars (16,000*l.*) for the b[uil]ding of a national library; a subsidy 200,000 dinars (8,000*l.*) for the erection building for the Academy of Science. T following further grants have also been p[ro]posed:—250,000 dinars (10,000*l.*) for the erect[ion] of a gymnasium and 750,000 dinars (30,00[0] for other school requirements. From Sanitary Funds are allocated:—1,600,000 din[ars] (64,000*l.*) for a lunatic asylum, 1,245,000 din[ars] (49,800*l.*) for the completion of the pu[blic] hospital in Belgrade, 2,800,000 dinars (112,00[0] for the erection of a hospital in the inte[rior] of the country, and 700,000 dinars (28,000*l.*) i[mp]improvements at three Servian Spas.

Roadmaking, Building Construction, etc., Congo State.

With reference to the notice on p. 68 of the *Board of Trade Journal* of January 11 relat[ing] to the Congo State budget expenditure [for] 1912, it is notified that the *Moniteur Be[lge]* (Brussels) of March 16 contains a decree [ap]proving an extraordinary expenditure 42,419,103 francs (about 1,696,800*l.*) in Congo State during 1912. It may be not[ed] that, *inter alia*, that 18,983,000 francs (ab[out] 759,300*l.*) have been earmarked for pu[blic] works, such as road-making, building constr[uc]tion, establishment of telegraph lines, sanit[ary] work, etc., and 1,700,000 francs (about 68,00[0] for the establishment of wireless telegra[phy] stations.

List of Competitions, Contracts, etc.

or some Contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) are advertised in this number:** Competitions, —; Contracts, iv. vi. viii. x.; Public Appointments, xvi.; Auction Sales, xxii.
ertain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not ind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.
he date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Competitions.

CH 30.—**Edinburgh.**—MEMORIAL TO KING RD.—Limited. See Competition News, , February 9.
CH 31.—**Manitoba, Canada.**—PARLIAMENT DINGS.—The Government of Manitoba designs for the new Parliament buildings erected in the City of Winnipeg. See tisement in issue of February 9 for further ulars
IL 13. — **Ormskirk.** — CLUB-HOUSE.—Com- e plans are invited for proposed club- for Ormskirk Golf Club. See advertise- in issue of March 1 for further particulars.
IL 20.—**Birmingham.**—BLUE COAT SCHOOL. ited to local architects. Assessors, Mr. Hunt, F.R.I.B.A., and Mr. C. E. Bate- F.R.I.B.A. Particulars from the Secre- the Blue Coat School, Birmingham.
1.—**Rhos Ruabon.**—PAIR OF WORKMEN'S GES.—Premiums of 10*l.* and 5*l.* Assessor, Raymond Unwin, F.R.I.B.A. Particulars Mr. G. Meirion Griffiths, Rhos Ruabon.
1. — **Wombwell.**—SWIMMING BATHS.— Wombwell U.D.C. invite designs in com- n for public swimming baths, to be d in Hough-lane, Wombwell, Yorkshire. prizes of the value of 40*l.*, 30*l.*, and 20*l.* tively are offered for the designs placed second and third respectively by the or. See advertisement in issue of ary 16 for further particulars.
15.—**Portland.**—COUNCIL OFFICES.—The nd U.D.C invite competitive designs and for Council Offices. See advertisement in f March 8 for further particulars.
1.—**Dunfermline.**—INSTITUTE AT NETHER- Cost not to exceed 7,000*l.* Premiums of 1*l.*, and 10*l.* Assessor, Mr. E. A. Jamieson. ulars from the Secretary, Carnegie Trust, street, Dunfermline.
28 — **Hale, Cheshire.**—TOWN PLANNING E.—Premiums 50*l.* and 25*l.* Particulars he Council Offices, Hale.
30.—**Padiham.**—TOWN HALL, BATHS, ETC. niums 40*l.* and 20*l.* Particulars from Mr. egson, A.M.Inst.C.E., Surveyor's Office, am.
1. — **Dusseldorf.** — A plan for the ion of the City of Dusseldorf. Premiums 00*l.* to 375*l.* Conditions on application to hief Burgomaster, Dusseldorf. A transla- ppeared on page 365, September 29.
SEP 30. — **Saxon Shell Prize.** — Fifty s; with medal, is offered for essay on a al subject. Particulars from the Sanitary te, 90, Buckingham Palace-road, S.W.
DATE. — **Cardiff.** — FOOTBALL STANDS.—Pre- s 30*l.*, 20*l.*, and 10*l.* Particulars from S. Arthur, 53, Queen street, Cardiff
DATE.—**Jordanhill, Glasgow.**—PROPOSED NG COLLEGE.—Limited to six firms, named petition News, December 1, page 635.
DATE. — **Sheffield.** — CRIPPLES' HOME — d to local architects. Mr. E. M. Gibbs, B.A., and Mr. F. E. P. Edwards, B.A., assessors.
DATE. — **Warrington.** — SCHOOL. The ington Education Committee invite com- e plans for the erection of a public tary school. See advertisement in issue ruary 16 for further particulars.

Contracts.

BUILDING.

date given at the commencement of each aph is the latest date when the tender, or mes of those willing to submit tenders, e sent in.

H 29.—**Eastbourne.** CONVENIENCES.—For ction of public conveniences in Gildredge Plan and specification seen, and form of from Mr. A. E. Prescott, Borough Sur- Town Hall, Eastbourne.
H 30.—**Aspatria.**—HOUSES.—For erection dwelling-houses in Lawson-street. Plans ecifications with Mr. Robert Bell, Rich- Hill, Aspatria
H 30. **Burslem.** ADDITIONS. For erec- additions to the Workhouse, Chell. Mr. Slater, architect, Overhouse-chambers, n. Deposit of 3*l.* 3*s.*
H 30. — **Fulneck.** — HEADQUARTERS.—For n of new headquarters for the Boys' e at Fulneck. Drawings seen, and quan- rom Messrs. C. S. Nelson and G. Birkin- architects, Sun-buildings, 15, Park-row,
H 30. — **Llancarvan (Glam.).** — HOUSE.— ction of a house at Fingerpost. Plans and ations with Mr. Coleman, tenant, on site.

MARCH 30.—**Martin.**—REPAIRS, ETC.—For renovation and repairs of Wesleyan chapel and vestry. Mr. J. W. Webster, Martin, Lincoln.
MARCH 30. —**Monmouth.**—COTTAGES, ETC.—For the erection of cottage and homestead on holding No. 1 in Henllys; three cottages on holdings near Llanhilleth, in the parish of Abercarn; two cottages, with stables and cart-sheds, on holdings Nos. 1 and 2 in Llanmartin. Plans and specifications, on deposit of 1*l.* 1*s.*, from Mr. C. Reginald Harding, county land agent, County Council-buildings, Newport, Mon.
MARCH 30. — **Rhymney.** — STABLES, ETC. — For erection of new stables and motor-house, etc., for Messrs. A. Buchan & Co. Plans and specification with Mr. Thomas Roderick, architect, Clifton-street, Aberdare.
APRIL 1. **Alnwick.**—HOUSE. For erection of a two-storied dwelling-house on Alnwick Moor. Plan and specification with Mr. M. T. Wilson, M.R.S.I., architect, Alnwick.
APRIL 1.—**Bristol.**—STAIRCASE, ETC.—For erection of a staircase at Eastville Workhouse; painting, etc., in relief depôt at Eastville; painting, etc., the male consumptive hospital at Southmead Workhouse. Mr. J. J. Simpson, Clerk to the Guardians, St. Peter's Hospital, Bristol
APRIL 1. **Cleckheaton.**—WALLS, ETC. For erection of boundary walls, bandstand shelter, laying-out of footpaths, etc. Plans and conditions of contract seen, and forms of tender and quantities from Mr. C. Lund, M.I.M. and C.E., Town Hall, Cleckheaton.
APRIL 1.—**Gower.**—SEA WALL.—For the erection of a sea wall between the road and the beach, in front of Beach-terrace, Pendlawdd Specifications, quantities, and form of tender from Mr. H. J. Ind, Clerk to the Council, Central Buildings, Fisher-street, Swansea. Information from the Council's Surveyor, Mr. C. A. Jones, Fairfield, The Crosses, Duntwant, S.O., Glamorgan.
APRIL 2. — **Aberfan.** — PICTURE PALACE. — For erection of picture palace for the Aberfan Picture Palace Company, Ltd. Plan and specifications seen, and quantities from Mr. T. E. Rees, architect, Bank-chambers, Merthyr Tydfil. Deposit of 2*l.*
APRIL 2.—**Brentford.**—SUBWAYS.—For the extension of existing pipe subways at the Infirmary, Isleworth. Plans and specifications by Mr. E. R. Dolby, M.Inst.C.E. (Messrs. Dolby & Williamson, 8, Prince's-street, Westminster, S.W.). Deposit of 2*l.* 2*s.*
APRIL 2.—**Halifax.** —ADDITIONS.—For additions and alterations to Highroad Well Congregational Chapel. Messrs. Clement Williams & Sons, architects, Post-office Buildings, Commercial-street.
APRIL 3. **Abercarn.** PREMISES For erection of new premises for the Abercarn Working Men's Club and Institute. Plans and specification with Mr. R. L. Roberts, M.S.A., Abercarn.
APRIL 3.—**Barnsley.**—EXTENSION.—For the extension of the Old Town School. Plans and specifications seen, and quantities from the architect, Mr. E. W. Dyson, Regent-street, Barnsley.
APRIL 3.—**Farnham Common.**—RESERVOIR.—Erection of a storage reservoir for the Burnham, Dorney, and Hitcham Waterworks Company, Ltd. Plans with Mr. C. S. Vardy, P.A.S.I., architect and surveyor, Cliveden-chambers, Maidenhead. Quantities on deposit of 10*s.*
APRIL 4. **Barnsley.**—HOUSE, ETC.—For erection of a caretaker's house and committee-room, etc., near the Minor Reservoir at Upper Midhope, near Penistone Drawings and specification seen, and quantities, with forms of tender, from Mr. J. Henry Taylor, M.Inst.C.E., Waterworks Manager, Manor House Offices, Barnsley.
* APRIL 4.—**Bognor.**—THREE SHOPS.—Tenders are invited for three shops at Camden-gardens, London-road, Bognor, Sussex. See advertisement in this issue for further particulars.
APRIL 4. — **Huddersfield.** INN. — For taking down and re-erecting the Plough Inn, Messrs. Kirk & Sons, architects, Central-buildings, Market-place, Huddersfield. Deposit of 1*l.* 1*s.*
APRIL 6. —**Aspatria.**—HOUSE, ETC.—For erection of dwelling-house and shop in Queen-street. Plans and specifications with Mr. R. Bell, Richmond Hill, Aspatria, Cumberland.
APRIL 6.—**Chesterfield.** — CONVENIENCES. For the demolition of the existing urinal and the erection of new public conveniences in Cavendish-street. Plans and specification seen and quantities and form of tender at the Borough Surveyor's Office, Salter-gate.
APRIL 6. — **Chesterfield.** — EXTENSIONS. For extensions to engine-house and boiler-house at the Borough Electricity Works. Plans and specification seen and quantities and form of tender from the Borough Electrical Engineer's Office, Chatsworth-road. Deposit of 1*l.* 1*s.*
APRIL 8. — **Coventry.** — DWELLINGS.—For erection of thirty-two workmen's dwellings, Pridmore-road. Drawings and conditions of contract and specification seen, and form of tender and quantities, on deposit of 1*l.* 1*s.*, from Mr. J. E. Swindlehurst, City Engineer and Surveyor, St. Mary's Hall.
APRIL 8.—**Kendal.**—BANDSTAND.—Construction of an oak bandstand at the Abbot Hall Recreation Grounds. Plans, conditions of contract, specification, quantities, and form of tender from Mr. F. W. Oxberry, Borough Surveyor, Town Hall, Kendal.
APRIL 8. — **Windsor.** — DEMOLITION. — For the demolition of two blocks of soldiers' quarters and part of one block of latrines, also filling basements, making-up parades, gravelling, etc., at the Victoria Infantry Barracks, Windsor. Plans, specification, and conditions of contract at the office of the Director of Barrack Construction, 80, Pall Mall, London, S.W., or at the Barrack Construction Office at the Victoria Infantry Barracks, Windsor Deposit of 10*s.*
APRIL 10.—**Margam.**—HOUSE, ETC.—Alterations at public baths and erection of caretaker's house. Plans and specifications seen, and forms of tender, on deposit of 2*l.* 2*s.*, from the Surveyor, Mr. John Cox, Port Talbot.
APRIL 11. **Abingdon.** POST OFFICE. — For alterations to Abingdon Post-office. Drawings, specification, and conditions and form of contract at Abingdon Post-office Quantities and forms of tender, on deposit of 1*l.* 1*s.*, from the Secretary, H.M. Office of Works, etc., Storey's-gate, London, S.W.
APRIL 12.—**Bugsworth.**—ADDITIONS, ETC.—For alterations and additions to the Council school. Drawings and specification with Mr. George H. Widdows, A.R.I.B.A., Architect to the Committee, County Education Office, St. Mary's-gate, Derby. Quantities on deposit of 1*l.* 1*s.*
APRIL 12. — **Pontselly.** ALTERATIONS. — For alterations to a house called "Quarry Mawr." Drawings and specifications with Mr. J. Teifion J. Williams, architect, Napier-street, Cardigan.
* APRIL 13.—**Brymbo.** DRILL-HALL, ETC.—The Denbighshire Territorial Force Association invite tenders for a drill-hall, miniature rifle-range, etc. See advertisement in this issue for further particulars.
APRIL 13. — **Denbigh.** — DRILL-HALL, ETC.—For the construction of a drill-hall, caretaker's house, and miniature rifle-range at Brymbo, Denbighshire, for the 4th Battalion Royal Welsh Fusiliers. Drawings, specifications, and form of contract with the architect, Mr. C. D. Rutter, M.S.A. Parr's Bank Buildings-chambers, Wrexham. Quantities on deposit of 1*l.* 1*s.*
APRIL 13. — **Manchester.** — SCHOOL.—For erection of a new municipal school in Grange-street, Bradford, Manchester. Plans seen and quantities at the Education Offices, Deansgate, Manchester, on deposit of 2*l.* 2*s.*
APRIL 15.—**Romiley.** SCHOOL.—For erection of a new elementary school in Sandy-lane, Romiley, near Stockport. Plans and specifications seen, and quantities from the Architect, Mr. Joseph Holt, A.R.I.B.A., 9, Albert-square, Manchester, on deposit of 1*l.*
APRIL 15.—**Tonbridge.**—SCHOOL.—Erection of new county school. Plans and specification, by the Committee's Architect, Mr. W. H. Robinson, M.S.A., seen with Mr. Fras. W. Crook, Secretary, Caxton House, Westminster, S.W.
* APRIL 16.—**Lambeth.**—PORTER'S LODGE, ETC —The Lambeth Guardians invite tenders for erection of porter's lodge, dispensary, and extension of nurses' home at the Infirmary, Brook-street, S.E. See advertisement in this issue for further particulars.
* APRIL 17. **Southampton.** NEW CLOAKROOM —The Southampton C.C. invite tenders for the erection of a new cloakroom at the Itchen Ludlow-road School. See advertisement in this issue for further particulars.
APRIL 19. — **Basingstoke.** — WORKS. — For foundation works for the new asylum to be erected at Park Prewett, near Basingstoke, Hants. Plans and specification by architects, Messrs. George T. Hine & H. Carter Pegg, of 35, Parliament-street, Westminster, S.W. Deposit of 5*l.*
* APRIL 20.—**Bexley.** BRANCH LIBRARY.—The Bexley U.D.C. invite tenders for proposed branch library. See advertisement in this issue for further particulars.
* APRIL 24. — **Limbury.** — SCHOOL. — The Bedfordshire C.C. invite tenders for new Council school. See advertisement in this issue for further particulars.
NO DATE.—**Ardglass.**—SHOP.—For erection and completion of a shop and dwelling. Plans and specification with Messrs. Browne Brothers, architects, Ardglass, Ireland.
NO DATE.—**Baildon.**—ALTERATIONS, ETC.—For alterations and redraining sanitary conveniences

BUILDING—*continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

at Lower Holme Mills. Mr. A. Sharp, architect, Market-street, Bradford.

No Date.—**Barnsley.**—Factory.—Erection of a new factory at Stocks-lane. Plans and specifications seen, and quantities from Messrs. R. Castle & Son, architects, London City and Midland Bank-chambers, Cleckheaton.

No Date. **Basford.**—Additions.—For alterations and additions to lavatory accommodation at the Workhouse, Highbury-road, Bulwell. Names, with deposit of 1*l.* 1s., to Mr. W. V. Betts, architect, Radford-road, Old Basford, Nottingham.

No Date. **Billingham.**—School.—Alterations and additions to existing buildings and erection of a new infants' department at Church schools. Messrs. Clark & Moscrop, FF.R.I.B.A., architects, Darlington.

No Date. **Buxton.** House.—For erection of farmhouse. Street House Farm, London-road. Mr. G. E. Garlick, Quadrant-chambers, Buxton, and Spring Bank, New Mills.

No Date. **Devon.** — Additions, etc. — For alterations and additions to farm buildings, for the Devon County Council. Messrs. Ellis, Son, & Bowden, F.S.I., surveyors, Bedford-chambers, Exeter.

No Date. **Dowlais.** — Additions, etc. — For alterations and additions to the Plough Inn, at Lower High-street. Mr. J. T. Jenkins, M.S.A., architect and surveyor, Porth (Glam.). Deposit of 2*l.* 2s. for quantities.

No Date — **Harrogate.** — Cottage, etc.—Erection of a warehouse, stabling, and cottage near East-parade. Mr. Samuel Stead, architect, Westminster-chambers, Station-parade, Harrogate.

No Date. **Horncastle.**—House. -For the construction of a new court-house. Mr. James Thropp, County Surveyor. Offices 29, Broadgate, Lincoln.

No Date.—**Manningham.**—Church, etc. For erection of a mission church and school for St. Luke's parish, Manningham, Bradford. Plans with Messrs. T. H. & F. Healey, architects, 42, Tyrrel-street, Bradford.

No Date. **Masham.** Hall.—For erection of a town hall Mr J. Houfe, architect and surveyor, Albert-chambers, Albert-street, Harrogate.

No Date.—**Pontefract.**—Mortuary.—For erection of a public mortuary. Mr. John E. Pickard, Borough Surveyor, Municipal Offices, Pontefract.

No Date. **Pontefract.**—Stables. For erection of stables. Mr. John E. Pickard, Borough Surveyor, Municipal Offices, Pontefract.

No Date.—**Silloth.** Additions. -For alterations and additions to premises, Eden-street Plans and information with Mr. George Armstrong, architect, 24, Bank-street, Carlisle.

ENGINEERING, IRON, AND STEEL.

April 2. — **Newcastle-on-Tyne.** — Culvert.—For the construction of a reinforced concrete culvert in the valley of the Ouse Burn, and other works. Specification, quantities, and form of tender on deposit of 2*l.* 2s., from the City Engineer, Town Hall, Newcastle-upon-Tyne.

April 3.—**Belfast.**—Trial Pits.—For sinking trial pits and boreholes in the Silent Valley. Specification by Mr. F. W. M'Cullough, M.Inst.C.E., at the Water Office.

April 3.—**Blackpool.**—Heating.—For heating the Palatine road new Council school. Particulars, with plans, from Mr. J. S. Brodie, Borough Engineer.

April 4.—**Aberdeen.**—Bridge, etc.—For construction of aidings, platforms, steel footbridge, culvert, and other works north of Guild-street Bridge. Drawings seen and quantities, on deposit of 1*l.* 1s., from the engineer, Mr. James A. Parker, 80, Guild-street, Aberdeen.

April 5. -**Brongwyn.**—Bridge.—Erection of a new footbridge at Forth, Brongwyn. Plan and specifications at the Post-office, Ponthirwen. Mr. Thomas Evans, Surveyor, Pantyrits, Llechryd.

April 12. — **Cricklewood.** — Engines. — The Metropolitan Water Board invite tenders for the erection of six installations of Diesel oil-engines to actuate horizontal three-throw ram pumps, with pipes, connexions, and all appurtenant works; also two 10-ton travellers. To be erected at the Board's Cricklewood pumping-station, with a 10-ton traveller, etc, and a similar installation to be erected at the Board's Fortis Green station. Drawings, conditions of contract, and specification at the offices of the Board (Chief Engineer's Department), Savoy-court, Strand, W.C.

April 12. -**Darenth.** - Engine. — The Metropolitan Water Board invite tenders for the erection of a Diesel oil-engine, with pumping machinery, pipes, connexions, and all appurtenant works, also 8-ton traveller, etc., at Greenstreet Green, in the parish of Darenth, Kent. Drawings, conditions of contract, and specification at the offices of the Board (Chief Engineer's Department), Savoy-court, Strand, W.C.

✱ April 15.—**West Ham.**—Iron Staircases.—The West Ham B.C. invite tenders for external iron staircases at Denmark-street and Water-lane Schools. See advertisement in this issue for further particulars.

April 17. — **Mayfield.** — Reservoir.—For erection and construction of a pumping-station and reservoir. Plans and site of works seen, and quantities, on deposit of 2*l.* 2s., from Mr. Luther Adams, Surveyor to the Council, Stanton, near Ashbourne.

FURNITURE, PAINTING, MATERIALS, etc.

March 29.—**Ealing.**—Painting.—For external painting of municipal cottages in North and South roads, South Ealing. Specifications seen, and forms of tender from Mr. C. Jones, M.Inst.C.E., Borough Engineer, Town Hall, Ealing, W. Deposit of 1*l.* 1s.

April 2. -**Rochdale.**—Painting For external painting at the Smith-street establishment, for the Baths Committee. Particulars from Mr. P. W. Hathaway, A.R.I.B.A., Town Hall.

April 2. — **Thorne (Yorks).** — Painting. For painting at the isolation hospital. Mr. J. Stanley, Surveyor, Thorne.

April 3.—**Durham.**—Painting For painting buildings, gates, etc., at the Cemetery, Blackhill. Specification with the architect, Mr. J. J. Eltringham, Blackhill, Durham.

April 3.—**London.** Painting.—For cleaning and painting the exterior of the public baths and wash-houses, Lime-grove, Shepherd's Bush, and Addison-gardens bridge. Forms of tender and specification from Mr. H. Mair, M.Inst.C.E., Borough Surveyor, Town Hall, Broadway, Hammersmith, W.

✱ April 3.—**Various.** Cleaning and Painting. —The Midland Railway Company invite tenders for cleaning and painting at following :—Somers Town, Edwalton, Plumtree, Widmerpool, Upper Broughton, Old Dalby, Grimston, Holwell Sidings, Geddington, Weldon and Corby, Gretton, and Harringworth. See advertisement in this issue for further particulars.

April 6.—**Glasgow.** Painting.—For cleaning and painting at Belvidere Hospital. Specifications and forms of tender at the Office of Public Works, City Chambers, 64, Cochrane-street.

April 10.—**Leeds.**—Painting.—For painting at the city hospitals. Specification and quantities at the Stewards' Office, Seacroft Hospital

✱ April 15.—**West Ham.** —Blinds. The West Ham B.C. invite tenders for supplying and fixing blinds at Gainsborough-road Schools. See advertisement in this issue for further particulars.

✱ April 18.—**London, N.**—Painting.—The St. Mary, Islington, Guardians invite tenders for painting, whitewashing, etc., at Infirmary, Highgate-hill, N. See advertisement in this issue for further particulars.

✱ April 18 —**Tooting.**—Painting.—The Wandsworth Guardians invite tenders for painting works at Tooting Home, Church-lane. See advertisement in this issue for further particulars.

April 19. — **Blackpool.** — Repairs, etc. — For decorations and repairs to the central and branch police-stations. Forms of specification from Mr. T. A. Connely, on site of proposed Palatine-road, Council school.

ROADS, SANITARY AND WATER WORKS.

March 29. **Brandon.** Sewage —For construction of sewer, with manholes, etc. Quantities from Mr. G. G. Donkin, Surveyor, Langley Moor, Durham.

March 30 —**Alton.**—Granite. —For supply of broken granite. Forms of tender from Mr. C. W. Maudsley, Surveyor, Park Close, Alton.

March 30.—**North Witchford.** —Granite —For supply of granite, iron slag, flints, rag-stone, and sand. Mr. A. W. Broker, Surveyor, Wimblington

March 30.—**Stoke-on-Trent.**—Road.—For the culverting of about 70 yds. of the Scotia Brook, in Tunstall Park. Plans seen, and quantities, on deposit of 2*l.* 2s., from the Borough Surveyor, Town Hall, Stoke-on-Trent.

April 1.—**Bridgwater.**—Granite.—For supply of broken granite. Forms of tender from Mr. W. A. Collins, Surveyor, 58A, Eastover, Bridgwater.

April 1.—**Bulkington.**—Stone.—For supply of stone. Forms of tender from Mr. E. Cuthbert, Surveyor, Council Offices, Bulkington.

April 1.—**Droxford.**—Granite. For supply of granite. Forms of tender from Mr. A. V. Carter, Surveyor, Droxford, near Bishop's Waltham, Hants.

April 1.—**Glasgow.**—Sewer.—For the construction of a 12-in. pipe sewer in Cathcart-road. Specifications and forms of tender at the Office of Public Works, City Chambers, 64, Cochrane-street.

April 2. **Limerick.**—Setts.—For supply paving setts. Specification and form of te from the Surveyor, Town Hall, Limerick.

April 2. — **Llandaff.** — Streets. — For pr street improvement works. Plans and spec tions seen, and quantities from the Surv Mr. James Holden, A.M.Inst.C.E., Park H Park-place, Cardiff.

April 2. **Maldon.**—Materials.—For supp materials. Forms of tender and particulars Mr. E. J. Ennals, Surveyor, 6, Market Maldon.

April 2.—**Portslade.**—Materials.—For su of broken granite, clean hill surface f screened dug flints. Forms of tender and ticulars from the Surveyor, Mr. A. T. Allen St. Andrew's-road, Portslade-by-Sea.

April 2.—**Rumney.**—Sewage.—For the struction of a system of sewerage for the pa of Rumney, near Cardiff. Plans and spec tion seen, and quantities and form of tende deposit of 5*l.* Mr. A. H. Rees, Clerk to Council, Queen's-hill, Newport, Mon.

April 3. -**Hugil.**—Road.—For road dive at Ings, Hugil. Plans, specification, and q tities at the office of Mr. Joseph Bintley, Co Surveyor, 7, Lowther-street, Kendal.

April 3. — **Newton.** — Sewers, etc. — For construction of pipe sewers and relative w Plans may be seen, and specification from W. L. Douglass, M.Inst.C.E., District Engi District Offices, Hamilton. Deposit of 1*l.*

April 3. — **Shepton Mallet.** — Main. trenching and laying about 1,350 yds 4 in. 30 yds, 5 in. cast-iron main at Gurney Slade, Binegar. Specification from the Cour Engineer, Mr. William Phelps, C.E., She Mallet. Deposit of 2s. 6d.

April 4. — **Shrewsbury.** — Sewage.—For struction of sewage outfall works at Pontesb Specifications and quantities, on deposit of 1 from Mr. H. Asher, Surveyor, 24, St. John's Shrewsbury.

April 6.—**Newark.** Sewage.—For extensi the sewage disposal works at North Collingh Plans seen, and contract and tender f from the Surveyor, Mr. R. Oakden, A.M.Inst.C.E., 27, Winchilsea-avenue, Newa

April 8.—**Barrowford.**—Streets.—For va street works. Specifications and forms of te from Mr. G. W. Hewes, Surveyor to the Cou

April 9. — **Bath.** — Castings, etc. — Cast pipes and special castings. Quantities from Engineer, Mr. W. H. Radford, C.E., Al chambers, Nottingham. Deposit of 2*l.* 2s.

April 9. — **Southgate.** — Street Works.— private street improvements. Plans with Council's Surveyor, Mr. C. G. Lawson, Council Offices, Palmers Green, N. Depos 2*l.*

April 10. — **Birmingham.** — Sewer.—For struction of brick and concrete foul-water se with an overflow chamber and manhole, in Sa lane. Plan and specification seen, and quanti and forms of tender from Mr. Henry E. Sti M.Inst.C.E., City Engineer and Surveyor, Council House, Birmingham. Deposit of 2 April 10.—**Eastwood.**—Paving, etc.— the paving and sewering, etc., of streets. and sections seen, and specifications, condit and forms of tender from Mr. Jas. John Borough Surveyor, Municipal Offices, Ra stall. Deposit of 2*l.* 2s.

April 11. — **Salford.** — Sewage.—For con tube sewer and brick sewer, with necessary holes. Particulars from Borough Engi Town Hall Salford.

April 12.—**Frodsham Bridge.**—Sewage. providing and laying stoneware pipes and iron pipes, and construction of eighteen manh and adjunct works, near Frodsham Bri Cheshire. Plans seen, and specification quantities from the Engineer, Mr. W. Beckett, A.M.Inst C.E., 33, Brazennose-s Manchester. Deposit of 1*l.* 1s.

✱ April 12. — **Hendon.** — Storm-Water Se etc. -The Hendon U.D.C. invite tenders fo laying of storm-water sewers, together with holes, inspection-chambers, and gullies. dvertisement in this issue for further ticulars.

April 12. — **Runcorn.** — Sewage. For l stoneware pipes, cast-iron pipes, and constru of eighteen manholes and adjunct works. seen and specification and quantities from and adjunct works, near Frodsham Bri Cheshire. Plans seen, and specification quantities from the Engineer, Mr. W. Beckett, A.M.Inst C.E., 33, Brazennose-s Manchester. Deposit of 1*l.* 1s.

April 15. **Brighouse.** —Setts.—For supp granite setts. Particulars and forms of from Mr. S. S. Haywood, Borough Engi Borough Engineer's Office, Brighouse.

April 26.—**Brighton.**—Sewers.—For the struction of sewers. Specifications and form tenders at the office of the Borough Surveyo the Town Hall, Brighton. Deposit of 1*l.* 1s

No Date.—**Hanley.**—Wall.—For excavati new course, Fowlea Brook, and erecting wall in concrete. Messrs. E. L. Maddo Sons, architects, Hanley.

No Date.—**Newport.**—Sewer.—For cons ing sewer and road off Oakfield-road, New Plans and specification seen, and quantities Messrs Ernest Page & Lister, architects surveyors, Crown-chambers, Newport, Mon

Public Appointments.

Nature of Appointment.	By whom Advertised.	Salary.	Applicat to be
*DIOCESAN SURVEYOR.....	Diocese of Ely	Not stated	April
*VALUER and SURVEYOR (IRELAND)	Civil Service Commission	Not stated	April

Auction Sales.

Nature and Place of Sale.	by whom Offered.	Date of Sale.
BATTENS, BOARDS, TIMBER, Etc.—Great Hall, Winchester House, E.C.	Churchill & Sim	April 3
HOLD PROPERTY, P ANT, MACHINERY, & BUILDER'S STK. On the Prems.	Bradshaw Brown & Co.	April 11
LD BUILDING PROPERTY, CROUCH-HILL, N.—At the Mart	Edwin Fox, Bousfield, Burnetts, & Baddeley	April 17
OLD BUILDING LAND, STAMFORD-HILL, N.—At the Mart	Edwin Fox, Bousfield, Burnetts, & Baddeley	April 17
EY PROPERTY, GREENFORD -At the Mart	S. Walker & Son	April 18

PATENTS.

APPLICATIONS PUBLISHED.*

of 1911.—Robert Kirk and Newcastle ne and Pulpstone Company, Ltd.: for moulding plastic and similar sub-

of 1911.—William Beedle, Frederick g, and John Gibbon How: Taps, nd the like.

of 1911. Frank Iliff: Heating and ng apparatus.

of 1912.—John Bratley: Draught s for doors.

of 1911.—Jean Philippe Burger and Müller: Earth anchor.

of 1911.—Ernest Walter Johnston: r window-sashes.

of 1911.—John Pilling: Sash windows.

of 1911.—Niels Martin Hansen and biss Manufacturing Company: Air for applying liquid paint, powder, or

of 1911.—Callender's Cable and Con- Company, John Charles Augustine nd Harry Percival Harvey Anderson: tus for opening and closing doors.

of 1911.—Martinus Rappard: Manu- of paint for protecting iron, wood, and from sea-growths.

of 1911.—William Sherman Scarbury: -holders for sliding sashes.

of 1911. Karl Emil Gustav Hahn: y and ventilating shaft tops.

of 1911.—Joseph Fowler Cowper: reinforcements for use in reinforced floors, beams, pillars, roofs, and structures.

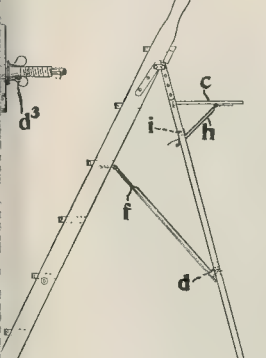
of 1911.—Thomas Benjamin Colman: isting panelling for doors and decora- rposes.

of 1911.—Edouard Picha: Process of cturing flooring-tiles of cement or other us materials.

SELECTED PATENTS.

of 1910.—Robert Salisbury: Step-

relates to step-ladders and trestles re provided with folding platforms C to the back legs and operated by slotted bars *h*, having loops engaged -rods *i* to lock the bars against move-

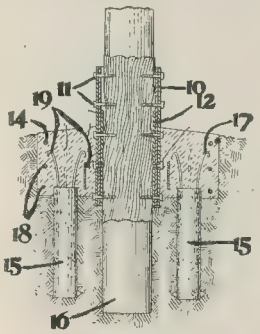


24,726 of 1910.

The spread of the step-ladder or trestles sted by a pivoted slotted bar *f* with more loops engaging a cross-rod *d*, arries a collar *e* and wing-nut *d*³ to he bar *f* in position.

these applications are in the stage in opposition to the grant of Patents upon n be made.

24,857 of 1910.—Valentine Konopinski: Posts. This relates to means whereby posts are protected at the ground line by surrounding them with a sleeve bedded in a flange of concrete or the like. The sleeve 10 is built up of iron plate, and is bolted to the post as at 11, and the space between the pole and the sleeve may be filled in with such material

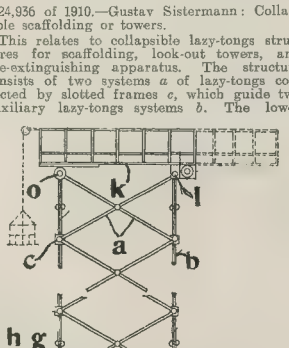


24,857 of 1910.

as pitch, and packing-pieces 12 held by short screws are introduced. Small posts 15 of concrete or of wood are forced into the ground round the base 16, and concrete 14 is poured round to form a flange which firmly attaches itself to the sleeve 10 and the reinforcing wires 17 in the posts 15. Reinforcing pieces 18, 19, are bedded in the flange. The posts 15 are made of wood.

24,936 of 1910.—Gustav Sistermann: Collapsible scaffolding or towers.

This relates to collapsible lazy-tongs structures for scaffolding, look-out towers, and fire-extinguishing apparatus. The structure consists of two systems *a* of lazy-tongs connected by slotted frames *c*, which guide two auxiliary lazy-tongs systems *b*. The lower



24,936 of 1910.

arms of the lazy-tongs *a* are pivoted at *f* to a car, and at *g* to a sliding member which is operated by screws *h* rotated by handles through worm gearing. The platform *k* is pivoted at *l* to the upper end of the structure, and is provided with rails running on rollers *o*.

SOME RECENT SALES OF PROPERTY:

ESTATE EXCHANGE REPORT.

March 12.—By Rogers Bros.

Dulwich.—55 and 57, Crystal Palace-rd., f., y.r. 68l. £915

March 13.—By Donaldson & Sons.

Dalston.—11 and 13, Mapledene-rd., u.t. 9½ yrs., g.r. 5l. 10s., e.w.r. 83l. 4s., with policy for 200l. 265

49, Downs Park-rd., u.t. 50 yrs., g.r. 6l. 10s., y.r. 36l. 225

Stoke Newington.—30, Winston-rd., u.t. 48 yrs., g.r. 5l. 5s., y.r. 30l. 210

March 14.—By Beken & Stokes.

Walthamstow.—30, Claremont-rd., f., w.r. 27l. 6s. £245

By H. J. Bliss & Sons.

Forest Gate. 57, Trumpington-rd., u.t. 67 yrs., g.r. 4l. 10s., y.r. 32l. 160

Stepney. 29 and 29A, York rd., u.t 38 yrs., g.r. 8l., y. and w.r. 6l. 16s. 120

16 and 17, King John-st., u.t. 35 yrs., g.r. 6l., w.r. 68l. 18s. 325

Mile End.—50, Grafton-st., u.t. 37 yrs., g.r. 4l., w.r. 41l. 12s 180

124, St. Dunstan's-rd., u.t. 50¼ yrs., g.r. 3l. 3s., w.r 46l. 6s. 170

Bow.—39, 39A and 39B, St. Stephen's-rd., u.t. 51 yrs., g.r. 10l., w.r. 87l. 2s 300

Limehouse.—28, Samuel-st., c., w.r. 26l. 190

Holloway.—101 and 103, Cottenham-rd., u.t. 40 yrs., g.r. 12l., w.r. 83l. 4s. 195

By Chesterton & Sons.

Streatham.—Hildown-rd., f.g. rents 16l. 16s., reversion in 97 yrs. 380

By S. H. Davids & Co.

Whitechapel.—18, St. Mark's st., u.t. 20 yrs., g.r. 4l. 5s., w.r. 53l. 10s 125

Bow.—7, Huddart-st., u.t. 54 yrs., g.r. 5l., w.r. 39l. 190

By E. Martin & Co.

Brixton. 178, Leander-rd., u.t. 64 yrs., g.r. 5l., w.r. 41l. 12s. 275

By Match & Co.

Hampstead.—18, Albion-rd., u.t. 32½ yrs., g.r. 10l., p. 720

By Stimson & Sons.

Blackfriars.—8, Charlotte-st.: 12 and 14, Gray-st. (lodging houses), lease for 13 yrs. at 135l. p.a. 650

Camberwell.—14, Windsor-rd., u.t. 42 yrs., g.r. 10l., y.r. 55l. 205

Wandsworth. 38 and 40, Swaffield rd., u.t. 75 yrs., g.r. 10l. 10s., w.r. 65l. 310

Norwood.—97 and 99, St Julian's Farm-rd., u.t. 74 yrs., g.r. 14l., y. and w.r. 67l. 14s 400

By Grimley & Son.

Solihull, Warwick.—Henwood Hall Farm, 144 a. 2 r. 7 p., f. 4,800

Knowle, Warwick.—Grimshaw Hall Farm. 132 a. 1 r. 13 p., f. and c. 4,600

Pasture Land, 6 acres, f. 480

Grimshaw-villas, f.g.r. 12l., reversion in 92 yrs. 330

Saltley, Warwick.—151 to 165 (odd), Havelock-rd., u.t. 81 yrs., g.r. 16l. 16s., w.r. 124l. 16s. 860

93 to 109 (odd), Clodeshall-rd., u.t. 86 yrs., g.r. 20l. 5s., w.r. 134l. 11s 600

Aston, Warwick.—49 and 51, Highst (s.), u.t. 39 yrs., g.r. 6l. 9s. 9d., w.r. 107l. 18s 460

March 15 By W. B. Hallet.

Mile End.—53 and 55, Alderney-rd.; 19 to 27 (odd), Frimley-st., f., y. and w.r. 179l. 8s 1,650

31, Alderney-rd., a d 1 g r. 31. 11s. 6d., u.t 29 yrs., g.r. 7l. 3s. 6d., w.r. 39l. 180

178, Mile End-rd. (s.), u.t. 31 yrs., g.r. 9l., y.r. 42l. 270

201 and 203, Mile End-rd. (s.), u.t. 29 yrs., g.r. 27l. 1 s., y.r. 105l. 500

49 to 55 (odd), Kenilworth-rd., u.t. 58 yrs., g.r. 149l. 10s. 650

Stepney.—Rectory-sq., l.g. rents 270l. 10s., u.t. 52 yrs., g.r. 164l 1,240

Enfield.—84, First-av., u.t. 77 yrs., g.r. 5l., w.r. 35l. 2s. 160

12, Second-av., u.t. 77 yrs., g.r. 4l. 10s., e.w.r. 36l. 8s. 145

By Percival Hodson.

Holloway.—96 and 98, Mercers rd., u.t. 52 yrs., g.r. 15l., y.r. 90l. 740

Crouch Hill.—89, Hamley-rd., u.t. 56 yrs., g.r. 7l. 7s., y.r. 36l. 225

By Green & Son.

St. John's Wood.—53, Blenheim-ter., f., y.r. 45l. 525

By C. P. Whitelby & Son.

Camberwell.—110 to 122 (even), Harris-st., f., y.r. 130l. 1,960

6 to 10, Teather-st., f., w.r. 100l. 2s. 500

March 18.—By T. Frazer.

Holloway.—8, Fulbrook-rd., u.t. 44 yrs., g.r. 6l., e.r. 42l. 310

32, Hampden-rd., f., w.r. 45l. 10s 210

By Wm. Houghton.

Leyton.—265 and 267, Markhouse-rd., u.t. 87 yrs., g.r. 11l., w.r. 62l. 8s. 230

By Lowe, Goldschmidt, & Howland.

Hampstead.—20, Fellows-rd., u.t. 52¾ yrs., g.r. 2l., y.r. 90l. 500

By Dunn, Soman, & Coverdale.

Robertsbridge, Sussex.—Six cottages, tenement house and shop, f. 950

March 19.—By Balch, Balch, & Turnham.

Kentish Town.—19, Caversham-rd., u.t. 36 yrs., g.r. 12l., e.r. 60l. 375

52, Patshull-rd., u.t. 48 yrs., g.r. 7l. 7s., y.r. 45l 390

Camden Town.—19, Georgiani-st., u.t. 27 yrs., g.r. 4l., y.r. 38l. 185

By C. W Davies & Son.

Canonbury.—24, Ashby-rd., u.t. 34 yrs., g.r. 6l. 6s., y.r. 49l. 280

Islington. 62, High-st. (s.), u.t. 33 yrs., g.r. 50l., y.r. 92l. 240

By GARRETT, WHITE, & POLAND.

Maida Vale.—Nos. 203 to 225 (odd), i.g. rents 181l. 4s., u.t 25½ yrs., g.r. 2l £1,650

Hyde Park 88, Westbourne-ter., i.g.r. 55l., u.t 25½ yrs., g.r. 10l. 500

Regent's Park 20, Cornwall-ter., u.t. 8 yrs., g.r. 52l. 10s., y.r. 168l. 515

By MAY & PHILPOT.

Streatham. 25, Streatham High-rd., u.t. 25 yrs., g.r. 6l., p. 350

By KNIGHT, FRANK, & RUTLEY.

Marston Trussell, North Hants—Thorpe Lubenham Estate, 1,100 acres, f. 17,312

March 21.—By EDWIN FOX, BOUSFIELD, & Co. City.—37, Charterhouse-st., f., y.r. 150l. 2,500

By FRANK JOLLY & JAMES

Wanstead.—Cambridge Park, Alkham, f., p. 1,900

By GEO. TROLLOPE & SONS

Watford, Herts. -Rasslyn rd., Ravello, f., p. 1,500

By KNIGHT, FRANK, & RUTLEY.

Covent Garden.—16, King st., lease for 6½ yrs. at 20l. p.a., p. 200

March 21.—By FAREBROTHER, ELLIS, & Co.

Soho. -35, Soho-st.; 14 and 14a., Dean-st. (s.), f., y.r. 325l. 9,600

Sidcup, Kent. 51 and 53, High st. (s.), f., y.r. 125l. 2,420

Hornsey. Shaftesbury-rd., f.g.r. 3l. 9s., reversion in 64 yrs. 100

By E. J. GAIRDNER

Harringay.—44, Warham rd., u.t. 80 yrs., g.r. 6l. 6s., e.r. 35l. 235

By BINGHAM & BROUGHTON.

Bermondsey.—15, Longley-st., u.t. 28 yrs., g.r. 5l., w.r. 39l. 200

By MARTEN & CARNABY.

Sydenham.—17, Crescent Wood-rd., u.t. 35 and 4 yrs., g.r. 46l 3s., p. 400

By C. C. & T. MOORE.

Bethnal Green.—331, Old Ford-rd., f., w.r. 33l. 16s. 210

Mile End.—136, 140, and 142, Harford-st., u.t. 42 yrs., g.r. 13l. 10s., w.r. 88l. 8s. 360

Plaistow. -70, Hermit-rd. (s.), f., w.r. 36l. 8s. 185

By NEWBON & SHEPHARDS.

Bowes Park. 55 to 65 (odd), Queen's-rd., u.t. 68 yrs., g.r. 27l., w.r. 145l. 12s. 510

23 to 45 (odd), Lascotts-rd., u.t. 67 yrs., g.r. 78l., y.r. 324l. 1,500

Kilburn.—38 and 40, Brondesbury-villas, u.t. 986 yrs., g.r. 32l., y. and e.r. 110l. 390

Islington.—39 and 41, Camden-passage (s.), f., y.r. 80l. 625

Battersea.—1, Prested-rd., f., e.r. 40l. 345

Bournemouth.—Alumhurst-rd., f.g.r. 16l., reversion in 80 yrs. 350

By STIMSON & SONS.

Bermondsey.—Law st., f.g. rents 88l., reversion in 7 yrs. 1,300

Alice-st., f.g.r. 14l., reversion in 4 yrs. 850

22 to 32 (even), Alice-pl., 12 to 24 (even), Rothsay-st., 1 to 7, Hargreave-st., f., w.r. 494l. 2,600

Walworth.—16 to 30 (even), Tiverton-st., f., w.r. 92l. 16s. 750

Old Kent-rd Nos. 800, 802, and 804 (s.), f., y. and w.r. 135l. 600

March 22. By GEO. BILLINGS, WRIGHT, & Co.

Hackney.—76, 78, and 80, Sheep-la., u.t. 20 yrs., g.r. 5l. 15s. 6d., w.r. 87l. 2s. 150

156, 158, and 160, Glyn-rd., u.t. 59 yrs., g.r. 12l., w.r. 106l. 2s. 640

7, Rayford st., u.t. 39 yrs, g.r. 5l., w.r. 33l. 10s. 180

140, King Edward rd., u.t. 31 yrs., g.r. 6l. 5s., e.r. 38l. 185

Contractions used in these lists.—**F.g.r.** for freehold ground-rent; l.g.r. for leasehold ground-rent; i.g.r. for improved ground-rent; g.r. for ground-rent; r. for rent; f. for freehold; c. for copyhold; l. for leasehold; p. for possession; e.r. for estimated rental; w.r. for weekly rental; q.r. for quarterly rental; y.r. for yearly rental; u.t. for unexpired term; p.a. for per annum; yrs. for years; la. for lane; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; cres. for crescent; av. for avenue; gdns. for gardens; yd. for yard; gr. for grove; b.h. for beerhouse; p.h. for public-house; o. for offices; s. for shops; ct. for court.

TO CORRESPONDENTS.

NOTE.—All communications with respect to literary and artistic matters should be addressed to "THE EDITOR" (and not to any person by name); those relating to advertisements and other exclusively business matters should be addressed to "THE PUBLISHER," and not to the Editor.

All communications must be authenticated by the name and address of the sender, whether for publication or not. No notice can be taken of anonymous communications.

The responsibility of signed articles, letters, and papers read at meetings rests, of course, with the authors.

We cannot undertake to return rejected communications; and the Editor cannot be responsible for drawings, photographs, manuscripts, or other documents, or for models or samples, sent to or left at this office, unless he has specially asked for them.

All drawings sent to or left at this office for consideration should bear the owner's name and address on either the face or back of the drawing. Delay and inconvenience may result from inattention to this.

Any commission to a contributor to write an article, or to execute or lend a drawing for publication, is given subject to the approval of the article or drawing, when received, by the Editor, who retains the right to reject it if unsatisfactory. The receipt by the author of a proof of an article in type does not necessarily imply its acceptance.

N.B.—Illustrations of the First Premiated Design in any important architectural competition will always be accepted for publication by the Editor, whether they have been formally asked for or not.

PRICES CURRENT OF MATERIALS.

*** Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

BRICKS, &c.

Per 1000 Alongside, in River.

	£ s. d.
Best Stocks	1 14 0
Picked Stocks for Facings	2 10 0

Per 1000, Delivered at Railway Depôt.

	£ s. d.		£ s. d.
Flettons	1 13 0	Best Blue Pressed	
Best Fareham Red	3 12 0	Staffordshire	3 15 0
Best Red Pressed Ruabon Facing	5 0 0	Do. Bullnose	4 0 0
		Best Stourbridge Fire Bricks	4 0 0
Glazed Bricks—			
Best White, Ivory, and Salt Glzd. Str'tch'rs	11 7 6	Double Headers	13 17 6
Headers	10 17 6	One Side and two Ends	17 17 6
Quoins, Bullnose, and 4½ in. Flats	14 17 6	Two Sides and one End	18 17 6
D'ble Stretchers	16 17 6	Splays & Squints	16 7 6

Second Quality £1 10s. per 1000 less than best.

	s. d.
Thames and Pit Sand	6 9 per yard, delivered.
Thames Ballast	5 6 „ „
Best Portland Cement	31 0 per ton, „
Best Ground Blue Lias Lime	19 0 „ „

NOTE—The cement or lime is exclusive of the ordinary charge for sacks.

Grey Stone Lime	13s. 0d. per yard delivered.
Stourbridge Fireclay in sacks	27s. 0d. per ton at rly dpt.

STONE.

Per Ft. Cube.

	s. d.
Bath Stone—delivered on road waggons, Paddington Depôt	1 6½
Do. do. delivered on road waggons, Nine Elms Depôt	1 8½

Portland Stone (20 ft. average)—

	s. d.
Brown Whitbed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2 3
White Basebed, delivered on road waggons Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2 4½

Per Ft. Cube, delivered at Railway Depôt.

	s. d.		s. d.
Ancaster in blocks	1 10	Closeburn Red	
Beer in blocks	1 6	Freestone	2 0
Greenshill in blocks	1 10	Red Mansfield Freestone	2 4
Darley Dale in blocks	2 4	Talacre & Gwespyr Stone	2 4
Red Corsehill in blocks	2 3		

York Stone—*Robin Hood Quality*.

Per Ft. Cube, Delivered at Railway Depôt. s. d.

Scappled random blocks	2 10

Per Ft. Super., Delivered at Railway Depôt.

6 in. sawn two sides landings to sizes (under 40 ft. super.)	2 3
6 in. rubbed two sides ditto, ditto	2 6
3 in. sawn two sides slabs (random sizes)	0 11½
2 in. to 2½ in. sawn one side slabs (random sizes)	0 7
1½ in. to 2 in. ditto, ditto	0 6

Hard York—

Per Ft. Cube, Delivered at Railway Depôt.

Scappled random blocks	3 0

Per Ft. Super., Delivered at Railway Depôt.

6 in. sawn two sides landing to sizes (under 40 ft. super.)	2 8
6 in. rubbed two sides ditto	3 0
3 in. sawn two sides slabs (random sizes)	1 2
2 in. self-faced random flags	0 5

SLATES.

Per 1000 of 1200 at Railway Depôt.

	£ s. d.		£ s. d.
In. In.		In. In.	
20×10 best blue Bangor	13 2 6	20×10 best Eur'ka unfading green	15 17 6
20×12 ditto	13 17 6	20×12 ditto	18 7 6
20×10 1st quality ditto	13 0 0	18×10 ditto	13 5 0
20×12 ditto	13 15 0	16×8 ditto	10 5 0
16×8 ditto	7 5 0	20×10 permanent green	11 12 6
22×10 best blue Portmadoc	12 12 6	18×10 ditto	9 12 6
16×8 ditto	6 12 6	16×8 ditto	6 12 6

TILES.

At Railway Depôt.

	s. d.		s. d.
Best plain red roofing (per 1000)	42 0	Best "Hartshill" brand, plain sand. faced (per 1000)	45 0
Hip and Valley (per doz.)	3 7	Do. pressed (per 1000)	42 6
Best Broseley (per 1000)	50 0	Do. Ornamental (per 1000)	47 6
Do. Ornamental (per 1000)	52 6	Hip (per doz.)	4 0
Hip and Valley (per doz.)	4 0	Valley (per doz.)	3 6
Best Ruabon red, brown, or brindled (Edw'ds) (per 1000)	57 6	Staffords. (Hanley) Reds or Brindled (per 1000)	42 6
Do. Ornamental (per 1000)	60 0	Hand-made sand-faced (per 1000)	45 0
Hip (per doz.)	4 0	Hip (per doz.)	4 0
Valley (per doz.)	3 0	Valley (per doz.)	3 6

WOOD.

Building Wood. At per standard.

	£ s. d.	£ s. d.
Deals: best 3 in. by 11 in. and 4 in. by 9 in. and 11 in.	14 0 0	... 15 10 0
Deals: best 3 by 9	13 10 0	... 14 10 0
Battens: best 2½ in. by 7 in. and 8 in., and 3 in. by 7 in. and 8 in.	11 10 0	... 12 10 0
Battens: best 2½ by 6 and 3 by 6	0 10 0	less than 7 in. and 8 in.
Deals: seconds	1 0 0	less thn best.
Battens: seconds	0 10 0	„
2 in. by 7 in. and 2 in. by 6 in.	9 10 0	... 10 10 0
2 in. by 4½ in. and 2 in. by 5 in.	9 0 0	... 10 0 0
Foreign Sawn Boards—		
1 in. and 1¼ in. by 7 in.	0 10 0	more than battens.
¾ in.	1 0 0	„

WOOD (*Continued*).

Building Wood (*Continued*)— At per load of

	£ s. d.	
Fir timber: best middling Danzig or Memel (average specification)	5 0 0	...
Seconds	4 10 0	...
Small timber (8 in. to 10 in.)	3 17 6	...
Small timber (6 in. to 8 in.)	3 5 0	...
Swedish balks	2 12 6	...
Pitch-pine timber (30 ft. average)	5 5 0	...

Joiners' Wood. At per standa

White Sea: first yellow deals,			
3 in. by 11 in.	24 10 0	...	25
3 in. by 9 in.	22 10 0	...	23
Battens, 2½ in. and 3 in. by 7 in.	17 0 0	...	18
Second yellow deals, 3in. by 11in.	19 0 0	...	20
„ „ 3 in. by 9 in.	18 0 0	...	19
Battens, 2½ in. and 3 in. by 7 in.	14 0 0	...	15
Third yellow deals, 3 in. by 11 in. and 9 in.	14 0 0	...	15
Battens, 2½ in. and 3 in. by 7 in.	11 10 0	...	12
Petersburg: first yellow deals,			
3 in. by 11 in.	21 10 0	...	22
Do. 3 in. by 9 in.	18 10 0	...	19
Battens	14 0 0	...	15
Second yellow deals, 3 in. by 11 in	16 10 0	...	17
Do. 3 in. by 9 in.	15 0 0	...	16
Battens	11 10 0	...	12
Third yellow deals, 3in. by 11 in.	13 10 0	...	14
Do. 3 in. by 9 in.	13 0 0	...	14
Battens	10 10 0	...	11
White Sea and Petersburg—			
First white deals, 3 in. by 11 in.	15 0 0	...	16
„ „ 3 in. by 9 in.	14 0 0	...	14
Battens	11 10 0	...	12
Second white deals, 3in. by 11in.	14 0 0	...	15
„ „ 3 in. by 9 in.	13 0 0	...	14
Battens	10 10 0	...	11
Pitch-pine: deals	19 0 0	...	21
Under 2 in. thick extra	0 10 0	...	1
Yellow Pine—First, regular sizes	48 0 0		upwar
Oddments	32 0 0		„
Seconds, regular sizes	33 0 0		„
Oddments	28 0 0		„
Kursi Pine—Planks per ft. cube,	0 4 6	...	0
Danzig and Stettin Oak Logs—			
Large, per ft. cube	0 3 0	...	0
Small „	0 2 6	...	0
Wainscot Oak Logs, per ft. cube	0 6 6	...	0
Dry Wainscot Oak, per ft. sup. as inch	0 0 10	...	0
¾ in. do. do.	0 0 8½	...	0
Dry Mahogany—Houndras, Tabasco, per ft. super. as inch	0 0 10	...	0
Selected, Figury, per ft. super. as inch	0 1 6	...	0
Dry Walnut, American, per ft. super. as inch	0 0 10	...	0
Teak, per load	18 0 0	...	22
American Whitewood planks, per ft. cube	0 5 0	...	0

Prepared Flooring, etc.— Per square.

1 in. by 7 in. yellow, planed and shot	0 13 6	...	0 1
1 in. by 7 in. yellow, planed and matched	0 14 0	...	0 1
1¼ in. by 7 in. yellow, planed and matched	0 16 0	...	1
1 in. by 7 in. white, planed and shot	0 12 0	...	0 1
1 in. by 7 in. white, planed and matched	0 13 6	...	0 1
1¼ in. by 7 in. white, planed and matched	0 15 0	...	0 1
¾ in. by 7 in. yellow, matched and beaded or V-jointed brds.	0 11 9	...	0 1
1 in. by 7 in. „ „ „	0 14 0	...	0 1
¾ in. by 7 in. white „ „	0 10 0	...	0 1
1 in. by 7 in. „ „ „	0 12 9	...	0 1

6 in. at 6d. to 9d. per square less than 7 in.

JOISTS, GIRDERS, &c.

	In London, or delive Railway Vans, per
Rolled Steel Joists, ordinary sections	£ 7 10 0 ... 8
Compound Girders, ordinary sections	9 10 0 ... 10
Steel Compound Stanchions	11 0 0 ... 12
Angles, Tees, and Channels, ordinary sections	9 10 0 ... 10
Flitch Plates	9 10 0 ... 9 10
Cast Iron Columns & Stanchions, including ordinary patterns	7 10 0 ... 8 1

METALS.

	Per ton, in Lond			£ s. d.	
Iron—	£	s.	d.	£	s.
Common Bars	9	0	0 ...	9	10
Staffordshire Crown Bars, good merchant quality	9	5	0 ...	9	15
Staffordshire "Marked Bars"	11	0	0 ...		
Mild Steel Bars	9	5	0 ...	9	15
Hoop Iron, basis price	10	0	0 ...		
„ „ Galvanised	17	10	0 ...		

(*And upwards, according to size and gauge.)

Sheet Iron Black—			
Ordinary sizes to 20 g.	10	5	0 ...
„ „ 24 g.	11	5	0 ...
„ „ 26 g.	12	15	0 ...
Sheet Iron, Galvanised, flat, ordinary quality—			
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15	10	0 ...
Ordinary sizes to 22 g. and 24 g.	16	0	0 ...
„ „ 26 g.	17	0	0 ...
Sheet Iron, Galvanised, flat, best quality—			
Ordinary sizes to 20 g.	18	10	0 ...
„ „ 22 g. and 24 g.	19	0	0 ...
„ „ 26 g.	20	10	0 ...
Galvanised Corrugated Sheets—			
Ordinary sizes, 6ft. to 8ft. 20 g.	15	0	0 ...
„ „ 22 g. and 24 g.	15	5	0 ...
„ „ 26 g.	16	15	0 ...
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	12	10	0 ...
Best Soft Steel Sheets, 2 g. & 24 g.	13	10	0 ...
„ „ „ 26 g.	15	10	0 ...
Cut Nails, 3 in. to 6 in.	11	0	0 ... 11 10

(Under 3 in., usual trade extras.)

LEAD, &c.

	£ s. d.	
—Sheet, English, 4lb. and up	20 2 6 ...	—
pe in coils	20 12 6 ...	—
l pipe	23 12 6 ...	—
mpo pipe	23 12 6 ...	—
—Sheet—	In casks of 10 cwt.	
ille Montagne	33 10 0 ...	—
ssian	33 5 0 ...	—
Zinc, in bundles, 1s. per cwt. extra.		
ER—		
ong Sheet per lb.	0 1 0 ...	—
in » »	0 1 1 ...	—
pper nails »	0 0 10 ...	—
pper wire »	0 0 10 ...	—
s—		
ong Sheet »	0 0 11 ...	—
in »	0 1 0 ...	—
-English Ingots »	0 1 11 ...	—
ER—Plumbers' »	0 0 9 ...	—
mmen's »	0 1 0 ...	—
owpipe »	0 1 2 ...	—

NGLISH SHEET GLASS IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

. thirds	2½d.	26 oz. fourths	3½d.
fourths	1½d.	32 oz. thirds	5d.
thirds	3½d.	» fourths	4½d.
fourths	2½d.	Fluted Sheet, 15 oz.	3½d.
thirds	4d.	» 21 oz.	4½d.

NGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

lled plate	2½d.	Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white	3½d.
ough rolled and ough cast plate	2½d.		
ugh rolled and ough cast plate	3d.	Ditto, tinted	5d.

* Not less than two crates.

OILS, &c.

		£ s. d.
Linseed Oil in pipes	per gallon	0 3 4
» » in barrels	»	0 3 5
» » in drums	»	0 3 7
od » in barrels	»	0 3 7
» » in drums	»	0 3 10
pentine in barrels	»	0 2 11
» in drums	»	0 3 1
ine Ground English White Lead, per ton		27 10 0
Lead, Dry	»	24 0 0
Linseed Oil Putty	per cwt.	0 10 6
kholm Tar	per barrel	1 12 0

VARNISHES, &c. Per gallon.

	£ s. d.
Pale Oak Varnish	0 8 0
Copal Oak	0 10 6
rfine Pale Elastic Oak	0 12 6
Extra Hard Church Oak	0 10 0
rfine Hard-drying Oak, for seats of urches	0 14 6

VARNISHES, &c. (*Continued*). Per gallon.

	£ s. d.
Fine Elastic Carriage	0 12 0
Superfine Pale Elastic Carriage	0 16 0
Fine Pale Maple	0 10 0
Finest Pale Durable Copal	0 18 0
Extra Pale French Oil	1 1 0
Eggshell Flating Varnish	0 18 0
White Pale Enamel	1 4 0
Extra Pale Paper	0 12 0
Best Japan Gold Size	0 10 6
Best Black Japan	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Knotting	0 10 9
French and Brush Polish	0 10 6

TENDERS.

GOOD FRIDAY WEEK.—In consequence of the Easter Holidays, we go to press a day earlier than usual next week, the *Builder* being published on Thursday. All communications must reach the Editor by first post on Wednesday morning, except Tenders, which must reach us *not later than 6 p.m. on Tuesday.*

* Denotes *accepted.* † Denotes *provisionally accepted.*

ASHFORD.—For construction of a general dressing-room and a range of six dressing-boxes at the Urban District Council's open-air swimming bath, Beaver-road Mr. William Terrill, Surveyor, 5, North-street, Ashford:—

J. J. Pink	£375 0 0	E. J. Bowles	£285 0 0
W. R. Shippam	323 18 0	J. Parkyn, Ashford, Kent*	224 15 10
H. Dixon	317 0 0		
J. Day & Son	310 0 0		

BRADFORD.—For erection of a workhouse at Daisy Hill. Mr. Fred Holland, architect, Bradford:—

C. Booth & Sons, Lidget Green, Bradford‡ £1,945

‡ Accepted subject to approval of the Local Government Board.

BROADSTAIRS.—For alterations and additions at West Cliff Cottage, Broadstairs, for Mr. F. M. Hornsby. Mr. R. Oliver, M.S.A., architect, 4, Whitehall-court, S.W.

J. T. May	£212	W. Martin	£190

CARNARVON. For additions and alterations to the landing-stage, for the Trustees of the Harbour. Mr. W. Bowen Jones, A.M.Inst.C.E., Carnarvon:—

In Timber.

Holme & King	£4,228 0 0
A. Thorne & Sons	1,877 18 6
B. Lumb	1,713 0 0
E. R. Lester	1,700 0 0
H. Jones	1,587 17 0
W. Gradwell & Co.	1,542 14 7

[Engineer's estimate, £1,500.]

In Ferro-Concrete.

A. Thorne & Sons	£1,660 0 0
J. & W. Stewart	1,459 0 0
Yorkshire Hennebique Co.	1,302 0 0
F. Mitchell & Son	1,225 0 0
E. R. Lester	1,050 0 0
British Reinforced Concrete Co.	915 0 0
Liverpool Ferro-Concrete Co., Liverpool*	893 10 0

DONCASTER. — For the erection of new Free Christian Church buildings (first portion), Hall Gate, Doncaster, from plans prepared by Messrs. A. J. Dunn, F.R.I.B.A., & J. B. Mendhum, joint architects, Clarendon-chambers, Waterloo street, Birmingham:—

T. E Elvins & Son	£3,850	D. Gill & Sons	£3,327
Mullins & Richardson	3,536	C. Sprakes & Sons, Doncaster*	3,030
J. G. Wright	3,518		

KETTERING. For erection of a corn market hall in Cattle Market, for the Kettering Urban District Council. Mr. Thomas Reader Smith, Engineer and Surveyor, Council Offices, Market-place, Kettering:—

Smith, Edmunds, & Co.	£1,450 0 0	O. P. Drever	£1,337 0 0
T. Hewitt	1,440 13 0	A. M. Bamford	1,335 0 0
Phillips & Slow	1,367 19 9	J. Norris, Kettering*	1,199 11 0
J. G. Pullen & Sons	1,342 15 0	W. Johnson	1,100 0 0

LITTLEHAMPTON. For erection of cottages, stables, etc., for the Urban Council. Mr. H. Howard, Council Surveyor:—

J. Andrews	£3,300 0 0	Sandell & Sons	£2,750 0 0
Summers Bros.	2,991 12 0	Snewin Bros.	2,669 0 0
R. Cook & Son	2,941 0 0	Wilson & Co.	2,650 0 0
J. Tanner	2,810 16 7	J. Linfield & Sons	2,568 10 0
H. Baker & Son	2,767 10 0		
Burrell & Standen	2,750 0 0		

LITTLEHAMPTON.—For erection of sewerage works and dust destructor, for the Urban Council. Mr. H. Howard, Council Surveyor:—

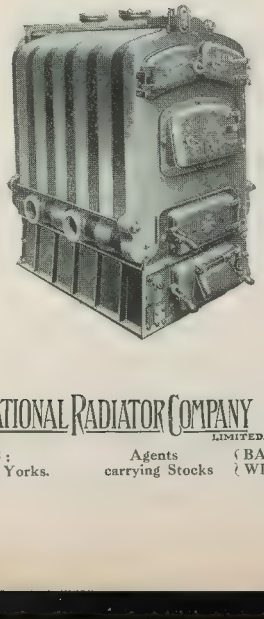
J. Mowlem & Co.	£20,577 0 0	W. Brigg	£17,176 5 0
Bower Bros.	19,755 7 0	J. Ford	16,683 0 0
J. Riley	19,491 3 3	A. Streeter & Co.	16,351 16 11
G. Stow & Co.	18,887 16 3	A. T. Osenton	16,212 3 9
G. Bell & Sons	17,483 0 0	Sangwen & Co.	15,830 0 0
J. Dickson	17,377 14 0	Wilson & Co.	14,380 19 2

LONDON. For supply, delivery, and erection of penstocks, pipes, and valves to the Crossness pumping-station, for the London County Council:—

Markham & Co., Ltd.	£3,210
Glenfield & Kennedy, Ltd.	3,100
J. Cochrane	2,992
J. Blakeborough & Sons	2,745

Fuel Cost and Heating Efficiency.

The large increase in the price of fuel greatly accentuates the importance of extracting the full calorific value from the coal or coke used for heating purposes—a matter closely affecting the owners and occupiers of all classes of office buildings, factories, shop premises, and private houses.



IDEAL & IDEAL RADIATORS & BOILERS

For warming houses, flats, hotels, shops, public buildings, etc. by hot water or steam.

The economy of central heating is now generally admitted, but the selection of suitable appliances for the generation and distribution of the heat requires careful consideration if the best results are to be obtained.

The specification by Architects and Engineers of Ideal Boilers and Ideal Radiators for Low Pressure Hot Water and Steam Systems ensures the use of a product which is based on scientific knowledge and more than 30 years' experience—a product made from the best materials, enjoying a world-wide reputation for reliability, efficiency, adaptability, and simplicity of design, construction, and operation.

If you have not our current catalogue we shall be pleased to send a copy gratis and post free.

NATIONAL RADIATOR COMPANY LIMITED. 439 & 441, Oxford Street, London, W.

WORKS: HULL, Yorks.

Agents carrying Stocks: BAXENDALE & CO., Ltd., Miller Street Works, MANCHESTER. WILLIAM MACLEOD & CO., 60, 62, & 64, Robertson Street, GLASGOW.

HENDON.—For making up private streets under sect. 150, Public Health Act, 1875, for the Urban District Council of Hendon. Mr. S. Slater Grimley, M.Inst.C.E. Engineer and Surveyor:—

—	Thorverton-road.	Caddington-road.	Middleton-road.	Corringham-road (part of).	Templegardens.	Templars-avenue (part of).	Wentworth-road (part of).	St. John's-road.	Ravenscroft-avenue (part of).	West Heathavenue.	West Heathdrive.	Byron-road.	Sanders place.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Elliott & Co.	1,097 0 4	1,138 8 0	1,104 3 10	1,904 2 9	860 19 0	1,986 18 1	2,319 6 10	1,064 16 8	1,633 2 7	4,310 11 0	1,790 3 0	1,271 1 0	379 16 6
W. Griffiths & Co.	1,068 17 10	1,107 17 8	1,120 16 5	1,947 17 11	801 3 10	1,921 19 3	2,243 14 6	999 2 6	1,513 7 3	4,470 14 5	1,895 2 8	1,181 18 8	339 7 9
H. Farrow	1,032 15 5	1,075 12 5	1,075 17 10	1,891 0 4	841 15 11	1,951 12 1	2,269 10 6	1,030 7 9	1,561 3 4	4,192 5 3	1,757 15 0	1,357 2 6	406 19 6
T. W. Pedrette	1,057 7 0	1,090 5 6	1,097 13 6	1,832 11 0	773 15 0	1,837 7 0	2,219 6 6	959 18 6	1,460 15 0	4,036 8 0	1,621 13 0	1,138 16 9	328 7 6
F. G. Brummell	1,026 0 4	1,036 5 6	1,077 10 0	1,743 12 3	794 4 5	1,775 15 3	2,086 10 5	925 15 3	1,423 0 3	4,142 3 10	1,894 3 8	1,088 16 4	321 19 3
R. Ballard	1,047 14 5	1,087 4 4	1,059 14 6	1,849 15 9	729 1 9*	1,718 14 9*	2,029 4 3*	904 13 3*	1,371 17 6*	4,161 15 6	1,712 7 9	1,139 6 3	358 3 6
T. Adams	1,030 18 9	1,054 2 8	1,025 5 5	1,779 19 0	751 0 8	1,773 14 10	2,094 4 10	948 14 2	1,926 2 7	3,998 4 2	1,659 10 4	1,073 10 6*	331 15 10
Mowlem & Co.	1,003 0 11*	1,035 9 8*	1,006 14 6*	1,755 3 11*	762 10 2	1,793 12 3	2,093 1 9	946 15 9	1,429 17 3	3,978 13 11	1,567 16 3	1,123 0 10	341 13 4

LONDON. For rebuilding the Fairfield-road School, Bow and Ir. mley, for the London County Council:—

Leslie & Co., Ltd.	£21,807 0 0
G. S. Williams & Son	21,070 0 0
W. Downs	21,000 0 0
C. Wall, Ltd	20,742 0 0
McLaughlin & Harvey, Ltd	20,524 19 3
McCormick & Sons, Ltd.	20,357 0 0
T. D. Lenz	20,317 0 0
L. H. & R. Roberts	19,833 0 0
F. & T. Thorne	19,728 0 0
G. Godson & Sons	19,329 0 0
Patman & Fotheringham, Ltd.	19,273 0 0
G. E. Wallis & Sons, Ltd.	19,228 0 0
J. & C. Bowyer, Ltd.	19,047 0 0
Rowley Bros	19,045 0 0
E. Lawrance & Sons, Ltd.	18,987 0 0
Brand, Pettit, & Co.	18,243 0 0

[The Architect's estimate, comparable with the tenders, is £19,100.]

LONDON. For erection of a fire-station in Brook Green-road, Hammersmith, for the London County Council:

F. G. Minter	£14,150	Patman & Fotheringham, Ltd.	£12,243
Holloway Bros. (London), Ltd.	13,316	Kerridge & Shaw	12,184
Leslie & Co., Ltd.	13,222	W. Downs	12,170
J. & C. Bowyer, Ltd.	12,900	H. L. Holloway	12,093
Higgs & Hill, Ltd.	12,850	W. Johnson & Co., Ltd.	12,079
W. Lawrance & Son	12,732		
E. Lawrance & Sons, Ltd.	12,479		

[The Architect's estimate, comparable with the tenders, is £12,400.]

LONDON.—For alterations and additions, 31, Oxford-square, W. Messrs. Joseph & Smithem, architects and surveyors, 83, Queen-street, Cheapside, E.C.

W. Downs	£3,777	C. R. Price	£3,175
J. Simpson & Son	3,585	C. W. Bovis & Co., Ltd.*	3,097

LONDON. For provision of two steam stop-valves, together with necessary pipes, etc., at Wilmington pumping-station, for the Metropolitan Water Board:—

Thames Ironworks, etc., Co., Ltd.	£165 0 0
Stewarts & Lloyds, Ltd.	150 0 0
J. Spencer, Ltd.	145 0 0
J. Hopkinson & Co., Ltd.‡	65 10 6

‡ Quotations for valves only, without pipes.

LONDON.—For two houses at Ryfold road, Wimbledon Park, for Mr. A. Colombe. Mr. H. Oliver, M.S.A., architect, 4, Whitehall-court.

Rice & Son	£1,555	Speechley & Smith	£1,297
W. Nash	1,397	Bull & Esdaile, Ltd.	1,162
Binning Candler, Ltd.	1,385		

MACCLESFIELD.—For additions at the public baths. Mr. Chas. W. Stubbs, Borough Surveyor:

Roylance & Co., Ltd.	£145	J. Wellings	£135
J. Clayton	127	J. Dakin, Steeple-street, Macclesfield*	111
Gorton & Wilson	112		

MOELFRE.—For erection of six cottages, for Miss Jones, Gwridog, Rhosgoch, Anglesey. Mr. W. G. Williams, M.S.A., architect and surveyor, Bangor and Beulleeh:—

Williams Bros.	£1,225	W. Griffiths	£1,030
J. & J. P. Jones	1,071	J. Owen, Moelfre*	928

PONTYMISTER. For alterations to the Forge Hammer Inn, for Messrs. Giles & Harrap, the Brewery, Merthyr Tydfil. Mr. C. M. Davies, M.S.A., architect, Merthyr Tydfil.

G. Williams	£515	A. Lovelack, Rugby, Gt. Newport, Mon.*	£295
J. Pritchard	510		
Leadbetir & Co.	319		

PORTMADOC.—For erection of a vicarage at Pentrefelin. Mr. Clough William-Ellis, architect. Quantities by Messrs. Evill & Moele, North Audley-street, W.:—

C. Griffiths ‡	£5,000 0 0	G. Williams	£1,759 4 8
J. H. Roberts	2,467 0 0	W. G. Evans	1,749 0 0
E. Humphreys§	1,940 0 0	H. Smith	1,642 0 0
Evan Jones & Son	1,890 0 0	J. T. Jones, Aberch Pwllheli§	1,483 10 6
J. Humphreys	1,769 0 0		

‡ Did not follow instructions.
§ Recommended for acceptance.

WOKINGHAM.—For house at Wokingham, for Mr. H. C. Mabe. Mr. Cecil H. Perkins, A.R.I.B.A., architect, Church-road, Bracknell, Berks:—

Charman	£2,250 0	Spear & King	£2,090 0
Brown	2,245 0	Hughes	2,049 0
Watson	2,140 0	Payne & Co., Bracknell*	2,035 10
Seward	2,114 0		

WOKINGHAM.—For business premises, 12, Broad-street, Wokingham, for Mr T. B. Pither. Mr Cecil H. Perkins, A.R.I.B.A., architect, Church-road, Bracknell, Berks:—

Seward	£1,474 0	Stimson	£1,274 0
Charman	1,330 0	Brown	1,190 0
Watson	1,328 0	Payne & Co., Bracknell*	1,137 10
Martin & Co.	1,287 0		

Ham Hill Stone.
Doulting Stone.
Portland Stone.
The Ham Hill and Doulting Stone Co., Limited
(Incorporating the Ham Hill Stone Co. and C. Trask & Son, The Doulting Stone Co.).
Norton, Stoke-under-Ham, Somerset.
London Agent:—Mr. E. A. Williams, 16, Craven-street, Strand

Asphalte.—The Seyssel and Metallic Lava Asphalte Co. (Mr. H. Glenn), Office, 42 Poultry, E.C.—The best and cheapest materials for damp courses, railway arches, warehouse floors, flat roofs, stables, cow-sheds and milk-rooms, granaries, tun-rooms, and terraces. Asphalte Contractors to Forth Bridge Co. T.N. 2644 Central.

SPRAGUE & CO., LTD.,
PROCESS BLOCK MAKERS
of all descriptions.
69 & 70, DEAN STREET, SOHO, W.

Telephone: DALSTON 135
OGILVIE & CO., Many years connected with the late firm of W. H. LASCELLES & Co. of Bucklil Row.
Amhurst Works, **DALSTON LANE, N.E.**
EXPERTS IN HIGH-CLASS JOINERY.
ALTERATIONS AND DECORATIONS. ESTIMATES FREE.

J. J. ETRIDGE, Jr.
SLATE MERCHANTS. LTD.
EXPERTS IN
SLATING, TILING.
BEST WORK ONLY.
Telephone 2685 Wall, or write—
BETHNAL GREEN SLATE WORKS,
BETHNAL GREEN, LONDON, E.

ASPHALTE
For Horizontal & Vertical Damp Courses,
For Flat Roofs, Basements, & other Floors.
The best materials and workmanship are supplied by
THE
French Asphalte Co.
Whose name and address should be inserted in all specifications.
For estimates quotations, and all information apply at the Offices of the Company,
6, LAURENCE POUNTNEY HILL,
CANNON STREET, E.C.

EWART'S
Cures in 19 cases out of 20.
"EMPEROR"
Write to-day for Illustrated Catalogue Free to
EWART & SON Ltd.,
346-350, Euston Road, London, N.W.
Established 1834.
Telephone: 2570 North.
SMOKE CURE

THE BUILDER

VOL. CII.—No. 3809. APRIL 5, 1912.

CONTENTS.

PAGE

PAPAL PLEASURE HOUSE (WITH ILLUSTRATIONS) 385
ES ... 388
E ROYAL INSTITUTE OF BRITISH ARCHITECTS 389
TURE EXHIBITION ... 389
S ARCHITECTURAL ASSOCIATION: SIXTH SPRING
ISIT ... 391
MPETITION FOR ST. PETER'S, ACTON GREEN ... 391
S CARPENTERS' HALL LECTURES ... 392
INEERING SOCIETIES ... 393
NERAL NEWS ... 393
TORIAL SUMMARY ... 395
ETINGS ... 395
CHITECTURAL SOCIETIES ... 395
RRESPONDENCE ... 395
S LONDON COUNTY COUNCIL ... 395
TES TO ILLUSTRATIONS ... 396
TY YEARS AGO ... 396
MPETITION NEWS ... 396

NTHLY REVIEW OF CIVIC DESIGN:—
RESTATYN ESTATE, NORTH WALES (WITH ILLUS-
TRATIONS) ... 397

PAGE

MONTHLY REVIEW OF CIVIC DESIGN (*continued*):—
IMPERIAL LONDON ... 399
TOWN PLANNING ... 400
THE FOURTH REPORT OF THE WELLCOME TROPICAL RESEARCH LABORATORIES ... 400
THE "TOWN PLANNING REVIEW" (WITH ILLUSTRATIONS) ... 400
NOTES ... 401

THE BUILDING TRADE:—
THE IDEAL BUILDER ... 402
THE "CEMENT GUN" ... 402
LAND VALUATION ... 402
THE LONDON ASSOCIATION OF MASTER DECORATORS ... 402
GENERAL BUILDING NEWS ... 403
PROJECTED NEW BUILDINGS IN THE PROVINCES 403

FOREIGN AND COLONIAL ... 404
THE NATIONAL PHYSICAL LABORATORY ... 405
INTERNATIONAL SMOKE ABATEMENT EXHIBITION, ROYAL AGRICULTURAL HALL ... 405

PAGE

BOOKS ... 406
LEGAL COLUMN ... 407
LAW REPORTS ... 408
LONDON COUNCILS ... 410
PATENTS ... 410
LIST OF COMPETITIONS, CONTRACTS, ETC., OPEN ... 411
PRICES CURRENT ... 412
TENDERS ... 414

Illustrations.

THE VILLA PIA, ROME. DRAWN BY MR. C. A. HARDING.

HEADQUARTERS FOR THE TERRITORIAL FORCE ASSOCIATION, NOTTINGHAM. MESSRS. BREWILL & BAILY, FF.R.I.B.A., ARCHITECTS.

DESIGN FOR ALMSHOUSES, NOTTINGHAM, FOR THE WILKINSON SMITH TRUST. MESSRS. BREWILL & BAILY, FF.R.I.B.A., ARCHITECTS.



St. Peter's from the Villa Pia.

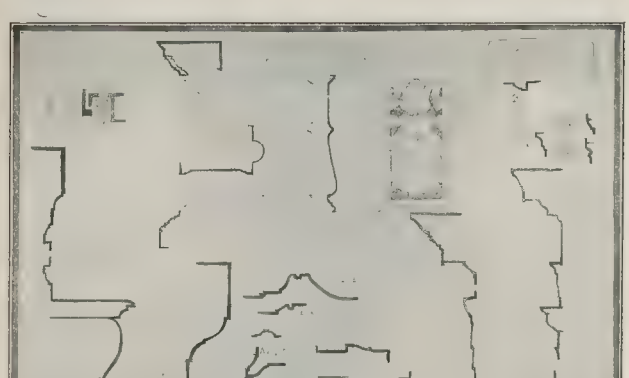
A PAPAL PLEASURE HOUSE.

ON the eastern side of the Vatican Palace in an angle of the ground is situated the "little wood of e Belvidere," as Vasari terms it, rising ntly at first and then more steeply the upper gardens and observatory, d in this wood is situated the subject this article.

The Villa Pia, or the Casino del Papa, as commenced in the year 1560, on the iers of Pope Pius IV. (Medici), and on completion, a year later, was used by n as a place of retirement in the warm ghts, where he used to converse with s nephew, S. Carlo Borromeo.

The architect was Pirro Ligorio, a eapolitan, who seems to have been person of importance at the Vatican. man of distinguished family, he had studied deeply from the remains of the antique, especially of the villas of the Romans, and was the author of several works on antiquity. He was first employed about the Vatican by Pope Paul IV. (Carrafa), having been recommended to him as worthy of employment on St. Peter's, and under this Pope he endeavoured to oust Michelangelo from his work on St. Peter's: indeed, according to Vasari, ventured to remark that the great Buonarroti had reached his second childhood. He was finally dismissed to make room for Vignola, and died in 1583. Among other works he designed the Villa d'Este at Tivoli (1549) for Cardinal Ippolite d'Este, afterwards Clement VIII., who had been appointed Governor of Tivoli.

The Villa Pia is the outcome of Ligorio's studies in the antique, and is said to have been an imitation of ancient villas, but the Renaissance architect of the best days was not bound to imitation, and the idea of reproduction did not enter his mind. His work was rather the result of the impression he had received while studying, expressed in his own way and tempered by his own character. Most of the materials of which it is constructed came from the Stadium of Domitian. Unfortunately, the original setting has disappeared, and the gardens, especially the lower portion, are much neglected. A view engraved by Falda in 1670, and reproduced in Triggs' "Art of Garden Design in Italy," shows the scheme as then existing, but of these gardens



The Villa Pia, Rome : Details.

there are now only a few overgrown paths and one small weed-covered pool.

An examination of the plans will show that the scheme consists of an elliptical court with the major axis running, approximately, east and west, with two buildings placed on the minor axis; the southern is a two-storied casino, and the northern, a loggia, with a lymphæum and water-chamber below. At the east and west are two small arches with gates, which close the court. Owing to the slope of the ground the casino is surrounded on the south by an area to keep off the water, and the lymphæum below the loggia rises out of a pool on a lower level, access to which is obtained by staircase ramps on either side of the courtyard, starting outside the archways and terminating in the lower garden. This is a rough semi-ellipse in form, with a low brick retaining wall and marble obelisks, terminating piers at the sides of three converging paths, which are said to be the remains of a design for gardens prepared by Sangallo.

Before considering the buildings in detail it should be noted that they have been very badly used, and also that, according to an inscription on the north front of the loggia, they were restored by Pope Leo XII. There are some drawings in the Vatican Library, made in 1836-1837, to which reference will be made later, which show some minor differences from what remains at the present day.

The casino is at present used as a repository for the late Pope's (Leo XIII.) letters, and permission to measure the interior was therefore refused; it contains two or three fine ceilings, some paintings by Zuccaro Barroccio and Santi di Tito, some antique mosaics, and very interesting floor-tiles. There are also some very fine terra-cotta panels from the Borgia apartments placed here by Canova.

It will be seen that on plan the loggia of the casino balances the loggia on the opposite side of the court. It is a barrel-vaulted apartment, with apsidal ends, roofed with semi-domes, in which are two niches containing antique statues; the walls are covered with a kind of coarse mosaic of dyed marble chips, and above this is a painted frieze of cupids. It might here be mentioned that the frescoes, mosaics, and plaster-work were carried out by a band of artists under the direction of Marc Antonio Amulio, who was decorated for his services by the Pope in 1561. There are two fine marble basins in this loggia which are shown in the drawings above mentioned as having marble candelabrum shafts, richly encrusted with carved ornament above the basin, for water, but of the shafts there is now no trace. The ceiling is especially interesting (see views); above the frieze is a moulding of white marble which marks the springing of the barrel vault, above this are four small plaster panels, divided by hermæ and forming a division of the vault surface. Above this again are large fresco panels, separated by modelled candelabra, gilt, the centre one surrounded by a broken pediment, and above again are three large fresco panels, forming the centre of the vault. The semi-domes are slightly different in treatment and contain three fresco panels, and in the top of the semi-dome is a plaster



The Villa Pia : North Entrance.



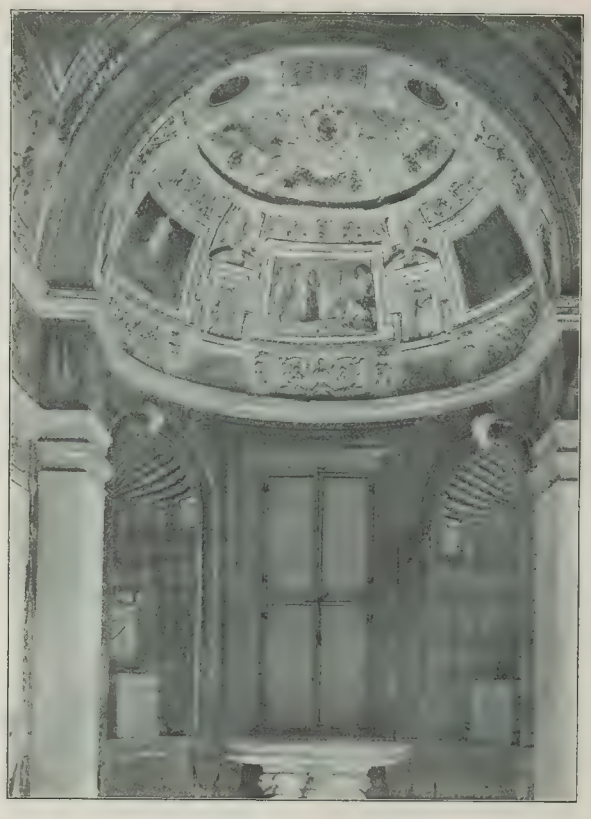
The Villa Pia : Side of Loggia.

richment which suggests the fore-
hner of the Adams work, and is also
ry similar to plaster-work in the wall
ades of the Villa di Papa Guilio. The
hes separating the semi-domes from
vaults are painted in fresco and
hly panelled and moulded, and in the
tre have the Medici arms in relief.
e whole of the enrichments here are
ked out in gold, and give a general
ect of great richness to the whole
nposition. The pavement of the
gia is of coloured marble and contains
cosmati slabs set in the design.
the centre of the loggia, against the
ll, is an antique statue on a Corinthian
pital.

The exterior is well designed and
very reminiscent of the work at
Villa Medici (now the French
ademy) completed by Lippi about
enty years before. Above the small
der is a high stage divided into three
pilasters, with floral scroll enrichments,
the centre division of which are three
aller panels, two, round-headed, con-
ning figures, and a centre one, square,
h *armorini* supporting the Papal
ns. A long panel fills up the upper
t of this division and contains a Latin
cription. The division of the front is
mpleted by two narrower panels con-
ning two medallions and panels.
ove this is a string-course ornamented
h a fret, and above in the centre por-
n are three windows surmounted by
dallions and floral garlands. At the
es are two niches containing statues.
e frieze is separated by an astragal
m the lower portion, and is enriched
h a luxuriant floral scroll. The whole
surmounted by a cornice and tiled
f hipped back to the centre.

The steps in the court are flanked by
tti, of white marble, riding on sea-horses
ced on the cope of the dwarf wall
rounding the court. This court has
range of seats broken only at the
rticoes and arches, and on the wall are
ster vases containing plants, which
ve, however, been moved from their
ginal positions, as may be seen from
rks on the cope.

The pavement of the court is a geo-
trical pattern in grey and white
rble, and in the centre stands a foun-
n attributed to Gio Vasanzio, who was
led "il Fiamigo," a Flemish architect
o worked on the Villa Borghese in



The Villa Pia: Apse of Loggia.

1616. This fountain consists of a basin of basalt supported on trusses, and at the ends are placed *putti* and dolphins standing on shells in the water. The loggia is reached, like the casino, by steps from the court, and, like it, contains a barrel-vault and two semi-domes. The elevation is simpler in conception and consists of the Order, above which is a high attic with three divisions. The centre panel contains a representation of Apollo and the Muses, and in the middle is a pediment borne on twisted columns framing a seated relief figure of Tragedy and bearing the Papal arms in the centre. The side panels contain similar pedimented frames in which are figures of Prudence.

On the pilasters at the end are placed caryatides boldly modelled, and these are repeated round the corner. The large pediment contains a representation of Aurora surrounded by the signs of the Zodiac.

The side elevations are also worthy of study. The entablature of the Order is broken to admit of a window, and is stepped against a panelled plaster on the north angle. The caryatid figures also appear and a freely-handled plaster panel fills up the attic stage. The whole is crowned by a segmental pediment, placed over the whole front, without regard to the break of the cornice over the pilaster referred to above and without regard to the axis of the window.

The interior is also interesting and quite different to the loggia of the casino. The surface of the barrel-vault contains, above the springing, an architectural division of a tiny Order of columns, some fluted spirally, some straight, and some encrusted with scroll foliage, bearing a complete entablature and pediments, and forming panels, alternately fresco, and moulded in relief, as small windows.



The Villa Pia: Barrel-Vault of Loggia.

Above are three large panels filled with frescoes, and the surface of the vault is decorated with enrichment in low relief. The semi-domes are similar with respect to the columns, but the panels are alternately oval and square, and there is no fresco decoration.

The walls of the apse are plastered and have a diaper of pieces of mosaic set in the white surface. The heads of the niches are elaborately but daintily enriched, and marble basins are placed in the ends of the apses.

The north elevation of the loggia is simpler, but, according to the drawings, has suffered from neglect and ill-treatment, as all trace of male carytides shown as existing in 1836 have disappeared. There is a large opening extending from floor to cornice, and the Order of the front appears as a minor feature supporting a cove, in which is an inscription to the effect that the Pope Pius IV. built this portico and ornamented it with columns of Numidian marble. The frieze contains an inscription recording the restoration of this front by Leo XII. In the pediment are the Medici arms, and they are repeated on the two centre dies of the white marble balustrade. The lower portion, or "lymphæm," ends in a fern-grown shelf over a pool, into which water is ever falling from two basins at the sides of the building, and is ornamented with three antique statues, the centre one of which, a beautiful Thetis, is raised on a rocky pedestal covered with ferns, and stands against a circular-headed panel. The statues at the sides are smaller, and are placed in square recesses lined with antique slabs.

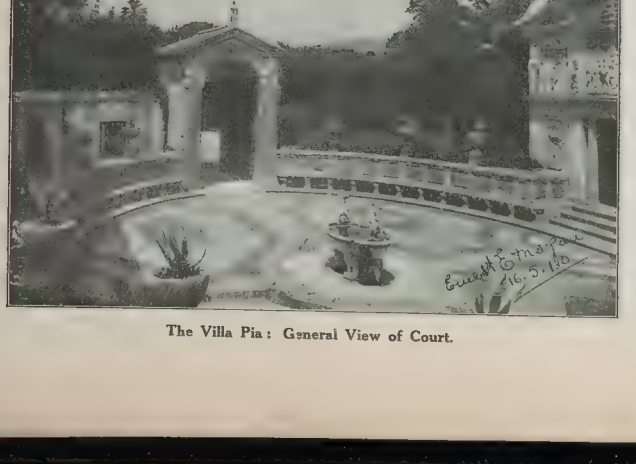
The pool overflows in a very naïve manner into a gutter. The water-chamber is placed behind the lower portion of the loggia.

The arches at the entrance are also beautiful, both in design and detail. The two pilasters, with the fronts, encrusted with coarse mosaic, support an arch and pediment, and the whole is set to the curve of the court. The inner arches are filled with graceful shell enrichments, and the outer tie-rods are decorated with foliage. The interior consists of a barrel-vault richly panelled, above walls containing three niches on each side and decorated in mosaic in a manner suggestive of the antique Roman wall paintings. The friezes on the exterior also are beautiful pieces of design based on that of the Roman Temple of Faustina. The simple wood gates are also worthy of note.

The above is a description of a work which is little studied at the present, and which shows a Renaissance architect's idea of a small villa. Free but scholarly in its treatment, all the details exhibiting much thought and care, and the whole design showing a straightforward conception, this villa may fitly take its place in the series of beautiful small villas of the culminating period of the Roman Renaissance.

As Mr. Halsey Ricardo pointed out in his paper on the Villa Madama, read before the R.I.B.A. (January 20, 1911), the architects of the Renaissance wore their scholarship lightly, and surely no happier example of a happy saying could be found than the subject of this sketch. The forms are antique, much of the material is Roman, but as placed in position the result is entirely novel and entirely charming. The whole is typical of the period, and testifies to the skill alike of Ligorio and his assistants. No words, however, and no photographs can give any idea of the exquisite charm and sparkle of this work, situated as it is under the shadow of St. Peter's, nestling among cypress-trees on the hill, the water playing softly in the fountain and overflowing from the pool with a gentle melody which seems to be the embodiment of the spirit of the place. Time has, in the main, dealt kindly with it, and a few slight repairs to the fabric are all that is necessary to preserve this gem for many years to come to delight the eye and sense of those who have the privilege to enter the garden of the Vatican and to visit this Papal pleasure house.

[The photographs accompanying this article are from negatives by Mr. E. E. Morgan, A.R.I.B.A., to whom we are indebted for permission to use them.]



The Villa Pia: General View of Court.

NOTES.

Monuments in our Parks.

The idea of the averag Englishman that a par should be a little piece Nature preserved in all its sylvan beaut amidst the formality of its surrounding was again put forward in the debate i the House of Commons on the sit for the King Edward Memorial. Som members appeared to object on princip to statues being placed in a park, the ide seeming to be that no statue is ever s beautiful as the blades of grass it su plants. This opens a large question, an on the same reasoning no building woul ever be sufficient compensation for th light and air it displaces or for th beauty of sky which it hides from ou view. If the idea that the least of th creations of Nature is preferable to th greatest of the creations of art is to pre vail in such matters, there is, of course no more to be said; architects an sculptors may put up their shutters, an the King Edward Memorial take som non-material form. After all, it a depends, we suppose, on how the thin is done. Candour compels the admis sion that, as a matter of fact, many o the statues and other monuments w have hitherto put in our parks are n real compensation for the natural beaut they displace. But the thing can b done, as anyone acquainted with th Stadt Park at Vienna, or the publi gardens of Paris, and of many other conti nental cities would immediately realise Apart from the artistic merits of an particular statue, the placing of it is a art in itself—an art which in the past ha been too much neglected in this country and has not received too much considera tion in the King Edward Memorial So long as our public authorities o selected Committees continue to allow any other consideration but that o artistic fitness to influence the positio of our public monuments they cannot reasonably complain of the results.

Architecture and Local Patriotism.

We cannot but sympa thise with the outburst o patriotic feeling which marked the opening meet ing of the Glamorgan County Council in their new County Hall at Cardiff even though it was caused by dissatis faction with certain aspects of the building. The entire absence of anything emblematic of Welsh ideals and national sentiments was adversely commented upon, though the meeting was not altogether agreed as to whether certain features behind the Chairman's seat were or were not goats' heads, or "billy-goats' jimmies," whatever they may be. The names of Nelson and Wellington inscribed on the walls were all very well, but where were Owen Glyndwr and Owen Gwynedd? Byron was given another niche in the temple of fame, but why not Dafydd ap Gwilym and other native worthies whose names are even more difficult for the mere Saxon to pronounce? Why not, indeed? In these days of cosmopolitanism in art it is just these fine distinctions which are so valuable as enabling an architect to express more exactly the purpose of a building and to give it distinctive character and local interest. While the

ctions of County Councils remain the
ie in every part of the United King-
n the County Halls which express
se functions must no doubt tend to
somewhat alike in their lay-out and
eral appearance. The finer shades
expression seem to depend largely
a sympathetic understanding and
sentation of local character and
lition in those features which are
so entirely dominated by matters of
ctical necessity common to all alike.
he Saxon was only as susceptible as
Celt to fine shades of artistic expres-
n architects would probably devote
re attention to them, greatly to the
antage of the art.

ie Question of Acoustics.

As, moreover, the acoustic properties of this hall do not appear to be quite sfactory, the *Western Mail* suggests t the alterations necessary to repair defect will provide an opportunity n the form of hangings or drapery—for introduction of such national emblems may be desired. Some such device often successful in overcoming these ustic difficulties, which certainly con-ute one of the most uncertain and zzling of the problems with which the dern architect has to deal. For some son or other, it seems most difficult guarantee that a hall of any consider-e size shall be perfect for speaking l hearing. Although its height and proportions generally, no doubt, rcise a considerable influence, it is sible that the hardness of modern terials and finishings have a good deal do with it. Hard bricks in cement shed in Keen's cement and concrete ings probably accentuate the difficulty. hough we are by no means sure that would be possible to lay down any cise and definite rules, or to evolve general principle of universal appli-ion that would ensure good acoustic perties in any and every building, the ject is one to which more systematic ention might well be directed. Per-ps the Science Committee of the titute might make a pronouncement this question, or suggest it as a fitting ject for a paper and discussion at ordinary meeting.

Competition Ethics Again.

We regret to see it reported that the Melford Rural District Council. er having engaged an independent hitect to decide finally between four cted designs in a competition, have own over his award for reasons which pear from the report to be entirely dequate. One member, we are pleased see, could not understand the Com-ttee calling in expert advice and then oring it. Neither can we. Nothing uld be more illogical or, as a general e, more detrimental to their own erests. A letter to the local Press tes that the competitor whose design s finally adopted by the Council had cularised the members of the mmittee before any award was given, nting out the merits of his own ign. Any such conduct as is here ged is rightly considered to disqualify competitor in a properly-conducted petition, and it cannot be too strongly demned.

The Strike.

It is to be hoped that even before these lines appear in print the miners' leaders will have adopted the only course now open to them, and will have advocated a general resumption of work. It is not for us to discuss in these columns the wisdom of the policy either of the men or of the Government in connexion with the strike, but in view of the general dislocation of trade we may point out that nothing is to be gained now by useless recrimination or by a prolongation of the dispute. The men may not realise the vast concession that has been made in the recognition of the principle of the minimum wage, but the leaders must appreciate it, and the nation are alive to it. The prolongation of inactivity can only now serve to eliminate any sympathy with the miners' cause and arouse the country to call for immediate legislation for the protection of its industries.

PICTURE EXHIBITION.

The Royal Society of British Artists' Spring Exhibition at the Suffolk-street galleries is quite the most interesting show of pictures which this Society has provided in recent years. Every wall repays examination. There are many pictures of high merit, and the general level is much above the average. Mr. Alfred Hartley's "Sky and Upland" is one of the first pictures to attract attention on entering the central gallery for its abstract poetic and decorative quality. Mr. Hartley's work is much closer to nature than many more realistic efforts: the clouds and upland and sheep resolve themselves under his brush into a generalised composition in which photographic verisimilitude is the last thing sought for. The "After the Ball" of Mr. Joseph Simpson recalls in the reclining attitude of the female figure a well-known work of Manet. Mr. Simpson uses his colours with a somewhat Post-Impressionistic boldness, but he attempts no tricks in either composition or drawing in this interesting picture. Our eye is next caught by a crude but effective and animated scheme in green, blue, and white, worked out in a mosaic combination of colours after the manner of some of the early impressionists—"The Border Castle." by Mr. Foottet. This method of painting has appealed to more than one artist at the exhibition, but none has employed it with greater apparent spontaneity than Miss Dorothea Sharp in her two pictures, "The Wind on the Hill" and "The Apple Tree." Mr. Elphinstone and Mr. D. Murray Smith are stylists. Each composes, arranges, selects; each goes to Nature with the object of discovering her secrets rather than with the object of serving up hot, as it were, a counterfeit presentment. Of the two, Mr. Murray Smith is the more formalistic; Mr. Elphinstone, we should imagine, the more inspired. "The Two Mills" by the latter painter, a winding canal, threaded by shipping, with mills in the distance, is one of the most notable pictures by this artist which we have seen. In quite another manner is "The Bathing Place" of Mr. Harry W. Adams, which is interesting and effective in its spacious way, but not quite convincing. "The Towing Path Bridge" by Mr. John Muirhead, represents yet another phase of the painter's outlook, in which the play and gradations of atmosphere on the extended vistas of a rolling countryside provide the theme. The work of the President, Sir Alfred East, is too well known to require commentary in the brief space at our command; and for the latter reason we must also omit mention of many works that certainly deserve it.

ART MUSEUMS AND PICTURE GALLERIES.

The usual fortnightly meeting of the Royal Institute of British Architects was held on Monday, at No. 9, Conduit-street, W., Mr. E. Newton, A.R.A., in the chair.

Mr. H. T. Hare, Hon. Secretary, announced the decease of Mr. F. W. Albury, elected an Associate in 1866 and Fellow in 1875, and placed upon the retired list of Fellows in 1900.

Mr. E. T. Hall then read a paper, of which the following is an abstract, on "Art Museums and Picture Galleries":—

"Let us consider the main lines and general principles on which an art museum should be designed.

It must be borne in mind that there are often priceless works of art in such a building, and as, alas, there are thieves in the world, it is not desirable to have more than one door (or group of adjacent doors) both for the ingress and egress of people in normal circumstances, so that all may be under observation by the same attendants! Fire escape exits in a large building may be necessary, but these should be safeguarded. The common ingress and egress facilitates the placing of cloakrooms. A spacious vestibule or hall will, of course, be necessary, and should be consonant with the dignity of the place.

Assuming a large building on more than one floor, the main staircase should be conveniently near the entrance, so that visitors to departments upstairs may at once be separated from those to the lower departments, thus reducing or disseminating the volume of people.

The administration offices should be placed in a position convenient for those who have merely business relations with the museum.

I do not propose to deal in detail with such necessaries as refreshment-rooms, etc. They may be placed where convenient for general access, but it must be remembered that the supplies and staff should have access without having to pass through the galleries.

The general disposition of departments now demands attention. Top-lighted galleries may be placed in internal courts with rooms around them or they may be on the top floor. The latter position is, I think, preferable for many reasons, one of which is that if the central gallery has a roof at the height of the surrounding building this will be quite unsuitable for anything but sculpture or architecture, and if the roof be kept down the shadow from adjacent buildings will be objectionable.

There is a widespread view among directors that there should be internal open courtyards to museums, and Doctor Gustav E. Pazaurek, the director of the museum at Reichenberg, in 1903, said:—"The internal courtyards of a museum should be laid out as gardens in which should be sculpture meant for outdoors." You will, of course, call to mind many sculpture gardens in Rome, Florence, and other parts of Italy. It is objected by some that our climate does not suit open courtyards for sculpture, etc., although last summer we had climatic conditions as favourable as any further south, but if we accept the inferential objection, this could be met by a plain glass roof with open sides, converting the courtyard into a covered garden. I think this courtyard feature is one to be encouraged and developed, and, although we cannot have such large spaces as the Italian courts and gardens or even the Grand Cour du Louvre at Paris, we could frequently have them of areas larger than the Octagon Court of the Vatican, which is but 20 metres across.

This suggestion of sculpture in gardens brings us to the consideration of sculpture galleries themselves. There is considerable difference of opinion as to the best means of displaying

D

sculpture. Some authorities favour large courts or galleries with plain glass roofs all over the area—in fact, the nearest approach to the open air; others say sculpture is best displayed by light coming from windows placed high up near the ceiling, the sculpture being placed near the opposite wall so that light may come diagonally to it.

Coming to the general disposition of other galleries in a museum, what is to be the principle on which they are to be laid out? Are galleries for all the different exhibits on a floor to be in one range—that is, to open into one another so that a visitor shall pass through all and make a circular tour back to his starting-place? Are galleries to be in groups so that each group shall take one branch of art and illustrate it through all time? Should art work of all kinds of each period or era be illustrated together in the same room or gallery?

For the convenience of administration and supervision only, the one continuous range is better. Large numbers of people are passing in only one direction and do not interfere with those following them. On the other hand, if a visitor wants to contemplate one period of art—be it painting or any other manifestation—he has to make the other rooms mere passage-rooms, and this, further, is disturbing to the art students in those other rooms. Professor Lichtwark condemns galleries used as passage-ways, and lays down as fundamental conditions of planning "free movement and quiet." He thinks the ideal is "broad corridors unobstructed and exhibition galleries disconnected one from another and accessible only from the corridor."

In small museums or galleries the question we are considering settles itself. The floor area is limited and the galleries on any one floor become a manageable unit which, if well arranged, meets with general acceptance, as in the examples of Aberdeen and Linz. Liverpool is on a different plan, but is still of manageable dimensions. It would appear to be possible to apply this small unit principle to a museum of any dimensions, however large. The Kaiser Frederich Museum at Berlin, erected in 1905, is a combination of the two systems. You may go all round, but it is possible to short-circuit home. The City Museum at Amsterdam and the National Gallery in London are similarly arranged.

The general principles of the scheme having been considered, we come to the ordinary galleries. As far as I can gather, the general feeling in respect of all except picture galleries is that side-lighted rooms are best.

It will be readily seen that show-cases having shelves will be better lighted from the side than from the top. For efficient lighting in our northern clime, cases should not be placed more than, say, 20 ft. to 25 ft. from a window. Windows in our climate should be kept as close to the ceiling as possible so as to get the highest possible angle of light, and in order to get the valuable reflected or diffused light from the ceiling surface. Show-cases should be placed with the long axis perpendicular to the window. If they are placed parallel a visitor casts a shadow on to the exhibit at which he is looking if his back is to the window, and if he is facing it the glare of the window will be in his face, obscuring the exhibit in the case. Nothing is gained by making these galleries more than, say, 20 ft. high.

For the proper display of tapestry and carpets upon the wall, side light is imperative. They are lost and wasted in large galleries lighted by glass all over. The top light casts a shadow from each stitch on to its neighbour, thus darkening the whole colour effect, and when the tapestries are covered with glass the rafters of the roof are reflected in the glass.

In the case of pictures with heavy and dark varnish and those darkened by time, light from above shows only a mass of black, while in a good side light they still present great richness of colour, and details become visible which had before completely escaped the eye. The superiority of side light is that it permits of placing oneself in a position to see the roughnesses on their lit-up side.

It may be noted from experiments that a good height for the window-sill of side-lighted rooms is 7 ft. 6 in. above the floor, and in Brussels, where the sills were lower, the authorities have fitted shutters to a height of about 7 ft. from the floor.

One difficulty with window-lighted rooms is the glare on the opposite wall. In the Bardini Gallery the back wall is not parallel to the window, but at an angle of one in eight, and there the difficulty disappears. In many side-lighted rooms, as, for example, the Hof Museum at Vienna, the City Museum at Amsterdam, the proposed Museum at Haarlem, and other museums, the side walls are not at right angles to the window, but at an angle of about 75 deg. converging inwards, and this materially adds to the illumination of the pictures. In some galleries pictures on the side walls which are perpendicular to the window are each set out at a similar angle, but that is not so satisfactory, as each casts its neighbour into shade. It should be noted that no picture can be hung on a side wall close up to the external wall in which is the window, but this space is always utilised for the doorway.

The very general commendation of side lighted rooms for pictures, and their adoption in most of the large Continental galleries—as well as their existence in the many palaces all over Europe, which, after all, form the most renowned places of exhibition—would lead us to conclude that such picture-rooms should be provided in every large museum. Mr. A. W. Weissman, architect, of Amsterdam, points out that these should not be on the ground floor because of the reflection from the surrounding ground. However, the top light in some form is so general, and the convenience of being able to get a great amount of wall space for hanging on a limited site is so great, that this system will always commend itself for picture galleries.

I find that the general consensus of opinion is that great areas of light all across the ceiling, even where these are kept well away from the surrounding walls by wide coves, are to be avoided. They unduly illuminate the floor. The centre of the ceiling should be opaque—*i.e.*, there should be a plaster ceiling to obstruct direct rays passing to the floor, and only the side portions should transmit the light. Lantern lights with vertical glazed sides, as in Sir John Soane's Galleries at Dulwich, have been tried, but these are not satisfactory, as the area of the light is not adequate to illuminate the opposite wall.

A great improvement is seen where the flat ceiling of the lantern is reduced in width and the glass sides sloped inwards from the bottom. This arrangement exists in some of the rooms of the old part of the National Gallery in London, but the slope was too steep and the area of light had to be supplemented. It is proposed to adopt the principle in the new Welsh National Museum. In the new rooms at the National Gallery the lantern form has not been adopted, the skylights being of the ordinary saddle-back type, and there has been in the newspapers a great deal of adverse criticism of the result.

Another form giving excellent results in an oblong gallery is a semicircular or segmental roof with sloping side lights divided by a flat plaster ceiling, or, in a square gallery, a centre skylight similarly divided by a flat ceiling. An outer glass roof and inner ceiling light should be avoided; the double glazing greatly diminishes the light.

In this connexion it is opportune to speak of the height of top-lighted galleries. This height may be well determined by drawing a 45 deg. angle upwards from the base of the picture (say, 3 ft. from the floor), and where it cuts a vertical line parallel to and distant from the opposite wall one-sixth of the width of the gallery, the point of intersection should be the base of the skylight. Thus, in a gallery 24 ft. wide the base of the roof light should be 23 ft. above the floor and 4 ft. within the face of the wall.

Top-lighted picture galleries in museums should not be more than 30 ft. wide. The very few extra large pictures demanding greater distance for observation can be placed at the ends of galleries. Any greater width makes the height too much.

Rolling blinds are necessary for skylights to adjust the varying intensity of sunlight, and these should be inside. In the new rooms of the National Gallery the blinds are external, and whenever there is a change of intensity in light men have to go on to the roof to alter the blinds. This is very inconvenient, and external blinds get very dirty. The floor of all galleries should be dark to absorb and not reflect light, and the same remark applies to the dado or base of the wall.

The German directors and Professor Bather of late years have recommended that works of all kinds of art of a period should be located together in a room architecturally reproduced in the same period, so that all may be seen in their natural environment. Dr. Brinckmann, the Director of the Hamburg Museum of Art, says:—"The grouping of various art objects together shows how all grew in common out of the soil of a certain temper of mind and a certain hereditary taste," and he arranged a Paris room in this way so as "to display the individual objects in a manner most favourable to their mutual reaction in form and colour." Of this room, Dr. Graul, the Director of the Grassi Museum of Applied Art at Leipsic, writes:—"Except where the purely scientific interest compels a store-room arrangement, soon no museum directed by taste and intelligence will permit any other method of exhibition."

An important feature of a museum is the reserve galleries. They are not mere warehouses or storerooms. Some may be so used, and these should be near the goods entrance, but the main purpose, according to modern ideas, is that they shall be accessory to the exhibition galleries and that from time to time exhibits proper in the galleries shall be changed so as to keep up public interest.

Another matter of interest is that there should be students' research and copying rooms off each department, where students may be quiet. Copying in main galleries is deprecated by some directors as not good for students or for the public.

I have not yet mentioned the children's room as part of a museum equipment. It is, however, a modern adjunct, and it should be near the entrance.

Growing interest by residents in a city in the former history of their environment is a most healthy sign, and to encourage this sentiment a department should be set aside to illustrate by sketches, drawings, and models—in some cases actual size—the archæology of the district, the demolished streets and old-world buildings, the former rural scenery, etc., of cities which may now be covered by a mass of modern buildings.

Last of all the public rooms is a lecture theatre, and this should be so arranged that, while it is acessible from the museum, it may be separately entered from the outside so that it may be used when the museum is closed. It requires its separate cloakrooms, lavatories, exits, etc. Its form depends on circumstances. In some cases its use may be restricted to lectures, in which case a semicircular form is convenient, with tiers of seats. In other cases it may be adapted for other uses as well, as, for example, for photographic or microscopic exhibitions, in which case it is better to make it rectangular with a level floor."

[The following buildings, among others of a similar nature, have been illustrated in the *Builder*:—

Sheffield, Mappin Art Gallery (Messrs. Flockton & Gibbs)—Plan and elevation, February 4, 1888; Perspective, October 9, 1897; Extension, May 14, 1904.

Tate Gallery (Mr. S. R. J. Smith)—Elevation and plan, January 2, 1897.

Bury, Art Gallery and Library (Messrs. Woodhouse & Willoughby)—Elevations and plans, October 12, 1901.

Forest Hill, Horniman Museum (Mr. C. Harrison Townsend)—Elevation and plans, February 8, 1902.

South Kensington, Victoria and Albert Museum (Sir Aston Webb, R.A.)—Elevations and plans, May 2, 1903.

Bristol, Art Gallery (Messrs. Wills & Houston & Houston)—Elevation and plans, April 15, 1905.

Berlin, Kaiser Friedrich Museum (Herr von Ihne)—Elevation, January 5, 1907.

Birmingham, Art Gallery, etc. (Messrs. Ashley & Winton Newman)—Elevation and plans, January 19, 1907.

Cardiff, National Museum of Wales (Messrs. Smith & Brewer)—Elevation and plans, April 2, 1910.

Manchester, Library and Art Gallery, Proposed (Messrs. Crouch, Butler, & Savage)—Elevation and plans, December 15, 1911.]

Dr. Evans Hoyle

(Director of the National Museum of Wales), in proposing a vote of thanks to the author, said he thought it was essential that museums should be separated into sections for the general public and for the student and specialist. With regard to the sections for the student, they could not have too much material for comparison: but, on the other hand, the specimens for the general public must be limited in quantity, for each one must be the best of its kind and must be selected with a definite object in view and with a definite idea of what it was there for. This applied equally

artistic productions as well as to objects which were for the instruction of scientific facts and principles. Full justice should be done to the works of art exhibited, and each should be hung in such a way as to show it to the best advantage. Pictures ought not to be jammed up together as if they were trying to get so many on a wall, for that was absolutely fatal to any proper realisation of a picture as a work of art at all. There was no one background which was better than another, but each must be selected to suit the objects which were to be placed in contiguity to it. Dr. Hoyle referred to the Bavarian Museum at Munich, which he said was specially designed for works of art already collected. He thought it was ill they had that museum, but it would be an absolutely fatal principle to apply generally, because such a museum was obviously a finished museum. In other museums they had to go on building, and hence they must have rooms which could be adapted for all objects. With regard to lighting, Mr. Smith, Sir Goscombe John, and himself visited a great many museums in Europe, and the conclusion they arrived at was that for most modern pictures top lighting was the most satisfactory so long as it was not quite vertical.

Sir Goscombe John, R.A.,

seconded the motion, and said that the two things which it seemed almost impossible to bring into line in these matters were the interests of the dilettante person and the interests of the students. Many museums, like that of South Kensington, were huge depositories of beautiful objects; glorified *bric-à-brac* shops in which one put oneself. If a museum was to be a place to hoard beautiful things it must be arranged on very different lines to a museum for the purposes of the student. As to placing objects in their proper surroundings, they could at once disagree as to what the proper surroundings were. The church in the Kaiser Friederich Museum at Berlin was very interesting, but one certainly did not see the things to advantage, whilst they knew it was almost impossible to see many of the beautiful objects in the churches in Italy. One had to take a lighted taper and crawl on one's hands and knees to see the panels of Donatello at St. Antonio at Padua. He thought the most satisfactory lighting for sculpture was when it approximated to an open-air light, and wherever the light came from it should not bother the spectator in the slightest way. He recollected having some years ago to see the Hermes at Olympia, and found a window placed right at the back, which was absolutely the worst position in which to place sculpture.

Mr. Frank Dicksee, R.A.,

did not think there could be any question of the value of side lighting and top lighting for a picture gallery. Provided that the top lighting was scientifically right, it was the best way. As to backgrounds, it was difficult to say which was the best; but if they had to have one colour, he felt that perhaps red was the best. His own feeling was that it was an absolute mistake to have a neutral colour. If there was colour on the wall it started the eye on an exploring expedition in the matter of colour, and probably produced a better result than if they had a dull grey, colourless wall which did not stimulate the optic nerve in any way at all. He was inclined to think that architects when dealing with pictures concerned themselves too much with their architecture and not enough with the object which they were, as it were, called on to serve. He thought that even in that building they had put their pictures too high up on the walls. From the point of view of decoration they were too high, and from the point of view of examination they were undoubtedly too high.

Mr. W. Woodward

thought that the architect in designing a building for a museum tried to make a magnificent architectural building without the slightest regard for the uses for which it was to be put. They also had not enough idea of simplicity of planning. He was sorry Mr. Hall did not refer to the Tate Gallery, as he considered it one of the best lighted in Europe. It was a curious thing that they had curators and directors reading papers on museum planning, and yet they went on repeating the blunders of the past. A building was put up, and then the curators said it was all wrong. He suggested that when the next museum or picture gallery was built the directors would confer with the architect so as to prevent costly blunders.

Mr. H. H. Statham

considered the best way of lighting was a lantern in the centre, with the lights vertical and the centre part opaque. As to the lighting of sculpture, he thought the sculpture at the Palais des Beaux-Arts at Paris was exhibited under almost ideal circumstances. It was almost the same as daylight, but there was shelter for the weather. He was looking forward to the time when the Royal Academy would have the will and the power to roof in the courtyard of Burlington House and put all the sculpture there instead of crowding it into the rooms as now.

Mr. A. T. Bolton

said they heard a good deal about museums being an absolute weariness, but there was another side in regard to the design of museums and picture galleries. Anyone going to the Louvre on Sunday must be impressed with the great stream of people coming in, and they must derive a great deal of good from the association of a fine interior with the pictures. He thought these buildings should be planned in a large way with large rooms, and with a dignified architectural effect, for that was as important as the point of view of enabling the pictures to be seen in minute detail. He did not agree with Mr. Woodward as to the Tate Gallery, because he considered it one of the worst lighted he had ever seen. There was no gallery more troubled with reflections than the Tate Gallery. He had just seen the new Birmingham Gallery, and had been greatly impressed. There they had done exactly the reverse to what had been done in the new buildings of the National Gallery, and had gone back to the old flat ceiling, such as Barry designed for the National Gallery in 1870. He thought that if the pictures were found to be properly lighted at Birmingham, as he believed they would be, they would have to reconsider the matter.

Mr. Matt Garbutt

pointed out the difficulty of seeing some of the old pictures in museums owing to their being glazed, which, of course, was necessary for the presentation. He suggested whether it could be possible to put temporary black screens in front of these pictures to get over the reflection.

The Chairman

said the whole subject was a difficult one, but difficulties were the architect's opportunities. As architects they could only have one view, which was that fine art must be finely housed. Practical problems, however, must be faced, because, in so far as a building of that sort failed in its practical purpose, it failed also as a real piece of architecture.

Mr. Hall

briefly replied, and said Sir Charles Holroyd had written pointing out that one difficulty was the policing of small rooms. He did not think it would be possible to have screens as suggested by Mr. Matt Garbutt.

It was announced that an extra general meeting would be held on April 15, when the discussion on "The Newer Responsibilities of Architects" would be resumed and a further paper read by Mr. A. Saxon Snell.

THE ARCHITECTURAL ASSOCIATION:

SIXTH SPRING VISIT.

For the third time since its commencement members of the Architectural Association visited, on Saturday, March 30, the new Wesleyan Church House, Westminster, now in a very interesting stage. Members assembled in the Great Hall, of which the fine proportions can now be appreciated, though the inner dome above its pendentives is at present obscured by staging, albeit the latter afforded a chance of examining at close quarters the extremely bold coffering and modelled plaster-work. The planning of the tiers and galleries with the position of their entrances and exits in re-entrant angles of the square proves admirably adapted to secure at once a good view of the platform and great facility of access from all parts. It is risky to predict as to acoustical properties, but it appears that the re-entrant angles should also serve a purpose in preventing echoes. From consideration of mere window area it might seem that the Hall would be under-lighted, but in practice it is most satisfactory, the superior value of high lighting being well seen.

An inspection was next made of the dome construction, the large space between the inner reinforced concrete dome and the outer dome of timber covered with lead upon a skeleton steel frame being accessible, and containing apparatus in connexion with heating, ventilation, and lighting, and a spiral iron stair to the central cupola. The lead covering was also examined with interest, and portions of the cast enrichment were seen in process of fixing. Descending to the ground floor, which is placed 7 ft. above the road level to secure better lighting for the large tea-rooms and other rooms in the basement, the small hall, seating about 600, and the library, usable jointly or separately at will, were visited, and from thence the main entrance hall was reached. The planning of the grand approach to the Great Hall provides a most telling series of architectural contrasts. Entering at ground level into a low elliptical vestibule, a broad central flight of steps ascends to the ground floor. Here from the spacious and dignified entrance hall the library is approached on the left and the small hall on the right. The grand staircase, doubling back, continues as two flights above the vestibule, reuniting as a single central flight, and again diverging as two sweeping flights for the final rise to the Great Hall level, where it delivers most effectively into a long low foyer or ante hall, whose proportions immensely set off both the staircase and the Great Hall. It is quite the most ambitious staircase in London, and displays real architectural motive in the relation between each of the sequence of apartments from the entrance to the assembly hall. On either side of the main stair case are enclosed subsidiary stairs in the towers, approached both from the vestibule and the street, and serving also the basement and the assembly hall galleries, communicating with the latter by circular crush-rooms or ante halls in the angles of the building.

The interior detail is fresh and vital, though described by the architects, Messrs. Lanchester & Rickards, as "somewhat austere." The visit was full of interest, and was much enjoyed by a very large attendance.

COMPETITION FOR ST. PETER'S, ACTON GREEN.

A competition, limited to seven architects, for the Church of St. Peter, Acton Green, has just been decided by the assessor, Mr. F. R. Hiorns, A.R.I.B.A.

The site, at the corner of Southfield-road and St. Alban's-avenue, is rectangular and level. The back portion of it is occupied by a mission hall. The church has to be placed between this hall and Southfield-road, leaving access to the hall from St. Alban's-avenue. The immediate surroundings consist of small two-storied houses of the usual deplorable type.

The conditions require a total accommodation for 650 persons in the church, including fifty in a chapel on the north side of the church and thirty seats in the chancel for clergy and choir; also a clergy and a choir vestry, with lavatories, and an organ-chamber on the south side of the chancel.

The total expenditure, including architect's and surveyor's fees, was limited to 7,000*l.*; this amount to include heating and ventilation, fence to St. Alban's-avenue, pulpit, and a certain number of permanent fixtures.

The site, being restricted and partially occupied, allowed little opportunity for original treatment in the general lay-out; orientation necessitated the long axis of the plan being parallel with Southfield-road, with the west end and main entrance facing the side street. The position of the chapel and of the organ-chamber being laid down by the conditions, and the cost being strictly limited, the designs are necessarily all on the same general lines, and are all treated elevationally in a simple rendering in brick of the later Gothic.

Although the plans are all more or less alike, they can be roughly divided into two classes—those with seats in the aisles and those without.

The winning design, by Mr. W. A. Pite, is one of those which shows seats in the aisles. It has a comparatively narrow nave with central gangway, from which the seats are continued into the wide aisles with side passageways against the walls. The general arrangements are on the lines suggested by the conditions, and appear to be well thought out. A special feature, which should give

a pleasing result, is created at the west end, where the font and the two entrance doors are treated as a baptistry or narthex. The interior effect should, we think, be good, though we are not quite sure about the height of the aisles, kept low presumably to allow a good height to the clearstory. The chapel ceiling also appears perhaps a little inadequate, but this, if a defect, is a minor one which could easily be reconsidered in execution. The elevations are good and extremely simple without being too plain. Breadth of treatment has apparently been aimed at, and this effect is helped by a long unbroken roof. The cube is stated to be 266,706 ft. at 6d.=6,667*l*. The whole design seems simple, pleasing, and practical, and should work out well and prove satisfactory.

No. 1, by Sir Arthur Blomfield & Sons, is a very reasonable plan. The building allows more space between the east end and the adjoining houses, giving a view of the mission hall. The arrangement of the west end as a sort of narthex seems good; the elevations are simple, but perhaps a little old-fashioned in sentiment. Cowborough stocks with red quoins, and a few stone off-sets, and a red-tiled roof are suggested. The cube amounts to 237,921 cubic ft., and the cost is 7,000*l*.

No. 2, by Messrs. M. B. & M. R. S. Adams, consists of three alternative designs. Considering the restricted scope of the scheme, this hardly seems worth while. The various alternatives do not appear to differ enough in idea to justify the amount of labour. Probably the authors would have done more justice to themselves if they had concentrated on a single one. They are all pleasing in design, and aim at breadth of effect. The cube of the first is 226,671 cubic ft., and the cost 6,468*l*.

No. 3, by Mr. J. S. Alder, is not quite so simple as the others in its general treatment. The drawings seem to give the suggestion of a pleasant but more expensive class of building. Seats are shown in wide, lofty aisles, with no clearstory over. The bell turret at the west end appears to create an awkward and useless feature on the plan. The organ-chamber is made a special feature on the south side of the chancel, as desired. Beyond the organ-chamber and outside the main structure are the vestries, treated more as outbuildings.

No. 4, by Messrs. Hall-Jones & Cummings, show seats in one aisle only. The narrow south aisle is a passageway, while the wider north aisle is continued eastward to form the chapel. Narrow choir aisles are inserted on either side of the chancel, with entrances at the east end serving chapel and vestries. This design also shows no clearstory.

No. 5, by Messrs. Comyn & Durst, gives an alternative, which is perhaps the more interesting of the two. It is something of a departure from precedent, inspired by the domed churches of the South of France. The whole of the seats are in the nave, and the aisles are reduced to passageways. The wide space thus obtained forms two squares on plan, and is vaulted over in reinforced concrete. The elevations, however, follow more nearly the Gothic traditions. The cube is 300,000 ft., and the cost, without small tower, is estimated at 6,875*l*. It is a good attempt to deal with modern conditions and methods of construction.

No. 7, by Mr. Louis Blanc, shows a nave 35 ft. wide in the clear, with narrow aisles forming an ambulatory right round the church. But as his seating accommodation in the nave is not quite sufficient, he creates a small south transept, containing seventy seats, from which it would be impossible to see the altar; the pulpit and lectern, however, are well in view. The provision of this transept hardly seems to be a strong point in the design. It would, we think, have been better if the whole of the seats could have been provided in the nave. What does, however, appear to be a strong point is the excellent treatment of the chapel and north door with wide entrance vestibule.

In its general bulk and outline this design differs from most in being broader and in taking up more depth of site. While all the rest keep to the building line of the adjoining houses, this one projects the whole length of the chapel and entrance porch up to the limit of the site. Whatever practical advantages may be gained we are not sure that even if permitted by the local authorities this departure from the general building line of the street is to be commended.

The cubic contents are given as 198,546 ft., and the estimated cost is 6,950*l*.

THE CARPENTERS' HALL LECTURES:

DEVELOPMENT OF PLANNING.

THE tenth and concluding Carpenters' Hall lecture on the Arts Connected with Building was delivered on Wednesday last week by Mr. Gerald C. Horsley, President of the Architectural Association, on "Influences in the Development of Planning," Mr. John Hooke, Middle Warden, presiding.

The lecturer showed a large number of lantern slides, and in the course of his remarks he said:—

"The arrangements of the plan sets the key and decides the scale of the completed design; it is the anatomy of a building, and if the anatomy is carelessly designed and ill-proportioned, the result will be inartistic, a failure from the point of view of utility, and an addition of no interest or value to our land. Thorough training in planning is essential to an architectural student, who will find that his talents have as much scope for expression and development when brought to bear upon the design of a plan as upon that of the elevation or decoration of a building. A good plan must be more than merely convenient; to be worthy of being called architectural, it must show originality in its conception as well as beauty. Genius must dictate the arrangement and disposition of its parts. The two principal influences which affect the development of planning are, first, the personal influence of the designer or architect—that is the influence of the artist; and, second, the racial influence—that is of the manners and customs and modes of life adopted by the different races of the world. I propose to limit my remarks to a consideration of the planning of domestic buildings in the past, and at the present time in this country, with some comparison between our methods and those which obtain abroad. We English folk are descendants of a Northern race, and it can be proved that the planning of our domestic buildings has, during the passing of the centuries, possessed characteristics which are directly traceable to the customs of this Northern people. On the other hand, in the case of the inhabitants of France and Italy, it is possible to show that the planning of their domestic buildings has been largely dominated by the influence of their chief ancestors—the members of the great Latin races."

Having referred to the Pictish "Broch," the lecturer said:—"The prototype of the English house is the home of our Saxon ancestors, the ancient hall or halle, containing the open hearth for the health-giving fire. It is remarkable that the rulers of our island before the coming of the Saxons, namely, the Romans, although they built largely themselves, should have exerted so little influence on our traditions of building. The destructive Danes laid waste the Roman buildings, and comparatively few were left to instruct our more immediate ancestors, the Saxons.

On the Continent of Europe, on the other hand, despite the successful invasions of the Northmen, the old Roman domination in art persisted; and when the Normans attacked England in the XIth century and subdued its Saxon inhabitants they initiated the building of the Norman keep, an art doubtless acquired by them from the ancient Roman tradition. But the designs of the Normans did not oust the hall from its position of supremacy. On the contrary, the halls built by the Normans in connexion with their castles were very notable; the one at Oakham is a well-known example. The Sagas tell us that the larger Saxon halls were built of timber and were planned like a church, with nave, columns, and aisles. The hall at Oakham, and other examples of Norman work, show this early type translated into stone. The similarity of the hall to the church is an instance of that kinship which exists in all living periods of art between forms of building. In spite of the beauty of their halls, the art of planning in the time of the Normans was crude.

Alexander Necham, or Nequam, a schoolmaster of St. Albans, in the end of the XIIth century, and afterwards Abbot of Cirencester, describes in his treatise, "De Nominibus Utensilium," the various parts of a house in his day. He speaks of the hall, the private bedchamber, the kitchen, the larder, the sewery, and the cellar. Of such rooms, of course, the hall was the chief apartment, and Necham's description represents the type of house which flourished with but slight changes and developments until the opening years of the XVI century.

The Saxon house plan was a single hall built of wood, with a separate apartment for the women. In the latter centuries of the Saxon domination in England their buildings were often of stone in the Roman or Romanesque manner—"more Romano"—and frequently these houses were built by hired artificers from the Continent. No kitchens were needed in these early days, for the same fire which warmed the inhabitants of the house sufficed to cook the food.

These buildings were of one story. They were often connected with covered ways, and the old Saxon manuscripts frequently show delightful pictures of them surrounded by a wall with their roofs just appearing above it."

Having referred to Stokesay Castle and Haddon Hall, the lecturer said—

"It is in the XVth century that we observe for the first time clearly the combination of the two influences on planning to which I referred at the outset. Hitherto the influence of the race has been more dominant than the personal influence of the artist. In the XVth century we see a greater expression of the artistic power of the designer. Warkworth Castle, Northumberland, is an example of an attempt at a symmetrical plan, though the result is not altogether successful; it is notable because the principal rooms are on the first floor, a practice more French than English; one also adopted by the builders of Scotch houses, and a method of design borrowed, no doubt, from abroad.

It is interesting to see how the earlier influence remains in the plan of South Wingfield in Derbyshire, though of precisely the same date as Warkworth, namely, 1435. Another house of much interest built exactly at this date is the famous Jacques Cœur's house, at Bourges, in France. A glance at the plan will show how far advanced the French were in house planning at this time.

Though the Renaissance was at hand in the XVIth century, and our house-builders were to learn much from Italy and France, the old English house plan of hall, screens, buttery, and kitchens, solar and private rooms, died hard. For 400 years our abbeys, our colleges, and our houses had been built on this plan.

The plan of Hengrave Hall, in Suffolk, marks the change from the house of the South Wingfield type to the Renaissance house. It was built in 1538, exactly 100 years after South Wingfield. More than a trace of the orderliness and symmetry which in this and the coming century were to be the distinguishing feature of our house plans is visible in this interesting building. The stable government of the XVIth century made fortified houses no longer a necessity. Artists from Italy and France instructed our house-builders in planning spacious courtyards and fine galleries.

The plans made by John Thorpe and Smithson in the reigns of Queen Elizabeth and James I illustrate the increasing power of the designer in house planning, and the change in customs and manners of the house-dwellers. To eat, drink, and even sleep in the hall was no longer the custom; rooms must be provided for dining and sleeping; handsome galleries and withdrawing rooms were called for by the craving for greater comfort. The ancient hall becomes now a fine vestibule, a means of entry to spacious staircase halls, with stairs of great magnificence leading to beautiful apartments on the first floor.

During the XVIIth century the movement in art, which had begun in the later years of the XVIth century, culminated in the full development of the Renaissance, and drew many young Englishmen to Italy for the purpose of studying the buildings of that country. Many were sent by wealthy noblemen, and records of these travellers exist. One there was who went on his own initiative, and who, on his return to England, altered the whole course of English domestic architecture. This man was Inigo Jones.

During his residence in Italy Jones studied chiefly the works of Palladio; and the principles in planning and design which he introduced in

gland and which he carried out himself in tual buildings were Palladio's, and naturally e course of house planning in this country was ich affected thereby. With Inigo Jones the rsonal influence of the architect became a minant feature, not only in the conception the design, but in the carrying out of the ole building. Stoke Park is an example of the lladian style. It was the first house to be ilt in this country with curved wings, and a pe of plan which for houses of a large size ted well into the XVIIIth century. The neral scheme in plans of this form consisted of e reception-rooms in the central block, and e kitchen offices in one of the wings, and the bling in the other; many a stately house was ilt on these lines, such as Buckingham House, or Park, Ditchley, Chesterfield House, and ughton.

The chief points to notice in these and other use plans of this period are—(1) That the ll has become a mere vestibule to more ately apartments; (2) the large "saloon" s taken the place of the hall; (3) the kitchen d service-rooms are either entirely on the ound floor, thus leaving the first floor, *piano nobile*, for the principal rooms; they are placed in a side wing, as at Stoke ark, an arrangement which is obviously nsatisfactory, as the separation of the dining- om from the kitchen is too pronounced. A mpler and a more workable plan, also by igo Jones, is that of Amblesbury, a type hich endured for very many years. The main ature on the ground floor is the hall; above it the first floor is the large room or saloon, the ight of two stories. The large porch in front the entrance hall, as I must now call it, rmed the base of a fine open portico above. he arrangement of the back staircase within e principal stair is a clever feature, borrowed om the Italians, but we shall see in later plans at a more convenient position was found for is necessary part of a house.

We have also to notice in these house plans of e XVIIth and XVIIIth centuries that the rincipal staircase is not quite so important a ature as in the spacious days of Queen lizabeth, which, as we have seen it, led up to e long gallery, the chapel, and the with- rawing-room. In passing it is interesting to otice the new development making itself felt the plan of Aston Hall (1618-1635), which as built from the design of John Thorpe at e same time that Stoke Park was being esigned.

A very interesting plan is Raynham, by Inigo nes (1636), a symmetrical and convenient an. Coleshill (1650) succeeds, and Thorpe, all by John Webb, Inigo Jones's assistant.

The following plans give some idea of hat was being done in the latter half of the ntury in the days of Sir Christopher Wren and is successors:—Eltham House, 1660; Groom- ridge (ascribed to Sir C. Wren), 1660; Belton scribed to Sir C. Wren), 1680.

It is remarkable that these XVIIth and VIIIth century plans were as noticeable for eir general want of privacy as any plan dating om the days before John Thorpe. He, as we ave seen in the plan of Beaufort House, under- ood the advantage of a corridor, from which the rincipal rooms could be entered; but the later esigners adopted to the full the Italian fashion building strings of rooms connected together y communicating doors. Sir Henry Wotton the early years of the XVIIth century con- emned this practice, but it lingered on till the nd of the XVIIIth century."

The lecturer then showed views of some Queen nne and Georgian houses, and illustrations of he origin of the French or Continental type of own house. Proceeding, he said:—"We shall otice that the modern plan marks an advance a good arrangement of rooms, in comfort and in rivacy, which is certainly amazing. It will, I ink, be clear to my audience that the architect f to-day has learnt much from the plans of the ast. He is mindful of the influence of the hall"—the focus, as we have seen, of the old nglish family life—of the long gallery, the tately staircases, and noble entrance, and arden courts of the great days of Queen lizabeth, the ordered symmetry and well- onsidered proportion which were the principal atterns of the house plans of the later English enaissance.

These form the basis of this art, while the easonable and sensible manner in which odern requirements and customs are met and rovided for indicate the progressive develop- ent of house planning in the present day."

ENGINEERING SOCIETIES.

Institute of Sanitary Engineers.

The Examination Board of this Institute, under the lead of their Chairman, Professor Henry Adams, M.Inst.C.E., recently submitted to the Council of the Institute a report recommending the reorganisation of their examinations upon a broader basis. The Council has now adopted the report, a new syllabus has been drawn up, and the Board of Examiners has been augmented. The new scheme will be in working order for the next examinations to be held in May, and particulars will gladly be forwarded by the Secretary upon request addressed to the offices, 120-122, Victoria-street, Westminster, S.W.

The Society of Engineers (Incorporated).

The following is an abstract of a paper on "Ligno-Concrete," by Mr. Gerald O. Case, read on Monday, April 1, at the Institution of Electrical Engineers:—In the introductory remarks, the author refers to the use in America and Australia of concrete in combination with timber, and points out that, while the concrete effectively preserves the timber, it is not used to the greatest advantage. The object of the author's investigations was to ascertain if it were possible to reinforce concrete with timber rods. Roughly speaking, steel is about eight or nine times stronger than timber, but ten to fifteen times as expensive. The efficiency of timber as a reinforcing material depends on whether there is sufficient adhesion between the timber and the concrete, and whether the difficulties of the absorption of moisture by the timber from the wet concrete, and the splitting the latter can be overcome.

The paper describes the experiments made by the author to ascertain (*a*) the amount of water absorbed by eighteen kinds of timber immersed in fresh water, along the grain and through the end grain respectively; (*b*) the relative absorption by the timber of fresh and sea water in the same period; (*c*) the relative amount of water absorbed by timber embedded in 6 to 1 concrete and neat cement blocks; (*d*) the effect of applying wood preservative, creosote, varnish, etc., to the timber before insertion in the concrete or cement blocks; (*e*) the effect on the adhesion between the timber and the concrete of soaking the rods before insertion. Examples are given to show that concrete effectively preserves timber embedded in it.

Particulars are given of the construction of twenty-five concrete beams reinforced by timber rods. Three ligno-concrete beams, 8 in. deep by 4 in. wide, were tested with a central load on a 4-ft. span; the average ultimate load producing fracture about 3 tons. The results of these tests are compared with the tests on ferro-concrete beams recorded by Mr. E. Marburg in the *Proceedings* of the American Society for Testing Materials (1904, Vol. IV.). It appears that for the same ultimate strength of beam it is necessary to use 9 per cent. of sectional area of pitch-pine tensile reinforcements as against 1 per cent. steel reinforcements. A comparison of the prices of steel and pitch-pine shows a saving in favour of ligno-concrete.

As the author points out, in cases where more than about 1·2 per cent. of steel reinforcement is required ligno-concrete cannot compete with ferro-concrete, because the required size of the timber bars would be too large for convenient use. There appears, however, to be a big field for it for use in constructing bungalows, buildings for small holdings, floors, piles, posts, fencing, coast and river works, etc. It has already been used for making fence posts and for building a short length of sea wall. The ligno-concrete fence-posts costs about 2s. per cube foot. They are about 20 per cent. cheaper than creosoted deal, and about 40 per cent. cheaper than English oak. In Canada, four bungalows have been built with ligno-concrete slabs, and the Pacific Coast Construction Company, of Victoria, British Columbia, now have contracts in hand for twenty buildings in which this material is to be used.

BOOK RECEIVED.

The Steel Square and Its Uses Simply Explained. (London: Cassell & Co., Ltd. 2s. net.)

GENERAL NEWS.

Professional Announcement.

Mr. R. W. Collier, F.R.I.B.A., has removed from 37, Lincoln's Inn-fields, W.C., to 5, Lancaster-place, Strand. Telephone, 10427 Central.

The Church of the Annunciation, St. Marylebone.

Plans have been made for the re-erection of this church, formerly known as Quebec Chapel, in Bryanston-street, which was remodelled and greatly improved by Sir Arthur Blomfield forty-five years ago. Mr. W. J. Tapper is the architect to the vicar and churchwardens for the proposed work.

Commendatore Walter Crane.

The portrait in oils of himself, which the Italian Government has invited Commendatore Walter Crane, R.W.S., to paint for the Uffizi Gallery, Florence, is now completed, and it will be shown, together with a selection of drawings and water-colours by this artist, at the Leicester Galleries, Leicester-square, on and after Saturday, 13th inst.

Campanile, St. Mark's, Venice.

On St. Mark's Day, the 25th of this month, will be opened the new campanile of St. Mark's, Venice. It is now ten years since the tower collapsed, its foundations having been undermined for centuries by the waters of the lagoons. During the ten years of restoration the work of Buono has been faithfully reproduced. A few months back saw the completion of the main structure, and there remained only the task of replacing the golden archangel on the pinnacle of the pyramid which crowns the tower. This figure is the work of Munavetti, and is made of brass, the head, arms, and feet being of massive bronze. The lily which the archangel holds in his hand measures 5 ft. 9 in. in length.

International Congress of Archæology, Rome.

In accordance with the decision of the second International Congress of Archæology, held at Cairo in the spring of 1909, the third Congress will take place at Rome from October 9 to 16, under the Presidency of Commendatore Corrado Ricci, Director-General of Antiquities and Fine Arts. There will be ten sections as follows:—1. Prehistoric Archæology; 2. Oriental Archæology; 3. Prehellenic Archæology; 4. Italic and Etruscan Archæology; 5. History of Classical Art; 6. Greek and Roman Antiquities; 7. Epigraphy and the Study of Papyri; 8. Numismatics; 9. Mythology and the Study of Religions; 10. Ancient Topography; 11. Christian Archæology; 12. Organisation of Archæological Studies. Those who desire to read papers or to bring proposals before the Congress are requested to communicate with the Secretary-General, Professor Lucio Mariani (to whom subscriptions for membership, 20 lire, should also be sent), Direzione Generale di Antichità e Belle Arti, 11, Piazza Venezia, Rome. It is hoped that it will be possible to keep the Archæological Exhibition open until the period of the Congress. Two special excursions will be organised in connexion with the Congress—one to Sardinia, the other to Magna Græcia and Sicily.

International Congress of Art, Rome.

The tenth International Congress for the History of Art will be held immediately after the Archæological Congress, from October 16 to 21 (in accordance with the decision of the ninth Congress, held at Munich in 1909 under the Presidency of Professor Adolfe Venturi. The discussions will deal with subjects of general interest in the history of art, and more especially with the relations between the art of Italy and that of other nations. The sections will deal respectively with Christian, Romanesque, Gothic, and Renaissance, and Modern Art; while a fifth section will discuss problems connected with organisation and methods of co-operation between workers of different countries. The cost of tickets of membership is 25 lire, but members may obtain tickets for ladies of their family for 10 lire. Visits have been arranged to the principal private collections of Rome and

its neighbourhood, for which, as a rule, permission can only be obtained with great difficulty. Further information can be obtained from the Secretary-General, Dr. Roberto Papini, Via Fabio Massimo, 60, Rome. It is requested that those who may desire to bring communications before the Congress will inform him without delay.

Sanitary Engineering Exhibition, Milan.

A Sanitary Engineering Exhibition, under the patronage of the Royal Italian Society of Hygiene, will be held from April to July at Milan, Italy. The exhibition is "to encourage and reward every progressive show in the field of practical hygiene as applied to civil engineering and architecture; to bring before interested parties whatever has been done in recent times in Italy and abroad and the best in this branch; to constitute a first collection of materials, samples, models, and drawings with the ultimate object of transforming the present temporary show into a permanent sanitary museum under the patronage of the Royal Italian Society of Hygiene, to be associated to the existing Museo di Igiene Sapolini." There will be an exhibition of materials, samples, models, drawings, projects, photos, pamphlets, books, etc. The programme sets out the following "groups" covering the interests of the exhibition:—A (Historical show)—History, Description, Legislation, and General Propaganda; B—Hygiene of Modern Cities and Roads; C—Modern Sanitation Town Dwelling; D—Water Supply; E—Sewers, Modern Refuse Disposal and Treatment—Destruction of House and Road Sweepings; F—Lighting; G—Ventilators, Ozonisers, Exhausters; H—Hygiene of Workshops, Quarries, Mines; I—Hygiene as Applied to Agriculture; L—Slaughterhouses, Dairies, Markets, Bakeries; M Schools, Children's Gardens, Colleges; N—Gymnasiums, Sporting Places, Theatres, and Meeting-rooms; O—Prisons and Barracks; P—Hospitals, Isolation Hospitals, Lunatic Asylums, Sanatories, Disinfection Apparatuses; Q—Baths and Washhouses; R—Cemeteries; S—Climatic Stations, Summer and Winter, Villas, Hotels, Sanatories, Alpine Colonies, Sea Hospitals; and T—Sanitary Transportation. Gold, silver, and bronze medals will be awarded.

Conversion of a West London Market.

A scheme is formulated to convert Portman Market, in Church-street, Marylebone, into a motor-car garage and depôt. The existing buildings were erected in 1900-1, at a cost of about 46,000*l.*, for Portman Market. Ltd., after the plans and designs of Mr. H. T. Gunton, of the firm of Messrs. Gordon, Lowther, & Gunton, and extend over an area of 43,500 ft. superficial. The company was formed to take a lease of the site from Lord Portman for a term of fifty-eight years from Lady Day, 1899, at a ground rent, after the first two years, of 1,030*l.* per annum. The vendor, Mr. John Baker, had fixed the purchase price of his lease and market rights at 40,000*l.* The premises were opened on April 18, 1901, for the sale of meat, fish, and vegetables; but the market was offered for sale in the autumn of the next year. It was reopened in August, 1905, for a wholesale trade in fruits, flowers, vegetables, and other garden produce. In October, 1906, the property, having a rateable value of 800*l.* yearly, was again offered for sale at auction. Portman Market was established upon the present site—on Viscount Portman's Lylleston estate—in pursuance of the Act 11 Geo. IV., cap. 71, additional powers being obtained under an amending Act 2 and 3 William IV., cap. 113. The buildings comprise 175 stalls and stands divided by diagonal and straight avenues, a large central cold storage beneath the dome, and a separate installation of electric light, and thirty shops in ranged terraces along the main frontage, 256 ft., to Church-street, and along three other streets, in close proximity to the goods terminus of the Great Central Railway.

Harrow Aerodrome.

The National Aviation Company, Ltd., have acquired an estate of more than 350 acres, between Harrow and Ruislip, which is a portion of the area that is covered by the Ruislip Manor and town-planning scheme. Northolt Junction Station on the Great Western and Great Central lines adjoins the south-west corner of the estate; to the north are the Eastcote and South Harrow stations of the Metropolitan Railway. The proposed plans provide for an aviation ground of 256 acres adjacent to the junction station, with storage hangars and workshops, and, on the site of the Bourne Farm House, a clubhouse, with restaurant, cricket ground, lawn tennis courts, etc. Surrounding the aviation ground to the south and east will be plotted a boulevard, 60 ft. wide, with shops, houses, and villas, so planned as to afford large open-air spaces, separate house gardens, and recreation grounds.

Open Spaces and Recreation Grounds.

A committee is appointed to secure the vesting in the National Trust of the summit of Finchampstead Ridges, portion of the Bear Wood Estates, Berks, which are included in the contemplated sale of the Sandhurst Lodge property near Wokingham; the Ridges consist of 143 acres of forest land commanding extensive prospects in Berkshire, Hampshire, and Surrey. It is also proposed to acquire on behalf of the National Trust the manorial rights of Minchinhampton Common, lying near Amberley and Woodchester, on the southern verge of the Cotswolds, in respect of which Major Ricardo, lord of the manor, has consented to give an option of purchase until May 1 next for 1,250*l.* (about 2*l.* per acre), a sum that represents the income now derived from the quarries; on the hill are extensive earthworks enclosing pit dwellings. This beautiful spot—the "Enderley Flat" of "John Halifax, Gentleman"—lies on the south-eastern slopes of the Cotswolds, near Strood and the Woodchester Valley. The place takes its name from the Minchin nuns of the church that appertained to the Abbaye aux Dames of Caen, who settled there *temp.* Henry III.; but upon the surrender by alien monasteries the nunnery passed to Sion in Middlesex. In the reign of Henry VIII. Alice de Hampton gave a grant for pasturage of the common land and Amberley Bank to the poor villagers; the manorial rights extend over about 600 acres. The Trust have just obtained, by bequest of the late Mr. G. H. Verrall, of Newmarket, a tract of land in Wicken Fen, near Upware, Cambs, which has suffered but little change since British times, and is the habitat of plants and insects found nowhere else in England. The Wandsworth Borough Council have agreed, conditionally, to contribute 3,000*l.* to the purchase, for 12,000*l.*, of 20 acres which belong to the Royal Patriotic Asylum, for an enlargement of Wandsworth Common. A sum of about 2,500*l.* is needed to secure a beautiful expanse of meadow and garden land which adjoins Valentine's Park, Ilford, and is now owned by the Ilford Garden Suburb undertaking. Sir Thomas F. Buxton has conveyed to the Conservators of Epping Forest some land on the approach to Copped Hall Green, and the lake at Wanstead Flats has been enlarged and improved.

London in the Reign of Elizabeth.

Amongst the exhibits that will be constructed for the show of "Shakespeare's England" to be opened on May 11 in the Earl's Court grounds are full-sized models of Staple Inn, the Globe Theatre, Bankside, and the Mermaid Tavern, in Bread-street, Cheapside, celebrated in verse by Francis Beaumont and Ben Jonson; Mr. E. Lutyens will superintend the preparation of the models of St. Mary's and Ford's Hospital, Coventry, Windsor cloisters, and Ledbury Hall. The Elizabethan Literary Society have formulated a scheme for the preparation of a map of London as in the days of Queen Elizabeth. It is intended to mark upon the map sites, places, and buildings which are associated with the literary and social history of the town during the period of about eighty years that ended with the death of Massinger in 1640, or which possess other interest, and to plot the lines of the streets as contrasted with those of modern times.

Old Houses in Haslemere.

Under this heading Sir Robert Hunter calls attention in the *Times* to a group of old houses in the little town of Haslemere and the threatened destruction of them. The London County and Westminster Bank, it appears, find the premises too small. Mr. Thackeray Turner, Chairman of Com mittee, the Society for the Protection Ancient Buildings, in the course of a rep to Sir Robert Hunter, says:—

"If the two projecting gables which for the centre of the group of old cottages a cleared away what remains will be of h small value. But I have studied the situatio carefully, and I am convinced that a skilf architect could perfectly well meet the requir ments of the bank by pulling down the portio of the buildings next the hotel, which are no great value, and retaining the projectin wing with its two gables and the roof an old chimney behind them. He could the build upon the cleared site a good bar frontage, utilising the space on the groun floor under the projecting gables and makin the new front of brick, keeping it quiet an in harmony with the old work."

Southampton Bargate.

The Estates Committee of Southampto Corporation have now received a detaile report on the subject of the Bargate from th Society for the Protection of Ancien Buildings. Mr. W. Weir, who makes th report, suggests that the three corbels whic support the projecting portion of the parap are in danger of breaking off, though in goo repair, owing to there being no other suppor Various suggestions of minor importance ar made which the Committee recommend shoul be carried out where advisable. The Borou Engineer also reports on the matter, and the result the Committee recommend th renewal of the three top corbels in Portlan stone.—*Southern Echo.*

Road Board Specifications.

Representations having been made to th Road Board as to the difficulty at the prese time of obtaining from gas works in ar about London and in some other distric tar or pitch which complies in percentage free carbon with the Road Board Specificatio for Pitch and for Tar No. 1 and Tar No. 2, th Board, as a temporary measure, in order allow time for arrangements to be made for th supply of tar and pitch containing no mo than the specified percentages of free carbo have, on the advice of their Advisory Engineerin Committee, decided to modify the percentag of free carbon as follows:—In Tar No. (Specification No. 4) the percentage should no exceed 20 per cent. In Tar No. 2 (Specificatio No. 5) the percentage should not exceed 21 pe cent. In Pitch (Specification No. 6) the pe centage should not exceed 31 per cent. Thes modifications will be operative until Decembe 31, 1913. It should be distinctly understood however, in contracting for the purchase of ta or pitch that the value of the material for roa purposes lessens with the increase of the pro portion of free carbon which it contains. A fair estimate would be that each 1 per cen of free carbon in excess of the percentage mentioned in Road Board Specifications 4 5, and 6 lessens the value to the extent of fro 5 per cent. to 7½ per cent. of the price.

The City of London Year-Book and Directory

The 1912 edition of this work, which is guide to the municipal, commercial, and socia life of the City, contains much valuable informa tion. The Municipal section gives the name of the members of the Corporation, Londo County Council, Livery Companies, and othe bodies. There is a list of the various Cit churches with names of the clergy; of th clubs and social institutions, hospitals, etc Altogether the work forms a very useful an interesting book. It is published by Messrs W. H. & L. Collingridge, Aldersgate-street, E.C

PUBLIC WORKS SCHEME, CHILE.

With reference to the notice on p. 231 o the *Board of Trade Journal* of February relative to a Chilian Government Bill for th construction of railways, hydraulic and irriga tion works, and public buildings in Chil during the ten years 1912-21, it is notified tha full particulars of the scheme have now bee received from H.M. Legation at Santiago H.M. Legation point out, however, that it considered unlikely that the proposals will b accepted by Congress. The particular referred to above (in Spanish) may be see by British firms at the Commercial Intell gence Branch of the Board of Trade, 7, Basinghall-street, London, E.C.

EDITORIAL SUMMARY.

The leading article, illustrated, is entitled "A Papal Pleasure House." Some illustration plates of the Villa Pia, the house in question, are also given this week.

In "Notes" columns (p. 388) will be found observations on: "Competition Ethics Again"; "The Strike"; "Architecture and Local Patriotism"; "The Question of Acoustics"; "Monuments in Our Parks."

A notice of the Royal Society of British Artists' Spring Exhibition appears on p. 389.

A meeting of the Royal Institute of British Architects was held on Monday, when Mr. E. T. Hall read a paper on "Art Museums and Picture Galleries." Our report is given on p. 389.

Some notes on a recent competition for St. Peter's Church, Acton, appear on p. 391.

A note of the sixth visit of the Architectural Association this year is given on p. 391. The building visited was the Wesleyan Church House, Westminster.

The tenth and concluding lecture of the series of Carpenters' Hall lectures on the Arts Connected with Building was delivered on Wednesday last week by Mr. Gerald Horsley on "Influences in the Development of Planning" (p. 392).

In Correspondence columns (p. 395) are letters on: "Spiral Pillars"; "London: Its New Royal Museum and New 'London Society.'"

The Monthly Illustrated Review of Civic Design (p. 397) includes: "The Prestatyn Estate Competition"; "Town Planning"; "Imperial London"; "The Wellcome Tropical Research Laboratories"; "*The Town Planning Review*"; and Notes.

The Building Trade Section (p. 402) includes: "The Ideal Builder"; "Land Valuation"; "The London Association of Master Decorators"; "Applications under the London Building Acts."

An article on "The National Physical Laboratory" is given on p. 405.

An article on The International Smoke Abatement Exhibition, Royal Agricultural Hall, appears this week on p. 405.

Book Reviews (p. 406) include "School Planning"; "History of Bridge Engineering"; "Practical Sewerage and Sewage Disposal."

In "Legal Column" (p. 407) are notes on: "Surveyors' Fees"; "Trade Union Law"; "Powers of Corporations—Municipal Trading"; "Extraordinary Traffic on Highways"; "Vendor and Purchaser."

Our Law Reports (p. 408) include: "Stronge and Others *v.* Beadel, Wood, & Co."; "Reading Industrial Co-operative Society, Ltd. *v.* Palmer"; "Tolley *v.* Lichwitz & Co."

MEETINGS.

Thursday, April 11.

Concrete Institute.—Ordinary general meeting. 8 p.m.

Society of Architects.—8 p.m.

Saturday, April 13.

Edinburgh Architectural Association. Visits to (1) Holyrood Palace and Chapel; (2) Thistle Chapel.

ARCHITECTURAL SOCIETIES.

Nottingham Architectural Society.

On the 26th ult. this Society concluded their winter programme with an informal smoking concert at Calvert's Café. There was a record attendance.

The principal designs sent in competition during the session were on exhibition, and, in addition, Mr. Arthur Marshall, A.R.I.B.A., lent over forty of his own pencil drawings and etchings for the inspection of the members.

The drawings are all unique specimens of artistic composition, and the quality and texture of the drawing are very beautiful, and the privilege of inspecting them was greatly appreciated by the large number of members and friends present.

The Society offer prizes annually for the best set of architectural drawings designed by the students.

In presenting the prizes to the successful competitors Mr. Robert Evans, F.R.I.B.A., the President, announced that it was a dead heat for the first prize, and the student who secured the second prize was very few points behind them.

The awards were as follows:—Bracketed first, Messrs. Hasledine and Pratt; second, Mr. Beaverstock. Mr. Evans announced that he would give a prize to the student who submitted the best sketch-book next session.

At the request of the President, Mr. Marshall gave an interesting brief description of his drawings, and at the same time described his own methods of working and the materials he used.

On the motion of Mr. E. R. Sutton, a hearty vote of thanks was accorded to Mr. Walker and the artists who had assisted him, and to Mr. F. M. Royle, the Hon. Secretary, for arranging such a successful evening.

The annual meeting and election of officers will be held on Tuesday, April 23.

CORRESPONDENCE.

London: Its New Royal Museum and New "London Society."

Sir,—Besides its vast size, London is unique in another respect. Though the largest city in the world its citizens take no pride in being citizens even of the metropolis of the Empire in the manner of those of Paris, New York, or Berlin. They do not go about proclaiming themselves to be Londoners, and if they have to confess to it they do it in a deprecating way, not wanting to be classed as Cockneys. No one even claims to be a Middlesex man, like those born more fortunately in other counties. There is no *esprit de corps* or bond of union between us, and to be known as a Londoner does not particularly help a professional or commercial man. Neither is it a recommendation to the operative or craftsman to be bred and born in London, though it sets the fashions, while it is no benefit to be born a Londoner: as matters go, it may be a positive handicap. Take the case of a musician or singer with a way to make in the world. Were he or she Scotch, Irish, or Welsh, Canadian or Australian, sympathetic compatriots are to be found everywhere ready to foregather. Even the Devonian, Salopian, Yorkshireman, or Lancastrian meet with *camaraderie* and fellowship entirely denied to Londoners. The causes are more easy to explain than to remedy, and for this reason, if for no other, both the Royal London Museum and the London Society should be heartily welcomed as steps in the right direction. Without visible funds the establishment of the former on any commensurate scale appeared a hopeless undertaking, but, thanks to the talented and indefatigable curator, Mr. Guy Laking, it has become a reality in an incredibly short space of time. The case is really remarkable as it was heralded by no preliminary agitation; there was already a museum in the Guildhall in existence, and all the unique and valuable objects found in London during previous centuries were safely housed in the great metropolitan museums, which cannot be called on to disgorge them.

The London Society has still to consolidate into fact, against difficulties even more insurmountable. Though numbers join it, views must be hopelessly divergent, and only the most uncommon tact, energy, enthusiasm, perseverance, and unanimity on the part of the promoters can make active and effective steps in the direction of great London improvements possible.

J. Starkie Gardner.

Spiral Pillars.

Sir,—There was an interesting list of spiral pillars in the *Builder* lately. They seem to have come from the East. May I suggest that perhaps those mysterious pillars called Jachin and Boaz, in Solomon's Temple, were spiral columns? The synagogues at Rotterdam, Vienna, two churches in Toledo, formerly synagogues, Nabludon, Casimir, Teheran, have spirals in them. Also the Armenian church at Tortoon and the throne at Teheran. A yad (pointer) used by the synagogue reader has a spiral stem. In the Cluny Museum is an ancient metal case to hold the Law, with spirals at the four angles. At New York is a breastplate for the scroll of the Law, having two spirals. The almenar (reading pew) of the Casimir Synagogue has its dome supported by spirals. A Jewish marriage contract, 1659, has spirally-wreathed columns. A Jewish Bible of Amsterdam, 1679, has Moses and Aaron between spirals on the title. Some of these are very old. Engravings of them are in the "Jewish Encyclopædia."

Being at Jerusalem in 1908, I visited the Holy Sepulchre, and the front of the Tomb chapel has four spiral columns. The first was built by Constantine, A.D. 326, and probably the later chapels reproduce the general features. Bartlett has engraved it ("Walks About Jerusalem"). At the Victoria and Albert Museum is the large cartoon by Raphael of the Beautiful Gate of the Temple, and the pillars are spiral. Hanner mentions that the Saracenic gateway of the Haram area has spiral columns, called Bab es Sileleh (gate of chains), of the XIIIth century, but founded on a Jewish gateway, whose pavement remains ("Walks About Jerusalem," 1910).

Sumner mentions seeing the mosque El Aksa, in the Temple area, built by Justinian, formerly called the Palace Porch or Temple of Solomon, and remarks:—"In many places pillars of twisted marble with graceful capitals are built into the walls, taken in all probability from the old Jewish Temple" ("Our Holiday in the East," 1887, p. 106).

And Hanner mentions that the Moslems of Jerusalem believe Solomon to have invented spiral columns (p. 221). In the Septuagint Jachin and Boaz are said to have "flutings" (3 Kings, vii., 15), and the spiral columns of Raphael have spiral flutings or grooves. In the mosque of Omar, in the Haram area, is a pulpit, flanked on either side with double-twisted columns.

These instances seem to show that spiral pillars came from the East, and connect them specially with the Jews, and the Arabs, the cousins and successors of the Jews in Jerusalem, copied them. And the Christians there may have found Jewish spirals among the *débris*, while tradition connects them with Solomon himself.

A. B. G.

THE LONDON COUNTY COUNCIL.

The usual weekly meeting of the London County Council was held in the County Hall, Spring-gardens, S.W., on Tuesday, Lord Cheylesmore, Chairman, presiding.

Loans.—The Finance Committee recommended and it was agreed to make a loan of 18,000*l.* to the Hammersmith Borough Council for street improvements, and to the Southwark Borough Council a loan of 4,456*l.* for electricity undertaking.

School, Kennington.—It is proposed to make various alterations at the St. Saviour's Salamanca School, Kennington, by providing internal office accommodation and an additional teachers' room.

Victoria-embankment.—Repairs are to be carried out and tar macadam laid on the Victoria-embankment at an estimated cost of 1,200*l.*

Painting, etc., at Parks.—Various painting and tarring work and repairs are required at the several parks and gardens during the ensuing summer, and it is proposed to execute these works by direct employment of labour at a cost of about 4,508*l.*

Theatres, etc.—The Theatres and Music Halls Committee have approved the following drawings:—75, Balham High-road (Theatre de Luxe)—Proposals for improving the steppings in the balcony; Earl's-court Exhibition—Arrangement of proposed concert hall in the Queen's Palace; His Majesty's Theatre Adaptation of certain rooms in the basement as property rooms; King's Hall, 83, Commercial-road, Stepney Provision of a rewinding room; London Pavilion, Piccadilly-circus—Provision of a dressing-room; New Cross Empire—Adaptation as waiting-rooms of the stalls and circle bars and alterations to the cinematograph chamber; 225, Oxford-street (Cinema House)—Electric wiring of premises; Putney Hippodrome Rearrangement of cinematograph chamber.

ILLUSTRATIONS.

The Villa Pia, Rome.

THE illustrations of this building are in connexion with the article which begins on page 385.

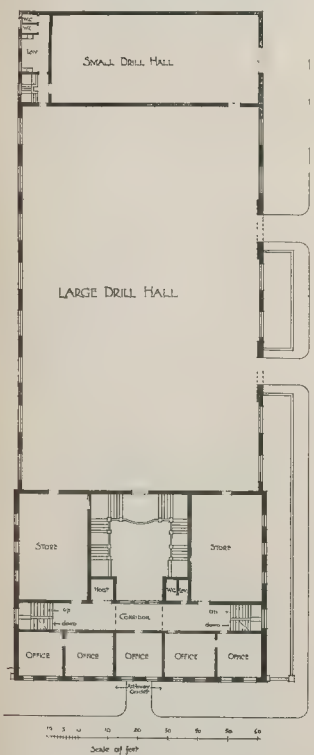
Territorial Force Headquarters.

THESE new premises for the Territorial Force Association of the County of Nottingham have been erected from the design and under the supervision of Messrs. Brewill & Baily, architects, Parliament-street, Nottingham.

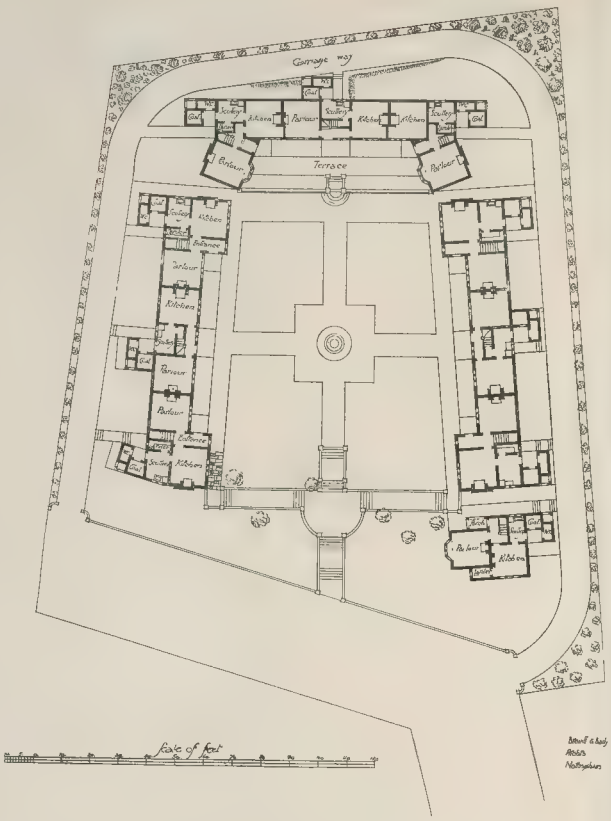
The premises are erected to accommodate the modern requirements of the Territorial Force and form the centre for all Territorial Units in the City of Nottingham, which include one battery Royal Horse Artillery, the South Notts Hussars, the 7th Battn. (Robin Hood) Sherwood Foresters, one company Army Service Corps, and one company Mounted Brigade Field Ambulance, the accommodation being for the storage of guns, waggons, vehicles, clothing, and equipment, etc., for all arms; also drill halls, miniature rifle ranges, offices, lecture-rooms, together with caretaker's residence.

The building has been designed in the Georgian Period with a stone rusticated basement, having a central archway leading to the court from which the principal premises are entered; the upper portion is erected with red bricks, and the centre being relieved by stonework broken by pilasters, the parapet to the centre portion also being relieved by stone balusters.

The general contractors were Messrs. Wm. Maule & Co., the stonework has been executed by Messrs. Pask & Thorpe, and the plumbing by Messrs. Humphrey & Co., all of Nottingham. The whole of the floors are fireproof, and have been carried out by the Yorkshire Hennebique Contracting Company, Ltd. The roof to the main block is covered with Val de Travers asphalte, and the wrought-iron gates and railings have been made by Mr. Starkie Gardner; Messrs. Roger Lowe & Co. executing the wood block flooring.



Headquarters, Territorial Force Association, Nottingham.
Messrs. Brewill & Baily, FF.R.I.B.A., Architects.



Proposed Almshouses, Nottingham.
Messrs. Brewill & Baily, FF.R.I.B.A., Architects.

Proposed Almshouses, Nottingham.

THIS competition design was sent in by Messrs. Brewill & Baily, architects, for the erection of ten almshouses for the Wilkinson Smith Trust, at Nottingham.

It was proposed to erect the buildings in brick with stone dressings, the centre portion of the gables being constructed with half-timber in oak.

FIFTY YEARS AGO.

From the *Builder* of April 5, 1862.

Marc Isambard Brunel.

GENIUS is a fearful gift. Its pleasures and its triumphs are intense, but so are its pains and penalties. Men of genius dwell, as it were, in a world of their own, apart from the worldly life; and there are few among the gifted who can fully enjoy both worlds. Genius is not incompatible with worldly wisdom, but it too often aims at independence of it, and sorrows and difficulties are the sure result. The imprisonment of Brunel when his business at Battersea fell into confusion, much of the pecuniary shortcomings and shabby treatment of the Government, and many other worries and annoyances of his life are far too like those so frequently experienced throughout the lives of eminent men of genius to be altogether ascribable to the defects of others. The very daring of his own inventive faculty as in the case of the Thames Tunnel, and perhaps a hasty impatience of maturisation in details, must have aided not a little in bringing down upon his devoted head much grief and annoyance. He himself declared that if he had another work of a similar kind to do he would do it differently. This, it is true, might have been said by any other engineer. However, in future time, so far as regards the Thames Tunnel, although it may continue to be an interesting question how it was done, and criticisms as to better ways of doing it may still be urged, the great inquiry will be, who did it? And the name of Brunel, and the skill and daring of the work, will be all that posterity will care to think of in regard to it, at a time when the "Thames Tunnel Company," its immense outlays, and its failure as a commercial speculation, will be all forgotten.

COMPETITION NEWS.

Church of St. Peter, Acton Green.

The first place in the competition for this Church has been awarded to Mr. W. A. Pite, F.R.I.B.A. All the designs submitted are described on page 391.

Harrow Public Offices.

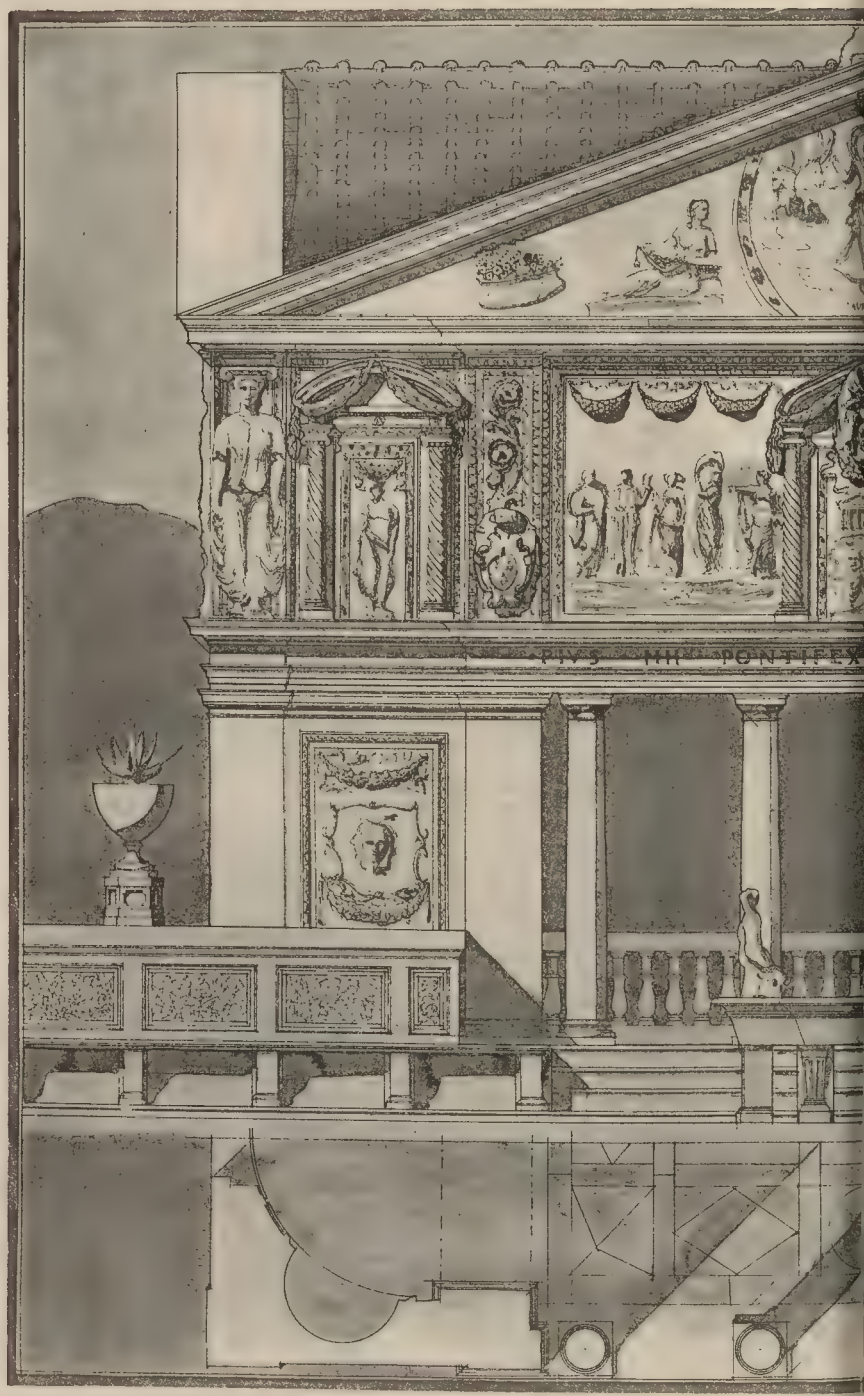
In the competition for alterations to the public offices of the Harrow-on-the-Hill Urban District Council the first premiated design is announced to be by Mr. H. Prince, A.R.I.B.A., 19, Old-square, Lincoln's Inn, W.C. The second premiated design is by Mr. E. E. Fetch, A.R.I.B.A., 20, John-street, Adelphi, W.C., and the third by Mr. H. Burgess, Queen Anne's-chambers, Broadway, Westminster, S.W. The designs of Mr. S. Pointon Taylor, Harrow, and C. H. Rose, Wimbledon, were commended.

Prestatyn Estate.

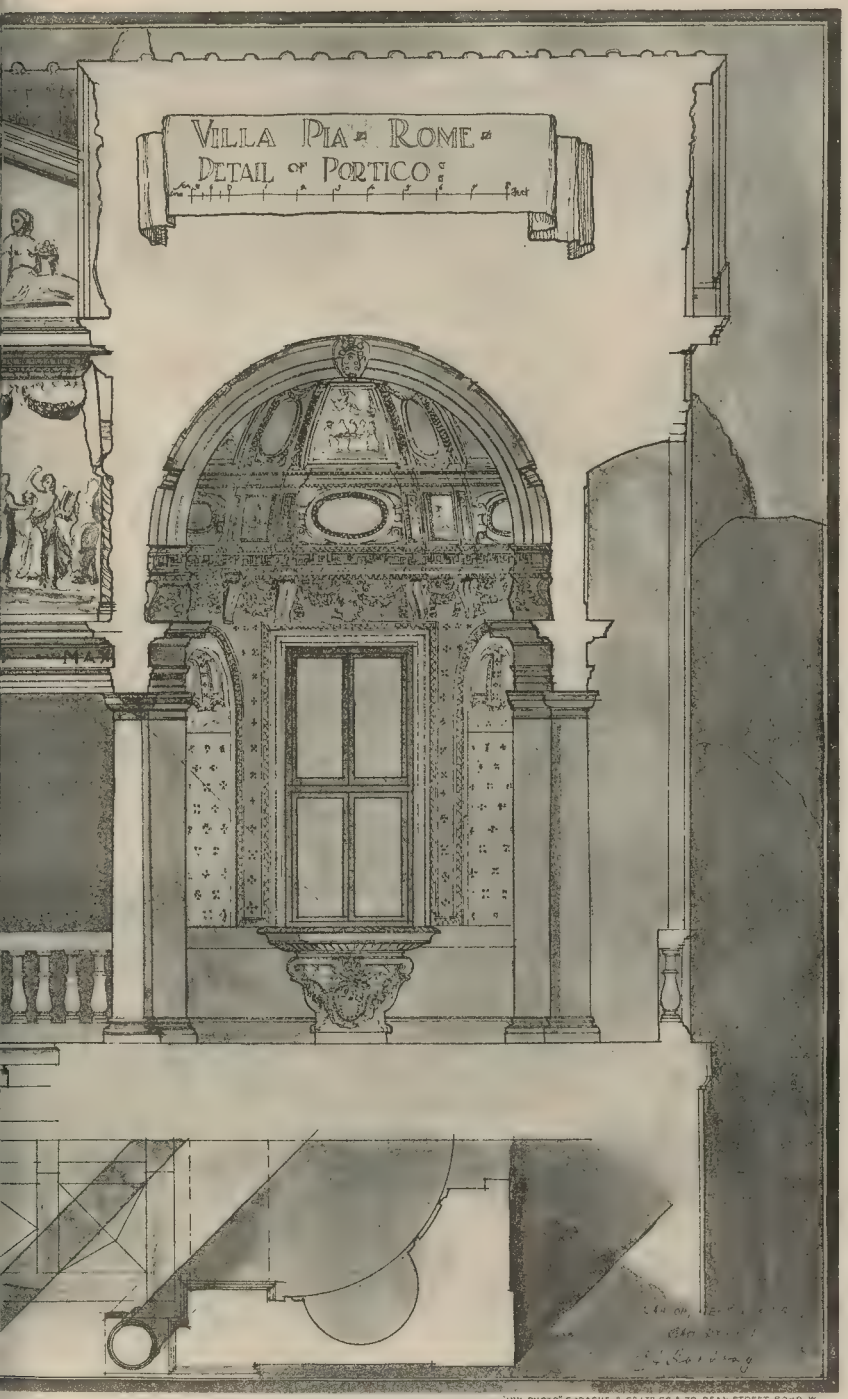
An illustrated article on this competition begins on page 397.

TERRITORIAL FORCE ASSOCIATION OF
THE COUNTY OF NOTTINGHAM
NEW HEADQUARTERS BREWILL & BAILY, ARCHTS



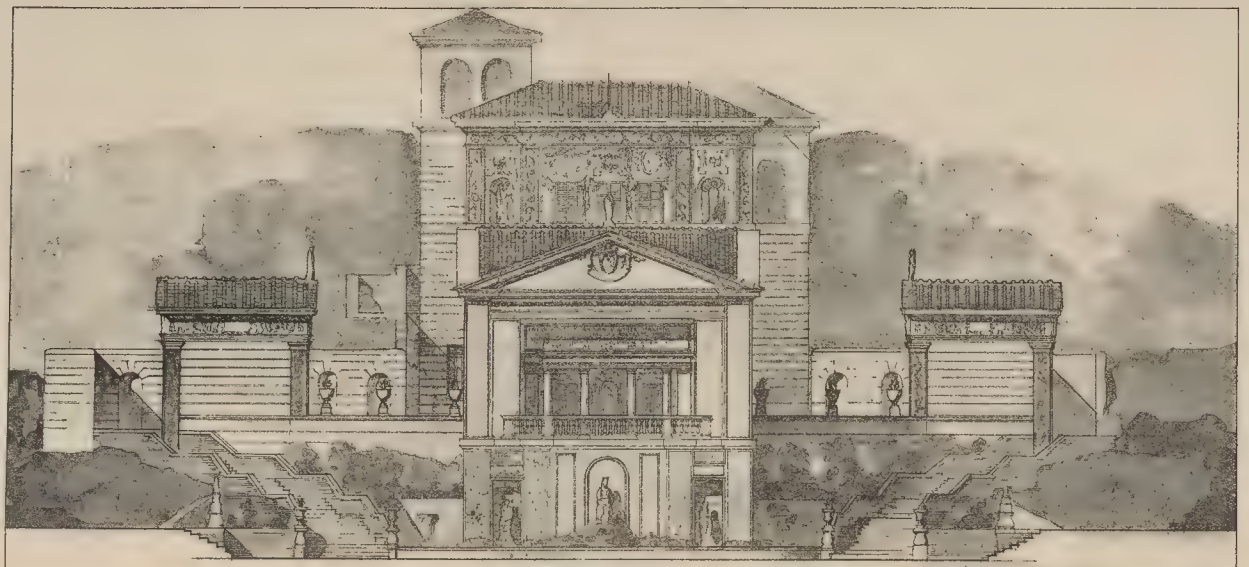


THE VILLA PIA,



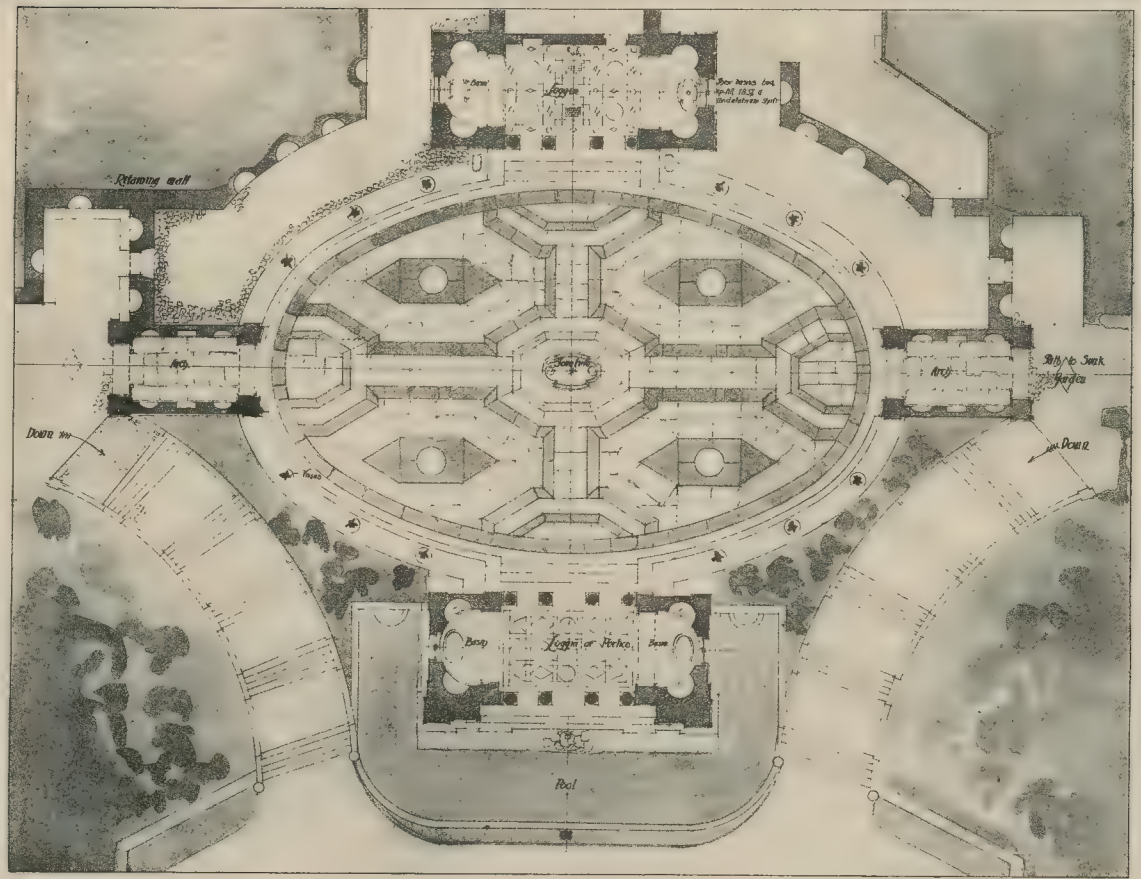
INK-PHOTO^CS SPRAGUE & C^O LT^D 69 & 70, DEAN STREET, SOHO W

MR C. A HARDING



ELEVATION :





"INK PHOTO" SPRAGUE & Co LTD 69 & 70, DEAN STREET, SOHO, W

THE VILLA PIA, ROME—Drawn by Mr. C. A. Harding.



Royal Academy Exhibition, 1911 DESIGN FOR ALMSHOUSES NOTTINGHAM FOR THE WILKINSON SMITH TRUST BY MESSRS. PERCY & BEVAN TEECE

MONTHLY REVIEW · *of* · CIVIC DESIGN.



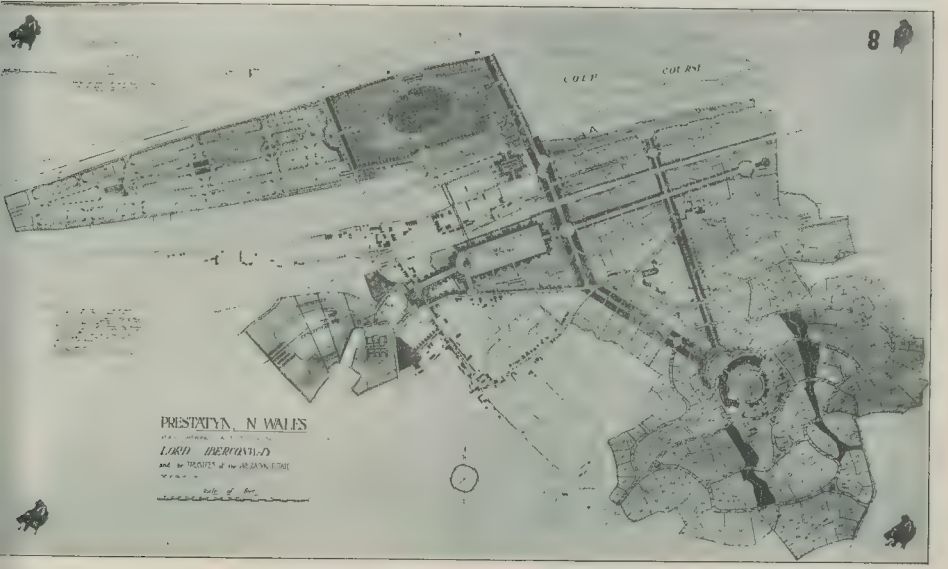
First Premiated Design, by Mr. Patrick Abercrombie, Mr. E. L. Bower, and Mr. T. F. Shepheard.

PRESTATYN ESTATE, NORTH WALES.

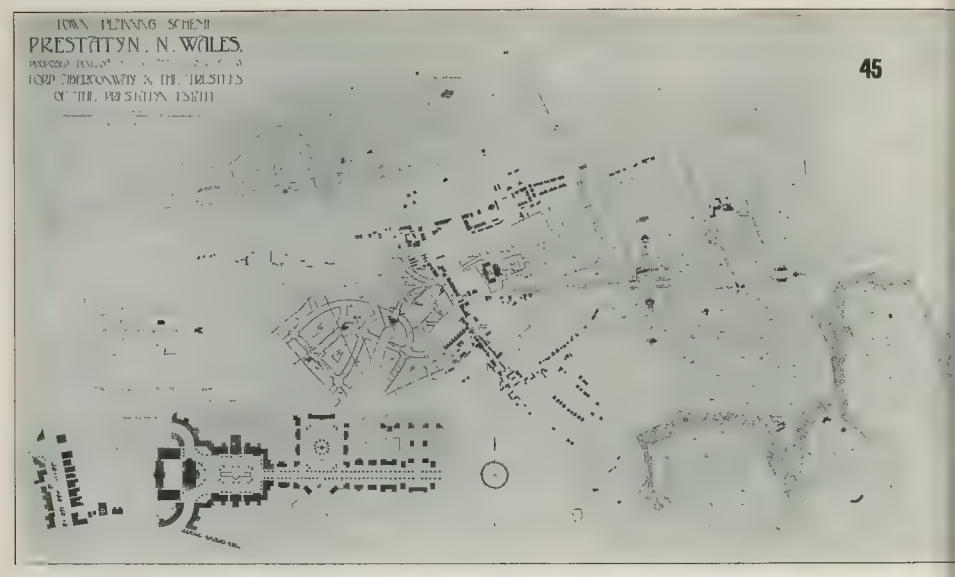
COMPETITION FOR LAY-OUT.

THROUGH the courtesy of the promoters, the trustees of the Prestatyn Estate, we are enabled to publish this week the designs premiated by the assessor, Mr. H. V. Lanchester, in this competition, together with those marked by him as "proxime accessit."

The estate comprises three areas nearly isolated from each other, two of these being almost equal in importance, and the third subsidiary to them. This must have involved a certain difficulty in the adjudication, for it would be unlikely that any one competitor would achieve the best solution in both cases, and the position might be likened



Second Premiated Design, by Mr. Harold Falkner.



Third Premiated Design, by Mr. Reginald Dann, of Messrs. Cheal & Sons.

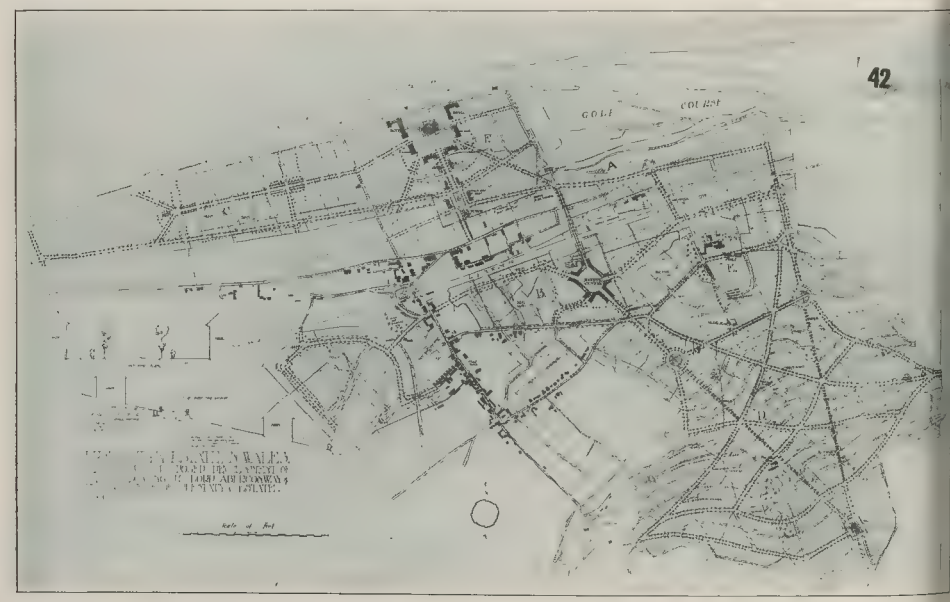
to a prize in a flower-show to be awarded to the gardener showing the best rose and the best cucumber. Add to this the condition that the rose and cucumber should form a good table group with the addition of an apple, and the simile is more complete.

The first premiated design, by Messrs. Abercrombie, Bower, & Shepheard, is more noticeably successful in the planning of the waterside area, where the middle of the strip of land behind the sand dune is marked by a well-arranged sheltered boulevard with the social centre in its proper place, and the buildings composing it particularly well arranged in relation to each other. The steep hillside to the south is treated somewhat sketchily, though on the right lines, but the design fails to take full advantage of the possibilities in connecting this hillside with the sea front.

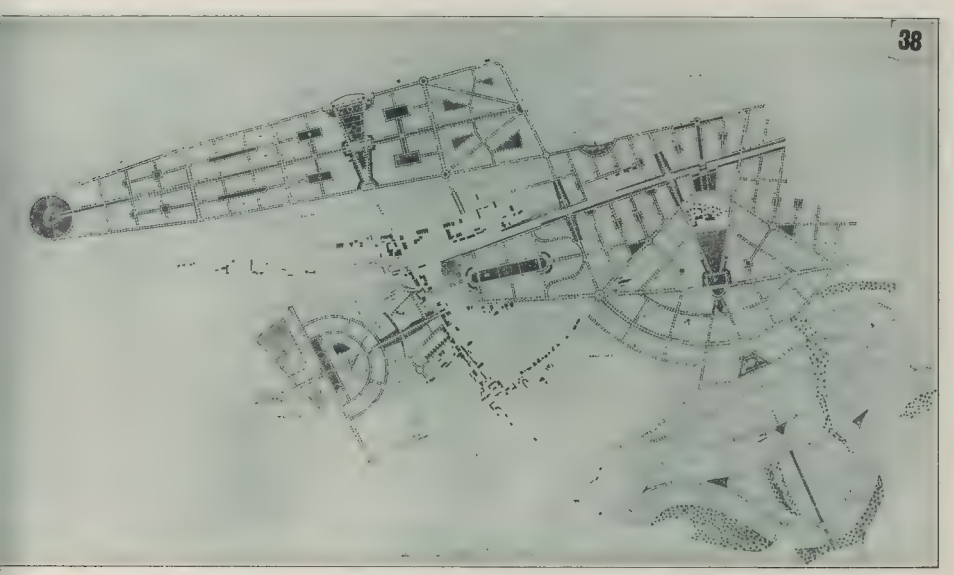
This connexion has been strongly emphasised in the design by Mr. Harold Falkner, placed second, whose idea in marking the termination of his principal avenue with a convex crescent appears an excellent one, as a means of affording a centre of interest amid the necessarily somewhat scattered effect of the general distribution of houses on an irregular hillside. The seaside is, however, far less successfully han than in the first design.

The design by Mr. Reginald Dann, pl third, also fails to some extent in the lay of the portion by the sea, the main boule suffering from too many intersections a acute angle, but the means of conne between the various sections of the e are carefully studied, and the main winding up the hill has been worked with greater skill than is to be found i design of any other competitor.

Two other designs have been h



Highly Commended : Design by Messrs. Geoffry Lucas, F.R.I.B.A., & F. Lodge, A.R.I.B.A.



Highly Commended : Design by Messrs. H. J. Rowse, A.R.I.B.A., & Sydney A. Kelly, F.S.I.

nended by the assessor. That by Messrs. s & Lodge appears to be a thoroughly d, businesslike scheme, and, even if it not display an imaginative outlook, it obviously have run the premiated ns very close as an eminently sane and ical solution of the problem. The only us defect that strikes us is the undue ness of some of the main roads on the a defect that it shares with the design d second.

e plan by Messrs. Rowse & Kelly is on general lines as regards the lower id, but we should say that they have their chance by endeavouring to ce a symmetrical lay-out on an irregular le. Symmetry in such a position is estionably absurd, and when it involves ssible gradients the mistake should been obvious.

r criticism of the designs is limited ose selected by the assessor, as we are le to notice the designs of other com- ors, except to say that they included good schemes.

IMPERIAL LONDON.

By Wilmot Corfield.

e broad basis of the design for beautifying on, ably illustrated by Mr. Adrian ington in the *Builder* of January 5. its accompanying article, calls for a response of friendly criticism and support. acceptability of the scheme for an perial way" on the Surrey side is ngly obvious, as also is the practicability e desirable improvements suggested for Middlesex side.

lumes might be written on points arising f the proposals, but the first thought to to one is that before any really extended ment in the direction of public improve- s on a large scale can be successfully urated the law as regards compulsory sition of buildings and sites must be ied and strengthened.

recent decision to disregard St. Paul's dral as the dominating factor in fixing ourse of a new bridge across the river ht into prominence an aspect of the rights of a community desiring to possess en site for public improvements. The to acquire it is admitted, but not the to upset an owner of property off the f the improvement in order to obtain a le site to meet the requirements of a ssessed owner on the line. A medical man "A" occupies a house at a given corner required for purposes of widening a street. He may be compulsorily bought out, but "B's" adjoining property, which would equally suit "A's" purpose, cannot be compulsorily acquired, and "A" has to be heavily compensated for the loss occasioned to his practice by removal to a distance. The principle of compulsory acquirement of private property for the public good having been accepted, it is a grave question whether its scope should not be enlarged so as to cover with the upsetting of "A" the upsetting of "B" also, in view to the proper putting through of an improvement, as a whole, upon economical and comprehensive lines. Until this extension is accepted by legislative enactment delay and expense must result. A freer hand for authority is demanded before London's wholesale beautification can be brought about.

In the published drawing a new Buckingham Palace covers the site of the existing one. The new Palace should be further back from the Mall and clear of that now occupied. By this two advantages would be gained: the Royal residence would not be upset during the replacement, and the Victoria Memorial would win eventually between it and the Palace a privately enclosed vista of lawns and trees, greatly adding to the charm of its surroundings.

Charing Cross should (with the permission of the railway company owning it) be transferred to the centre of the open space on the Trafalgar-square side of the Mall archway, additional reason for this removal being found in the fact that the Cross would then be nearer the ascertained actual site of its original. The Strand could then be widened at the expense of part of the station yard, pending the ultimate transfer of the station itself to the other side of the river. The opening of the Mall between Drummond's Bank and the nearest building left standing, at present nameless, should be christened "Rivett-place," in memory of John Rivett, the brazier, who preserved for posterity Le Sueur's statue of Charles I. from the destruction it was thought had befallen it. Lord Herbert of Lea, hidden in the War Office courtyard, might join Florence Nightingale in York-place. It is of interest to note that *Punch*, as long ago as 1861, proposed and depicted a statue in Pall Mall to "the Lady with the Lamp."

Mr. Berrington provides for the National Theatre on and about the site of the Adelphi Theatre. A better position for it would be on the Surrey side, as nearly as possible to a point on the "Imperial way," known to have been the spot where a theatre of Shakespeare's own days stood. Such a point would be in the future brought more within the borders of a London suited to the pleasure-seeker by the beautifying of the surroundings of Southwark Cathedral. Some day London will realise the injustice done to Shakespeare's memory by preserving the ineffective statue to him in Leicester-square, the wrong place for it. The statue is not an ignoble one, and its transfer to the precincts of the Cathedral might well be considered. The old Buckingham Water-gate could be reconnected by inlet with the Thames, and used on special occasions for river pageants. The re-erection of the Westminster Court house should be carried out elsewhere, and the site of the demolished building left to turf together with that of the hospital (to be also removed elsewhere), now obscuring the view of the new Wesleyan Hall. An Abbey annexe for the reception of monuments to the dead who have passed away since Queen Victoria's decease is urgently needed, and to it should be removed the Salisbury and Campbell-Bannerman memorials. The fine range of Royal statues in Westminster Hall should be supplemented by others to Victoria and Edward VII., while those Members of Parliament who find their unasked-for salaries an inconvenience might pool them for the further provision of statues, frescoes, and other decorative paintings in the Parliament House. The "piked head" supposed by some to be that of Cromwell, frequently supplying newspaper copy, ought to be finally buried under the Cromwell statue near Westminster Palace-yard. The spot of Nelson's coffin's resting-place in the Greenwich Painted Hall should be permanently indicated by a brass inscription let into the floor.

Chantrey's statue to George IV. in Trafalgar-square was originally intended for the top of the Marble Arch when that structure faced Buckingham Palace. Its removal to the Arch in its present position is now suggested. The relegation of these two grim-looking warriors, Sir Charles Napier and Sir Henry Havelock, to positions on either side of the York steps leading from the Mall would leave the four angles of the Square free for five men of action—Gordon (now dwarfed to a needless extent by the Nelson Column) and Clive, Cook, and Wolfe, now under preparation. The protest is now made against the banishment of Clive to King Charles-street; the proximity of the India Office is apparently the only reason for placing the recoverer of Calcutta and victor

at Plassey in so little used a thoroughfare. The India Office already possesses a "Mason's effigy" to his memory. No site in London is too good for Clive. In 1907 the present writer in Calcutta advocated a statue in that city. By a curious coincidence, upon which the local Press commented at the time, just three days afterwards, Lord Curzon, in London, started in the *Times* the movement now culminating in the erection of twin statues in London and Calcutta. This writer did not a little by voice and pen to keep alive the scheme in the East, and his hope is that attention may be called before it is too late to the perpetuation of a mistake to be afterwards regretted.

A representative Indian Hall similar to Calcutta's great Victoria Memorial should grace the "Imperial way" near Waterloo Bridge, hard by a new London University building erected also on that side. These might interfere with the continual nightly exhibition of illuminated advertisements of certain liquid refreshments, but London would survive the blow. The distribution of the Crystal Palace among various parks and the utilising of its site for a vast Indian Hall at the head of noble public gardens might, as an alternative, possibly solve another outstanding London problem. The early respacing of Piccadilly-circus is imperative, the delay in the completion of the embankment between the Victoria Tower and Lambeth Bridge inexplicable. The time has surely come for putting an end to piecemeal progress in the matter of bricks and mortar, and for the speedy realisation of the dreams of London lovers for the City Beautiful, the City Reproachless, the City Superb.

TOWN PLANNING.*

We have already seen that the corporate life is really a collection of individual lives all mutually dependent upon and acting and reacting on one another, and that this corporate life is undergoing a process of evolution towards a more completely fused condition. This process means the more perfect readjustment of every part of the civic life to every other part, a process of give and take everywhere, and entails a surrender of the rights of the individual in the interests of the whole. The more perfect the civic life the more complete is this subordination of the individual.

Communal life is only possible on the understanding that every individual is willing to subordinate his personal interests and surrender his private rights for the good of all. This is the basis of civilisation.

Now, in any state you find that every man in whatever part of the country he may live has to surrender certain rights or liberties—such as the liberty to steal from another or the right to exact private redress against those who steal from him—but beside this general agreement between ourselves which applies equally anywhere and everywhere, and is now the general law of the whole country, limiting our freedom in a general way only, you find that inside this general law that applies everywhere there are other additional and minor laws or by-laws which apply only in certain districts, limiting our individual freedom still further in those districts. These by-laws are the result of the growth of towns, and they represent the common agreement at which we have arrived as to the need of further curtailment of individual rights under the particular circumstances.

If a man wants to do as he likes, within the limits of the common law, he must live in an isolated spot in the country. In complete isolation he may freely develop his own personality and give expression to his own individual tastes, but the nearer he comes to the centres of population the more his individual tastes and habits must be restricted, till in the heart of a great city he loses all individuality in the corporate life, when everyones conduct approximates to uniformity and is governed by consideration for the general good.

This restriction of personal liberty is the price he pays for the advantages of the town.

You will notice, however, that not only are there purely voluntary restrictions in personal habits (such as costume and behaviour) and the restrictions by special laws—such as those affecting the speed of motor-cars—but also certain voluntary agreements between different classes of private individuals, such as landlords and tenants, which might be described as by laws in the making. For instance, in the country you can practically keep what animals you like on your premises, but in some suburbs you may not keep chickens in your garden; while in some London flats you may not keep a cat, or a canary, or even a musical instrument. These are all obligations voluntarily entered into in return for the advantages of the town, and are just examples showing how everything tends towards uniformity the nearer we get to the centre.

Now, this tendency to uniformity has an important and interesting influence over the general lay-out of a town and the treatment of its buildings.

As a complete town expresses the complete corporate life of its inhabitants, taken as a whole, so the house expresses the life of the individual. In the country where, as we have seen, a man's individuality develops freely, untrammelled by contact with his fellows, the house which expresses his life can also develop freely: if the owner is eccentric his house can be eccentric also, it can be any shape, size, or style he wishes, he has a building site free of all restrictions, he can do as he pleases—he is free to behave as he likes, and his house can express it. But the moment he comes towards the suburbs of the city restrictions begin. His own modified character and habits show themselves in his house—as he modifies his conduct out of consideration for his neighbours, influenced by their presence, so his house is modified, influenced by others. A certain degree of individual treatment remains, but a certain approach to uniformity is apparent. His site is restricted, and the nature and value of his house, a frontage line is to be observed, and a more stringent code of building by-laws. There may be no actual restriction as to architectural style, but even then the influence of the neighbourhood tends to present too much eccentricity in design, for he does not care to be laughed at.

When, however, we get into the centre of the town we find the complete absorption of his individuality in the corporate life expressed by the inclusion of his house in a terrace row of similar houses, whose uniformity of outward appearance expresses the general uniformity of his outward behaviour, costume, and appearance. The inner mental life of the man which retains its own personal individuality is expressed by the internal arrangements and decoration of his house, which can be as individual or even eccentric as may be desired, without offence to his neighbours. Such small differences of outward behaviour and personal characteristics as still remain would be expressed by the details of the front.

This seems to be the general principle that governs the treatment of houses in the mass.

* Extracted from a lecture by Mr. A. R. Jemmett, F.R.I.B.A., at the Westminster Technical Institute.

THE FOURTH REPORT OF THE WELLCOME TROPICAL RESEARCH LABORATORIES.

The events which led up to the occupation of the Sudan by the British authorities and to the rebuilding of Khartoum are so recent, and were of so dramatic a character, that they are familiar to everybody.

The results of that occupation have been, in many respects, remarkable. Civilising and educational influences have been brought to bear upon this region. Near the spot where Gordon fell in 1885 there now rises the "Gordon Memorial College," devoted to the training of the young; and as an integral part of it the "Wellcome Tropical Research Laboratories" were established some few years ago through the munificence of Mr. Henry S. Wellcome under the auspices of the Sudan Government Department of Education.

These laboratories, under the guidance of their able Director, Dr. Andrew Balfour, have been very largely concerned with investigations into purely medical problems. Tropical diseases, insects, animals, and sociological conditions have been the subjects of minute inquiry; but, as was to be anticipated from the thorough and practical character of this institution, the study of the conditions of health and disease has necessarily involved a study also of the familiar problems with which builders have to grapple in all parts of the world, namely, sanitation, drainage, water supply, and town planning. Upon these latter subjects the fourth report of the Laboratories, just issued, contains a surprising amount of information not otherwise available.

The provision of adequate water supplies for large towns in tropical regions can no longer be left to Nature and the natural processes filtration and purification which springs rivers undergo. In any large aggregation population the sources of contamination are numerous and the purifying effects of sun air too slow and insecure.

When the question of an improved w supply for the growing city of Khart became urgent it was evident that two sou were available—(1) The river, by taking supply above the town; (2) deep wells, if could be obtained.

A trial boring was sunk at a selected above the town and close to the southern b of the Blue Nile, and seven deep wells sunk. Unfortunately, the abundant su tapped by the wells was found to be serio polluted. The source of pollution was, howe located, and the trouble remedied by cut off the upper strata with cement. The were lined with a casing-tube of 9½ in. diam A second tube of 6⅝ in. diameter was pa down each well to the depth where it desired to cut off the upper strata. This i tube descended in the open borehole below level of the outer tube. In order to facili operations the well was first of all filled sand to provide the necessary cushion. Li cement was then poured between the two t down to the depth desired, and in cases w it did not settle properly it was blown d and packed by means of compressed air. set, for the most part under water, and for a hollow column of impermeable subst which entirely prevented contamination the Blue Nile water through the po travertine and sandstone stratum.

One fact which has been realised in conne with buildings for white men under tro conditions is the necessity for protection ag light as well as against heat. The na pigmentation of the negro's skin cuts off t light rays, but the European requires additi protection, and the means for effectu darkening the house form, therefore, important desideratum.

The erection of a model bungalow at Gordon College has afforded an opportu of testing certain ideas which had been evo as the essentials of a white man's residence i Sudan. The points referred to were as follow

(*a*) The walls should be protected from sun by verandahs, especially if they ar brick or stone; and, if not so protected, sh have as few openings as possible.

(*b*) Verandahs should not be less than 1 wide—preferably of timber as being cooler brick or stone—brought down to within 4 ft. to 7 ft. above the floor level, with a space between roof covering and lining, ventilated at the top.

(*c*) Roofs of houses and verandahs shoul thick enough to stop both the heat and rays, and be lined if constructed of timb

(*d*) Rooms should be arranged as fa possible so that each gets a share of the preva winds.

(*e*) Colours should be employed to whic eyes are naturally adjusted—such as the gr dark yellows and browns, white being avo especially for outside decoration, as the from it in the tropics is terrible.

In the chapter on "Some Muni Engineering Problems in the Tropics" exceedingly useful notes are to be found de with the difficult problems of sanitation, disposal of sewage, and the provision of p latrines in a large town of mixed popula It contains also the building regulations o town of Khartoum.

The "conservancy" method of se disposal has been adopted at Khartoum, a being worked very successfully in conne with a sewage farm and a refuse destr outside the town.

These two volumes contain many diag and much novel information concerning in the tropics, and are of special interes builders, architects, and sanitarians. They well repay study by all whom work or inclin beckons towards the Equator.

THE "TOWN PLANNING REVIEW."

The *Town Planning Review* continue maintain its high standard. The third nu of Vol. II. begins its editorial comments an illustrated discussion of Professor Adsh suggestions for improving Hyde Park C as a site for the King Edward Memorial.

The Town Planning Conference at Bromwich is then dealt with by Prof



Paris: Vista in the Garden of the Luxembourg.
(From the *Town Planning Review*.)

ad, with special reference to engineering in
n to such schemes; and Mr. Thomas
s concludes his general survey of New
in which he shows that the housing con-
s are far worse than is, we think, generally
d. An article by Mr. W. E. Groben,
ect to the Department of Public Works,
e re-planning of Philadelphia concludes
ries of five American schemes which has
valuable feature of the *Review*. Illustra-
are given of plans and models of the
ial parkway.
fessor Adshead's well-illustrated article on
isks" is the third of the series on the
tions and furnishing of the city. It
information about the various obelisks
chief cities of Europe, and illustrates
with well-chosen views, chiefly of
s in Rome.
reference to "Cleopatra's Needle"
ed an opportunity for commenting on
lacing of its supporting sphinxes facing
rds, but no doubt it was thought
ent to place it in juxtaposition to that in
iazza de Quirinale, with its supporting
facing outwards, and leave us to point
oral for ourselves.
Editor continues his study of the influ-
which have shaped the growth of Paris
a valuable article on the "Royalist
n Designs and Squares," for so much
ich Louis XIV. and Louis XV. were
isible. Two most interesting old plans
ven, one by the Abbé Delagrive, 1737,
he other by Louis Bretoz, 1729, and a
arison is drawn between the Avenue des
Elysées and the Unter den Linden,
ed as approaches and entrances to a city.
charming views and vistas are given, two
ich, by the courtesy of the Editor, we are
d to reproduce.
T. H. Mawson discusses the "Position and
ct of Landscape Architecture in England."
e inclined to share the doubts expressed
Editor as to the use of the term "Land-
Architect," and to deprecate any attempt
ate an artificial distinction between the
of a building and that of its placing or
nment, the two things being, in our
n, but parts of one problem. If architects
concentrate more on the essentials of
work the æsthetic aspects of both sides of
roblem should not be beyond their scope.

CIVIC DESIGN NOTES.

The Great Western Roadway. All who have occasion to travel to the West of England by road will follow with keen interest the proposal to project Cromwell-road through Hammersmith to Brentford and Hounslow. Such a road is one of the pressing necessities of London, and if, through the co-operation of the Road Board with the several local authorities concerned, the scheme can be brought to fruition it will be a work of abiding importance. While the subject of road cutting and the widening of existing thoroughfares is under consideration the architectural possibilities must not be overlooked. The cost of the actual highway is estimated to cost about 1,750,000*l*. To bring forward any ambitious scheme of building at the present moment would be to court failure, but the magnificent opportunity to put modern theories into practice should not be neglected in due season.

St. George's Hill Estate, Weybridge. A company is formed to develop this estate of nearly 970 acres, which commands fine prospects in one of the most beautiful parts of the county. The scheme provides for the erection of houses, to consist chiefly of large residences to cost from 2,000*l*. to 10,000*l*. apiece, for a golf course of 160 acres, and a sports ground of 10 acres. Forty acres are set aside for roads, walks, drives, and rides, and the ancient earthworks and the rhododendron valley will be preserved. A novel feature of the planning will be presented by the common kitchen-garden, with orchard, vineries, and greenhouses, for the growing of produce for all the tenants, which obviates the spoiling large areas of woodland by forming a separate kitchen-garden for each house.

Slum Areas, Nottingham. The City Council have ratified a scheme for expending about 140,000*l*. in clearing away what is regarded as the worst slum area in the town, which includes thirty seven squalid streets, and 600 houses inhabited by nearly 2,000 people. Some statistics presented by Dr. Miller, Chairman of the Housing Committee, show how great is the death rate in that quarter as contrasted with the rates in other parts of the City.

A Sports Ground for Guildford. Sir Harry Waechter, who was High Sheriff of Surrey last year, has bought from Lord Onslow and presented to the Corporation of Guildford the local sports ground, 8 acres in area, for its continued use for recreation and for purposes of military manœuvres by the Territorial or National Reserve Forces.

A Park for Eastbourne. A specially-appointed Committee have recommended the acceptance of the Devonshire Park Company's offer to sell the park to the Eastbourne Corporation for 110,665*l*. The Duke of Devonshire gives 10,000*l*. towards the purchase-money, and will reduce his interest in the company from 16,000*l*. to 23,000*l*.; he also offers the interest on the balance of 13,000*l*. towards the provision of an orchestra conditionally upon the levying of a penny rate for purposes of the band.

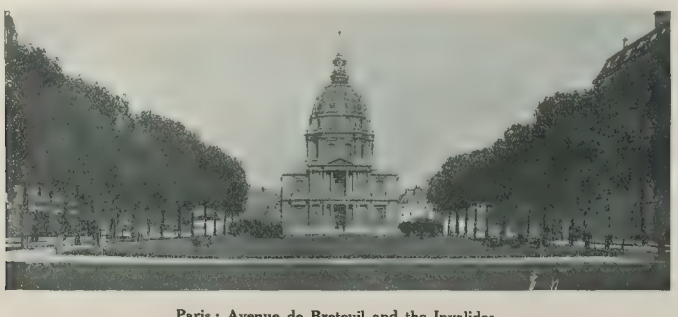
Electric Railway Bills (London) in Parliament. The Select Committee of the House of Commons, of which Sir L. White is Chairman, have ordered to be reported to the House the London Electric Railway Bill for extending the Baker-street and Waterloo Tube line from Paddington to the London and North-Western main line at Queen's Park, and the Edgware and Hampstead Railway Bill for extending the Charing Cross Tube line from Golder's Green to Edgware, with an amalgamation of the undertaking with the London Electric Railway Company.

Popularising the T.P. Act. "What Town Planning Means" is an excellent little pamphlet by George L. Pepler, F.S.I., published by the Garden Cities and Town Planning Association at the price of 1d. It points out in a concise and popular manner just what benefits seem to be obtainable under the Act. It is divided into two main sections—what a Council can do, and what an owner can do. Under the first heading it shows the possible scope of operations, and what a Council can do by making use of its powers, what its position will be if it does not make use of them, what it will cost, and what ought to be done at once. Under the second heading it points out the present position of the owner, the possibilities opened up by the Act, and how the Act works from his point of view, whether the local authority does or does not prepare a scheme.

This pamphlet seems admirably adapted to awaken interest in the Act on the part of all those concerned, and we hope it will obtain a wide circulation.

Colley Hill, Reigate. The National Trust make appeal for 2,000*l*., to meet a conditional promise of 1,000*l*., so as to provide the 3,000*l*. which is required to secure this charming stretch of 60 acres of the Surrey North Downs, rising to 700 ft. above sea level, and traversed by the Pilgrims' Way, from spoliation. The executors of the vendor, Mr. George Taylor, have agreed to extend for a short time the option of purchase at a price of 7,700*l*. The offices of the Trust are at 25, Victoria-street, S.W.

Widening of High Holborn. Negotiations are opened by the Holborn Borough Council with the London County Council in the matter of widening the street, on the south side, between the Inns of Court Hotel and the Holborn Empire Theatre concurrently with the erection of the new premises for the Pearl Assurance Company



Paris: Avenue de Breteuil and the Invalides.
(From the *Town Planning Review*.)

THE BUILDING TRADE.

THE IDEAL BUILDER.

WE have often heard it remarked, as a kind of protest against attaching too much importance to external circumstances, that the personal element is the determining factor in making or marring a man's success in life. This is undoubtedly so in relation to the building trade, although it may not be obvious to everyone; and it will have been realised by anyone who has met the ideal builder. What is the ideal builder? it may be asked. He is the man with a good all-round practical knowledge of every trade comprised in his work. He not only wishes to produce good building, but is competent to see that it is produced; and this applies equally to work that is hidden after completion and to that which always meets the eye. He is the man *par excellence* whom an architect would select —clients permitting—to give effect to his designs.

There are, happily, many builders who come near to the ideal standard; there are many who fall short of it in some degree; and there are some who may be said to miss it altogether. Imagine the head of a firm who has bought his way into a business from which older men approximating to the ideal type have retired or been removed by death. He owes his knowledge solely to a counting-house training, and, with the best intentions, cannot bring the fruits of practical experience to bear upon the work which is undertaken in his name. It might perhaps be asked, How should his ignorance affect the quality of the work, provided that he has competent men to act under his directions? Well, experience shows that such a man's control is not only ineffectual; not only is he liable to be deceived by those who work nuder him, but he will, himself, still, we say, with the best intentions, frequently obstruct the carrying out of thoroughly sound building work.

The personal element comes largely into play in the character of a builder's foreman. A capable and conscientious foreman will not allow bad work in any part of a building. His men are quick to learn the character of the person whose eye may be upon them at any moment. They, being paid by time, have nothing to gain by hurrying or scamping their work; and so a good foreman's task is an easy one, provided that he is not subjected to undue interference. On the other hand, when the foreman happens to be a "hustler," the result must be that much bad work is put into the building, especially in such matters as foundations and underpinning, which are soon to be concealed from view. The architect cannot possibly see every brick laid, and he must, in the absence of a clerk of works, rely largely upon the builder's foreman. Now if the builder is one of those men who fall so far short of the ideal standard as to have scarcely any practical knowledge of building, he will usually judge only by financial results. He will find that, where the foreman was a careful, conscientious man, the job did not pay so well as in another case where the foreman was a "hustler," and often has a good foreman been made to realise that he must "either hustle or get the sack." In the end he will be compelled to pass bad work, and the men will take their cue from him. Thus the personal influence of the head of a firm extends downwards to the poorest labourer in his employ.

As with the foreman and his master, so it may be with the managing director, who possesses a thorough knowledge of building work, and a Board to whom he stands accountable and who view affairs solely from the financial standpoint. He, poor man, may become a "hustler," much against his own will; he who has perhaps converted his business into a limited liability company may find himself, like Frankenstein, overmastered by a monster of his own creation.

Many of our readers are aware that the evils to which we refer have been on the increase for many years past. They are mainly the result of that feverish race for wealth which acts prejudicially to high ideals and goes far to ruin modern society. We see the causes of disease in operation. Whence, we may ask, is to come the remedy?

The cry has often been raised, especially in regard to building, that men no longer take pride in their work; they do not, we are told, love it for its own sake, as did the workmen of the Middle Ages. But it cannot be maintained that this is so with the majority of builders at the present time. Every day may be found instances to the contrary. True, we have not so many firms now whose heads have risen from the bench as were in existence, say, forty years ago. But the principle of survival of the fittest holds good, and must ever do so. In judging of building firms the personal element will always influence an architect's decision, and he will cast a favourable eye upon those approximating most nearly to the ideal standard. Thus the steady-going practical builder will be selected, when possible, in preference to the mere financier, and, though he may never become a millionaire, will hold his ground ultimately, neither playing for high stakes nor risking a stupendous disaster. The need for a sound practical training before attempting to enter the building trade if not recognised in advance may be learnt by unwelcome experience. The control of large firms by men who lack the necessary qualifications will sooner or later show itself to be unworkable. Meanwhile, young architects may be advised to exercise the closest discrimination when selecting builders to tender in competition.

THE "CEMENT GUN."

An appliance first used on a large scale in building work for renovating the exterior of the World's Fair pavilions in Chicago, the so-called "gun," has been widely used in the United States and will probably find its way into this country as an American novelty, despite the fact that the same principle has been applied for many years past in painting and limewashing machines made by British firms. The cement gun, or spraying machine as we should prefer to term it, consists essentially of two vertical cylindrical chambers one on top of the other. The upper chamber is fitted with an inlet valve at the top and there is a similar valve between the two chambers, which are used for the reception of cement and sand in given proportions, and are provided with hand-worked beaters used for breaking up any lumps. At the bottom of the lower chamber is a flat wheel with deeply cut teeth, the wheel being rotated by a small air motor so as to carry a small quantity of the dry materials into the air current of a blow pipe and thence into a flexible hose terminating in a nozzle where water is added in the form of spray from a small independent hose pipe.

Leaving the nozzle at a velocity of 300 ft. per second the mortar deposited is denser and stronger than ordinary stucco, and it is claimed that as hydration takes place in transit immediately before and during the application of the mortar, the process of setting is not interfered with as occurs in mortar applied by hand.

In building construction the spraying machine has been used for coating steelwork, forming exterior and partition walls based on wire netting or tarred paper covered with netting, stuccoing timber and other houses, building fences, and for other classes of work where cement mortar is commonly employed.

LAND VALUATION.

The Land Union announces the decision of the Official Referee under the Finance Act in the celebrated "Richmond Case." This was a case which gave rise to some comment, and questions were asked in the House of Commons about it. Some ladies inherited in 1910 a small dwelling-house and shop in Yorkshire. This property had been purchased by the father of these ladies for 500*l*., but the date of this purchase is not given in the report. The ladies paid death duties on 500*l*., and subsequently sold the property for 500*l*. The property was, however, valued as for purposes of the Finance Act as being of value of 380*l*. on the date fixed by the A April 30, 1909, and thus on the sale 22*l*. claimed as increment value duty. The la had neglected to appeal from this valuat within the prescribed period, and it was favour, after questions were asked in House, that the matter was allowed to reopened by appeal. The Referee has rai the total value by nearly 20 per cent., fix it as on April 30, 1909, at 466*l*. 15s. Th if all the difference between this valuat and the price realised by sale is attributed increment, the amount of the duty will 5*l*. and not 22*l*., but it remains to be pro whether the site value has in fact increa in value.

In another case, the "Palmer's Green Cas recently reported by the Land Union, it been held that a small profit realised on sale of a leasehold property was not subject of increment value duty, as there no increase in the site value.

That hardships occur under the Act da is common knowledge, as many persons can afford to appeal, but the point we now w to draw attention to is the lack of publicity being given to the decisions of Referees. Unless there is a further appeal the High Court the public have no knowle of the course that is being pursued under Act, and individuals may be paying ta levied on a basis which has been held to erroneous. The appeals to Referees t appear in no way to simplify the administ tion of the Act. The public are m indebted to the Land Union for the cou they are taking in publishing the decisi of the Referees.

THE LONDON ASSOCIATIO OF MASTER DECORATORS

A meeting of the General Committee v held at the offices, 92, Queen Victoria-stre E.C., on the 11th ult., Mr. C. E. Wilkins in the chair.

Trades Disputes Act.

The Secretary read letters received fr the Employers' Parliamentary Council, Prime Minister, and the Trades Disputes Reform League, and presented a copy of proposed Bill. He explained that he written to the Prime Minister, submitting t a deputation should be allowed to wait u him, and the letter read was the reply to t request. The Prime Minister regretted inability to receive a deputation.

The Chairman said that the only thing Association could do was to support the B using what influence it had with Parliament representatives.

The Secretary said he had asked in w way the Association could support the F ployers' Parliamentary Council, and he r read the reply received.

The Chairman said that reply could not acted upon, but he thought the Bill had unanimous support of the members.

The petition was passed round the Co mittee and signed by the members.

Mr. Dakin suggested that the Associati should signify its willingness to support Bill and should say that, as Australia h shown the way, England ought not to m taking the hint and doing the same.

Mr. Anderson thought it would be well send a resolution to the London Mas Builders, which they could attach to memorial when they sent it in, and a let might be sent direct to Lord Claude Hamil to the same effect, unanimously supporting recommendations.

Mr. Anderson thought that was all t could be done at the moment. The Secret might be instructed to write to the Mast Builders' Association, saying that the membe present at the Committee meeting that ev ing had signed the petition, and cordia endorsed the action they were taking in t matter, and sent another resolution to L Claude Hamilton, informing him that matter had been discussed by the Committ which was unanimously in favour of the B he was promoting.

This was agreed to.

Anderson said it might be wise in writ- Lord Claude Hamilton to ask him in ay the Association could further assist l. It might be that a memorial could arded on the part of the Association next general meeting.
was agreed to.
Dakin considered that it should be sent o the other members of the Association get as many signatures as possible.
Chairman thought the petition might brought up at the general meeting ned there. He did not think it was ely necessary that it should be signed members of the Association.
Anderson said the Secretary might some memorial sheets for circulation.
Dakin suggested that a member of the tee in each district might have a get signatures.
Chairman agreed. As long as those who were employers or masters, it did not to matter whether they belonged to the tion or not.

ndon County Council Education.

Committee proceeded with the con- on of the letter from the London Council on the subject of technical on.
Anderson said that as there were several s asked, which were more or less out- e Report submitted to the County it would be better to have the matter i to three or four members of the ional Committee.
Chairman said one or two questions were n the letter, which might be answered General Committee at once. For , names of firms represented on the tion who were prepared to guarantee ment to boys on the completion of ourse of training, and the names of ho would take the boys, were questions ight be answered straight away. He it might be said that all the firms in sociation would take them.
Anderson said there was no definite from firms. To say how many boys e taken each year was rather a big He did not know that a guarantee e given that any firm would take a h year, because in four or five years uld mean four or five boys, and the as whether the firm could keep those ing.
Dakin thought that was a question could hardly be answered until the s had been written to for their views subject.
Milton asked whether it would not be say that each firm would take one or A boy might not stop. He might get e of something better and might leave, might misbehave himself and be dis- .
Chairman thought there would have to cular letter to the members before the could be answered.
Anderson said the whole matter might rred to a Sub-Committee of three to ith. They could draft a form which o out with the notice of the general . It might be a means of bringing a the general meeting. This was agreed on the motion of Mr. Milton, seconded Rowden, Messrs. Anderson, Wilkinson, kin were appointed the Sub-Committee.

nants' and Manufacturers' Terms to the Public.

Secretary read a letter from the l Federation of Builders.
Anderson said the only thing the Asso- had done was to induce the principal er manufacturers not to supply the direct at all except at gross prices. could not prevent a merchant from ng a private individual, if he was pre- o do it, at gross prices.
Chairman thought it might be said that rts of the Association in the past had ith considerable success in obtaining ts for the trade.
Anderson said in the circular Messrs. on's sent round they said they would not the public at all except through a or.
Dakin said that was the only firm who hat statement in writing. Most of the firms said they had always taken that d intended to continue to do so.
Anderson said that Messrs. Sanderson & rote to some 5,000 architects stating uld not in future supply them with but any goods they required must come a decorator. There were other firms d declined to allow discount to any individual except a small cash .

Mr. Dakin said an arrangement had been come to with the Wallpaper Manufacturers, Ltd., that in future there would be no public advertisement of a discount off wallpapers such as that which, up to that time, had been put in the windows of Whiteley's, Maple's, and similar firms. That was stopped through the agitation of the Association.

Mr. Anderson thought that was the agreement with most of the larger houses, that, provided it was general, they would agree not to exhibit advertisements with reference to discounts on paper.

Mr. Dakin said it was further suggested at that time by Messrs. Sanderson's, Lines, and several others, that in order to assist in carrying out the arrangements decorators ought not to deal with firms who gave more than a third discount off ordinary orders.

The Chairman said the reference in the letter was to merchants and manufacturers supplying the public with goods on trade terms, and the Association were asked what they were doing in the matter, and in what way the Federation could help the Association or the Association help them. He thought the reply might be that the Association were taking the matter up whenever they received information, and had been successful in dealing with the firms.

Insurance Act.

Mr. Dakin said that with reference to the Insurance Act, he had been in communication with various members of the Committee asking them to form a Committee to consider what the action of the Association should be in regard to the Act, and he had received replies from the Chairman, Mr. Rowden, Mr. Campbell, and Mr. Anderson, in favour of uniting with him to go into the pros and cons of the Act to see how it affected the employers in the decorating trade. By the time the quarterly meeting came along that Committee ought to have a concise form of objections to the Bill, and be able to say what procedure should be recommended to the Association, subject, of course, to the general meeting's approval. Part II. of the Act, dealing with unemployment, was rushed through the House with only eight or nine provisions discussed out of twenty-five. He failed to see that employers could submit to an Act passed in such an unconstitutional manner. He was strongly of opinion that the Association ought to be brought, if possible, to agree to object to the Act by making themselves passive resisters to the demand of the fees until such time as the Act met the views of the employers and of the working classes, who were affected by it as much as the employers.

The Chairman said unless there was resistance there would be no amendment.

The Secretary said that when the notice for the general meeting went out it might be stated that it was the intention to take the opinion of the Association on the Act at the meeting, and those who could not be present might be invited to send their views.

The Chairman agreed, and said at the same time it might be mentioned that the Report would be brought forward at the Special Committee.

Continuous Certificate of Discharge.

The Secretary submitted proof certificates, samples, and estimates of costs in connexion with the proposed continuous certificate of discharge.

On the motion of Mr. Rowden, it was agreed that the word "employment" should be substituted for the word "engagement" in one of the headings.

Mr. Dakin suggested that a larger number of entries should be allowed for on the cards.

Mr. Mellis suggested that the coat of arms of the Association should be on the outside of the card, and this was agreed to.

It was agreed that further estimates should be obtained from other firms for 1,000 or 2,000 cards.

Mr. Anderson said as soon as the card had been decided upon the Secretary should be instructed to write to a number of firms asking them to take the matter up, and saying the cards could be supplied at such-and-such a price, and also that if taken up it would be in the interests of themselves and of the men

TRADE DISPUTES ACT.

In the House of Commons, on the 25th ult., Mr. Peto presented a petition from 134 members of the London Master Builders' Association praying that the number of pickets during trade disputes should be limited to two, and that pickets should be permitted to attend only the place where a person worked or exercised his business, and that all unions should be made responsible for the acts of its members.

GENERAL BUILDING NEWS.

CHURCH REPAIRS, NEWPORT, MON.

The report and plans of Mr. G. E. Halliday, F.S.A., of Cardiff, for the reparation and enlargement of the historic Parish Church of St. Woolos, Newport, Mon, have been adopted by the Vicar, the Rev. D. Griffiths, and Committee. The work is estimated to cost about 6,000*l.*

CHURCH, PORTHCAWL.

A new church is about to be erected at Porthcawl, Glam, to seat 600. Tender for the first section, to cost 4,500*l.*, has been accepted. The architect is Mr. G. E. Halliday, F.S.A., of Cardiff. The total cost is estimated at 6,500*l.*

ENLARGEMENT OF CHURCH, ABERDARE.

The extensive enlargement of St. Elvan's Church, Aberdare, Glam, has recently been completed at a cost of about 6,000*l.* from the designs of Mr. G. E. Halliday, F.S.A., F.R.I.B.A., of Cardiff.

COWBRIDGE PARISH CHURCH.

The report and plans of Mr. G. E. Halliday, F.S.A., for the reparation of Cowbridge Parish Church, Glam. at a cost of about 3,000*l.*, have been adopted by the Vicar and Churchwardens.

ROMAN CATHOLIC SCHOOL, MOORTHORPE.

This school has been erected at a cost of about 2,000*l.* from the designs of Mr. J. H. Eastwood, A.R.I.B.A., architect, of London. The contractors for the work were Messrs. Swift Brothers.

NEW SCHOOL, CHESTER.

Mr. Fairclough, of Warrington, was the builder of the new city and county school in Queen's Park, Chester, which has been erected from the designs of Mr. W. T. Lockwood, architect, of Chester. The new building contains a central hall, 46 ft. by 35 ft., and laboratories.

THE ADELPHI HOTEL, LIVERPOOL.

The hotel has been reconstructed from the plans prepared by Mr. Frank Atkinson F.R.I.B.A. The new building consists of nine floors, is 120 ft. above the street level, and includes a French restaurant, Hypostyle hall, and a ballroom.

TRADE NEWS.

Under the direction of Mr. Fred Howorth, architect, Preston, Boyle's latest patent "air-pump" ventilators have been supplied to Fulwell Wesleyan Church, Preston.

The Houghall new Infectious Hospital, Durham, is being supplied with Shorland's warm-air ventilating patent Manchester stoves by Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester.

Owing to the increase of London business, Messrs. Richard Johnson, Clapham, & Morris, Ltd., appointed as their agent Mr. H. M. Kelk, who has now removed to larger and more convenient offices. In future his address will be 42 and 42a, Broad-street House, New Broad-street, E.C. Telegraphic address: "Crossways, London." Telephone No.: 6183 London Wall.

PROJECTED NEW BUILDINGS IN THE PROVINCES.*

ACCRINGTON.—Ice-making premises, Argyle-street, for the Blackburn Crystal Ice Company, Ltd.

Banbury.—Workmen's dwellings; Messrs. Lucas & Lodge, architects, Hart-street, Bloomsbury, W.C.

Barrow.—School; Mr. A. Race, Surveyor, Town Hall, Barrow.

Batley.—Weaving premises, for Messrs. Hall, Tankard, & Co., Brookroyd Mills.

Belfast.—Additions to Park Lodge, for the Earl of Shaftesbury; Mr. H. Beaver, architect, Donegal-square, Belfast. Lecture hall; Mr. S. Stevenson, architect, 83, Royal-avenue, Belfast; Messrs. R. Curry, Ltd., builders, University-street, Belfast.

Bolton. Nurses' home (4,500*l.*); Henderson & Brown, Fold-street, Bolton.

Bonnybridge.—Drill hall (2,500*l.*); Messrs. A. & W. Black, architects, 5, King's Arms-court, Falkirk.

Brymbo.—Drill hall for the Denbighshire Territorial Force Association; Mr. C. D. Rutter, architect, Parr's Bank-building-chambers, Wrexham.

Cambridge.—County offices (13,000*l.*); Mr. H. H. Dunn, County Surveyor, Central-chambers, Cambridge.

* See also our list of Competitions, Contracts, etc., on another page.

Castleblayney.—Convent school; Mr. J. I. McDowell, architect, 27, Chichester-street, Belfast; Messrs. R. Ritchie & Co., builders, 85, North Queen-street, Belfast.

Castlerock.—Golf hotel: Messrs. Davidson & Miller, Richmond-street, Londonderry.

Cathcart.—Queen's higher grade school; Messrs. Thomson & Sandilands, architects, Blythswood-square, Glasgow. Thirteen houses, Muirend-road, for Messrs. John Emery & Sons, Nursery-lane, Strathbungo.

Cheshire.—Tower at Sandiway Church; Messrs. Marshall & Muspratt, architects, Chester; Messrs. Clegg & Sons, builders, Chester.

Childer Thornton.—School (3,780*l.*); Messrs. A. Fleming & Co., builders, Neston.

Clydebank.—Library; Messrs. Gardiner & White, architects, Glasgow.

Colne.—Weaving-shed (800 looms) for Messrs. S. Greenwood & Sons, Colne. Additions to hospital; Messrs. Holgate & Spivey, architects, Lloyd's-chambers, Market-street, Colne.

Drogheda.—Fifty houses; Borough Surveyor, Town Hall, Drogheda.

Dublin.—Foresters' hall; Mr. W. A. Scott, architect, 45, Mountjoy-square, Dublin.

Dundee.—Additions, West Green Asylum (1,200*l.*); Mr. T. M. Cappon, architect, 32, Bank-street, Dundee.

Durham.—Drill halls, Barnard Castle, Gateshead, and West Hartlepool; Mr. Hy. Chapman, architect, Grainger-street, Newcastle-on-Tyne. Block to University (2,500*l.*); Messrs. J. Potts & Son, Eldon-square, Newcastle.

Easington Colliery.—School (10,275*l.*); Mr. J. Hedley, builder, Newcastle.

Edinburgh.—Shops and warehouses, Easter-road, and Causewayside-buildings (2,200*l.*); Mr. T. J. Marwick, architect, 43, York place, Edinburgh.

Flint.—School, Halkin-street (5,000*l.*); Mr. Sam Evans, County Architect, Mold.

Foleshill.—One hundred houses; Mr. W. McCarthy, builder, Ellys-road, Coventry.

Frodingham.—Alterations to iron and steel works (4,000*l.*); Mr. W. S. Walker & Son, 77, Lowgate, Hull.

Gainsborough. Electric theatre; Mr. W. O. Eyre, architect, 18, Silver-street, Gainsborough.

Glasgow.—Playhouse, Charing Cross (22,500*l.*); Mr. W. B. White, 219, St. Vincent-street, Glasgow. Buildings, Vincent-street, and West Nile-street (20,000*l.*); Messrs. Campbell & Hislop, architects, 124, St. Vincent-street, Glasgow. Alterations and additions to residence, Albert-road (2,000*l.*); Messrs. J. Hamilton & Son, architects, 212, St. Vincent-street, Glasgow. Restoration of flour mills, Centre-street, for Messrs. Wm. Primrose & Sons, Ltd.

Gloucester.—Fire-station; Mr. R. Read, Surveyor, Guildhall, Gloucester.

Halifax.—Premises, High-road (1,500*l.*); Messrs. Clement Williams & Sons, Halifax.

Hanley. Mining school, Victoria road; Mr. S. B. Ashworth, Town Hall, Hanley.

Harrogate. — Conversion of Town Hall theatre into mechanotherapeutic institution (980*l.*); Mr. F. Bagshaw, Engineer, Town Hall, Harrogate.

Hinckley. Hospital; Messrs. Walker & Heaton, architects, The Borough, Hinckley.

Ilkley.—Additions to King's Hall (3,000*l.*): Mr. T. H. Smith, Surveyor, Town Hall, Ilkley.

Irlam (Manchester).—Picturedrome; Mr H. Booth, 42, Regent-street, Haslingden.

Jarrow.—Additions to Palmer Shipbuilding Company's offices; Mr. B. Gowan, general manager, Palmer Shipbuilding Company, Hebburn-on-Tyne.

Keighley. Baptist Sunday school, Albert-lane; Mr. A. P Harrison, architect, High-field-lane, Keighley.

Laugho.—Additions to reformatory; Mr. H. Littler, architect, 16, Ribblesdale-place, Preston.

Leicester.—Church (15,000*l.*); Mr. W. D. Caroe, architect, 98, College-street, S.W.: Messrs. Collins & Godfrey, builders, The Cross, Tewkesbury.

Limerick Rebuilding St. Murchin's Church: Mr. B. E. F. Sheehy, architect, 57, George-street, Limerick.

Lisburn (Co. Antrim).—Erection of Brownlie Memorial School (2,500*l.*); Mr. Jas. Hunter, Beechwood, Antrim-road, Lisburn.

Littlehampton. — Fire-station: Mr. H. Howard, Surveyor, Town Hall, Littlehampton

Llanelly.—Additions, Liberal Club: Mr. J. Evans, architect, Llanelly.

Londonderry.—Orange hall (1,800*l.*); Messrs. Robinson & Davidson, architects, Richmond-street, Londonderry. Church (1,800*l.*); Mr. J. P. McGrath, architect, 6, Castle-street, Derry.

Maryhill (Glasgow).—Additions to rubber works of Messrs. G. MacLellan & Co.,: Mr. Geo. Simpson, architect, 233, St. Vincent-street, Glasgow.

Newbridge.—School; Mr. J. Bain, Architect, Shire Hall, Newport, Mon.

Newcastle.—Hospital at workhouse; Mr. E. Bowman, architect, Westgate-road, Newcastle; Messrs. Davidson & Miller, builders, Newcastle.

Newlyn (Penzance). — Wesleyan school (2,200*l.*); Mr. Jas. Madden, architect, Morrat-road, Penzance.

Newton.—Additions to school; Mr. G. Widdows, St. Mary's-gate, Derby.

Oswestry.—School; Messrs. Willink & Thicknesse, architects, 14, Castle-street, Liverpool.

Outwood.—Power station and house, Lingwell Nook-lane, for the Yorkshire Electric Power Company.

Peterborough. — Alterations, court-house; Messrs. Townsend & Nordham, architects, Peterborough.

Porthcawl.—Church; Mr. Halliday, Diocesan Architect, Castle-street, Cardiff; Messrs. Vicary Brothers, builders, Barry Dock.

Reading.—Manual instruction centre, Wokingham-road (720*l.*); Messrs. R. Bell & Sons, builders, Caversham.

Rhondda Valley. — Workmen's institute (3,000*l.*); Mr. W. D. Morgan, architect, Victoria-chambers, Pentre, Rhondda.

Rogerstone (Mon.).—Golf clubhouse (2,200*l.*); Messrs. Phillip & Vaughan, architects, Prudential-buildings, Commercial-street, Newport, Mon.

Sacriston.—Literary institute; Mr. G. T. Wilson, architect, Durham-road, Blackhill.

St. Asaph.—Additions to workhouse; Mr. J. Hughes, architect, Denbigh.

Shirley (Soton).—School (14,600*l.*); Messrs. H. Stevens & Co., builders, 126, Above-bar, Southampton.

Silverton (Devon). — Reservoir; Messrs. Montague Luke and Partners, architects, 9, Princes-square, Plymouth.

Skipton. Shops and offices, High-street (2,000*l.*); Mr. J. W. Broughton, architect, 19, High-street, Skipton.

Sligo. Operating theatre at infirmary: Mr. A. Murray, architect, 37, Dawson-street, Dublin.

South Bank (near Middlesbrough).—School (8,423*l.*); Mr. G. M. Radge, builder, Normanby, near Middlesbrough.

South Bank.—School (8,000*l.*); Messrs Bottomley & Wellburn, architects, 38, Albert-road; Middlesbrough; Messrs. C. Brown, Ltd., builders, West Hartlepool.

South Moor.—Picture hall; Mr. E. Dyson, architect, Pelton. Institute (4,000*l.*); Mr. T. E. Taylor, The Grove, Lanchester, Co. Durham.

South Shields.—Block to workhouse (2,600*l.*); Messrs. J. H. Morton & Son, architects, Eastern Bank-chambers, South Shields.

Spennymoor.—Council offices, public hall, and market (15,000*l.*); Mr. G. T. Wellburn, architect, 38, Albert-road, Middlesbrough.

Springwell.—Extensions to premises of Windy Nook Co-operative Society (3,000*l.*); Messrs. Davidson & Miller, builders, Newcastle.

Stoke-on-Trent.—Fire-station (1,800*l.*); Mr. A. Burton, Surveyor, Town Hall, Stoke.

Stonehaven.—Alterations, premises, High-street, for Messrs. J. Jack & Sons, Ltd., net manufacturers.

Stonehouse (Plymouth). — Police station (4,000*l.*): Mr. E. H. Harbottle, architect, The Castle, Exeter.

Strood (Kent).—Premises, Gun-lane, for the Rochester and District Co-operative Society.

Sunderland.—Church hall (2,000*l.*); Messrs. W. & T. R. Milburn, architects, Fawcett street, Sunderland.

Swadlincote.—Extensions to Pottery Works for Messrs. T. G. Green & Co.

Swansea. -Fifty houses, Cwm-road (6,375*l.*); Messrs. J. Marles & Sons, builders, Swansea. Fifty-three houses, Trewyddfa Common; Mr. A. J. Colbourne, builder, Swindon. Plans have been passed as follows: -Rebuilding premises, Woodfield street, Morriston, for Mr. L. B. Lewis; warehouse, 26-7, Orange-street, for Swansea Co-operative Society Company, Ltd. A plan has been lodged for four houses, Quar-road, Landore, for Messrs. Hughes & Morgan.

Taunton.—School, Priory Estate (5,880*l.*); Messrs. G. Pollard & Son, builders, Taunton

Tavistock. -Isolation hospital: Surveyor, Urban District Council Offices, Tavistock

Tibshelf -School (5,000*l.*): Mr. G. Widdows, architect, St. Mary's-gate, Derby.

Tiverton.—Drill hall: Messrs. Ellis & Bowden, architects, Bedford-circus, Exeter.

Troon.—Picture theatre. Portland-street: Mr John Wilson, Brandon-street, Motherwell.

Trowse.—Six houses, etc., Whitlingham Farm (2,430*l.*): Mr. A. E. Collins, Engineer, Town Hall, Norwich.

Upper Penn (Stafford). — School: Mr Hutchings, Education Offices, Stafford.

Ushaw Moor. -Picture hall; Mr. Storey, architect, Cornsay Colliery.

Wattstown.—Two hundred houses: Mr. W. J. Jones, Surveyor, Town Hall, Rh Glam.

Willing (Co. Durham).—Hospital (7 Mr. J. H. Gardner, Surveyor, Council Willington.

Winton (Bournemouth). — Congreg church (5,000*l.*); Mr. J. Donkin, ar 58, Portchester-road, Bournemouth.

Witham.—Fire station and isolation ho Mr. W. P. Perkins. Surveyor, Urban Council Offices, Witham.

Wolverhampton.—Additions, Horde school; Messrs. Fleeming Brothers, arc Bank-chambers, Wolverhampton. Ad to Moorfield Works for the Sunbeam Car Company, Ltd.

Wooler.—Improvements at St. Mary's (2,000*l.*); Mr. A. B. Plummer, architect castle; Mr. G. Beattie, builder, Woole

Worcestershire. Mission hall, Dart road, Selly Oak; Alfred J. Dunn, F.R. architect, No. 1, Waterloo-street, Bi ham; Messrs. Thomas Loud & Sons, b Selly Oak.

Worstholme (Burnley).—School; M Littler, architect, 16, Ribblesdale Preston.

Yarmouth. — Additions, infirmary (5, Mr. A. S. Hewitt, architect, Regent Yarmouth.

Yeovil. — One hundred houses; Mogridge & Sons, builders, Queen Taunton.

Yoker.—Electric sub-station off Fer for Bull's Metal and Melloid Company,

FOREIGN AND COLONIA

Labour in the Colonies.

From the Emigrants' Information 34, Broadway, Westminster, S.W., w received the April circulars of the Emi Information Office, from which we lea in *New South Wales*, in Sydney and s the building and iron trades, the sawye factory workers, have been well emp and stonemasons, bricklayers, brickn plasterers, carpenters, and joiners, an bodied labourers are in great dema *Victoria* employment continues to b good, and assisted passages are now granted to mechanics under forty-five y age. There is a large demand for pla boiler-makers, blacksmiths, moulders, plu sheet metal workers, and electric light -*South Australia* grants cheap passa emigrants. Work of nearly all ki plentiful, and a large amount of m being spent on public works. There is demand for bricklayers, masons, pla carpenters, plumbers, ironworkers, finishers, coppersmiths, engineersmiths, ar and shovel men.—The *Queensland* Gove grants nominated passages to emi There has been plenty of employment f kinds of mechanics.—In *New Zeala* demand for mechanics is not general, building trades have been busy nearly where, and carpenters and joiners, brick plasterers, plumbers, gas-fitters, and b trade labourers are wanted in many The engineering trades have been fairl but the supply of men is generally suffi In the *Union of South Africa*, employm the building and other trades in Johan continues fairly active; but the supply is quite sufficient.

Extensions and Improvements in Rio de J

According to the *Messager de São* towards the end of last year Dr. J. Alencar Lima submitted to the author Rio de Janeiro comprehensive plans embellishment and improvement of th Provision is made in the plans for construction of six new large avenue four large streets, the object being them up with the main avenue leading docks, and thus facilitate commun between the suburbs and the in quarters; (2) the erection of 7,000 bl residential flats capable of accomm 300,000 people, as well as workmen's te for the accommodation of 20,000 indiv (3) the laying of extensive undergroun for draining the soil of torrential rai (4) the carrying out of sewerage wor demolition of old quarters, the const of quays and squares, and the laying gardens, &c. Commenting on this rep British Acting Consul-General at Janeiro (Mr. E. Hambloch) states considers it unlikely that the scheme passed in its entirety, although part may materialise, as has happened in t of similar projects presented in recent Ultimately, he adds, it will be found sary in the interests of the city to ca in full, changes similar to those now pr

IE NATIONAL PHYSICAL LABORATORY.

the occasion of the presentation of the ual Report of the General Board of the onal Physical Laboratory on March 15 invited to be present had an opportunity specting the various departments of this useful institution, accommodated partly ie fine old brick-built mansion known as y House, and to a far more considerable rt in the new buildings that have been ed in the grounds.

the Thermometry Department are the gas nometer-room, with a thermometer fulfilling duty of an ultimate high temperature lard up to 1,200 deg. C., apparatus for deter- ng the sof ening points of refractory rials, a potentiometer and electric furnace hermo-couple comparisons, and two furnace- s, one with appliances for the verification gh-range standard mercury thermometers, atinum melting-point furnace, resistance- nometers and pyrometers, and the other shed with electrical furnaces of various . Other rooms in the same department ccupied by equipment for testing mercury nometers, flash-point apparatus for testing leum and lubricating oils, liquid air plant ow-range temperature verification, and ratus for the determination of thermal activities of heat insulators.

e departments devoted to general electrical urements and electrical standards are rably equipped for the many delicate tests measurements demanded in connexion this important branch of physical science, he Optics Department, devoted to tests of graphic lenses, microscopes, and general al apparatus and materials, is one of much est.

separate building accommodates the rotechnics Division, including the Electro- ical and Photometrical Departments.

xt in order comes the Engineering Depart- , under the direction of Dr. Stanton, where quipment for testing structural materials des horizontal and vertical testing machines, half-dozen impact testing machines, e testing plant, and research apparatus. latter comprises experimental channels for mining the resistance of plates and models iform currents of air and water, respectively, ratus for determining the specific heat eam, the rate of heat transmission from l surfaces to gases in contact with them, epeated load tests on reinforced concrete s, and percolation tests on concrete . In the grounds there are two experi- al towers 60 ft. high, with revolving rms 20 ft. long, for the study of wind- ure on structures.

new building belonging to the Engineering rtment has recently been erected and pped for testing the endurance of road ces and materials used in road construction. e Metallurgy Department, under the direc- of Dr. Rosenhain, is now housed in the Wernher Building, with laboratories for llurgical Chemistry. The main building sts of a two-story block, measuring 100 ft. ft., with a workshop and foundry attached, onnected by a single story extension with chemical laboratories. The ground floor voted principally to the cutting, grinding, ning, and etching of metal sections, and subsequent examination and microscopic graphy. The workshop, formerly used e Standard lathe-house, will be equipped testing machines and machine tools, and oundry provides for casting and handling ls in comparatively large quantities. The ical laboratories include rooms and ratus for steel analysis, alloy analysis, ical work on cement and road materials, o-chemistry, gas analysis, and spontaneous ustion research.

e Metrology Division is housed in a separate ing, designed to meet the requirements of ancy of temperature for the main measuring s, to provide a long corridor suitable for neasurement of tapes, and to provide the site workrooms, offices, and accommoda- or special warming plant. The eight main s are of the double-shell type, the walls louble glass ceilings being entirely within uter walls and roofing, and the temperature aintained at uniform level by automatic al regulators. Among the chief appli- in this division of the laboratory are the swood ruling-machine, the 50-metre arator for measuring tapes and wires, comparators for line standards of length and the calibration of scales, comparators for the accurate comparison of end standards of length, the Pratt and Whitney measuring-machine, Dr. Shaw's electric contact measuring-machine, Whitworth measuring-machine, screw and nut measuring-machines, standard scales gauges and templates, standard screw-cutting lathe, and other apparatus too numerous for individual mention.

The William Froude National Tank, 550 ft. long by 30 ft. wide by 12 ft. 3 in. deep, is constructed in a special building, where also is a smaller tank, 63 ft. long by 5 ft. wide by 3 ft. 3 in. deep. Although shipbuilding may not come within the professional practice of our readers generally, these tanks and their equipment are of extremely interesting character, and will thoroughly repay detailed inspection.

It is highly satisfactory to note the substantial progress made by the laboratory during the year which ended this month, and we trust that the invaluable work being done by the institution may lead to still greater financial support by the present and future Governments.

INTERNATIONAL SMOKE ABATEMENT EXHIBITION, ROYAL AGRICULTURAL HALL.

BEARING in mind the comparatively limited scope of this exhibition, it could scarcely be expected that so large a building as the Agricultural Hall would be filled to overflowing with apparatus and appliances intended to further the cause advocated by the Coal Smoke Abatement Society.

It is satisfactory to find that the main hall is fairly well filled and that the King Edward Hall is entirely occupied by a comprehensive display of electrical apparatus for light, heat, and power.

In the main hall the visitor will find ample proof of the efforts being made by many engineering firms to reduce the amount of smoke incidental to steam generation, and various improved types of coal and gas fired warming and cooking stoves and water heaters denote the activity of numerous other firms to cope with the unnecessary and wasteful consumption of fuel in private houses and buildings generally.

In the smaller hall electrical engineers demonstrate in a very practical way the justice of their claim that electricity is capable of abolishing smoke production entirely, so far as the consumer is concerned, although, of course, the generation of current must be attended by a certain proportion of smoke, except in cases where oil or gas is used as fuel.

In the following brief review of the principal exhibits we consider them for the convenience of readers under the heads of coal stoves and apparatus, gas stoves and apparatus, steam boiler auxiliaries, and electrical apparatus.

Coal Stoves and Apparatus.

The Carron Company (Stands Nos. 6, 7, and 8) make a comprehensive display of anthracite slow-combusion stoves, dog and other grates, including the Castle series, enamelled baths, and a kitchen range embodying the patent Blacktown fire and other recent improvements. The Blacktown fire, which can be adapted to Carron open and close fire ranges, is so constructed that the air, admitted by controlling ventilators and passing through the firedoor or bottom grate, becomes heated and promotes thorough combustion of the fuel. As the gaseous products are thereby raised to a temperature far in excess of that in an ordinary range the efficiency for cooling is increased and the fuel consumption reduced considerably. A further improvement is to be found in the pivoted shutter of the ashpan hopper, an arrangement excluding cold air and permitting ashes from the front fire to be tilted readily into the ashpan.

The foregoing improvements are embodied at the exhibition in a range of excellent design and finish. The place of the usual plate-rack is occupied by two hot closets with plate-glass doors; the ovens are fitted with duplex doors, the outer one of steel lined with insulating material and the inner one of plate-glass in steel frame for inspection without loss of heat; and the oven dampers are provided with quadrant indicators of neat design. We may add that the oven duplex doors are fitted with an ingenious latch enabling the cook to open both doors together or the outer one only at will.

A new type of electric cooking range exhibited by the Carron Company has been transferred to the electric restaurant, where it may be seen in operation, and we are informed that a second range of the kind will shortly be on view.

The Eagle Range and Gas Stove Company, Ltd. (Stand No. 9), show a "Premier" gold medal range with several novel features, a "new portable" range with oven and boiler, an "Imperial" grate with adjustable front bars and smoke-consuming back, "Premier" and "Governor" grates, an "Eagle" hot closet and independent hot-water boiler, and their "heat distributor" fitted to an ordinary firegrate for warming two or three additional rooms by hot-water radiators.

The "Premier" range, exhibited at work in the front of the stand, includes several recently patented improvements. The fire-box has a hinged front facilitating cleaning, the bottom grate can be raised or lowered with one hand, and hollow smoke-consuming cheeks are fitted at each side, and the back also where a boiler is not used. The cheeks, made of specially tough iron, have a series of gills cast on the back, and give up heat absorbed from the fire to air entering the bottom of the cheeks. The air thus superheated emerges through perforations at the top and, mixing with smoke, causes the latter to burst into flame, insuring perfect combustion and more rapid heating of the ovens and hot-plate. The smoke-abating action of this furnace are demonstrated in the range on view by the aid of talc windows in the flues. The ovens are fitted with duplex doors, the inner one being of glass and the outer one acting as a reflector for throwing light into the interior of the oven, so as to enable cooking operations to be watched even in a poorly lighted kitchen. Over the hot-plate are two ventilating canopy draught regulators and hot closets, and the special coal-saving dampers, now shown for the first time, are arranged so as to admit cold air to the main flue as the dampers are opened, thus obviating excessive heat and the consequent waste of fuel.

The "New Portable" range exhibited is a neat and compact stove very suitable for bungalows and other dwellings. It combines several new features and includes a powerful boiler for hot-water circulation.

The "Imperial" firegrate, with adjustable bars and draught doors, is a good example of a slow-combustion smoke-consuming grate, capable of perfect regulation. The heat-distributor fitted to one of these grates is in reality a small tubular boiler capable of providing sufficient hot water for two or three radiators and a towel-horse, thereby utilising heat that would otherwise pass up the chimney to waste. A simple device permits the boiler to be thrown out of action when not required.

Messrs. McDowall, Steven, & Co., Ltd. (Stand No. 10), show examples of their "Lion" ranges and "Whiteflame" fires. The "Lion" range, shown at work, is constructed with a boiler and boiler flues of new design, patent soot collecting shelves are provided under the ovens to facilitate the removal of soot and the thorough cleaning of the flues, the ovens are fitted with an inner glass door and foot pedal releases, which allow the cook to have both hands free, and temperature indicators of new patterns are fitted to the oven doors.

The "Whiteflame" fire is of entirely new type on the underfeed principle. Visitors can judge for themselves from the stove in operation the justice of the claim made for this fire in respect of perfect combustion and smoke abatement.

The Interoven Stove Company, Ltd. (Stand No. 14), make a feature of Pascall's patent combination stove, comprising a slow-combustion grate behind which is a high-pressure circulating boiler, the fire back being formed by the underside of a hinged hot-plate, while the ornamental canopy above the furnace conceals a large oven. When closed the stove presents the appearance of an ordinary modern fireplace. By a simple movement it can be converted into an efficient kitchen range capable of cooking for eight to ten persons, the oven being equal to one of the size usual in a 36-in. range, and the hot-plate providing accommodation for four large saucepans. The apparatus is self-contained, and can be fitted with very little trouble or expense. For flats, maisonettes, and tenements it would be difficult to devise anything more useful than this combination stove, which weighs about 2 cwt. and measures 38 in. high by 20 in. wide by 14 in deep. The firm also show samples of their "Sunbeam" anthracite stoves of the type which has become so popular during recent years.

The Sinclair Iron Company, Ltd. (Stand No. 15), exhibit one of their "Roseneath" fire-grates fitted with a recently introduced back-plate, increasing the glow and heating efficiency of the fire and making the grate available for burning ordinary coal, anthracite coal, or gas coke.

Messrs. O'Brien. Thomas, & Co. (Stands Nos. 104, 105, and 106) make a good display of anthracite stoves, firegrates, hospital ward stoves, and cooking ranges.

One of their stands is chiefly occupied by examples of the "Lasco" anthracite stove in various types. A very useful addition is the "Lasco" domestic boiler stove newly patented by the firm. The boiler is constructed of copper or gun-metal, and is arranged so that it can be cleaned without removing any part of the stove. Being heated by waste gases from the fire, the boiler is economical and provides constant supplies of hot water for domestic purposes, or may be applied to the warming of rooms or a conservatory, as may be desired.

The "Quadrant" range shown in the adjoining space embodies several new features, including an exceedingly simple and effective form of rising and falling grate, special dampers enabling the oven flues to be regulated in an efficient manner, and a new and very convenient type of clock-face temperature indicator. The range is also fitted with hot closets above the hot-plate, and has the indicating flue dampers now customary in high-class ranges.

The third space occupied by the firm is chiefly occupied by a selection of Boyd's "Hygiastic" ventilating stoves and grates and ventilating cowls. These stoves are now finished in porcelain enamel of any tint to match glazed brickwork, a method of treatment which saves labour, reduces the lodgment of dust, and imparts a pleasing appearance to the stoves.

The London Warming and Ventilating Company, Ltd. (Stand No. 109), have on view a varied assortment of their anthracite stoves and other apparatus, including the "Florence" patent boiler grate, for anthracite coal, for warming several radiators by low-pressure hot water from an open fire; and a continuous burning kitchener with enclosed mica front. This range is capable of heating the contents of a 40-gallon hot-water cylinder, and surplus heat is absorbed before the gases pass into the chimney. It is of the independent type and merely requires to be connected with the chimney by a length of flue pipe.

The Falkirk Iron Company (Stands Nos. 113, 114, and 115) make a representative display of cooking and warming stoves. The "George" range is completely self-contained and has iron flues throughout, facilitating the circulation of the gases and making the work of flue cleaning easy. The close and open fire flues are independent, thus avoiding impaired efficiency of the boiler when the open fire is in use. The furnace has hollow cheeks for heating air before admission, thereby conducing to complete combustion and the prevention of smoke. The fire bars are in the form of thin steel spindles, and the bottom grate is raised and lowered by a simple quadrant action protected from the fire. The oven doors are packed with silicate cotton and lined with white enamelled plates, and plate-glass inner doors are fitted for inspection. An ingenious double-action damper renders the baking oven suitable for ordinary baking, pastry cooking, or roasting, and the doors are opened by a pedal attachment. The company also exhibit Barker's "Hydro-Radiant" independent stove, which can be used to provide an open or close fire, and is fitted with a boiler for hot-water warming purposes. This type of stove can be applied for continuous burning, the combustion of the fuel being under complete control, and the boiler is so arranged that only waste heat is utilised for the boiler.

The "Era" anthracite warming stoves form another interesting series of exhibits, and a new type of warm air grate for hospitals and schools also deserves inspection. Various patterns of the "Pelham" fire are exhibited, and the "Orbit" hot-air controlled combustion stove, handsomely designed in the Adams style, is a distinct novelty. This is an independent stove for ordinary fireplaces suitable for coal or coke.

Gas Stoves and Apparatus.

The Shannon Engineering Company (Stand No. 3) exhibit a new type of water-heater with Bunsen type gas-burner and capable of boiling small or large quantities of water with great rapidity.

Messrs. Bilbie, Hobson, & Co. (Stand No. 4) make a small but interesting display, including two of their Hornsby-Stockport gas engines, a Marsh & Thorp combined blower and governor for high-pressure gas lighting, a Marsh & Thorp combined anti-pulsator and governor for supplies to gas engines, and high-pressure gas burners of 100 candle-power used for illuminating the exhibit.

The James Keith and Blackman Company, Ltd. (Stand No. 26), exhibit gas compressors with the capacity of 2,000 cubic feet per hour, and supplying forty-six Keith lamps of 1,500 candle-power used for lighting part of the exhibition.

Messrs. Ewart & Son, Ltd. (Stands Nos. 56 and 69), have on view a large number of their geysers, "Califonts," and appliances for the rapid heating of water in quantities from 1 to 10 gallons per minute.

The Cannon Iron Foundries, Ltd. (Stands Nos. 58 and 67), have arranged a comprehensive assortment of their gas-heating specialities, including gas fires, gas-heated radiators, gas cooking stoves, boiling burners, washing boilers, and gas irons, in addition to representative specimens of "Porceliron" sanitary ware and fittings. This is a stand that should not be overlooked by the visitor.

Messrs. R. & A. Main, Ltd. (Stands Nos. 71 and 86), exhibit some interesting examples of their gas fires and cooking stoves, the "St. Nicholas" fire being one representing a successful attempt to invest the gas fire with the cheerful aspect of an ordinary coal fire.

Messrs. D. Anderson & Co. (Stands Nos. 70 and 87) exhibit their "Dacolight" lamps of high candle-power for high or low pressure gas, some of these being used in lighting the exhibition.

The Gas Companies' joint exhibit (Stands Nos. 72-75 and 82-85) is one deserving careful inspection. It includes stoves, boilers, furnaces, and other gas fired appliances by the Davis Gas Stove Company, Ltd., Messrs. Fletcher, Russell, & Co., Ltd., The Richmond Gas Stove and Motor Company, Ltd., Messrs. Wilsons & Mathiesons, and the John Wright and Eagle Range, Ltd.

The Foster Engineering Company, Ltd. (Stand No. 92), make a feature of their gas governor.

Messrs. C. E. Podmore & Co. (Stand 106B) exhibit some of their high-power gas lamps for interior and exterior lighting.

Messrs. J. Marse & Co., Ltd. (Stand No. 112), show specimens of their "Visco-Marse" incandescent gas burners of the upright and inverted types, mantles, and auxiliaries.

Messrs. Tilley Bros. (Stand 116) show one of their "Hot Ray" gas fires controlled by a governor which can be fitted to any grate, and their system of high-pressure gas lighting.

Steam Boiler Auxiliaries.

In view of the continually increasing employment of steam boilers in architectural practice, we cannot appropriately pass by the exhibits coming under this head, which relates to appliances intimately connected with the question of smoke abatement.

The Underfeed Smokeless Fire Syndicate (Stand No. 5) exhibit the "Bowden" smokeless firegrate, applicable to domestic stoves and boilers, as well as to steam boilers.

Mr. W. Whitaker (Stand No. 19) makes a special feature of his cooking stoker and sprinkler stoker for Lancashire and other boilers.

Messrs. Babcock & Wilcox, Ltd. (Stand No. 20), devote a large share of their stand to the patent chain grate stoker designed for the smokeless combustion of semi-bituminous coal.

The Smoke Consuming Company, Ltd. (Stand Nos. 32 and 51), exhibit the "Thomas" apparatus for preventing the emission of smoke from tall chimneys without altering any of the existing fittings, except the boiler furnace front and fire bridge.

Messrs. Edward Bennis & Co., Ltd. (Stands Nos. 35 and 48), have an interesting boiler house exhibit, comprising a complete smokeless stoking machine and coal and ash handling plant, and different types of the "Bennis" stoker.

The Metallbank and Metallurgische Gesellschaft A. G. (Stand No. 89) exhibit the ingenious smoke dissipator invented by Professor Wislicens, and of which an account was given some time ago in our columns.

Messrs. J. Ruscoe & Co., Ltd. (Stands Nos. 91 and 101), exhibit their "Auto" mechanical stoker.

Messrs. J. &. P. Hill (Stands Nos. 118-1 show an installation of the Galloway-I furnace, which the makers claim enables cheapest kind of coal to be burned without production of smoke.

Electrical Apparatus.

The display of electrical appliances in King Edward Hall was organised by the Elec Supply Publicity Committee, and is intended appeal strongly to householders. The exhi are grouped in various sections instead of be placed on stands occupied by individual fir Therefore the character this part of the exh tion is quite different from that in the main h

The cooking department of the elec restaurant is open to inspection by visit and serves as a practical demonstration of cleanliness and convenience of electric cook apparatus.

The cooking section in another part of hall comprises specimens of various elec cooking utensils, the heating section is devo to electric radiating and convecting heat and another section is occupied by electrica heated irons for laundry work. Each sect is under the charge of attendants who are re to explain the working of the appliances, catalogues relating to electrical manufactu of every kind can be obtained at the stall of Electric Supply Publicity Committee.

BOOKS.

School Planning: Being a Practical Trea on the Planning of British Train Colleges and Schools. By PHILIP A. R SON. (London: Nicholson & Smith, Amen-corner, E.C.)

MR. P. A. ROBSON'S recently-publis treatise on school planning appears to the outcome of a lecture delivered by author before the class for school nurses health visitors of the Royal Institute Public Health. And so, naturally enou the important subject of hygienic planning relation to school buildings, more particula with regard to public elementary scho is discussed at considerable length. instance, the book contains some g practical advice relative to the choice sites and playgrounds, followed by enumeration of administrative and hygi considerations which affect the plann of entrances and staircases, classroo assembly-halls, cloakrooms, etc.

A well-arranged table of data, extrac from the building regulations of the Bo of Education, which will be found extren useful for ready reference, is an admir feature of the work.

The chapter on recent elementary sc building in Derbyshire comprises a serie interesting notes extracted from a paper r by the Architect of the Derbyshire Educa Committee before the Royal Sanitary In tute in February, 1910. In this paper author, Mr. G. H. Widdows, A.R.I.B suggests that the limit of the number children which can be effectively superv by a head teacher varies from 250 to and that as a rule there should not be n than six classrooms, comprising two ro for sixty and four for fifty children.

"This is, of course, on the large size, 10 sq. ft. per child is not too much, and w the higher elementary basis of 12 sq. ft. child is introduced, as possibly it will be days to come, or when the number of chil for which individual teachers are recognise still further reduced, then these rooms accommodate forty and fifty respectively."

It is also urged in favour of a six-roo school that it enables the three infant cla to be duplicated, and in the case of older pupils each standard has a room itself, for, owing to the smallness of t number, children in Standards VI. and V are almost always taken together.

The typical plans of elementary and o school buildings recently erected in Der shire which illustrated Mr. Widdows's p are full of interest as examples of a pra worthy effort to bring about an improven in the hygienic conditions of school life.

But, although the plans given in illustra of the author's views show marked varia in their general treatment, yet they similar to the extent that in all cases classrooms are provided each, in a greate less degree, with direct cross lighting ventilation, and so, whatever its aspect

jion in the building, sunshine is sure to
n each room during some portion of the

several cases open verandahs, or covered
, take the place of ordinary enclosed
dors, and thus not only do the class-
s open direct into the fresh air, but the
rooms are adequately cross-ventilated.
e fenestral treatment advocated by Mr.
lows has much to commend it. Windows
d in the end gables of classrooms are
with swing lights fixed at a height of
6 in. from the floor, and they are thus
above the eye of the teacher. Those in
ide walls have hoppers at the sill level
swing lights above.
ese hoppers, which only open to the
ht of 4 in., are formed with a deep rebate
he top and provided with a wind shield
orce the incoming air to travel in an
rd direction.
to the heating of the classrooms, in
ion to open fireplaces, low-pressure hot-
r ventilating radiators having a heating
ce of 25 sq. ft. per 1,000 cubic ft. of
nts are fixed in each room.
e glass area provided is equal to one-
of the floor area of the room; all class-
s are 11 ft. in height to the wall-plate
14 ft. to the ceiling.

ross-lighting and cross-ventilation add little,
thing, to the expense. The price paid has
l from 9*l.* 9*s.* to 13*l.* 13*s.* per head, and one
ay that under ordinary conditions a six-
d school costs 11*l.* 11*s.* per head This
des boundary walls, playgrounds, out-offices,
main building, but not site and furniture
special buildings, such as cookery and
al centres."

th regard to higher elementary, second-
and technical schools, Mr. Robson dis-
s the modern tendency to disconnect the
bly-hall from the classrooms by means
tervening corridors. In schools planned
igher education the use of the hall is
more extended than in an elementary
l—*e.g.*, for concerts, prize distributions,
astic displays, examinations, and "even
ing if there be no proper art-room. The
bjects gained by a central hall of the
ype are cheapness and ease of super-
n. The defects of the plan are more
ilties of ventilation and the restricted
t the hall to avoid disturbing classes."
ilities for constant supervision are
's necessary in elementary education, and
schools teaching higher "elementary"
cts the enclosed hall may well
n. But both in secondary and technical
ls the assembly-hall should be well
ed from the neighbouring classrooms.
ools intended for higher elementary
tion should contain—in addition to the
ary class and lecture rooms—suitable
modation for teaching such subjects as
ntary chemistry and physics, laundry-
cooking, general needlework, and art,
here should be one or more workshops.
on the arrangement, lighting, and
ment of these special rooms or depart-
are followed by some valuable sugges-
with regard to the planning of training
es, and the treatise concludes with
s extracts from the reports of Depart-
Committees having reference to the
f school buildings in various parts of
nited Kingdom.
Robson's book will doubtless prove of
service to all who are interested in
lvancement and development of school
ing.

---

ry of Bridge Engineering. By HENRY
TTAN TYRRELL. (Chicago, 1911. Pub-
ed by the Author. Octavo. Pp. 447.)
no easy task to bring so large a subject
the compass of a book such as this.
Mr. Tyrrell has been entirely successful
method of compression can hardly be
ted; but he, to some extent, disarms
sm on this point by explaining that it
en prepared as the historical part of a
ctive comprehensive work on bridge
ering, and on this account the theory
ethods of design are carefully excluded.
itial conception of the book is good.
a brief introduction dealing with early
s, we find bridges classified according to
ructural principles, commencing with
stone bridges, and in subsequent
rs treating of wooden bridges, cast-iron
, truss bridges, suspension bridges,
ver bridges iron and steel arches,
trestles and viaducts, and, lastly, solid concrete bridges. A vast mass of statistical information on the hundreds of examples included will doubtless give the book considerable value as a work of reference, although it necessarily detracts somewhat from the literary interest. It would have been far better to have given this information in tabular form so as to avoid the necessity of encumbering the descriptions with particulars of cost and dimensions. Uniformity in the scale of the diagrams would have assisted comparison, which, after all, is the most important point, while dimensions, etc., would be much easier to find in a table than scattered through the text. It should also be understood that the subject is approached mainly from the point of view of the constructor, and, while many bridges of marked beauty are illustrated, the author evidently feels that it would widen the scope of his work too much to go into questions of æsthetics.

Practical Sewerage and Sewage Disposal. By H. C. H. SHENTON, F.S.E., M.I.Mun.E., M.R.San.I. (S. Edgecumbe Rogers, 27A, Farringdon-street, E.C. Price 3s. 6d. net.)

INSTEAD of describing many methods and appliances, good and bad, from which the reader is left to draw his own conclusions, definite practical recommendations are given in this work as far as possible, so that those who have actually to carry out work can obtain from the book very useful advice. The whole of the book is arranged in paragraphs which are numbered, and in addition to the usual chapter headings there are many sub-headings which indicate clearly the various matters dealt with in each chapter. The book has been kept at a size which makes it suitable for the pocket. The general design, construction, and maintenance of sewers are described, and the recommendations with regard to the design, construction, and management of sewage disposal works and land treatment are based upon the latest developments in this work, and particularly upon the Reports of the Royal Commission on Sewage Disposal. We are glad to call attention to a useful little book.

Refrigeration, Cold Storage, and Ice-Making. By A. J. WALLIS-TAYLER, A.M.Inst.C.E. Third Edition. 414 Illustrations. (London: Crosby Lockwood & Son. 1912. Pp. 632. 10s. 6d. net.)

IN this treatise is included the third edition of a smaller work, entitled "Refrigerating and Ice-Making Machinery," the combined treatise discussing a good many technical matters that come more strictly within the province of the engineer than of the architect. But, as often happens, the architect is expected by his clients to know everything, and therefore he will find a great deal of valuable information even in the engineering part of the book. The chapters on "Refrigeration and Cold Storage" and on "Manufacturing, Industrial, and Constructional Applications" are specially interesting to architects because they deal with the design and arrangement of cold storage chambers, giving data and illustrations of practical value. The book is an excellent guide for all concerned in the subject.

LEGAL COLUMN.

Surveyors' Fees.

It is curious how often in contracts drawn up relating to important transactions between business persons some material point is left open which subsequently necessitates litigation. In the recent case, Reading Industrial Co-operative Society *v.* Palmer, the plaintiffs had purchased some land from the defendants for building purposes, and it was a term of the contract that the buildings erected thereon should be approved by the vendor's surveyor, but the contract was silent as to who should pay the surveyor's fees. The defendants endeavoured to set up a custom that in such cases the fees, in the absence of special agreement, should be paid by the purchaser but they failed in showing this, and on the evidence the Court held that there was no such custom—at any rate in Berkshire, where the land was situated. Then it appears to have been argued that as the approval of the plans was material to the purchaser the burden ought to fall upon him. The Court, however, did not accept this view, but held that the covenant was for the interest of the vendor, restricting the user of the land which otherwise the purchaser would have been entitled to use without restriction, and that the surveyor was instructed and retained by the vendor, who conferred upon him the authority to approve plans, and in such circumstances the person who retained the surveyor was the person to pay him.

Trade Union Law.

The case—Russell *v.* Amalgamated Society of Carpenters (noted the *Builder*, January 29, 1910) has been carried to the House of Lords. The claim was that of a widow of a deceased member of the trade union in respect of certain sick and superannuation benefit which she alleged was due to her husband before his death, and in the alternative she claimed a return of the money paid by him to the society; but the merits of the case had not to be considered by the Courts because the union raised the contention that by reason of the Trade Union Acts the Courts had no jurisdiction to entertain the action.

The history of the case is somewhat peculiar. In the Court of First Instance it was held that this was a proceeding to recover damages for the breach of an agreement to provide benefits for members which sect. 4 of the Trade Union Act, 1871, prohibits the Courts from entertaining (see the *Builder*, May 22, 1909). In the Court of Appeal this question was not argued, but it was contended that the rules of the society were such that it was not a society whose objects were in restraint of trade, or if some of its objects were so illegal, yet they could be dissevered, and consequently an action would lie at common law quite apart from the Trade Union Acts. The Court of Appeal decided that many of the rules were in restraint of trade and illegal, and they could not be disconnected, and therefore no proceedings could be taken at common law.

In the House of Lords, according to the report in the *Times*, the majority decided the case on the same grounds as the Court of First Instance, and no opinion was expressed by them on the points raised in the Court of Appeal. Lord Robson, however, dealt with the point, and he held that since under one of the rules members of the union subjected themselves to fine and suspension, or even to expulsion, if they did not comply with the decision of the Committee as to strikes, and obey the trade union rules of the district, and bound themselves not to work under a sub-contract or on work "made under unfair conditions," the union was illegal in the sense that its objects were in restraint of trade, and he held that the sickness and superannuation benefits could not be dissevered, as there was no distinction made in respect of these objects, nor any separation in the funds. In the report of this case in the "Weekly Notes" it appears that the majority of the Lords decided the case on this point also, and as it has been the cause of much litigation this would be most satisfactory.

Powers of Corporations; Municipal Trading.

A case, Attorney-General *v.* Mayor, etc., of Sheffield, which occupied one of the Chancery Judges for some days, again raises the question whether a Corporation with powers to supply electrical current has also power to engage in trade and supply fittings. Similar questions were raised some time back in a case before Mr. Justice Neville, Attorney-General *v.* Corporation of Leicester (the *Builder*, July 9, 1910); but in the present instance both parties have intimated their intention of carrying the case to the House of Lords. The action was brought at the relation of a ratepayer to restrain the Corporation from (a) within their area of supply (1) erecting and installing electric-light fittings, wiring houses, and fixing and installing electric bell fittings and apparatus for domestic telephones; also through sub-contractors installing lightning conductors. These things were supplied to persons, whether they took current or not. (2) Keeping a depôt for the display of such articles and fittings. (3) Executing repairs. (4) Cleaning and maintaining arc lamps. (b) Outside the area of supply, from supplying motor fittings and accessories for electric motors and similar things to those enumerated above.

The funds employed were obtained by the statutory powers conferred upon the Corporation for its electrical undertaking.

The Court held that the case was practically covered by the decision of Mr. Justice Neville, and that neither under the Municipal Corporations Act, 1882, nor under the Sheffield Corporation Act, 1905, was the Corporation entitled to carry on the above operations.

In our note to the case before Mr. Justice Neville we pointed out that there was a distinction between the Electric Lighting Act,

1882, and the Gasworks Clauses Act, 1847. The latter confers certain powers to supply fittings, whereas the former Act does not.

Vendor and Purchaser.

In the purchase of freehold or leasehold property it very often happens that the intending purchaser inspects the property and, thinking it will suit him, makes a tentative offer without having professional advice, with a view to ascertaining whether the vendor is likely to come to terms with him before going to further expense. This, indeed, may be said to be the ordinary practice; therefore a recent decision of a Judge of the Chancery Division in the case of Von Hatzfeldt-Wildenburg *v.* Alexander ("Law Reports") is of especial interest to intending purchasers. The subject-matter of the dispute was a leasehold house in Grosvenor-square, and the only contract was contained in three letters which passed between the vendor's and purchaser's agents. In the first letter the agents said that their client was willing to accept 25,000*l.* for the lease. The purchaser's agent then wrote accepting the house at that price, but subject to certain conditions. Two of these conditions were (1) that the purchaser's solicitors should approve "the title to and covenants contained in the lease, the title from the freeholder, and the form of contract"; (2) that the purchaser approved her surveyor's report. The vendor's agents then wrote accepting the purchaser's offer. The purchaser did not approve her surveyor's report, and demanded from the vendor a contribution of 1,000*l.* towards certain wants of repair and deficiencies. The vendor then withdrew the offer to sell, and the purchaser commenced an action claiming specific performance of the contract contained in these letters.

It is to be remembered that it was the intending purchaser who was seeking to enforce the contract, and therefore it is to be presumed she intended to waive the conditions, such as approving surveyor's report. The decision turned upon that condition as to the approval of title, etc., and the Court held that as the purchaser's solicitors were to approve the freehold title, which could not be called for on an open contract for the sale of a lease, this condition could not be treated as a mere expression of the desire of the parties as to the manner in which a transaction already agreed to should be carried out, but it was a real condition showing the contemplation of the execution of a more formal document to complete the contract, and the letters in themselves, therefore, did not constitute a binding contract.

Extraordinary Traffic on Highways.

The case of Colchester Corporation *v.* Gepp and King ("Law Reports") throws some additional light on that complicated branch of the law relating to extraordinary expenses incurred on the highways by reason of damage caused by excessive weight or extraordinary traffic. The plaintiffs in the action were the highway authority, the defendants were the Corporation and a contractor who had entered into a contract with them for the erection of certain buildings in connexion with the lunatic asylum.

By their statement of claim the plaintiffs alleged that extraordinary expenses had been incurred on Mile End Road, Colchester, as shown by the certificate of their Surveyor, having regard to the average expense of repairing the highways in the neighbourhood. The expenses were placed at 1,577*l.* 11s. 9d. From further particulars obtained by an order of the Court, it apeared that the above sum was arrived at by deducting 217*l.* 8s. 4d., from the actual expense of repairing the road, and that this latter sum represented the average for one year of the expenditure of repairing the said road. The defendants applied to the Court for further particulars of the average expense of "similar highways," and the Court of Appeal has now affirmed the Court below in making this order.

To appreciate the importance of the point it is necessary to glance at the Highway Acts and the recent decision of the Court of Appeal in Billericay Rural District Council *v.* Poplar Union.

Sect. 23 of the Highways and Locomotives Act, 1878, as subsequently amended, provides—"Where by a certificate of their Surveyor it appears . . . that, having regard to the average expense of repairing highways in the neighbourhood, extraordinary expenses have been incured by such authority in repairing such highway by reason of the damage caused by excessive weight passing along the same, or extraordinary traffic thereon, such authority may recover . . . such expenses as may be proved to the satisfaction of the Court to have been incurred. . . ." In the Billericay case the Court of Appeal held that the latter part of the section means the expenses defined in the earlier part of the section to be ascertaind by the Surveyor by reference to the average expenditure of repairing similar roads. Therefore the importance of the present decision can be seen, as it carries into effect the principle affirmed in the former case, and lays the burden upon the plaintiff of proving, not the average expenses of repairing the road that has sustained injury, but the damage incurred as ascertained by reference to the average expenditure on other similar roads.

One other observation remains to be made on the Billericay case. In the Court below there were certain expressions contained in the judgment from which it might appear that the learned Judge who tried the case thought that the test which might be applied was to consider whether or not in fact the rates had had to be raised to meet the extraordinary expenditure. In our issue for October 6, 1911, we pointed out that any such consideration taken by itself would be most unsatisfactory.

In the Court of Appeal in that case Lord Justice Buckley expressed the very same opinion as to this being an erroneous view, which we put forward in our "Note" and for the same reasons. The Court only affirmed the decision of the Judge upon the ground that he had rightly held that the plaintiffs had not proved their case before him under the section, as they had not proved the average expenses of repairing similar highways in the neighbourhood.

LAW REPORTS.

OFFICIAL REFEREE'S COURT.

(Before Mr. EDWARD POLLOCK.)

Heavy Claim against Surveyors:

Stronge and Others *v.* Beadel, Wood, & Co.

JUDGMENT was given last week by Mr. Pollock, who began the hearing of this action in February, which occupied in the aggregate twenty-two days, during which many expert witnesses were called and lengthy arguments advanced. The plaintiffs, Sir James Henry Stronge, Mr. William Van Sommer, and Mr. John Marcus Poer O'Shea, trustees of the Thorpe Hall estate at Southchurch, near Southend-on-Sea, claimed damages against Messrs. Beadel, Wood, & Co., Ltd., of Gresham-street, E.C., for negligence the plaintiffs alleged had been shown by the defendants in the preparation of contract plans and drawings, and also in the supervision of a contractor's work in the construction of a sea and retaining wall, and the making of certain roads on the Thorpe Hall estate.

It appeared that the sea wall had bulged forward and given way, and the plaintiffs alleged that this was occasioned by the foundations having been placed at an insufficient depth in the clay subsoil, and the insufficient draining of the wall. The consequence was that the pressure of land water at the rear was too great for the wall to stand. The defendants denied negligence, and said that the work had been properly carried out, and pleaded that every possible precaution had been taken, and, further, that the collapse of the wall was the outcome of an act of God, erosion having been started by a storm in October, 1909, although no erosion had taken place during the last forty years previous to the wall's collapse.

Mr. Hudson, K.C., Mr. Moresby, and Mr. Inman (instructed by Messrs. Van Sommer & Chilcott) appeared for the plaintiffs, and Mr. Sankey, K.C., and Mr. Ernest Todd (instructed by Mr. C. J. Parker) represented the defendants.

In the course of a judgment, delivered without notes, and lasting two and a half hours, the Official Referee stated that the work had been carried out under two contracts, a local contractor, Mr. Anstead, being employed in the two instances: Mr. Beadel had been engaged by the trustees as surveyor for the purposes of certifying that the work was fittingly executed. It was a term of the contract that the contractor was not to be paid the final 20 per cent. due to him until a period of six months had passed from the completion of the work. During that period the contractor was liable to maintain the work in sound condition. Mr. Beadel in each case, however, certified for payment of the whole of the balance at the same time as he certified the completion of the work, with the result that in one case Mr. Anstead received about 1,500*l.*, and in the other he received over 2,000*l.*, to which he would not have been entitled for another six months even if the work had been perfectly satisfactory. Mr. Beadel, said the Referee, had granted certificates throughout without regard to the that had been done, and seemingly granted them just when Mr. Anstead fo would be convenient to receive some Both in this connexion and in the grant the final retention money Mr. Beade shown great negligence, and he had als negligent in the preparation of the sp tions, which had enabled Mr. Anst scamp the work concerning the found He (the Official Referee) felt he could n on the statements as to the facts of Mr. Beadel or Mr. Anstead, unless sup by independent evidence. In the o particulars as to the alleged act of G defendants had relied on the excessive r and no suggestion had been made as existence of a spring which had now be forward. When Sir Alexander Binnie w sulted his report revealed the condition wall to be just what one would have ex it, assuming the plaintiffs' allegation justified. The foundations were not su The material was bad, and there w fact, a permanent spring behind th which had never been adequately dealt The defendants' statements as to erosi been entirely contradicted by the exper

Dealing with the question as to what the wall to fall, the Official Referee sai no evidence as to negligence in contract fications would convict the defenda negligence in this case if, in fact, th had been efficiently constructed, and to have stood, if it had not been carrie by something for which they wer responsible. Erosion had been suggest none had taken place for forty years and seemingly none had taken place the occurrence. It was amply clear t work had been scamped in every deta (Mr. Pollock) was satisfied, on the ev that no erosion took place at all. H also satisfied that there had been a behind, which was never properly deal and that the spring caused the w collapse. He must, therefore, conclud the wall had been negligently built, a there had been no proper supervision, must, therefore, hold defendants to be Dealing with the figures, he said t found that on the claim the plaintiff entitled to 6,080*l.* 11s. 2d., and that defendants' counterclaim (for work do side the contracts), the defendants were to 1,269*l.* 15s. 7d. There would be a l judgment for the plaintiffs for 4,810*l.* 15

Mr. Ernest Todd asked for costs con different items which had been admit the defendants' counterclaim, but the Referee refused this application.

CHANCERY DIVISION.

(Before Mr. Justice SWINFEN EADY

Alleged Custom as to Surveyor's Fe

Reading Industrial Co-operative Society *v.* Palmer.

HIS LORDSHIP heard this case on March 22, Saturday, the 23rd, and Mond 25th. It raised an important question alleged custom in Reading and distri also in London, that the purchaser for building purposes, whose building had to be approved by the vendor's su was liable to pay the fees of such su and also a question of construction conveyance of land to the plaintiffs.

Mr. Frank Russell, K.C., and Mr. Lu appeared for the plaintiffs; and the ants were represented by Mr. Micklem and Mr. Stiebel.

In opening the case Mr. Russell sa the action was commenced by orig summons in the first instance, and r short point of construction under an in of conveyance, by which certain land, in extent, in Grovelands-road, Readi conveyed by Sir Walter Palmer, Bart., plaintiffs. The defendants were Eustace Exall Palmer, Robert Clarina and Richard Blake Harrison, who w trustees of Sir Walter Palmer, who h since the date of the conveyance, wh May 18, 1908. Under the conveyan defendants were to put a building on t to the satisfaction of the vendor's su They had, of course, to pay their o veyor's fees, and the defendants co that they had also to pay the fees Walter Palmer's surveyor. Evidence w by the plaintiffs in support of the su and in the defendants' evidence in answ set up a custom that, notwithstand contract, there was a custom prevale the plaintiffs were bound to pay Sir Palmer's surveyor. Then another s was taken out asking that the case sh put in the list for trial with witn

that the question of custom could be with. The plaintiffs issued a writ claim- ecific relief, and thus the matter came the Court. The conveyance contained nant on the part of the plaintiffs that ould observe and perform the covenants ed in the schedule. After reading the Mr. Russell submitted that it was for fendants to show that anything else nported into the contract between the by reason of a special local custom. ordship agreed, and accordingly Mr. m called evidence, the effect of which n in the judgment appearing below.

Russell called rebutting evidence, and Vm. L. Millar, F.S.I., an architect and or, who had carried on his profession ding for upwards of twenty-five years, e first witness. Mr. Millar said he for several building estates, and was y piecework or time. When buildings erected had to be approved by the ven- surveyor, the costs of such approval sually paid by the vendors. When the ct was silent as to that, he always d the vendors. He never charged the ser for approving plans unless there specific clause to that effect in the ct.

Russell: You have heard the evidence as to a custom that where the contract nt the purchaser should pay the costs? e is no such custom in our part of the y, that is for 10 miles round Reading.

Eggington, surveyor, of Reading, gave r evidence.

r the close of the plaintiffs' evidence Micklem gave up the point of custom ading, but submitted that the certificate vendor's surveyor was for the benefit plaintiffs and not for defendants' bene- ven assuming that Mr. Tuckett was ved by the defendants, he would have to heir orders, but would have an absolute ion to say, "I will not give you my ate of approval until I am paid by He would be in the position of a rbitrator.

r hearing counsel,

Lordship, in giving judgment said: aintiffs claim a declaration that accord- the true construction of the conveyance y 18, 1908, the plaintiffs are not bound y the costs, charges, and expenses id by the defendants in obtaining the val of the surveyor of the defendants specifications and plans pursuant to the plaintiffs proposed to build. When mmons was issued the sole question was er the plaintiffs were under any liability . It appears, however, that the defend- et up that there was a custom or usage must be treated as incorporated under ed. That custom was denied, and as estion could not be tried on a summons, was issued by the plaintiffs so that it be tried with witnesses. As put into by the defendants, the custom alleged follows:—

That by general usage, where a convey- contains covenants by the purchaser to build except in accordance with plans specifications to be approved by a sur- r; the fees of the surveyor, including legal charges properly incurred by him, paid by the person requiring the roval in the absence of any express ision in the contract."

ave, therefore, first to determine the uction of the deed, and secondly whether stom is established so as to throw the n of disproving it on the plaintiffs.

convenance of May 18, 1908, was to the plaintiffs to erect a steam bakery, he frontages to the land were reserved Walter Palmer, and not conveyed to rchasers. In the deed the purchasers nted to perform and observe the stipu- and restrictions in relation to the land d by the vendor. The vendor did not nt in any way with a view of binding wn land as to the way in which s to be developed, or of restrict- n any way the user of his own The covenants are only by the vendor rict the user of the land conveyed to the ffs. In the first schedule to the deed aintiffs undertook to erect to the satis- of and under the inspection of the ven- good and sufficient fence or wall along all undaries of the premises, and secondly erect any building whatsoever on a part of the property, and not to erect uilding otherwise than in accordance ch plans and specifications as might be sly approved of in writing by the sur- of the vendor. After the conveyance laintiffs submitted plans to Messrs. t & Son. the vendor's surveyors, of ildings they proposed to erect. On February 12, 1909, Messrs. Tuckett & Son wrote with reference to the plans:—". . The customary charge for approving plans and seeing that they are properly carried out is 1¼ per cent. of the cost of such buildings, but as you will be spending a considerable sum of money, we propose to charge you an inclusive fee of 100 guineas." It appeared that the cost of the buildings was close upon 3,000*l*. The plaintiffs objected, and saw Sir Walter Palmer, who communicated with Messrs. Tuckett & Son, and in the end the buildings were put up and the plaintiffs did not pay anything by way of fee to the vendor's surveyor. The next thing was with regard to the conveyance. A letter of March 3, 1909, from Messrs. Tuckett & Son stated that they could not approve the plaintiffs' proposal of a six-foot iron fence, and suggested various alternatives. It was quite manifest that they were considering the effect of the fence on the adjoining land of Sir Walter Palmer. In 1911 the plaintiffs wanted to make a slight addition to the building, and in June they submitted plans to Mr. Tuckett for his approval. Those plans were returned by Mr. Tuckett with an intimation that they ought to be sent to Messrs. Waterhouse & Co., the solicitors for Sir Walter Palmer's trustees. Accordingly the plans were sent to Messrs. Waterhouse. A question had arisen as to whether the plaintiffs were liable to pay the surveyor's charges, and it was thought best that the plans should be sent to the surveyor through the solicitors. On July 6 Messrs. Waterhouse wrote:—"We shall be pleased to consider the plans on receiving from you an undertaking to pay our charges and the surveyor's fee in connexion therewith. It does not follow that Messrs. Tuckett have no authority to represent the executors, but it is best for us, acting for the trustees, to instruct them in the usual way."

The plaintiffs would not give any undertaking to pay the costs, and on July 18 Messrs. Waterhouse wrote:—"It is without exception the practice for the applicant to pay the charges of the lessor's solicitors for the licence, and it is the same with regard to making alterations. Our clients are trustees, and we cannot ask them to consent to matters of a technical character without being properly advised, and unless you are prepared to pay these charges we cannot consent to the alterations." That letter was written under a misapprehension, because the consent of the trustees was not required; all that was necessary was that the plans should be approved by the vendor's surveyor. On October 12, six guineas having been paid by the purchasers without prejudice to any question, this summons was issued raising the question of construction. Of the six guineas, one guinea was for legal charges and five guineas for Messrs. Tuckett & Son's costs.

It was urged by the defendants, first, that according to the true construction of the deed the purchaser ought to pay the surveyor's costs of approving, *i.e.*, that it was like a licence under a lease, and the burden ought to fall upon the person who asks for the lease. In my opinion, that is an erroneous way in which to look at the deed, and was not the position of the surveyor under it. In my opinion, the covenant is a covenant in favour of the vendor—a restriction upon the user which the purchaser would otherwise be entitled to put his land. The land was conveyed in fee simple, and in the absence of any restriction, the purchaser would be able to do what he liked with it. It is quite obvious that the fence to be erected under the inspection of the surveyor is a fence which the surveyor for the time being of the vendor has to approve. He is the person to approve. In my opinion, the surveyor under the deed is a person who is instructed and retained by the vendor or his assigns, and to whom authority is conveyed to approve plans on behalf of the vendor. He can only approve plans as the vendor authorises him to do it. In my opinion, the person who employs and engages the surveyor is the person to pay him. It is very common for the contract to expressly provide for the party to pay the surveyor, and in case the charge is thrown upon the purchaser it usually specifies the fee as so much per house. In the present case there is no reference in terms to the person by whom the surveyor is to be paid, and there is nothing, in my opinion, which requires the purchaser to pay the surveyor's charges as a condition precedent to obtaining approval of the plans. Clauses I. and II. of the schedule to the conveyance must be read together. In my opinion, the vendor in both cases—with regard to the fence and with regard to the building—is to pay his own surveyor for the work which he does for him in approving the plans from which the buildings are to be erected. If it were a matter of construction only, I am of opinion that there is nothing to show that this is a charge upon the purchaser.

But it is said that in a case like this evidence of usage and custom can be received by way of addition to the written contract. I am of opinion that no evidence has been adduced at all, that there is any custom whatever for the purchaser to pay any legal charges. It is strictly confined, if there is such a custom, to the fees of the surveyor. In order to establish the custom in regard to the surveyor's fees, the defendants called three eminent London surveyors, Mr. Farebrother Ellis, Mr. Tuckett, and Mr. Savile. The custom as stated by Mr. Tuckett was 1¼ per cent. on the cost of the building. Mr. Ellis said that he had never heard of a custom with regard to the scale of 1¼ per cent., and he did not know of any definite scale. Mr. Tuckett thought until recently that the scale was 1¼ per cent. for approving plans without reference to the amount of work. Quite recently, however, he said he had heard that the scale was fixed by the Royal Institute of British Architects. Mr. Savile said he did not work on scale at all. Mr. Micklem, after that evidence, very wisely said that the evidence as to the amount of the scale breaks down altogether. On the other hand, Mr. Tuckett introduced a new exception to cases where the purchaser was to pay. He said there was an exception in cases where there was a large estate, and the vendor's surveyor was a salaried servant, and that such a surveyor was not entitled to charge a fee. It seems to me to be very difficult to apply that principle. Mr. Savile further said it is usual in most cases expressly to provide by the contract that the purchaser should pay. In my opinion, having regard to the different views of these three eminent gentlemen as to the nature and extent of the alleged custom, I am not satisfied that such a custom exists, even in London and the surrounding district. I certainly think it is quite clear, and quite sufficient for the determination of this case, that there is no such general usage extending into Berkshire.

The plaintiffs called evidence to show that no such custom existed, in Reading and district, at any rate. Mr. Millar and Mr. Eggington not only denied that the practice existed at Reading, but showed that the practice was the other way, and that when contracts were silent as to who should pay the surveyor's fee for approving plans, the practice was that the vendor should pay, so that not only does the alleged custom fail, but the exact opposite is established. In those circumstances, I am of opinion that the plaintiffs, the purchasers, are not under any liability either as a matter of construction of the contract or by any general usage or custom that can be imported into the contract to pay the costs of the vendor's surveyor for approving the plans. In my opinion, the gentleman who approved the plans—the surveyor for the time being of the vendor—is employed by the vendor, and ought to be paid by him. There will be a declaration to that effect in favour of the plaintiffs, one order on the summons and in the action, and the costs will follow the event.

What is "Repair"? Decision under the Building Act.

A DECISION under the Building Act was recently given by Mr. Garrett, at the West London Police-court, when the point as to what constitutes a "repair" came up for discussion. Messrs. Lichwitz & Co., roofing manufacturers, of Market-street, Paddington, were summoned at the instance of Mr. Tolley, District Surveyor for North Kensington, for failing to give a building notice in respect of a building at 41B, Portland-road, Notting Hill. Mr. H. Pierron (Messrs. Pierron & Ellis) supported the summons, and Mr. Graham Mould (instructed by Messrs. Corbould, Ellis, & Mitchell) represented the defence.

Mr. Pierron stated that the defendant firm carried out a contract for re-covering the whole of the roof of a workshop without giving notice to the District Surveyor. The matter came accidentally to the knowledge of the District Surveyor, who wrote to the defendants and received a reply that they "had merely repaired the zinc roof covering." As a matter of fact, they had covered the whole of the roof with new zinc, and, having regard to the fact that so much of the new patent roofing, a material which was not incombustible, was used, it was very necessary that the District Surveyor should be given an opportunity of testing it in the interest of public safety. He (Mr. Pierron) understood that the defence relied on the exemptions in sect. 209 of the Building Act, which provided that notice was not necessary where there was being carried out "necessary

repair" to a building "not affecting the construction of any external or party wall." He (Mr. Pierron) argued that in this case it was not a matter of repairing the roof, but of making an entirely new one, and he reminded his worship that last May his worship, in a similar case, decided in favour of the District Surveyor.

Evidence was given by Mr. Tolley, the District Surveyor, who stated that the whole of the roof had been recovered with zincs with the exception of the clips.

In answer to Counsel for the defence, the witness said the brickwork of the walls and the woodwork under the roof had not been touched. The work did not affect the construction of any external wall, or was it an addition to or an alteration of the building.

For the defence, evidence was given by Mr. Martin Lichwitz, a member of the firm, who stated that there was no other way of repairing the roof than by putting new zinc in. They did not touch the brickwork or the woodwork, or make any structural alteration at all.

In answer to Mr. Mould, the witness said his firm had been twenty years engaged in roofing work, and they had never given notice to a district surveyor.

In answer to Mr. Pierron, the witness admitted that, with the exception of the clips, the whole of the roof was completely covered with new zinc. His firm did not use the new patent roofing; they only used zinc and iron.

Mr. Mould, addressing the magistrate, contended that his clients came within the exemption in sect. 209, inasmuch as this work was a necessary repair, which did not affect the construction of the building. The point was—was this a repair? and, considering that the only way to repair a zinc roof was by putting in new zinc, he contended that this was a repairing of the roof. If the contention of the District Surveyor was true, his (Counsel's) client might have taken off half the roof at a time and thus escaped the necessity of giving notice. If the defendant had left only one old roll on the roof he would have come within the exemption. Counsel argued further that this work was also a repairing of part of the building, and he cited the case of Badger and Denn, J. P., Vol. 22, page 129, in which the judges in a Divisional Court held that the reconstruction of a doorway was a necessary repair.

The Magistrate observed that he did not suppose there was any Act of Parliament which was so complicated and as difficult to decide upon as the Building Act, and the real truth was that each case had to be decided on its own merits. Reviewing the contentions advanced on either side, his worship observed that he considered that the argument for the defence—viz., that you could not repair a zinc roof except by renewing it—was a sound one, because in so many cases renewal was a good deal more than repairing. The matter was a difficult one to decide, but what occurred to him was that the main structure of the roof remained, and he therefore held that this work amounted to nothing more than the repairing of an old roof. He therefore dismissed the summons.

LONDON COUNCILS.

Acton.—At the last meeting of the Council a recommendation was passed to the effect that notices be published of the intention of the Council to apply to the Local Government Board to prepare a town-planning scheme for the area on the north side of the district. The Board are also to be asked to grant leave to the Council to dispense with the service of notices, draft orders, and orders to occupiers whose tenancy is less than a quarterly tenant.

Barking.—Tenders are to be invited for the erection of an administrative block at the hospital, also for the erection of artisans' dwellings in accordance with three schemes prepared by the Council's Architect. Plans have been passed for Mr. J. Graffy for the erection of fifteen houses in Ripple-road.

Battersea.—The Council have decided to execute paving works in connexion with the widening of Falcon-road on behalf of the London County Council, at a cost of 969*l.* A portion of Clapham-common, west side, is to be made up, the carriageway with tar, red slag macadam, and the footways with 2-in. artificial stone and tar-paving, at an estimated cost of 1,427*l.*; as is also a portion of Cringle-street, with the same paving except the footpaths, which are to be of 2½-in. artificial stone, at an estimated cost of 848*l.* Repairs are also to be carried out in various roads throughout the borough at an estimated cost of 323*l.* Electricity mains are to be extended at an estimated cost of 403*l.* Plans submitted by Price's Patent Candle Company, Ltd., have been passed for the erection of offices at their Belmont Works, York-road.

Bermondsey.—Plans have been passed for rebuilding premises to new frontage line in Rotherhithe-street for Mr. R. Hyde. The architect is Mr. H. D. Scarles Wood, of 157, Wool Exchange, E.C.

East Ham.—Sanctions have been received from the Local Government Board to the borrowing of 8,943*l.* and 1,772*l.* for the execution of sewage works in High-street North, East-avenue, Southend road, and Sibley-grove, and for concrete sewers in connexion therewith, respectively. Plans have been passed as follows:—Mr. G. Mitchell, seventy-eight houses, Monmouth-road; Mr. A. W. Pierce, twenty-four houses, Brampton-road; Messrs. T. Young & Sons, eight houses and two shops and houses, Barking-road; Mr. W. Smith, eight houses, Mafeking-avenue.

Finchley.—The following plans have been passed:—Messrs. Lavington Brothers, six houses, Fenstanton-avenue; Mr. R. Ellwood, five houses, Holmwood-gardens; Mr. G. Bennett, six houses, Lansdowne-road; Mr. J. C. Williamson, six houses, Clarence and Lyndhurst Gardens.

Hackney.—Plans prepared by Mr. Cooper, architect, of the branch library proposed to be erected in Homerton have been approved by the Council, and are to be forwarded to Mr. Carnegie. On his approval tenders are to be invited. It is estimated that the building will cost 5,280*l.* The tender of Mr. A. T. Catley, 23, Lloyd-square, W.C., has been accepted, at 559*l.* 6s. 3d., for making up part of Wilton-road and Pigwell-path. The edge kerbs and flat channels are to be of Guernsey granite. No objection is to be raised to the proposal of Messrs. H. Bradford & Sons to erect eight houses in Wellington-road.

Ilford.—The following plans have been passed:—Messrs. W. Fletcher, Ltd., extensions to factory, Roden street; Mr. P. E. Brand, three shops and houses, Green-lane; Mr. W. J. Hobbs, thirty-seven houses, Cranbrook road: Messrs. Higgins & Thomerson for Mr. W. H. Knox, fifteen houses, South Park-drive.

Kensington.—The Borough Engineer has been instructed to prepare plans and estimates for making-up Kingsley-mews, Stamford-street, Balliol-road, and portion of Kellfield-gardens, as new streets. It has been decided to accept the specifications and estimates of the Taroads Syndicate, Ltd., for paving the carriageway of a portion of Addison-road with 3-in consolidated bituminous macadam, at a cost of 4s. per yard super. with free maintenance for a period of four years. The area to be dealt with amounts to 6,655 yds. A portion of the kerb, channel, and footway paving in Pembridge-square, and a portion of the kerb and footway paving in Cornwall-road are to be reinstated at an estimated cost of 127*l.*

Lewisham.—A portion of Brownhill-road is to be coated with tar macadam at an estimated cost of 1,097*l.* The following plans have been passed:—Mr. F. Howkins, eight houses, Cliff View-road; Messrs. Norfolk & Prior, five shops and houses, Perry Vale; Mr. J. Nicholls, eight houses, Manwood-road.

Marylebone.—It has been decided to provide a tower in connexion with the Council's new Town Hall.

Middlesex.—The Committee appointed by the County Council to consider and report what plans, if any, should be taken to provide further accommodation for lunatics in the county have come to the conclusion that further accommodation should be provided by means of a new asylum, and that steps should be taken to find a suitable site. The tenders of the Acme Flooring and Paving Company (1904), Ltd., at 4,305*l.* 13s. 9d. and 4,622*l.* 3s. 4d., have been accepted for renewing the wood-paving and substituting wood-paving for macadam, respectively, on the haunches of portions of High-road, Wood Green. The tender of Messrs. A. Fairhead & Son, Enfield, has also been accepted, at 14,975*l.*, for the erection of a county school and technical institute at Ealing. For the erection of additional cottages at Napsbury the tender of Mr. A. Pitkin, St. Albans, has been accepted at 2,835*l.* Certain enlargements are to be carried out at the Napsbury Asylum at an estimated cost of 355*l.*

Southwark.—The following streets are to be repaved with wood during the ensuing year at the estimated costs mentioned:—St. George's-road, 5,120*l.*; portion of Old Kent-road, 3,254*l.*; portion of Trinity-street, 1,000*l.*; portion of Southwark-street, 1,500*l.*; portion of East-street, 1,282*l.* The following are to be paved with asphalt:—Villa-street, 1,885*l.*; Tower-street, 1,641*l.*; Austral-street, 942*l.*; portion of Broadwall, 605*l.*; portion of South-street, 1,131*l.*; portion of Swan-street, 1,230*l.* The present granite setts in Collingwood-street are to be covered with granited asp
an estimated cost of 130*l.*, in accordan
an offer received from the Val de T
Asphalte Company, Ltd. Application i
made to the Road Board for a gr
12,000*l.* for asphalting Hillingdon-stre
repaving with wood Blackfriars-road.

Walthamstow.—The footpath in H
Hill-road is to be kerbed and paved
swimming-bath at the Public Baths is
shortened by 1 ft. 10 in. by filling i
concrete and facing same with tiles
following plans have been passed:—
Starkey, twelve houses, Blackhorse-lan
H. H. Iles, seventeen houses, Aveling
road; Mr. T. Baker, four houses, Wi
road; Mr. A. Pimm, four houses, Woo
road; Messrs. Allen Brothers, four
Malvern-avenue. Plans have been lodg
Mr. J. E. Ashby for the erection of a
in Blackhorse-lane.

Westminster.—The tender of Messrs.
Mowlem & Co., Ltd., has been accep
806*l.* for constructing a new sewer und
street, from Glasshouse-street to Regent
and maintaining same for a period
year. No objection has been raised to
posal of the Wolseley Tool and Moto
Company, Ltd., to carry out extensions
premises at Gatliff-road, Pimlico.

Willesden.—Plans submitted by the En
have been approved for making-up Do
ton-road, Harlesden. Tenders are to be
for carrying out wood and asphalt pav
four roads. The Engineer has been ins
to prepare plans and estimates for th
struction of a women's underground
venience in Manor Park-road. The fol
plans have been passed:—Mr. Edward
six houses, Barr's-road, Stonebridge Par
A. Welford, for Mr. H. R. Hunter,
houses, Doyle-gardens, Harlesden;
W. L. T. Brown, for Mr. A. Phillips, five
Chatsworth-road, Willesden Green;
C. W. B. Simmonds, four houses, St. Ga
road, Cricklewood; Messrs. Scott & Fras
the British Thomson-Houston Company,
factory and works office, Neasden-lane
H. G. Alaway, for Mr. J. E. Neav
houses, Yawfield-road, Willesden. Plan
been lodged by Mr. W. L. T. Brown f
A. Phillips, and by Messrs. Walter
Sons for Mr. Pearce, for the erection
houses, Chatsworth-road, Brondesbury, a
shops, Church-road, Willesden, respecti

Wood Green.—Plans have been pass
Messrs. A. & S. James for Mr. A. R.
for six houses in Caxton-road.

Woolwich.—The following plans hav
passed:—Mr. W. Harris, Steam
Works, North Woolwich, six houses,
land-street, North Woolwich; Mr.
Bassett, 121, Earlshall-road, Eltham,
houses, Dunvegan-gardens, Dunvega
Eltham; also four houses, Glenlyo
Eltham.

PATENTS.

APPLICATIONS PUBLISHED.*

5,260 of 1911.—Charles Louis Cuthb
Harry John Grafham: Construction of
for forming holes in a sheet of lead
alloy, or other comparatively soft mate

5,673 of 1911.—Gustav Scholz: Plasti
positions for the manufacture of floors.

6,501 of 1911.—John Murray Leig
Method of recording the volume or se
area of concrete in piles formed in the g

7,329 of 1911.—Louis Eck and Hans R
Process of graining wood.

9,753 of 1911.—Reginald Haddan (Fra
Roff): Dams.

11,448 of 1911.—Maria Elizabeth
Hanging of window-sashes.

13,074 of 1911.—Leonard Freeborn: C
fixing together the steel members in rein
concrete work.

13,275 of 1911.—Moses James Adams:
basins.

18,135 of 1911.—Curt Zander: Step-lad

18,875 of 1911.—Friedrich Haizmann:
for securing door-latch handles.

22,129 of 1911.—Louis Wolf: Floor po
and like machines.

24,004 of 1911.—Heinrich Meister: Ch
or ventilating shaft tops.

24,223 of 1911.—John William Cross: A
sash pulleys.

26,621 of 1911.—Jens Rude: Proces
apparatus for increasing the draug
chimneys.

* All these applications are in the st
which opposition to the grant of Patent
them can be made.

List of Competitions, Contracts, etc.

For some Contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) are advertised in this number:** Competitions, — ; Contracts, iv. vi. viii. x.; Public Appointments, xix.; Auction Sale, xxiv.

Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Competitions.

RIL 13. — **Ormskirk.** — CLUB-HOUSE.—Competitive plans are invited for proposed club-e for Ormskirk Golf Club. See advertise-t in issue of March 1 for further particulars.

RIL 20.—**Birmingham.**—BLUE COAT SCHOOL. mited to local architects. Assessors, Mr. H. Hunt, F.R.I.B.A., and Mr. C. E. Bate-, F.R.I.B.A. Particulars from the Secre-, the Blue Coat School, Birmingham.

AY 1.—**Rhos Ruabon.**—PAIR OF WORKMEN'S TAGES.—Premiums of 10*l.* and 5*l.* Assessor, Raymond Unwin, F.R.I.B.A. Particulars Mr. G. Meirion Griffiths, Rhos Ruabon.

AY 1. — **Wombwell.**—SWIMMING BATHS.— Wombwell U.D.C. invite designs in com-ion for public swimming baths, to be ed in Hough-lane, Wombwell, Yorkshire. e prizes of the value of 40*l.*, 30*l.*, and 20*l.* ectively are offered for the designs placed second and third respectively by the ssor. See advertisement in issue of uary 16 for further particulars.

Y 15. **Portland.** COUNCIL OFFICES.—The land U.D.C invite competitive designs and s for Council Offices. See advertisement in of March 8 for further particulars.

NE 1.—**Dunfermline.**—INSTITUTE AT NETHER-.—Cost not to exceed 7,000*l.* Premiums of 150*l.*, and 100*l.* Assessor, Mr. E. A. Jamieson. iculars from the Secretary, Carnegie Trust, ot-street, Dunfermline.

NE 28. — **Hale, Cheshire.**—TOWN PLANNING ME.—Premiums 50*l.* and 25*l.* Particulars the Council Offices, Hale.

NE 30.—**Padiham.**—TOWN HALL, BATHS, ETC. emiums 40*l.* and 20*l.* Particulars from Mr. Bregson, A.M.Inst.C.E., Surveyor's Office, ham.

LY 1. — **Dusseldorf.** — A plan for the nsion of the City of Dusseldorf. Premiums ,000*l.* to 375*l.* Conditions on application to Chief Burgomaster, Dusseldorf. A transla-appeared on page 255, September 29.

GUST 30. — SAXON SNELL PRIZE. — Fifty eas; with medal, is offered for essay on a ital subject. Particulars from the Sanitary tute, 90, Buckingham Palace-road, S.W.

DATE. — **Cardiff.** — FOOTBALL STANDS.—Pre-ns 30*l.*, 20*l.*, and 10*l.* Particulars from C. S. Arthur, 53, Queen-street, Cardiff.

DATE.—**Jordanhill, Glasgow.**—PROPOSED NING COLLEGE.—Limited to six firms, named ompetition NEWS, December 1, page 635.

DATE. - **Sheffield.** — CRIPPLES' HOME. — ted to local architects. Mr. E. M. Gibbs, I.B.A., and Mr. F. E. P. Edwards, I.B.A., assessors.

DATE. — **Warrington.** — SCHOOL. — The rington Education Committee invite com-tive plans for the erection of a public entary school. See advertisement in issue ebruary 16 for further particulars.

Contracts.

BUILDING.

e date given at the commencement of each graph is the latest date when the tender, or names of those willing to submit tenders, be sent in.

RIL 4.—**Aberdeen.**—RECONSTRUCTION.—For reconstruction of the east wing of Robert on's Technical College. Specifications and tities from Mr. J. A. O. Allan, architect, Union-terrace, Aberdeen

RIL 4.—**Bognor.**—SHOPS. Erection of three s at Camden-gardens, London-road. Plans specification with Mr. Henry R. G. S. Small-F.S.I., A.R.I.B.A., 8, Queen-street, Cheap-London, E.C.

RIL 6. - **Meldrum.** REPAIRS. Alterations repairs on stable and barn wings at Coutens n (Birnie), Meldrum. Sm. Plans, specifications, general conditions of contract with Messrs. deon & Garden, 12, Dee-street, Aberdeen.

RIL 8.—**Duffryn Cellwen.**—HOUSES.—For ion of thirty-nine or more houses, for the marchog Building Club. Plans and specifi-n with Mr. J. Cook Rees, M.S.A., Parade-mbers, Neath.

RIL 8.—**Onllwyn.**—INN.—For rebuilding the -way Inn, Onllwyn. Plans and specification and quantities from Mr. J. Cook Rees, A., Parade-chambers, Neath.

APRIL 8.—**Rustington.**—GROYNE.—Erection of a 300-ft. timber groyne on the foreshore west of the Sea Mill. Specification with the Surveyor, Mr. C. W. Leney, The Croft, Angmering.

APRIL 10.—**Dewsbury.** -HOUSE —Erection of a dwelling-house in Northfields-road West, Dewsbury. Plans seen, and quantities from Messrs. Kirk, Sons, & Kidgway, F.R.I.B.A., architects, surveyors, and valuers, Market-place, Dewsbury.

APRIL 10.—**Dumfries.**—BUILDINGS.—For erection of new county buildings. Plans and specifications at the office of Mr. J. M. Dick-Peddie, architect, 8, Albyn-place, Edinburgh. Quantities, etc., on deposit of 3*l.*

APRIL 10.—**South Farnborough.**—ADDITIONS. —For additions and alterations to the South Farnborough Working Men's Club, York-road. Plan and specifications at the Club.

* APRIL 10. **Walsall.**—INSTITUTE The Staffordshire Education Committee invite tenders for a county mining institute at Chase Town, near Walsall. See advertisement in this issue for further particulars.

APRIL 11.—**Endmoor.** HOUSE, ETC.—Erection of a house and shop. Plans seen, and quantities, specification, and information from Mr. Malcolm G. Shaw, Lic.R.I.B.A., architect, 45, Highgate, Kendal.

APRIL 12.—**Bradfield.**—REPAIRS, ETC.—For alterations and repairs to the Wharncliffe Side Council School. Plans seen, and specifications, with quantities, from the Education Architect, County Hall, Wakefield. Deposit of 1*l.*

APRIL 12. **Cymmer.**—PREMISES.—Erection of new business premises, committee-rooms, and assembly-hall, for the Cymmer Industrial Co-operative Society, Ltd. Quantities, on deposit of 2*l.* 2s., from Messrs. T. E. Richards & Kaye, architects and surveyors, Pontypridd and Cardiff.

APRIL 13. **Coventry.**—BATHS.—For the conversion of Primrose Hill House into public slipper baths. Drawings, conditions of contract, specification, forms of tender, and quantities, on deposit of 1*l.* 1s., from Mr. J. E. Swindlehurst, City Engineer and Surveyor, St. Mary's Hall.

APRIL 13.—**Denbigh.**—HALL, ETC.—Construction of a drill-hall, caretaker's house, miniature rifle-range, and buildings at Brymbo, Denbighshire, for the 4th Battalion Royal Welsh Fusiliers. Drawings, specifications, and form of contract with the architect, Mr. C. D. Rutter, M.S.A., Parr's Bank-chambers, Wrexham. Quantities and form of tender on deposit of 1*l.* 1s.

APRIL 15.—**Abbeyleix.**—HOUSE.—Erection of a dwelling-house at Abbeyleix, for the Viscount de Vesci's Estate. Plans and specification by Mr. A. O'M. Lovell, M.R.I.A., architect, Waterford.

APRIL 15.—**Anerley.**—ALTERATIONS.—For structural alterations to the North Surrey District School, Anerley, S.E. Specification, with form of tender, on deposit of 1*l.* Mr. H. J. Chaldecott, Clerk to the Managers.

APRIL 15.—**Bedale.** VILLA.—Erection of a villa resident at Wycar, Bedale. Plans and specifications with Mr. Thomas Stokes, architect, Thirsk.

APRIL 15. —**Breaston.**—SCHOOL.—For the erection of a new Council school at Breaston, Derbyshire. Drawings, specification, etc., with Mr. George H. Widdows, A.R.I.B.A., County Education Office, St. Mary's Gate, Derby. Quantities on deposit of 1*l.* 1s.

APRIL 15.—**Bugsworth.**—SCHOOL.—For the erection of a new Council school at Bugsworth, Derbyshire. Drawings, specification, etc., with Mr. George H. Widdows, A.R.I.B.A., County Education Office, St. Mary's Gate, Derby. Quantities on deposit of 1*l.* 1s.

APRIL 15.—**Inverkeithing.** TANK.—Construction of clear-water tank of ferro-concrete work, with enclosure walls, footpaths, etc. General conditions, specification, and form of tender from Messrs. Kyle Dennison, & Laing, civil engineers, 174, West George-street, Glasgow, or 34, Castle-street, Edinburgh. Deposit of 1*l.* 1s.

APRIL 15.—**North Darley.** -SCHOOL.—For the erection of a new Council school at North Darley, Derbyshire. Drawings, specification, etc., with Mr. George H. Widdows, A.R.I.B.A., County Education Office, St. Mary's Gate, Derby. Quantities on deposit of 1*l.* 1s.

APRIL 15.—**Romiley.**—SCHOOL.—For erection of a new elementary school in Sandy-lane, Romiley, near Stockport. Plans and specifications seen, and quantities from the Architect, Mr. Joseph Holt, A.R.I.B.A., 9, Albert-square, Manchester, on deposit of 1*l.*

APRIL 15 **Smalley Common.**—SCHOOL.—For the erection of new Council school at Smalley Common, Derbyshire. Drawings, specification, etc., with Mr. George H. Widdows, A.R.I.B.A., County Education Office, St. Mary's Gate, Derby. Quantities on deposit of 1*l.* 1s.

* APRIL 15. **Southend-on-Sea.**—SCHOOL.—The Essex Education Committee (Rochford Hundred Higher Education Sub-Committee) invite tenders for erection of a new secondary school at Southend-on-Sea. See advertisement in this issue for further particulars

APRIL 16.—**Belfast.**—ALTERATIONS, ETC.—For making alterations, etc., at premises, North-street. Plans and specifications seen with Messrs. Young & Mackenzie, Scottish Provident buildings, Belfast, and quantities from Mr. S. C. Hunter, Scottish Provident-buildings, on deposit of 2*l.* 2s.

APRIL 16. **Doddington.** COTTAGES.—Erection of two single cottages on Bank or Granary Farm. Plans and specifications with the Land Steward (Mr. S. Croot), Brampton, Hunts

APRIL 16.—**London.** EXTENSIONS, ETC. Erection of a porter's lodge, dispensary, and extension of nurses' home at the Infirmary, Brick street, Kennington-road, S.E. Plans and specification by Mr. F. A. Powell, F.R.I.B.A., F.S.I., 344, Kennington-road, S.E. Quantities on deposit of 2*l.* 5s.

APRIL 17. **Halifax.**—BUILDING.—Erection of a new building to provide accommodation for the fourth class at the Halifax Workhouse. Drawings and specifications, and quantities from Messrs. Clement Williams & Sons, architects, Post Office-buildings, Commercial-street, Halifax.

APRIL 18.—**Croydon.**—SCHOOL.—Erection of a handicraft centre at Boston-road Council School. Drawings by Mr. A. Sunderland, Education Office, Croydon. Quantities and forms of tender on deposit of 1*l.* 1s.

APRIL 18.—**King's Lynn.**—MORTUARY.—For the erection of a mortuary at the rear of the Town Hall. Specification and plans with Mr. Alfred J. Smith, Borough Surveyor, Town Hall, King's Lynn.

APRIL 18. **Seacombe.**—PURIFIER.—For construction of purifier-house at the Gasworks, Dock-road, Seacombe, Cheshire. Plans, specification, and quantities from the Engineer and Manager, Mr. J. H. Crowther, Dock-road, Seacombe. Deposit of 2*l.* 2s.

APRIL 20.—**Bexley.** -LIBRARY.—For erection of proposed branch library. Plans with the architect, Mr. E. Brantwood Maufe, A.R.I.B.A., 23, Old-buildings, Lincoln's Inn, W.C. Forms of tender and specifications on deposit of 1*l.* 1s.

APRIL 24. **Ashton-under-Lyne.**—EXTENSIONS. —For alterations and extensions to the electricity works. Plans seen, and quantities from the architects, Messrs. Lindley & Gibson, Market-avenue, Ashton-under-Lyne, on deposit of 2*l.*

APRIL 24.—**Limbury.**—SCHOOL. For erection of a new Council school. Drawings, specifications, and form of contract with Messrs Gotch & Saunders, architects, Kettering. Deposit of 1*l.* 1s.

APRIL 27.—**Pontypool.**—HOUSES.—Erection of 100 dwelling-houses. Plans, specifications, and conditions with the Council's Architect, Mr. C. F. Wilson, Club-chambers, Pontypool.

* MAY 15.—**Teddington.**—SEWAGE DISPOSAL AND REFUSE DESTRUCTOR.—The Teddington U.D.C. invite tenders for construction of buildings, chimney shaft, roadway, sewers, tanks, filters, and other works in connexion with the sewage disposal works at Broom-road. See advertisement in this issue for further particulars.

NO DATE.—**Birkenhead.**—HALL, ETC.—Erection of hall and school premises connected with St. Paul's Presbyterian Church of England. Quantities, on deposit of 1*l.* 1s., from the architects, Messrs. Green, Knowles, & Russell, 19, South John-street, Liverpool.

NO DATE.—**Broxton.**—CHAPEL.—Erection of a new Primitive Methodist chapel at Brown Knowl. Mr. J. Harry Pickard, architect, Whitchurch.

NO DATE.—**Cogan.**—ADDITIONS, ETC.—For alterations and additions to Nos. 4 and 5, Pill-street, Cogan. Plans and specifications with Mr. Ivor J. Purnell, 102, St. Mary-street, Cardiff

NO DATE. -**Diggle.**—PREMISES. For erection of new premises for the Liberal Club, Diggle. Messrs. E. W. Leeson and J. Burgess, joint architects, 49, Princess-street, Manchester.

NO DATE.—**Dunfermline.** OFFICES.—Erection of new offices in Abbot-street. Plans seen, and schedules from Messrs. Muirhead & Rutherford, architects, Dunfermline. Deposit of 1*l.*

* NO DATE.—**Hitchin.**—BACON FACTORY.—Tenders are invited for the erection of a proposed bacon factory of brick and steel construction. See advertisement in this issue for further particulars.

NO DATE.—**Hull.**—WORKS. -Erection of proposed new works in Dock-street, for Messrs. A. Brown & Sons, Ltd. Specifications and conditions of contract with Messrs. Harbron & Robson, architects, 50, Spring bank, Hull. Quantities on deposit of 1*l.* 1s.

BUILDING—*continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

No DATE.—**Northampton.**—ADDITIONS, ETC.—For alterations and additions to Berry Wood Asylum. Drawings with Messrs. Gotch & Saunders, architects, Kettering.

ENGINEERING, IRON, AND STEEL.

APRIL 6.—**Keith.**—BRIDGE.—For widening, strengthening, and improving the bridge over the Isla, between Keith and Fife-Keith. Plans and specification with Mr. C. C. Doig, Engineer, Elgin.

APRIL 17.—**Mayfield.** RESERVOIR.—For erection and construction of a pumping-station and reservoir. Plans and site of works seen, and quantities, on deposit of 2*l.* 2*s.*, from Mr. Luther Adams, Surveyor to the Council, Stanton, near Ashbourne.

FURNITURE, PAINTING, MATERIALS, etc.

APRIL 8.—**Dearnley.**—DECORATING.—For re-decorating the medical officer's house at the Workhouse. Specifications at the Workhouse, Mr. R. A. Leach, Union Clerk, Union Offices, Townhead.

APRIL 11. **London.** PAINTING.—For external and internal cleansing, painting, and other works at relief station and dispensary, 46 and 47, Clarendon-square, N.W. Specification by their Architect, Mr. A. E. Pridmore, 2, Broad-street-buildings, E.C. Deposit of 5*l.*

APRIL 12.—**Lintrathen.**—GATE. For erecting a wrought-iron gate. Plans and specification seen, and schedules from Mr. George Baxter, Engineer and Manager, Water Engineer's Office, 93, Commercial-street, Dundee.

APRIL 13.—**Burton-on-Trent.**—PAINTING.—For painting, etc., at schools. Specifications and forms of tender from Mr. Henry Bence, Secretary and Director of Education, Education Offices, Burton-on-Trent.

APRIL 13.—**Cardiff.** FLOORS.—For provision of tile floors at the Hospital Headquarters Homes, Ely. Specification, with form of tender, from Mr. Arthur J. Harris, Clerk, Union Offices, Queen's-chambers, Cardiff.

APRIL 13.—**Cardiff.**—RAILINGS, ETC.—For providing and fixing wrought-iron boundary railings, etc., on land near Headquarters Homes, Ely. Specification, with form of tender, from Mr. Arthur J. Harris Clerk, Union Offices, Queen's-chambers, Cardiff.

✱ APRIL 18.—**London, N.**—PAINTING.—The St. Mary, Islington, Guardians invite tenders for painting, whitewashing, etc., at Infirmary, High-gate-hill, N. See advertisement in this issue for further particulars.

APRIL 18. **Lonaon.**—PAINTING.—For painting works, etc., at the Tooting Home, Church-lane, Tooting. Form of specification and tender, on deposit of 1*l.*, to Mr. F. W. Piper, Clerk, Union Offices, St. John's-hill, Wandsworth, S.W.

APRIL 18.—**Plymouth.**—PAINTING.—For painting at Victoria Park. Specifications seen, and forms of tender from Mr. James Paton, Borough Engineer and Surveyor.

APRIL 19.—**Blackpool.**—REPAIRS, ETC.—For decorations and repairs to the central and branch police-stations. Forms of specification from Mr. T. A. Connely, on site of proposed Palatine-road, Council school.

✱ APRIL 20.—**London, N.** PAINTING.—The Metropolitan Asylums Board invite tenders for cleaning and painting and repairs at Northern Convalescent Fever Hospital, Winchmore Hill, N. See advertisement in this issue for further particulars.

✱ APRIL 20. **London, S.W.** PAINTING.—The Metropolitan Asylums Board invite tenders for cleaning and painting and repairs at South-Western Fever Hospital, Stockwell, S.W. See advertisement in this issue for further particulars.

APRIL 22.—**Chester.**—TIMBER.—For supply of timber for handicraft instruction in City Public Elementary and other schools. Forms of tender from the Director of Education, Town Hall, Chester.

No DATE.—**Stafford.**—PAINTING.—For repainting the exterior of the Stafford Asylum buildings. Mr. W. James Nevett, the County Architect, County-buildings Stafford.

No DATE.—**Warrington.**—PAINTING.—For painting outside wood and iron work of part of the Asylum buildings. Tender forms from Mr. Henry Ellis, Clerk and Steward.

ROADS, SANITARY AND WATER WORKS.

APRIL 9.—**Crewe.**—ROADS.—For the making of the back passages of Edward-street. Plans and specifications seen, and information from Mr. G. Eaton-Shore, Borough Surveyor, Earle-street, Crewe. Deposit of 1*l.*

APRIL 9.—**Southampton.**—ROAD.—For private street works in Belgrave-road. Plan, specification, quantities, and form of tender at the Borough Engineer's Office. Deposit of 1*l.* 1*s.*

APRIL 10.—**Wendover.**—SEWAGE.—For the construction of detritus tanks, percolating f humus tanks, sand filters, storm-water t and appurtenant works at the sewage Drawings and specification seen, and quan and form of tender, on deposit of 3*l.* 3*s.*, Mr. B. L. Reynolds, Clerk to the Co 12, Easton-street, High Wycombe.

APRIL 11.—**Llantrisant.**—WATERWORKS. construction of a new filter bed and sand at Llanilid reservoir, with requisite valve other works. Drawings and specification and quantities and form of tender, on depo 1*l.*, from Mr. Thomas Saunders, Sur Council Offices, School-street, Pontyclun, G

APRIL 12.—**Barnstaple.**—DRAINAGE. drainage work at Albert-place. Plan and s cation with Mr. E. Y. Saunders, P.A Borough Surveyor, The Strand, Barnstaple

APRIL 15.—**Watford.**—SEWERAGE.—Constr of stoneware pipe sewer and storm-water with necessary manholes, etc. Drawing, fication, and form of tender with Mr. W Newman, A.M.Inst.C.E., Engineer. C Offices, High-street, Watford.

APRIL 16.—**Belfast.**—SEWER.—Constructi brick sewer in May-street, Verner-street, Lagan-street, and glazed earthenware pipe in East-street and Lagan-street. Drawing specification seen, and forms of tenders fro City Surveyor, on deposit of 1*l.* 1*s.*

APRIL 17. **Gloucester.** STONE.—For sup stone. Forms of tender from the Distric veyor, Mr. F. E. Weaver, Berkeley E Berkeley-street, Gloucester.

APRIL 22.—**Wigan.**—TRAMWAY.—Constru of about 700 lin. yds. of single-track tra Drawings seen, and specification and quan from the Borough Engineer, King-street Wigan.

APRIL 23.—**Farmborough.** PATH.—For struction of a footpath in the parishes of Littleton and Farmborough. Specification the Council's Surveyor, Mr. T. Orchard, Grange, Hallstrow, near Bristol. Deposit

APRIL 24.—**Brighton.**—FLINTS.—For supp hand-picked flints for highways. Specific and form of tender from the Borough Sur Town Hall, Brighton.

APRIL 26.—**Brighton.**—SEWERS.—For the struction of sewers. Specifications and for tenders at the office of the Borough Surve the Town Hall, Brighton. Deposit of 1*l.* 1

APRIL 29.—**Hastings.**—SEWER.—For layi 9-in. pipe sewer, and other work at Winch road, Ore, Hastings. Drawing and specific seen, and form of tender from the Bo Engineer, Mr. P. H. Palmer, M.Inst.C.E., Hall, Hastings.

Public Appointments.

Nature of Appointment.	By whom Advertised.	Salary.	Applics to be
*CLERK OF WORKS	Three C'ties Asy., nr. Hitchin	3*l.* per week	April
*VALUER AND SURVEYOR (IRELAND)	Civil Service Commission	Not stated	April
*SEWERS FOREMAN	Lambeth Borough Council	3*l.* per week	April
*DISTRICT ROAD FOREMAN	Lambeth Borough Council	2*l.* 10*s.* per week	April

Auction Sale.

Nature and Place of Sale.	By whom Offered.	Dat of Sa
*FREEHOLD FACTORY PROPERTY, GREENFORD—At the Mart	S. Walker & Son	April

TO CORRESPONDENTS.

NOTE.—All communications with respect to literary and artistic matters should be addressed to "THE EDITOR" (and not to any person by name); those relating to advertisements and other exclusively business matters should be addressed to "THE PUBLISHER," and not to the Editor.

All communications must be authenticated by the name and address of the sender, whether for publication or not. No notice can be taken of anonymous communications.

The responsibility of signed articles, letters, and papers read at meetings rests, of course, with the authors.

We cannot undertake to return rejected communications; and the Editor cannot be responsible for drawings, photographs, manuscripts, or other documents, or for models or samples sent to or left at this office, unless he has specially asked for them.

All drawings sent to or left at this office for consideration should bear the owner's name and address on either the face or back of the drawing. Delay and inconvenience may result from inattention to this.

Any commission to a contributor to write an article, or to execute or lend a drawing for publication, is given subject to the approval of the article or drawing, when received, by the Editor, who retains the right to reject it if unsatisfactory. The receipt by the author of a proof of an article in type does not necessarily imply its acceptance.

N.B.—Illustrations of the First Premiated Design in any important architectural competition will always be accepted for publication by the Editor, whether they have been formally asked for or not.

PRICES CURRENT OF MATERIALS.

✱✱ Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

BRICKS, &c.

Per 1000 Alongside, in River.	£ s. d.
Best Stocks	1 14 0
Picked Stocks for Facings	2 10 0

Per 1000, Delivered at Railway Depôt.	£ s. d.		£ s. d.
Flettons	1 13 0	Best Blue Pressed Staffordshire	3 15 0
Best Fareham Red	3 12 0	D. Bullnose	4 0 0
Best Red Pressed Ruabon Facing	5 0 0	Best Stourbridge Fire Bricks	4 0 0
GLAZED BRICKS—			
Best White, Ivory, and Salt Glzd. Str'tch'rs	11 7 6	Double Headers	13 17 6
Headers	10 17 6	One Side and two Ends	17 17 6
Quoins, Bullnose, and 4½ in. Flats	14 17 6	Two Sides and one End	18 17 6
D'ble Stretchers	16 17 6	Splays & Squints	16 7 6

Second Quality £1 10*s.* per 1000 less than best.

	s. d.	
Thames and Pit Sand	6 9	per yard, delivered.
Thames Ballast	5 6	" "
Best Portland Cement	31 0	per ton, "
Best Ground Blue Lias Lime	19 0	" "

NOTE—The cement or lime is exclusive of the ordinary charge for sacks.

Grey Stone Lime ..... 13*s.* 0*d.* per yard delivered.
Stourbridge Fireclay in sacks 27*s.* 0*d.* per ton at rly dpt.

STONE.

Per Ft. Cube.	
BATH STONE—delivered on road waggons, Paddington Depôt	
Do. do. delivered on road waggons, Nine Elms Depôt	

PORTLAND STONE (20 ft. average)—

Brown Whitbed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	
White Basebed, delivered on road waggons Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	

Per Ft. Cube, delivered at Railway Depôt.

	s. d.		s. d.
Ancaster in blocks	1 10	Closeburn Red	
Beer in blocks	1 6	Freestone	
Greenshill in blocks	1 10	Red Mansfield Darley Dale in blocks	2 4
Red Corsehill in blocks	2 3	Talacre & Gwesapyr Stone	

YORK STONE—*Robin Hood Quality.*

Per Ft. Cube, Delivered at Railway Depôt.	
Scappled random blocks	

Per Ft. Super., Delivered at Railway Depôt.

6 in. sawn two sides landings to sizes (under 40 ft. super.)	
6 in. rubbed two sides ditto, ditto	
3 in. sawn two sides slabs (random sizes)	
2 in. to 2½ in. sawn one side slabs (random sizes)	
1½ in. to 2 in. ditto, ditto	

STONE (*Continued*).

YORK—

Per Ft. Cube, Delivered at Railway Depôt.	£	s.	d.
ed random blocks	3	0	
Per Ft. Super., Delivered at Railway Depôt.			
wn two sides landing to sizes (under 40 ft. r.)		2	8
ubbed two sides ditto		3	0
wn two sides slabs (random sizes)		1	2
lf-faced random flags		0	5

SLATES.

Per 1000 of 1200 at Railway Depôt.

	£	s.	d.		£	s.	d.
best blue				20×10 best Eur'ka			
gor	13	2	6	unfading green	15	17	6
ditto	13	17	6	20×12 ditto	18	7	6
1st quality				18×10 ditto	13	5	0
	13	0	0	16×8 ditto	10	5	0
ditto	13	15	0	20×10 permanent			
ditto	7	5	0	green	11	12	6
best blue				18×10 ditto	9	12	6
msdoc	12	12	6	16×8 ditto	6	12	6
litto	6	12	6				

TILES.

At Railway Depôt.

	s.	d.		s.	d.
lain red roof-			Best "Hartshill"		
(per 1000)	42	0	brand, plain sand-		
ip and Valley			faced (per 1000)	45	0
(per doz.)	3	7	Do. pressed (per		
Broseley (per			1000)	42	6
)	50	0	Do. Ornamental (per		
rnamental (per			1000)	47	6
)	52	6	Hip (per doz.)	4	0
ip and Valley			Valley (per doz.)	3	6
(per doz.)	4	0	Staffords. (Hanley)		
Ruabon red,			Reds or Brindled		
wn, or brindled			(per 1000)	42	6
w ds) (per 1000)	57	6	Hand-made sand-		
rnamental (per			faced (per 1000)	45	0
)	60	0	Hip (per doz.)	4	0
ip (per doz.)	4	0	Valley (per doz.)	3	6
alley (per doz.)	3	0			

WOOD.

BUILDING WOOD.	At per standard.					
	£	s.	d.		£	s. d.
: best 3 in. by 11 in. and 4 in. by 9 in. and 11 in.	14	0	0	...	15	10 0
: best 3 by 9	13	10	0	...	14	10 0
ns: best 2½ in. by 7 in. and n., and 3 in. by 7 in. and 8 in.	11	10	0	...	12	10 0
ns: best 2½ by 6 and 3 by 6	0	10	0	...	less than 7 in. and 8 in.	
: seconds	1	0	0	less than best.		
ns: seconds	0	10	0	"		"
, by in. and 2 in. by 6 in.	9	10	0	...	10	10 0
, by 4½ in. and 2 in. by 5 in.	9	0	0	...	10	0 0
rgn Sawn Boards—						
and 1½ in. by 7 in.	0	10	0	more than battens.		
	1	0	0	"		
nber: best middling Danzig	At per load of 50 ft.					
emel (average specification)	5	0	0	...	5	10 0
nds	4	10	0	...	5	0 0
ll timber (8 in. to 10 in.)	3	17	6	...	4	0 0
ll timber (6 in. to 8 in.)	3	5	0	...	3	10 0
dish balks	2	12	6	...	3	0 0
pine timber (30 ft. average)	5	5	0	...	6	0 0

JOINERS' WOOD.	At per standard.					
e Sea: first yellow deals, in. by 11 in.	24	10	0	...	25	10 0
in. by 9 in.	22	10	0	...	23	10 0
attens, 2½ in. and 3 in. by 7 in.	17	0	0	...	18	0 0
nd yellow deals, 3in. by 11 in.	19	0	0	...	20	0 0
" " 3 in. by 9 in.	18	0	0	...	19	10 0
attens, 2½ in. and 3 in. by 7 in.	14	0	0	...	15	0 0
rd yellow deals, 3 in. by in. and 9 in.	14	0	0	...	15	0 0
attens, 2½ in. and 3 in. by 7 in.	11	10	0	...	12	10 0
sburg: first yellow deals, in. by 11 in.	21	10	0	...	22	10 0
o. 3 in. by 9 in.	18	10	0	...	19	10 0
attens	14	0	0	...	15	0 0
nd yellow deals, 3 in. by in.	16	10	0	...	17	10 0
o. 3 in. by 9 in.	15	0	0	...	16	0 0
attens	11	10	0	...	12	10 0
rd yellow deals, 3in. by 11 in.	13	10	0	...	14	10 0
o. 3 in. by 9 in.	13	0	0	...	14	0 0
attens	10	10	0	...	11	0 0
e Sea and Petersburg—						
st white deals, 3 in. by 11 in.	15	0	0	...	16	0 0
" " 3 in. by 9 in.	14	0	0	...	14	10 0
attens	11	10	0	...	12	10 0
nd white deals, 3in. by 11 in.	14	0	0	...	15	0 0
" " 3 in. by 9 in.	13	0	0	...	14	0 0
attens	10	10	0	...	11	0 0
-pine: deals	19	0	0	...	21	0 0
ler 2 in. thick extra	0	10	0	...	1	0 0
w Pine—First, regular sizes	48	0	0	upwards.		
lments	32	0	0	"		
onds, regular sizes	33	0	0	"		
lments	28	0	0	"		
Pine—Planks per ft. cube.	0	4	6	...	0	6 0
ig and Stettin Oak Logs— ge, per ft. cube	0	3	0	...	0	4 0
all " "	0	2	6	...	0	2 6
scot Oak Logs, per ft. cube	0	6	6	...	0	8 0
Wainscot Oak, per ft. sup. as ich	0	0	10	...	0	1 0
do. do.	0	0	8½	...		—
Mahogany—Houndras, Ta- asco, per ft. super. as inch..	0	0	10	...	0	1 1
ected, Figury, per ft. super. inch	0	1	6	...	0	2 6
Walnut, American, per ft. per. as inch	0	0	10	...	0	1 0
per load	18	0	0	...	32	0 0
ican Whitewood planks, ar ft. cube	0	5	0	...	0	6 0
red Flooring, etc.—	Per square.					
, by 7 in. yellow, planed and not	0	13	6	...	0	17 0
, by 7 in. yellow, planed and atched	0	14	0	...	0	18 0
n. by 7 in. yellow, planed and atched	0	16	0	...	1	0 0

WOOD (*Continued*).

JOINERS' WOOD (*Continued*)— Prepared Flooring, etc.—	Per square.					
	£	s.	d.		£	s. d.
1 in. by 7 in. white, planed and shot	0	12	0	...	0	14 6
1 in. by 7 in. white, planed and matched	0	12	6	...	0	15 0
1¼ in. by 7 in. white, planed and matched	0	15	0	...	0	16 6
⅞ in. by 7 in. yellow, matched and beaded or V-jointed brds.	0	11	0	...	0	13 6
1 in. by 7 in. " "	0	14	0	...	0	18 6
⅞ in. by 7 in. white " "	0	10	0	...	0	11 0
1 in. by 7 in. " "	0	12	9	...	0	15 0

6 in. at 6d. to 9d. per square less than 7 in.

JOISTS, GIRDERS, &c.

	In London, or delivered Railway Vans, per ton.					
	£	s.	d.		£	s. d.
Rolled Steel Joists, ordinary sections	7	10	0	...	8	0 0
Compound Girders, ordinary sections	9	10	0	...	10	0 0
Steel Compound Stanchions	11	0	0	...	12	0 0
Angles, Tees, and Channels, ordinary sections	9	10	0	...	10	0 0
Flitch Plates	9	10	0	...	9	10 0
Cast Iron Columns & Stanchions, including ordinary patterns	7	10	0	...	8	10 0

METALS.

	Per ton, in London.					
IRON—	£	s.	d.		£	s. d.
Common Bars	9	0	0	...	9	10 0
Staffordshire Crown Bars, good merchant quality	9	5	0	...	9	15 0
Staffordshire "Marked Bars"	11	0	0	...	—	
Mild Steel Bars	9	5	0	...	9	15 0
Hoop Iron, basis price	10	0	0	...	—	
" " Galvanised	17	10	0	...	—	
(*And upwards, according to size and gauge.)						
Sheet Iron Black—						
Ordinary sizes to 20 g.	10	5	0	...	—	
" " 24 g.	11	5	0	...	—	
" " 26 g.	12	15	0	...	—	
Sheet Iron, Galvanised, flat, ordinary quality—						
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15	10	0	...	—	
Ordinary sizes to 22 g. and 24 g.	16	0	0	...	—	
" " 26 g.	17	0	0	...	—	
Sheet Iron, Galvanised, flat, best quality—						
Ordinary sizes to 20 g.	18	10	0	...	—	
" " 22 g. and 24 g.	19	0	0	...	—	
" " 26 g.	20	10	0	...	—	
Galvanised Corrugated Sheets—						
Ordinary sizes, 6ft. to 8ft. 20 g.	15	0	0	...	—	
" " 22 g. and 24 g.	15	5	0	...	—	
" " 26 g.	16	15	0	...	—	
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	12	10	0	...	—	
Best Soft Steel Sheets, 2 g. & 24 g.	13	10	0	...	—	
" " " 26 g.	15	10	0	...	—	
Cut Nails, 3 in. to 6 in.	11	0	0	...	11	10 0

(Under 3 in., usual trade extras.)

LEAD, &c.

	£	s.	d.		
LEAD—Sheet, English, 4lb. and up	20	0	0	...	—
Pipe in coils	20	10	0	...	—
Soil pipe	23	10	0	...	—
Compo pipe	33	10	0	...	—
ZINC—Sheet—	In casks of 10 cwt.				
Vieille Montagne	33	10	0	...	—
Silesian	33	5	0	...	—
Zinc, in bundles, 1s. per cwt. extra.					
COPPER—					
Strong Sheet per lb.	0	1	0	...	—
Thin "	0	1	1	...	—
Copper nails "	0	0	10	...	—
Copper wire "	0	0	10	...	—
BRASS—					
Strong Sheet "	0	0	11	...	—
Thin "	0	1	0	...	—
TIN—English Ingots "	0	1	11	...	—
SOLDER—Plumbers' "	0	0	9	...	—
Tinmen's "	0	1	0	...	—
Blowpipe "	0	1	2	...	—

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

15 oz. thirds	2¼d.	26 oz. fourths	3¼d.
" fourths	1¾d.	32 oz. thirds	5d.
21 oz. thirds	3¼d.	" fourths	4¼d.
" fourths	2¼d.	Fluted Sheet, 15 oz.	3¼d.
26 oz. thirds	4d.	" 21 oz.	4¼d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

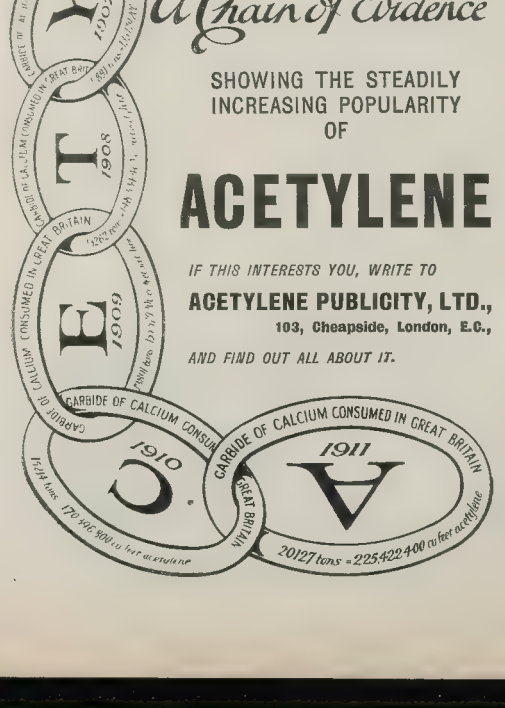
⅛ Rolled plate	2¼d.	Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white	3¼d
⅛ Rough rolled and rough cast plate	2½d.	Ditto, tinted	5d.
¼ Rough rolled and rough cast plate	3d.		

* Not less than two crates.

OILS, &c.		£	s.	d.
Raw Linseed Oil in pipes	per gallon	0	3	4
" " " in barrels	"	0	3	5
" " " in drums	"	0	3	7
Boiled " " in barrels	"	0	3	7
" " " in drums	"	0	3	10
Turpentine in barrels	"	0	2	11
" in drums	"	0	3	1
Genuine Ground English White Lead, per ton		27	10	0
Red Lead, Dry	"	24	0	0
Best Linseed Oil Putty	per cwt.	0	10	6
Stockholm Tar	per barrel	1	12	0

VARNISHES, &c.

	Per gallon £	s.	d.
Fine Pale Oak Varnish	0	8	0
Pale Copal Oak	0	10	6
Superfine Pale Elastic Oak	0	12	6
Fine Extra Hard Church Oak	0	10	0
Superfine Hard-drying Oak, for seats of Churches	0	14	6



VARNISHES, &c. (*Continued*). Per gallon.

	£ s. d.
Fine Elastic Carriage	0 12 0
Superfine Pale Elastic Carriage	0 16 0
Fine Pale Maple	0 10 0
Finest Pale Durable Copal	0 18 0
Extra Pale French Oil	1 1 0
Eggshell Flating Varnish	0 18 0
White Pale Enamel	1 4 0
Extra Pale Paper	0 12 0
Best Japan Gold Size	0 10 6
Best Black Japan	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Knotting	0 10 9
French and Brush Polish	0 10 6

TERMS OF SUBSCRIPTION.

"THE BUILDER" (Published Weekly) is supplied DIRECT from the Office to residents in any part of the United Kingdom at the prepaid rate of 18s. per annum, with delivery *by Friday Morning's Post* in London and its suburbs.

To Canada, post-free, 21s. 3d. per annum; and to all part of Europe, America, Australia, New Zealand, India, China, Ceylon, etc., 26s. per annum.

Remittances (payable to J. MORGAN) should be addressed to The Publisher of "THE BUILDER," 4, Catherine-street, W.C.

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than 6 p.m. on Wednesday.* [N.B.—We cannot publish Tenders unless authenticated either by the architect or the building owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is stated, nor any list in which the lowest Tender is under 100*l.* unless in some exceptional cases and for special reasons.]

* Denotes *accepted.* † Denotes *provisionally accepted.*

BOURNEMOUTH.—For new Law Courts, Bournemouth. Mr. F. W. Lacey, M.Inst.C.E., Borough and Tramway Engineer :—

J. & W. Hayward	£14,869 0
H. W. Pollard & Son	14,682 0
J. Miller & Sons, Ltd.	14,653 0
F. Hoare & Sons, Ltd.	14,489 0
Jenkins & Sons, Ltd.	14,433 0
Walker & Slater	14,300 0
J. McWilliam & Son	14,295 0
Bowman & Sons	14,195 0
Pethick Bros., Ltd.	13,444 0
W. E. Blake, Ltd.	13,095 0
A. J. Colborne	12,999 12
G. Shears & Sons, Ltd.*	12,995 0
J. & M. Patrick	12,940 0

BURY. For alterations at the abattoirs :—
J. Tinline, Parker-street Saw Mills, Bury { Schedule of prices.

BURY. For construction of an ejector chamber at the sewage works, for Bury Corporation. Mr. J. Ainsworth, Settle, A.M.Inst.C.E. Quantities by Engineer :—
J. Byrom, Ltd., Woolfold, Bury Schedule of prices

CHELMSFORD. — For erection of thirty eight dwellings on a site adjoining Rainsford-lane :

Grimwood & Son	£6,898 5 0	Coles Bros.	£5,700 0 0
Wood Bros.	6,735 0 0	J. Rayner	5,600 0 0
W. J. Lingwood	6,238 11 8	T. J. Bailey	5,598 0 0
Everett & Sons	6,200 0 0	Johnson & Hawkes	5,565 0 0
Eglin & Co.	6,000 0 0	Potter & Sons	5,483 0 0
W. Fincham	5,750 0 0	F. Weight, Chelmsford*	5,441 13 11
F. Willmott	5,730 0 0		

DEVIZES.—For new public convenience on the green, for the Devizes Urban District Council. Mr. F. G. Billingham, Borough Surveyor, Devizes :—

G. O. Offer & Sons	£102 10 6	W. L. Maslen	£94 16 6
W. E. Chivers & Son	98 19 0	H. J. Ash, Cyprus-terrace*	88 18 0

ECCLES. — For erection of a store-shed in the Town Hall-yard, for Electricity Department, Eccles Corporation. Mr. Thomas S. Picton, Borough Surveyor, Eccles :—
T. Moore & Sons, Eccles* £170 12

LONDON.—For the cleaning, repainting, etc., of Battersea Bridge, for the London County Council :—
M. McCarthy, Clapham-park, S.W. £1,689
[The Chief Engineer's estimate, comparable with the tender, was £1,600.]

LONDON.—For rebuilding the Cook's Ground School, Chelsea, for the London County Council :—

J. Garrett & Son	£25,301 0 0		
G. Parker & Sons	24,723 0 0		
F. & H. F. Higgs	23,479 0 0		
J. Longley & Co.	22,687 0 0		
McLaughlin & Harvey, Ltd.	22,365 9 10		
W. Smith & Son	22,178 0 0		
W. Lawrence & Son	21,812 0 0		
W. Downs	21,227 0 0		
G. E. Wallis & Sons, Ltd.	20,721 0 0		
F. & T. Thorne	20,451 0 0		
G. Godson & Sons	20,386 0 0		

[The Architect's estimate, comparable with the tenders, is £20,500.]

LONDON.—For rebuilding the Curtain road School, Hoxton, for the London County Council :—

Kirk & Randall	£16,164	Rowley Bros.	£13,319
J. & M. Patrick	13,924	G. Godson & Sons	13,228
Brand, Pettit, & Co.	13,875	G. E. Wallis & Sons, Ltd.	12,994
T. D. Leng	13,694	Holliday & Greenwood, Ltd.	12,945
W. Johnson & Co., Ltd.	13,563	E. Lawrance & Sons, Ltd.	12,894
Patman & Fotheringham, Ltd.	13,538		

[The Architect's estimate, comparable with the tenders, is £13,000.]

LONDON.—For erection of a steam-heating installation for the new engine-house at Abbey Mills pumping station, for the London County Council :—

W. G. Cannon & Sons, Ltd.	£279 0	Strode & Co.	£237 0
Clements, Jeakes, & Co.	250 0	E. Dean & Beal, Ltd.	210 6
G. & E. Bradley	245 0	J. & F. May	199 17

LONDON.—For the quadrennial survey and overhaul of the s.s. *Binnie*, for the London County Council :

J. Stewart & Son, Ltd.	£2,249 10 0
Thames Ironworks Shipbuilding and Engineering Co., Ltd.	1,954 0 6
Fletcher, Son, & Fearnall, Ltd.	1,945 0 0
Glengall Iron Works, Ltd., Millwall*	1,765 0 0

LOWESTOFT.—For erection of Beach School, near Christ Church. Messrs. Oliver & Chetwood, architects, 7, Southampton-street, Bloomsbury-square, London, W.C. :
C. Roper, Ipswich* £4,594

MORLEY. - For alterations and additions finishing mills. Mr. T. A. Buttery, architect, Queen street, Morley :—
I. Newton, Ackroyd-street, Morley £992 5 6
[All trades.]

STACKSTEADS.—For construction of headquarters buildings, for accommodation of "H" Company, 1st Battalion, East Lancashire Regiment. Mr. A. Brockhurst, architect and surveyor, Waterfoot :—

H. & B. Coupe Bros.	£1,753 9 1	W. Ashworth	£1,621 1
W. Simpson	1,747 11 0	Moore Bros.	1,618 1
G. Cunliffe & Son	1,734 0 0	J. R. Holt	1,581 1
J. Tinline	1,720 0 0	Hawley & Heaton	1,574 1
O. Ashworth	1,685 17 8	J. Byrom, Ltd.	1,535
C. Lomax	1,640 0 0	Smith Bros., Ltd., Burnley*	1,529
R. Carlyle	1,636 0 0		

WALTON-ON-THE-NAZE. For additions to public conveniences. Mr. H. W. Gladwell, A.I.S.E., District Surveyor. Quantities by Mr. H. W. Gladwell :—
P. G. Oxley, Walton-on-the-Naze* £205
J. T. Ward 199
[Surveyor's estimate, £196.]

Ham Hill Stone.
Doulting Stone.
Portland Stone.
The Ham Hill and Doulting Stone Co., Limited
(incorporating the Ham Hill Stone Co. and C. Trask & Son, The Doulting Stone Co.).
Norton, Stoke-under-Ham, Somerset.
London Agent : — Mr. E. A. Williams,
16, Craven-street, Strand.

Asphalte.—The Seyssel and Metallic Lake Asphalte Co. (Mr. H. Glenn), Office, 42, Poultry, E.C.—The best and cheapest materials for damp courses, railway arches, warehouse floors, flat roofs, stables, cow-sheds and milk-rooms, granaries, tun-rooms, and terraces. Asphalte Contractors to Forth Bridge Co. T.N. 3644 Central.

SPRAGUE & CO.'S, Ltd.,
"INK-PHOTO" PROCESS.
69 and 70, DEAN STREET, SOHO, W.

JOINERY,
Of every description and in any kind of Wood
CHAS. E. ORFEUR, LTD
ESTIMATES ON APPLICATION.
COLNE BANK WORKS
COLCHESTER
Telephone 0195. Telegrams: "Orfeur, Colchester."

PILKINGTON & CO
(ESTABLISHED 1838),
DEPTFORD WHARF,
190 & 192, CREEK ROAD, DEPTFORD, S.E.
Telephone No.: New Cross 1102 (two lines).

Registered Trade Mark.
Polonceau Asphalte.
PATENT ASPHALTE AND FELT ROOFING
ACID-RESISTING ASPHALTE.
WHITE SILICA PAVI
SEYSSEL ASPHALTE (*Direct from the Mines*)

J. J. ETRIDGE, Jr.
SLATE MERCHANTS. LTD.

EXPERTS IN
SLATING, TILING.
BEST WORK ONLY.
Telephone 2685 Wall, or write—
BETHNAL GREEN SLATE WORKS,
BETHNAL GREEN, LONDON, E.

ALSO AT DEPTFORD, LIVERPOOL, BRISTOL,
FRED^K BRABY & Co. LTD
TANK MAKERS
LONDON.
GALVANIZED CISTERNS AND TANKS.
COPYRIGHT
GLASGOW, FALKIRK BELFAST, & DUBLIN
Chief Offices: 352 to 364, EUSTON ROAD, LONDON, N.W.

THE BUILDER

VOL. CII. -No. 3810. APRIL 12, 1912.

CONTENTS.

PAGE

TISM AND ARCHITECTURE ... 415
... 416
HOUSES IN LINCOLN'S INN-FIELDS (WITH STRATION) ... 417
ARCHITECTURAL ASSOCIATION CAMERA, CH, AND DEBATE CLUB ... 417
FECTS FROM GEORGE IV. TO GEORGE V. ... 418
ES AT ST. HELENS, HASTINGS (WITH ILLUS-TIONS) ... 421
OCIETY OF ARCHITECTS ... 421
FECTURAL SOCIETIES ... 423
TERING SOCIETIES ... 424
AL NEWS ... 424
ITION NEWS ... 424
N AND COLONIAL ... 424
IAL SUMMARY ... 425
NGS ... 425
PAL BUILDINGS EXTENSION, GLASGOW ... 425
PONDENCE ... 425
UNICATION COLUMN ... 425
TO ILLUSTRATIONS ... 425
YEARS AGO ... 425

PAGE

MONTHLY REVIEW OF CONSTRUCTION:—
SOME ANCIENT BRICK ARCHES AND A NEW ARCH (WITH ILLUSTRATIONS) ... 427
REINFORCED CONCRETE IN GREAT BRITAIN.—V. (WITH ILLUSTRATIONS) ... 428
WESTON'S PATENT WALL STRAIGHTENER (WITH DIAGRAMS) ... 429
PROTECTIVE AND DECORATIVE METALLIC COATINGS (WITH ILLUSTRATION) ... 430

THE BUILDING TRADE:—
TRADE DISPUTES AND COLONIAL AND FOREIGN LEGISLATION ... 431
TRADE UNIONS, 1908-10 ... 431
LOCAL BY-LAWS ... 431
RAILWAY AND CANAL TRAFFIC ... 432
GAS POWER AND STEAM ... 432
GENERAL BUILDING NEWS ... 432
APPLICATIONS UNDER LONDON BUILDING ACTS, 1894 TO 1909 ... 432
PROJECTED NEW BUILDINGS IN THE PROVINCES 433

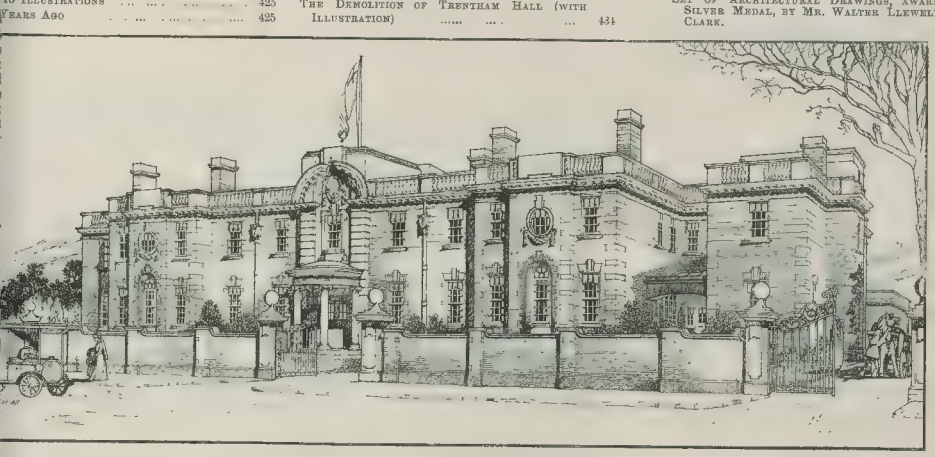
THE DEMOLITION OF TRENTHAM HALL (WITH ILLUSTRATION) ... 434

PAGE

LOWER THAMES VALLEY DISTRICT SURVEYORS' ASSOCIATION 434
BOOKS 434
LEGAL COLUMN 435
LAW REPORTS 436
LONDON COUNCILS 437
TRADE CATALOGUES ... 437
LIST OF COMPETITIONS, CONTRACTS, ETC., OPEN 438
PATENTS 440
SOME RECENT SALES 440
PRICES CURRENT 440
TENDERS 442

Illustrations.

R.A. SCHOOLS, 1911:
AN ARCHITECTURAL DESIGN, BY MR. W. H. GUMMER, A.R.I.B.A.
DETAIL OF AN ARCHITECTURAL DESIGN, BY MR. W. H. GUMMER, A.R.I.B.A.
DESIGN AWARDED BRONZE MEDAL, BY MR. CYRIL A. FAREY.
SET OF ARCHITECTURAL DRAWINGS, AWARDED SILVER MEDAL, BY MR. WALTER LLEWELLYN CLARK.



The Weir Cottage Hospital, Balham. (*See page* 424.)
Mr. E. J. Thomson, F.R.I.B.A., Architect.

PATRIOTISM AND ARCHITECTURE.

LTHOUGH the patriotic point of view so ably put forward by Mr. Voysey in his paper at the ectural Association is one which t safely be neglected, we are not ther surprised that he failed to carry neeting with him. As Mr. Keen enough points out, the appeal w.s to the feelings, and not to the ent of the meeting. Considering trength of this appeal and the stioned truth of so many of the ents on which it was founded, the at the meeting decided to exercise dgment adversely to his contention go far to persuade Mr. Voysey he present age does not show so an emotional tendency to swing direction—imitative or otherwise—appears to think. The present tion has largely outgrown the entalism of the previous one and ds an appeal to reason. It is endeavouring—if Mr. Voysey only believe it—to obtain that e between reason and emotion we agree with him is so necessary cess.

Since the break up of tradition we have no doubt seen style follow style in a procession of passing fashions founded on the sentiment or whim of the moment to which Mr. Voysey's accusations might rightly apply, but from this emotional tendency to swing in one direction after another we have at length discovered that something more than emotion or imitative faculty is required.

This, in our judgment, is the strength of the movement which Mr. Voysey deplores. It is a movement of mind, not merely a movement of sentiment; a movement towards the more intelligent study of foreign work, based on the solid foundation of reason and common sense.

We imagine that the days of indiscriminate and unintelligent imitation are over and done with, and that everyone now realises that, as Mr. Voysey says, "it is far more important to know from what general principles good work is produced than to have a knowledge only fitted to reproduce given examples." In spite of evidence brought forward to the contrary, we are convinced that this is the spirit in which foreign study is now undertaken, and in which great progress is now being made.

Unless we are to consider Mr. Voysey's contention to be a piece of special pleading deliberately put forward to provoke discussion, we cannot help feeling that he is tilting at windmills. The idols at which he throws mud are no longer worshipped with the same enthusiasm as heretofore. In assuming a shrine still exists in Tufton-street he hardly does justice to the intelligence of the members of the Association.

It is surely a question of intelligence, not of patriotism. Each and every member would wish to be as patriotic as Mr. Voysey himself, but fortunately, we think, for the future of architecture they appear to take a different view of the meaning of the word.

We must say we are not quite sure of the wisdom of introducing ethical terms into a discussion on art, but if we must use this word in relation to architecture, let us be very careful to discriminate. Patriotism in the real and highest sense of the word is a lofty and ennobling virtue, but in the lowest sense of the

word it is little better than a selfish, a stupid, and a degrading vice.

Of the patriotism that exalts country over self, that sacrifices all personal interests for the good of the State, we cannot have too much either in architecture or elsewhere; but it is just that narrow-minded, self-satisfied provincialism so characteristic of the lowest form of patriotism which is far more responsible for the deficiencies of our present-day architecture than are the crude attempts to profit by foreign experience upon which Mr. Voysey is so unnecessarily severe

If our architecture is in the future to hold its own as a fine art with music and literature, and to accurately interpret and adequately express the highest aspirations of the spirit of the age, it seems to need more of the virtue of patriotism and less of the limited outlook into which it so frequently degenerates.

Although we must all recognise that a building, growing as it does from the very soil of a country, is necessarily more affected by local influences than any other form of art, and though we all admit that we cannot ignore these influences even if we would, yet we have to ask ourselves whether all these various local distinctions of material or of method are really the essential qualities of architecture. Are the local peculiarities that differentiate a French from an English cathedral of the same date essential qualities or more in the nature of incidental or even accidental ones? Is there not some quality in architecture which, including all this, is yet above and beyond it, and is not this aspect of our art the one which is really of the most vital importance to us all?

Do not all the greatest masterpieces of art of whatever description rise far above the expression of local or even national characteristics? Do the symphonies and sonatas of Beethoven or the operas of Wagner appeal only to the national sentiment of Germany? Is a statue by Michelangelo typically Italian, or a portrait by Velazquez typically Spanish? If so, is this its essential quality—its *raison d'être?* Is it not rather its limitation—the measure of its distance from perfection?

Is it not enough for art to be simply human? To appeal direct to the heart of humanity, to the elemental instinct and feelings common to all nations and races alike? And does it not there find its only free expression and attain thereby its most overwhelming effects?

So in architecture it would be possible to imagine a Classic or a Gothic which, had it been free from arbitrary national limitations and divisions, might, by the combined effort of the whole of Western humanity, have attained to even greater height, and expressed even more clearly and forcibly those eternal truths which are independent of political or geographical divisions.

Although to the student or connoisseur of architecture nothing is more interesting and instructive than to trace the effect on the architecture of the past of the ever-varying groups or nations into which humanity has from time to time been divided, he is yet bound to realise that all such divisions are temporary only, and that the essential truths of architecture do not depend upon them.

Whatever the remote future may hold in store, nothing seems more certain than the general tendency of humanity in the immediate future to obliterate rather than accentuate all unnecessary distinctions, to combine in a few large confederations rather than to split up into many small sections, to endeavour by a free exchange of ideas to arrive at a general community of sentiment.

It is only reasonable to presume that if architecture is to keep pace with the upward progress of humanity that the same tendency must be visible here; but this tendency does not seem to be fostered by a deliberate ignorance of all ideas but our own.

The essential truths of architecture are founded on the essential facts of nature and of human life. Although no one would wish to dispute the obvious fact that local and national differences of sentiment must be considered, yet they must not be over-emphasised to the detriment of less obvious but more vital essentials. After all, such distinctions are only variations of the theme. The theme itself is architecture, not its local or national variations.

NOTES.

London University Site. MR. WILLIAM WOODWARD, in a letter to the *Times*, makes the suggestion that the Botanic Gardens, Regent's Park, might be considered a suitable site for the new London University. For reasons that have long been well recognised, these gardens do not fulfil their original functions, and their advantages as a site are reinforced by the proximity of the new Bedford College and the Royal Academy of Music. While we feel that this site would be far superior to the fragmentary and expensive areas at the back of the British Museum, the obvious disadvantage of the suggested position is its apparent isolation from other buildings, which creates an undesirable feeling of remoteness from the activities with which a university should be in touch; but this might easily be overcome, without great detriment to the Park, by including in the scheme a strip about 500 ft. wide, extending to York Gate, to be occupied by a fine approach avenue lined on either side by detached blocks of a monumental character suitable for occupation by various sections of the organisation. Provided it is not carried too far, the aspect of a cloistral seclusion is not altogether out of harmony with the purposes of a university, and up to the present we have not seen any suggestion that meets the conflicting claims so adequately as this one by Mr. Woodward.

Federal Capital City, Australia. THOSE who have sent in designs for the laying-out of the Capital City at Canberra will be specially interested in the announcement of the names of the adjudicators. They are Mr. J. M. Coate, surveyor (Chairman), Mr. J. A. Smith, President of the Victorian Institute of Civil Engineers, and Mr. John Kirkpatrick, architect, of Sydney, with Mr. C. J. Clarke, architect, of Tasmania, as Secretary. Apart from those di concerned, the whole profession will with regret that no pre-eminent arc has been appointed to assist in se the award. The status of the gentl composing the Board is high locall doubt, but for an international com tion of this magnitude and intere was desirable that eminent judges sh have been chosen from Great Br America, and Australia, if not fro Continent. These nominations sh have been made beforehand, of c and competitors should not have told merely that their work woul judged by "an engineer, an arch and a licensed surveyor." The co tition has been conducted in a that has not inspired confidence, a can only hope that the result wil by good fortune rather than by management, more successful than Commonwealth deserves. If it be we must admit that it would be having made the awards, to start a as a lesser evil than the adoptio all time of an inadequate and unsu scheme.

The Abuse of Advertising. THE Japanese have a well-earned reput for their genius in ada the ideas of other nations and efficiently putting them into pra Mr. Richardson Evans, the Chai of the "Scapa" Society, writes t *Times* that Count Hayashi during visit to England was so impressed the work inaugurated by this So for the protection of our scenery th determined to apply the same prin in Japan, and from the text of the published in Mr. Evans's letter it ap that the Japanese have now legisl on this subject, which is far more eff and practical than that provided in country by the Regulation of Adve ments Act, 1907. In saying thi must, however, in no way be take disparage the Act which was obt through the exertions of the "Sca Society. The full effect of that Act postponed from coming into oper for a period of five years, and, a pointed out in the *Builder*, Septe 22, 1911, great difficulty has experienced in drafting by-laws unde Act which shall be deemed *intra* There is now reason to believe that difficulty has been overcome, and the period of five years comes to a in August next the benefit of the will no doubt be experienced in country districts. Mr. Richardson E moreover writes that the Society is promoting a Bill which is intende secure "a reasonable standard of g dignity, and interest in the aspect o towns."

Street Accidents and Street Shelters. THE recent return rel to street accidents d the year 1911 furn subject for reflection. number of accidents k to the public in the United Kingdom 35,210, an increase of nearly 3,00 the previous year, this increase chiefly due to accidents caused mechanically-propelled vehicles. In the total number of street accidents only some 22,568, so in the seven

e street accidents have increased by arly 13,000. No doubt the mixed ffic with vehicles of different speeds s considerably enhanced the dangers the streets from both horse-drawn and tor traffic, but there is another con-eration to which attention may well drawn, especially in the metropolis. e street widening schemes which have n carried into execution during the t few years have rendered crossings re dangerous to nervous persons. A le thoroughfare crowded with traffic varying speeds is even a trial to the ongest nerves, and with the widening thoroughfares and the extension of ffic sufficient attention has not been en to the erection of street shelters. th a death roll of 410 and personal uries numbering 15,254 in the tropolis alone this is a question which ls for prompt consideration.

he Byzantine Revival.

Mr. W. G. Renwick, as quoted in the *Standard*, is not altogether happy in list of the architects responsible for resuscitation of the Byzantine style in modern work. Mr. T. G. Jackson and Mr. Bentley we recognise, but Mr. Bodley, Mr. Garner, and Mr. Fellowes-Prynne have concerned themselves far less with Byzantine art than many others we could name. Without mentioning others, Mr. R. W. Schultz and Mr. S. Barnsley are surely entitled to a place on such a list.

OLD HOUSES IN LINCOLN'S INN-FIELDS.

The old houses, with the archways under them, were for some two and a half centuries a familiar landmark of Old London. The passage communicated between Lincoln's Inn-fields and Duke-street.

The design of the façade has been attributed, not apparently without reason, to Inigo Jones, for it seems to bear much of the stamp of his grave manner.

The centre house at one time contained a mission-room and priest's residence, in connexion with the old church of SS. Anselm and Cecilia, which stood hard by, and doubtless, with its neighbours, looked down on many a strange scene, as when, in 1780, the Gordon rioters made a bonfire in the street of the furniture and fittings of the church.

The houses were demolished January, 1912.



Old Houses, Lincoln's Inn-fields, W.C. (now demolished).

From a Drawing by Mr. A. C. Comrade.

THE ARCHITECTURAL ASSOCIATION CAMERA, SKETCH, AND DEBATE CLUB.

At a recent meeting of the Camera, Sketch, and Debate Club of the Architectural Association Mr. Alan Snow read a paper entitled "Neo-Grec?" in the course of which he said:

"I shall endeavour to give you the arguments upon which I base my two contentions that a purely Greek style, with colonnades, pediments, etc., is absolutely unfitted for our uses and requirements, and that the manner of building at present known as Neo-Grec is not Greek at all, neither in the spirit of its design nor the actuality of its appearance. Those of you who have come expecting a prescription for the cure of all architectural ills will, I am afraid, be disappointed, for amongst these ailments I am of opinion that what most of us know as Neo-Grec should find its right place. I myself have a different conception of a new Greek style, which I will give you later on. Most past styles, as they have been left to us, are in themselves unsuited to modern conditions in England, but of them all it seems to me that Greek is the most unsuitable. The charm of Greek buildings is in their shape as much as in their detail; in their long and low proportion. How can we transplant this into the tall modern building? We may maintain the same general proportion in the building, although its size is greatly increased. But do we really imagine that by adopting in our larger edifices a similar treatment to that which the Greeks gave to their smaller ones we are perpetuating Greek architecture? We are not; we are deluding ourselves. Sometimes perhaps we may fitly use Greek forms for details, unless we can think of better, but even then they can only be used as a basis to work upon, not as a copy. Where we go so far wrong is in increasing the size of the details as we increase that of the building; in enlarging things that were only meant to be small; in using them as our models, the Greeks never used them, and in combining them with features which they either did not know or did not use.

Greek architecture in England is joyless and cold—as cold as the Greek costume would be, and for the same reason. It was designed for a warmer, sunnier land. This is felt even by those who attempt to practise it, as we can see by the way in which it becomes embellished. I was going to say enriched, but embellished seems somehow to express better the result we see. In this embellishment, and in the increase in scale already referred to, its Greek character disappears, the simplcity of Greek is gone, and in its place is richness and extravagance; the architecture is Romanised. We are doing just what the Romans did; we have turned our Philistine minds to Greek architecture, and produced a manner as far in spirit, proportion, and character from its beautiful inspiration as it could be.

What is the distinguishing characteristic of this great style? Is it not simplicity—a simplicity possible only because of the small size of even their greatest buildings? It is simple, too, because it adhered to one method only of building, and developed that until it could go no farther. It was so simple that we can use it in connexion with only one feature—the pier. The Greeks evolved two forms of pier, round and square, always used separately. The distinguishing mark of our latest Neo-Grec erections is the use of the half-round stuck on to the square, the reasonableness of which proceeding will not bear examination.

No modern building built in a purely academic Greek manner, using only Greek details and features, is Greek in spirit. Greek art itself would have been different in a different environment. Had we learnt truly the lessons left us by the Greeks we should never indulge in this literal, uncomprehending transcription of their style. We should not ignore all that has happened since—they did not. They did not invent an original architecture all their own. They, too, studied the past, and their understanding of study was the correct one—the selection and perfection of certain features. Study means selection. They selected one method of construction, not one manner of design, and throughout all the variations which they used it is never obscured, and the refinement and ornamentation which the crude essentials of this method underwent were all directed to the emphasising of the functions

of the various parts—the vertical lines of the columns, the horizontal lines of the architrave which they supported, and the projecting lines of the cornice. They evolved an "Order" of building, and only by a strict adherence to this was possible the perfection they achieved.

By a close and never-ceasing study of construction they developed their wonderfully beautiful architecture—as perfect a style as the world has seen, but not so perfect as to be universally applicable. We are told that "there is nothing in the world of art that is not Greek in its origin." This is not more true than that there is no one in this world who is not a descendant of Adam, and the one statement really means no more than the other. Everything has its beginning; even Greek had its origins, and that of Adam has been traced back to fishes, and even further, but I cannot see that either are of any account in considering modern conditions. Some may hold that the salvation of the world lies in a return to the conditions of Eden, and some the hope of architecture in a return to those of early Greece. I quite disagree with both, for neither can be right until the population of the world is small enough to be gathered together in either of these favoured regions.

The Greeks were able to pursue the study of one particular manner of building, and bring it to its very simple perfection, only by the comparative isolation of their land and the extreme simplicity of their mode of life. If we could live again as they did, well and good, but we cannot. In the hey-day of Greek art there was no unemployment, no competition. Each man was sure of a livelihood; each man was sure of the boundless leisure required for the completion of a perfect work of art. The land was self-supporting, and foreign intercourse was strongly discouraged during the great period of Greek art; nothing was needed, nothing obtained from other countries, either spiritually or materially, and the laws and customs were largely directed towards the restriction of population, thus avoiding the necessity of emigration. The commencement of the decline in all Greek art can be dated from the relaxation of these restrictions, from the time when the land ceased to be self-supporting. We can never return to this old Greek ideal of being sufficient unto ourselves in these days of enormous and shifting populations.

We can never return to the old Greek dependence on the most elementary of all forms of building construction. We cannot get away from the fact that we know more than the Greeks in every department of human knowledge. We may not be wiser, but we know more.

The greatest legacy that the Greeks have left us is their recognition of the æsthetic element in construction, and since their days the great successes of architecture have been due to great engineering. The Romans were great architects entirely because they were great engineers; there is little of real beauty in their buildings, but they are supremely wonderful, and wonder is one of the elements of fine architecture. We wonder at Greek perfection, and at Roman engineering, and at the marvellous combination of both that we call Byzantine. The men of the Middle Ages were great architects, too, entirely by virtue of their skill and daring in building, in the successful engineering of their materials; the history of mediæval architecture is one of continual engineering development.

It is most important to note that all of these great styles of architecture arose through continual experiment; therein lay their life. Renaissance, too, was a living art so long as it remained true to experimental construction. Immediately it was assumed that this had reached its final stage, immediately architecture became academic and merely a matter of adaptation, then all life and joy departed from it.

In Greek and Roman, in Gothic and Byzantine supreme art accompanied supreme construction. We shall see that this must be, as the perfect craftsmanship and clear vision that are necessary to achieve greatness in art are the very qualities necessary also for the achievement of greatness in construction. To this fact is due the feeling that comes to us when contemplating the great monuments of the past—a feeling that they are inevitably what they are—that they took the shape they did not through the conscious caprice of their builders, but through the force of circumstances beyond their control. They were as much the product of their age and circumstance as the feudal system, party politics, or the steam locomotive of theirs. It is through this feeling that as they are so must they have been that we derive the satisfaction and contentment that is ours in their contemplation. We view with equal pleasure the Parthenon, the Pantheon, or Notre Dame, unless we are architectural bigots, and to these I may add the Forth Bridge and the Gare d'Orléans—classic instances by now. This pleasure is not one peculiar to architects, but one shared by them with anyone of susceptibility—anyone capable of intellectual pleasure. In short, these great buildings are not merely beautiful, but they are significant—they have a meaning and a beauty apart from the decorative forms in which they are clothed, forms in themselves accidental. It is this significance that raises them to the highest plane as artistic achievements. To adapt a paragraph from Baldwin Brown's "The Fine Arts," "their harmonious subdivision and play of part against part, which make the life of their architecture, was readily evolved from the constructive forms that had their basis in utility." It was by the arrangement of their essential constructive forms to secure the greatest convenience, economy, and strength that they obtained their splendid results—by what we understand as planning.

Is architecture going to stand alone? Is our "modern style" to be the first of all to separate itself from the intellectual life of the age? Or are we going to be Neo-Grec in all our arts? Shall we breakfast with Neo-Grec porridge plates, take tea from subtly-moulded Neo-Grec cups, go to sea in Neo-Grec galleys, and clothe ourselves in scanty, if picturesque raiment? This is no frivolity; an art that has anything in it should permeate the whole artistic life of the nation, and certainly its devotees, if sincere, should be prepared to see it do so, and wish that it should. Are you prepared for this? Do you wish that it should happen? If you are, and do, I can do nothing for your case; if not, you stand condemned. Art is thus reflected in all the life of ancient Greece, and in Roman, Byzantine, and even Renaissance times. Cannot we all identify the smallest thing dating from any one of these periods? Are we to mount even higher on our pedestals, from which Mr. Burns recently and quite justifiably beseeched us to descend?

St. George's Hall, an unique building, was brought into being by an unique problem, and it and other similar buildings are no material for argument either for or against a general adoption of the style, any more than is that other unique building, the Liverpool Cathedral, in itself a justification for the condemnation or universal adoption of Gothic.

The only real argument for the adoption of Greek would be that its forms can be so arranged as to obtain qualities otherwise impossible of achievement. Apart from the fact that argument of this character places architecture no higher than scene painting or mural decoration, it is certainly not the case. Fine architecture has another set of principles to which it must adhere—fitness to purpose, climate, and other conditions peculiar to each country. With these as our guide, all that can be urged for Greek can be urged for any other style; it becomes merely a matter of personal predilection, and not of principle at all.

We may feel from the study of Greek that all other architecture is incompletely worked out, but why throw up the sponge? Why not work it out? Why not attempt something? Might we not find that we too had produced something worth while? Or are we just to take the easy road—to quiet our architectural conscience (there is such a thing), and steal and borrow our architectural forms, stifle our architectural intellect and kill originality of thought?

"There is no substitute for thought." Every reference to the past should increase the mental labour of the inquirer, not serve as another modern labour-saving device, as it so generally does. He must endeavour to find out why each feature that he examines is as he finds it; discover its purpose and determine its suitability both for that and the use which he proposes to make of it. By such methods it should be possible to build up a satisfactory philosophy or Order of architectural design; by so doing we should arrive at a method of building beautifully that would be truly Greek in spirit—of which the plans and constructive forms would be absolutely modern, but nevertheless profoundly influenced by past achievements. In it we might well find that many of the details were based on Greek forms, simply becau
certain features were so well studied by t
Greeks and brought by them to such perfectio
that we are hardly likely to be able to impro
them. Such a modern style would include n
only the post and lintel system of buildin
which is all that the Greeks bequeathed to t
and which alone is far too small an equipme
for our requirements, but also the round a
pointed arch, the vault, and the dome.

Must we fall back on engineers for constru
tion, and Greek and Roman for our clothing
it? Have we no wit or imagination? The
is more charm and originality in Georgian th
in this revived Roman. It is the great fault
the average architect that he does not ta
advantage of his opportunities as an artist
that is, he does not set out to create somethin
but at the first opportunity harks back to wh
someone else has done, both constructively a
decoratively. How can his art improve if
accepts the conclusion that the best has be
done, and there is nothing left for him to do b
adopt and adapt the ideas of other men? If
really thought this I would never have becon
an architect, but rather an engineer or a pla
wright. To be so hide-bound and fetter
would be intolerable. We are not free to do
we like—far from it—but there is no need to
imprison our intellects. That is what seems
me most missing in modern English architectu
—intellect—the mental grappling with a
overcoming of our problems. We are still
much amateurs as Lord Burlington, with n
one-half of the excuse."

ARCHITECTS FROM GEORGE IV. TO GEORGE V

A MEETING of the Glasgow Institute
Architects was held on February 14, whe
Mr. Maurice B. Adams read a paper on th
subject, from which we take the followi
extracts:—

"Evolution in design had spent itself by th
time of George III. No tradition wor
mentioning remained, and our most accon
plished achievements henceforward were du
to individual example. Academicalism ha
reigned long enough. "The Neo-Class
period," which has been divided thus, e
tended from 1666 to 1820; the Formativ
period, from 1666 to 1720; the Palladia
period, from 1720 to 1760, and the Form
school, which ended in 1820. War and fi
have generally contributed to the advance
architecture, and since the era of the Middl
Ages the one outstanding event which had th
most immediate influence upon subsequen
building art in this country was the Gre
Fire of London in 1666. Wren thus was give
his opportunity, and although the governin
authorities then failed to realise theirs, in n
adopting Sir Christopher's plan for the la
out of the metropolis, the great thing that di
matter was his rebuilding of St. Paul's an
his many churches in the City, not forgettin
Greenwich Hospital. The second conflagra
tion to be mentioned as of architectura
import was the burning of the old Houses o
Parliament in 1834. These two event
coupled in this way define the beginning an
the end of the "Neo-Classicism" of Englis
building. Till the turn of the tide of fashio
towards the closing years of the last century
indigenous architecture became associate
more or less with the "Gothic revival." S
little attention indeed was devoted fifty yea
ago to Classic work that it would hav
acquired an inspired prophet to have foretol
the change which our children have witnessed
and no one could have thought it probabl
that the praise of Soane and his school woul
find expression in the early days of th
XXth century. Belcher and Macartney
book on "The Later Renaissance" helped t
bring about this swing in the pendulum
Long prior to the Georges, beauty, colour
and grace had succumbed to the Puritan
the Revolution, and the iron hand
Cromwell. Houses were grey, with flat roof
and hopelessly dull interiors, although som
of the better sort exhibited a somewha
architecturally contrived plan, recognisin
vistas by making one room lead out
the other. A reaction so early as the daw
of the XIXth century evinced signs
activity, but so little was mediæval art com
prehended that it was generally spoken of a
"the English style," ignoring the historic ar
of Europe. Wyatt was building Fonthil

ey, known as "Beckford's folly," on an mous scale with puerile and petty detail, an advance was registered when John v erected the clever church of St. stan's in the West in Fleet street, and ed a respectable deception to Christ's pital in so-called "Gothic." The new ts of St. John's College, Cambridge, ribed as "a monstrous pile of ugliness," put up by Thomas Rickman, the Quaker, hom we owe the invention of the nomen- ure of the English Periods of Archi- ure in his "Attempt to Discriminate," ished, with "The Classic Orders" as a ace in 1819. Porden had built Eaton , and Atkinson, a pupil of Wyatt, carried "Abbotsford" for Sir Walter Scott. ustus Pugin with Le Keux informed the ated public by their illustrations of mandy and other mediæval work, thus ng the way for the turbulent crusade nst Pagan inconsequence so vigorously rtaken by Welby Pugin, whose graphic *rasts* and *True Principles* did so much ice later on. His energy was attributed hat "Classicists" called his "Whimmery, ' e his critics applied to him the sobriquet Smell-fungus," and so "the battle of the s" began.

Samuel Prout and Others.

nterior to that event there lived, quite rt from this battlefield, a delicate and sically fragile individual of retiring perament, devoid of technical training, single-handed wrought a revelation liscovering and popularising the charm the picturesque in such common thing; old cottages, and so opened up the ibilities of simply befitting countryside estic architecture by which English archi made a world-wide reputation long years Samuel Prout, the man I mean, had forgotten and reckoned as a bygone. t man of his century dreamed of the isite beauty existing in the unsophisticated, bledown, neglected smaller Tudor and rt built dwellings of the husbandman re Prout made his brown-ink and reed "dotted and blotted sketches?" Piranesi, doubt, and Rembrandt, too, with such ies as his "Mill," had extended influences, Cotman and others, towards a truer eciation of the higher forms of architectural resqueness, and Piranesi's Baroque com- ions told in an imaginative direction. *Beauties of England*, edited by Britton illustrated by Prout, filled a mission in way I have indicated, at a time when forefathers displayed an intense ignorance chitecture. Wood, of Bath, and Le Roy, aris, exemplified the spirit of refinement esign which found expression in France he buildings designed by Gabriel, also in lon and Edinburgh by Robert Adam, the tasteful architect of his day, but his ner, for varied reasons, failed to find y imitators. The Adelphi Adams were nsively engaged at the time by the lity, and by speculating, too, on their own unt. Thus they enjoyed opportunities ed to Stuart and Revett, while Joseph omi only had a restricted practice in h his skill was always manifest. Thomas rton did more, and was associated with lay-out of London squares. Sir John e, the master of commonplace Greek, and essor at the Academy, designed a scheme he House of Lords, was much in favour, ed the Bank of England, and left a most llent museum. John Gandon, pupil to Wm. Chambers, displayed a much higher city when he won the competition and the Custom House and Four Courts at lin. The expiring embers of the XVIIIth ury had not been extinguished without a lden flash of the Baroque, the Rococo ing concert with the vagaries of the amentalists, who fancied architecture isted of so much applied enrichment more ess. They published pattern books, and ing inspiration from Peking, also intro- d red lacquer work for furniture and rations. For portable pieces some of work is very charming, and certainly the ese wall-papers imported at this time most beautiful, brilliant, and durable. Chinese room at Blickling Hall is an mple in point.

he culminating extravagancies of George were encouraged by John Nash when ding the Regent's plaster fabricated Palace known as the Royal Pavilion, Brighton. This vogue for extraordinary diversions was thus exploited, but it was not all vulgar, and many of the appointments in glass, both in form and colour, were most clever; also the grotesque gilded carvings in this seaside palace were in their way excellent.

It strikes one, in reading about the blatant etiquette and expensive social comedy of Court life in Europe then, how incongruous the common conveniences of their everyday doings were, and their total disregard of the most elementary requirements of sanitation. The recognition of light and air was equally unthought of in the frosty upholstered, unventilated, pretentious dwellings of society, with their *bric-à-brac* better suited to the inventory of a stage wardrobe, though they exhibit the taste of their day. No doubt, some of the more stately dwellings, such as the Bishop of London's mansion in St. James's-square, are marked by architectural refinement of plan; and S. P. Cockerell, its architect, was a most cultured man. A few West-end residences of the same decade show the same distinction, but there was a prosaic order and colourless proportion about these decorous façades. James Wyatt, who acquired a big fortune, flattered by Walpole for his Gothic work, following up the Græco-Italian style, designed the "Pantheon" in Oxford-street; and Wyatville, R.A., invested, midst Edwardian surroundings, the incongruities of the Empire style at Windsor. His diploma drawing at Burlington House, showing a bird's-eye outlined view in Bistre of a mansion for the Earl of Yarborough, dated 1826, is no mean performance. W. Wilkins, R.A., built the National Gallery in 1832, and the British Museum, by Sir Robert Smirke, was commenced in 1823. John Dobson, of Newcastle-on-Tyne, erected the famous station there and laid out the town for Thomas Grainger. Dobson, by the way, was the first architect allowed to exhibit a coloured drawing at the Royal Academy. Up to 1815 architects had to be content with black-and-white drawings. Whatever niche may be accorded to Sir John Soane in Architectural History, he will not be best remembered by the box-like galleried tabernacles which he put up. St. Peter's, Walworth, filled him with such pride that he reproduced it later at Holy Trinity, Marylebone. The church was one of his best, and Walworth in 1824, when it was built, ranked as a fashionable suburb for the residences of merchants. St. Pancras parish church, by the Inwoods in 1822, famous for its Greek style of course, leaves Soane miles behind; but then St. Pancras church cost 100,000*l*., and Marylebone church cost nearly as much. University College, Gower-street, by W. Wilkins, dates from 1827.

Two years later the Travellers' Club displayed a remarkable departure by Sir Charles Barry, who had then returned from Italy fully impressed with the Farnese Palace, and Wolfe, a pupil of Gwilt, had systematised his method of study, inducing him to forego his fancy for Egyptian hieroglyphics covering mural surfaces with enrichments. Thus inspired from Italy, Barry also designed the Reform Club in 1837, and Bridgwater House in 1847. His early taste for redundant ornament reasserted itself in Barry's Gothic work. Liverpool was ennobled by the building of St. George's Hall, H. L. Elmes, a pupil of his father, being its architect, who died early. By his last wish Professor Cockerell finished the building. Cockerell, foremost as a brilliant "scholar architect" and exponent of the higher school of theoretical classic, erected the Taylorian Building at Oxford. George Basevi carried out the structural shell of the noble Fitzwilliam Museum at Cambridge, and laid out Belgrave-square. Hyde Park screen witnesses to the refinement of Decimus Burton, the architect of the Athenæum and United Service Clubs, Pall Mall. Sir William Tite commenced the Royal Exchange in 1844, which, it is said, owned a natural parent not recorded in the register. The west side of Somerset House was added a little earlier by Sir James Pennethorne. A considerable influence on façade treatment about this time was due to stucco, one of the most useful and ancient of materials; but cements are modern, and to what base uses have they not been put? It may be useful to give a date or two. Coade's patent stone dressings were used in 1771 by Leverton in Bedford-square. Robert Adam employed Liardet's cement for external ornamental work both in Fitzroy-square and the Adelphi. Parker patented Roman cement in 1796. Portland cement, invented by a bricklayer named Aspdin, was patented in 1824, and Keen's cement was patented in 1838. Nash is accorded the credit of having introduced the "stucco style" by his quadrant and building of Regent-street. Patent selenitic cement was invented by General Scott, 1870. There is also another practical matter which cannot well be omitted, and it may be mentioned here. However, at the moment I should like to point a moral as to *esprit de corps* by saying that Wyatville, a much-maligned man, merits our respect as an examplar, because when the tipsy Regent wanted to get rid of Nash as architect of Buckingham Palace by electing Wyatville in his place, the good man declined to supplant a brother architect even at a Royal "command." I have known architects who might still learn a lesson from the disparaged Wyatville.

The Gothic revival was a tangential departure, and not an evolution by which in imperceptible degrees one style grew out of another. The result was chaos, and it would be difficult to decide as to when and to whom emancipation was due. A certain class of progressive antiquarians even now assure us that darkness prevailed till the advent of the pre-Raphaelites. Others date our Renaissance from the birth of the Arts and Crafts Society, fortified by the archæological cave-dwellers of the anti-restorationist crusade. We might perhaps be more convincing to them if we spoke slightingly of "the so-called Gothic revival" which was brought about after Prout had touched the heart of the public and unsealed its eyes to the picturesque. Pugin, with his doubtful analogies, and Ruskin, with his false taste for Naturalesque sculpture in ornament, had at least instructed and roused public opinion. The educated classes were thus prepared to co-operate, and architects, to make themselves fit, measured details and studied mouldings, but somehow missed the inspirations of the mediæval soul, as they borrowed fragments which became lifeless and uninteresting.

Barry and Pugin.

When the Government advertised the Houses of Parliament competition in 1835 the conditions prescribed "Elizabethan or Gothic." Four premiums of 500*l*. each were offered, and ninety-seven competitors sent in plans. Charles Barry won the prize, and was forty years of age when King William IV. confirmed the award of the Commissioners and elected him architect early in 1836. The Classicists fought against the verdict, and Welby Pugin, who had not competed in his own name, plunged into the subsequent fray with all the ardour of his enthusiastic temper. Barry and Pugin had previously co-operated when King Edward's School at Birmingham was built in 1833, and it was in that building that Barry discovered Thomas, the stone-carver who carried out so much of the work at Westminster. The controversy as to how far Welby Pugin was the author of the Houses of Parliament ended, as it had begun, in the conclusion that the general conception and magnificent lay-out of the plan belonged to Barry, and that Pugin detailed it. The foundation-stone was laid in 1839, and it is evident that Barry's love for Egyptian surface enrichment favoured Pugin's encrustation, so to speak, of the façades with endless florid detail. The conception of the scheme is eminently classic in its distribution, which shows Barry's personal predilections for balanced symmetry. The Birmingham school just named precisely illustrated the same combination of authorship.

Everyone knows what an excellent draughtsman Welby Pugin was, but those who are not familiar with the drawing in Ferrey's "Life" of this great architect may not remember that at so early an age as thirteen Pugin made a first rate sketch of Christ Church Priory, realising the architecture of that remarkable building fully expressed. A bird's-eye of his church and convent at Ramsgate is included in the Phené Spiers's collection of historic drawings hung in the Victoria and Albert Museum.

While Pugin was busy in 1837 with the drawings of the new Palace at Westminster,

"in the composition of the river front," the centre wings and tower, he was engaged in erecting St. Mary's College, Oscott, and Scarisbrick Hall. Simultaneous entries in his diary show this beyond question. His first church was St. Mary's, at Derby. Talbot Bury and Benjamin Ferrey I knew, and having worked with Pugin for Barry, they all three gave Sir Charles the full credit for his design as a whole. The work carried out all over the United Kingdom by Welby Pugin stands as his best evidence of his claims, as at St. Gregory's Priory, Downside, the cathedral-like church near Hereford, and St. Chad's, Birmingham. Three churches at Liverpool, more at Manchester, Leicester, Cambridge, and St. Giles's, Cheadle, which for its size was the most costly of them all. Killarney and Newcastle show others. Lord Dunraven's seat at Kildare in Ireland, and Bilton Grange, Warwick, his domestic work. The Pugin Travelling Studentship, founded by subscription at the R.I.B.A., was first held in 1865 by Mr. Tavenor Perry, who built part of the Hotel Cecil, facing the Embankment.

Sir George Gilbert Scott.

Sir George Gilbert Scott, at the outset of his career, erected many workhouses and such-like buildings, and other Gothic celebrities, like S. W. Dawkes, who had erected Colney Hatch, and Benjamin Ferrey, who built Dorset County Hospital in 1839 Scott was articled to Edmeston in 1827, and in 1834 helped Kempthorne, an expert in workhouse projects, after serving a time with the builders, Peto and Grissell. Scott's connexion with Moffatt began in 1835, after which the firm went in seriously for Poor Law enterprises, and carried competitions before them with businesslike foresight in such a way as to obscure some other considerations. Influenced by Storer's "Cathedrals," which came out in 1814-19, Scott turned his attention subsequently to mediæval work, and the Cambridge Camden Society woke up matters in favour of ecclesiology, which was inspired largely by Pugin. Curious to relate, Gilbert Scott obtained his first church, St. Mary's, Stafford, through his connexion with the Poor Law Commissioners. He had realised the shortcomings of the Gothic church at Windsor, built in 1822 by C. Hollis. This building was remodelled by Teulon in 1869 internally.

Scott characteristically went in to win, and so adopted a popular style, as at St. Mary's, Wakefield, and he won much favour by his capable church of St. Giles at Camberwell (1841), also by securing by competition Hamburg Cathedral in 1844, on which design he had the help of Coe and Street. The Camden Society, being more liturgical, advocated Butterfield and R. Carpenter. Churchmen looked askance at Scott's partnership methods with Moffatt, which connexion was concluded in 1845. Scott obtained the surveyorship of Westminster Abbey when Blore retired in 1849. The Chapter House was restored by Scott, who built the new north portals. The upper part of this transept façade was the beautiful design of J. L. Pearson.

In 1853, Scott built the much-talked-of church at Doncaster, when E. B. Denison, afterwards known as Sir Edmund Beckett, and subsequently Lord Grimthorpe, acted as candid friend, giving Scott much to interfere with his devotional exercises. The west window, erected years afterwards by Grimthorpe at St. Alban's Abbey, with an arched sill added, was based on Scott's Doncaster design, which Denison twitted Scott for borrowing from elsewhere.

The competition for the Foreign and Colonial Offices in Whitehall was taken part in by 218 other architects, and I have already mentioned how Scott was chosen, and how he was served, but I did not say that Sir Digby Wyatt's work was confined to the interior of the India Office, the contrivance of some rooms badly fitting the exterior, but much of his ornament is extremely clever. It is impossible in a paper of this kind to do justice to such a personality as Sir Gilbert Scott. His work was enormous, and his capabilities such as would have made him distinguished in any age.

The Architectural Museum.

Sir Gilbert Scott founded the Architectural Museum in 1851. It originated in the sale of Cottingham's Collection and was based on Bruce Allen's idea of a school of applied art for workmen. Street and Butterfield did not encourage the project, but Alfred Waterhouse and Mr. Norman Shaw always supported it. Scott engaged Gerente, of Paris, to get together a vast number of fine casts from France. Sir Bartle Frere gave a splendid collection of marble reliefs from India, Ruskin added more carved treasures, also his Venetian collection. Joseph Clarke, Ewan Christian, and J. P. Seddon proved its best friends. A wharf was rented in Cannon-row, and here the Earl de Grey presided in the cockloft while Ruskin lectured and Bereford Hope found the ways and means. The casts were removed to South Kensington, then in its embryo stage, under Henry Cole; but the museum casts were too much absorbed by the larger assemblage, and so later they were brought back to Westminster, where in Tufton-street the Museum quarters had been erected by Ewan Christian and Joseph Clarke as hon. architects. To provide a home for the Architectural Association day and evening schools in 1902, I proposed, and, with the concurrence of the Museum Council and subscribers, brought about the free gift of our buildings and their contents, subject only to one condition, viz.: "that the Architectural Museum should be maintained for the free use of the public as heretofore for ever."

Having referred to the professional societies of architects, to the 1851 Exhibition, and the work of Paxton, and Sir Henry Cole, the lecturer dealt with William Butterfield, J. L. Pearson, James Brooks, G. F. Bodley, and others.

William Burges.

As to William Burges, the lecturer said:

"William Burges I also knew personally. His wonderful house at Melbury-road is worthy, like the Musée Plantin, Antwerp, of belonging to the nation. It is incomparably more interesting than Lord Leighton's house, of which so much has been said, though no doubt the Arab Hall, with its old Moorish tiles, is very beautiful and interesting. William Burges joined H. Clutton in a competition for Lille Cathedral in 1856, which they won. Street took the second prize, and he said Burges was so familiar with French prejudice that he had taken the precaution to use French paper, and, as Street thought, thereby obtained undue advantage. The drawings anyhow were so quaintly executed that Viollet-le-Duc at first believed, when he visited the competition, that Burges's drawings were some old ones of the XIIIth century, till he discovered "Whatman's" water-mark in the paper. Either Street or Viollet-le-Duc was wrong. The church at Lille is a wretched building, boiled down from Burges's and Street's designs, and erected by a local man named Leroy, Burges and Clutton having been got rid of. The designs of William Burges were always thorough, including the most minute detail. His design for the Law Courts was architecturally by far the best. The scheme which he made for decorating St. Paul's Cathedral by a veneer of marble was shown at the Royal Academy in 1873. Burges's design for Edinburgh Cathedral would grace any period of art. E. W. Godwin, F.S.A., like his personal friend, William Burges, imported French Gothic mannerisms, and exercised a great influence on his fellows, though considering his genius, Godwin's career individually was largely a failure due to his own personal shortcomings. Congleton and Northampton Town Halls, Dromore Castle and Glenbigh Towers, some work at Canons Ashby for the Marquis of Northampton are his designs. He won the first competition for the Town Hall at Leicester and built Whistler's house at Chelsea, and others at Bedford Park. Godwin created a style of his own, and took up Japanese art with ability. As a writer of literary accomplishment and as an authority on costume and dramatic staging he was unsurpassed.

George Edmund Street.

George Edmund Street, R.A., the builder of the Law Courts, was in every sense a great architect. Bristol and Christ Church Cathedrals were partly rebuilt by him, and, he told me that when the Dublin work was in hand a detail for the entrance arch was asked for. He drew it out on the spot, size. As the structure proceeded a fragm of the old arch was subsequently found wh proved to be identical with the profile he supplied, so scholarly was Street's kn ledge. His design for Edinburgh Cathe was an excellent performance, a rem which applies to his fine churches at Kenn ton, Paddington, Eastbourne, Clif Bournemouth, and Oxford, also St. Jar the Less, Westminster, and the convent East Grinstead. Like Barry and Sc Street was buried in Westminster Abb Bodley designed the brass over the grave.

Domestic Work.

The lecturer then referred to some re and present church architects, and to c buildings of recent times and their archite Proceeding, he said:—

"English and Scotch Domestic work exceeded in merit all foreign competit and it bids fair to reach a more gen application as men learn to omit sense detail and elaboration, depending inst more on outline and good proportion; the Gothic spirit must be retained to k it virile and adapted to modern requirem and domestic comfort.

The introduction of ferro-concrete c struction and the facility of transport materials as well as the introduction specialists' building appliances have not c quite revolutionised the contracting tra but settled for ever the influence of l materials on work in different parts of land. Curiously enough it is the me politan architect who now is most kee anxious to retain indigenous modes and revive traditional local styles should he employed where any once obtained. native architect, as a rule, perhaps to imp what he does with what may pass as be up to date in style, emulates what he assu to be the last phase of fashion in town illustrated in the professional journ This is a matter of keen regret. A hund years ago architects were often builders well. The Brothers Adam, like many prominent architects, undertook to prov completed buildings. Now, architects hav increased in numbers beyond all hope lucrative employment, too much work is be expensively handled wholesale by munici trading schemes on the one hand and emporium furnishing firms or stores und taking architectural work on the oth Registration is being pressed forward a remedy. It may help the practitioner e if it does not improve architecture as an for that depends upon the artist, whose s is a matter of birthright and not le enactment.

Restoration.

No retrospect of the past century reasonably be complete without some ref ence to the vexed question of restorati which with all its disastrous results, carried out in the earlier Victorian per with far too big a letter R; it destro much that was historically valuable artistically beautiful by well-meaning ent siasts who scraped and spoiled many a no building at enormous expense without rec nising the value of architecture and her ha maidens in craftsmanship. We are all agr about that, and now, let us hope, no capa architect would do anything of the sort deplore. The pity is that the Protection so seldom do anything to preserve a build from thoughtless neglect, and in their g to prevent an architect from touching an church to make it more fit for contempor worship, they forget that rack and ruin going on elsewhere unheeded, and no eff made to save and upkeep all kinds of e more valuable remains, which, if left alo will soon remain no longer."

THE ROAD BOARD.

During the months of January, Februa and March, 1912, the Road Board, with approval of the Treasury, have m advances amounting to 88,992*l.* from Road Improvement Fund to county coun and other highway authorities. The Boa have also intimated that they are prepa to contribute, subject to the approval the Treasury, 875,000*l.* towards the constr tion of a new western approach road London.

TTAGES AT ST. HELENS, HASTINGS.

is building occupies an elevated and ed position overlooking Hastings and the The southern aspect and view has ly governed its general disposition. The gements are dictated by rather unusual rements. Although planned as two ges, they communicate on the first floor are technically one building; but the ing wall has been taken up through the in deference to the wish of the local orities. The materials are a local clamp of rough texture, varying in colour, but icing a general effect of a low-toned red, with red-brick arches and green . The cost, not including garden ning wall and slips, was 568*l*. The ers are Messrs. J. Lester & Sons, of ings, and the architect is Mr. A. R. nett.



Cottages at St. Helens, Hastings.
Mr. A. R. Jemmett, F.R.I.B.A., Architect.

THE OCIETY OF ARCHITECTS.

a meeting of the Society of Architects, on Thursday, April 11, a paper, entitled es on Some Principles of Professional ice and Suggestions for a Code of Ethics," ead by Mr. C. McArthur Butler, F.C.I.S., tary of the Society. In the course of his rks he said:—

propose in the first instance to make a reference to the practice and custom pre- g in other professions, then to consider is being done by architectural bodies, quently making a reference to some of the principles which it appears to me should n architectural practice, finishing with suggestions for procedure and for the of a schedule of practice and a code of

Custom in Other Professions.

eed only refer in passing to the professional ette prevailing in such professions as those y and medicine, the code applying to the being probably one of the most stringent, ich so that from a perusal of letters in the e Press one is led to think that the line sometimes be drawn to an extent which appear to amount to an injustice in n cases.

Among the numerous institutions representing the engineering, surveying, and allied professions in the United Kingdom the only one, so far as I am aware, which has a code of ethics as well as by-laws is the Institution of Civil Engineers, whose procedure in this respect is being closely followed by the Institution of Electrical Engineers and by the newly-formed Association of Consulting Engineers.

I understand that the American engineering institutes adopt similar methods.

The opinion has been expressed that in some cases, such, for instance, where an institution is called upon to act in a judicial capacity in dealing with complaints regarding professional etiquette or misconduct, a code might limit and hamper that institution in the performance of these duties, but the general feeling appears to be in favour of a code.

The Attitude of Architectural Societies.

We will now consider the custom is regard to architectural societies, noting first colonial and continental practice.

The American Institute of Architects offers to its members advice relating to the principles of professional practice and puts forward a canon of ethics.

The architectural institutions of Australia are co-operating in compiling a code, while the one issued by the Central Society of French Architects has, I understand, been adopted by other French architectural societies.

In South Africa similar measures are being adopted by the various associations of architects, and in Canada the Royal Architectural Institute of Canada and other associations of architects, which are rapidly springing up in that progressive Dominion, have each their code of ethics, administered in most instances. I believe, under an Act of Parliament.

Architecture is one of the few, if not the only one of the great professions, the practice of which at home is not regulated by Act of Parliament, and probably it is the only one which is split up into so many institutions and societies, all having very much the same general aim. There are, for instance in London the Royal Institute of British Architects, the Society of Architects, and the Architectural Association, and in the provinces there are seventeen architectural societies allied to the Royal Institute, besides several at present unattached and others in course of formation. All these societies have by-laws which enable them to deal with specific charges against their members, and in most cases a member on joining has to sign a declaration against illicit commissions as well as an undertaking to keep the regulations.

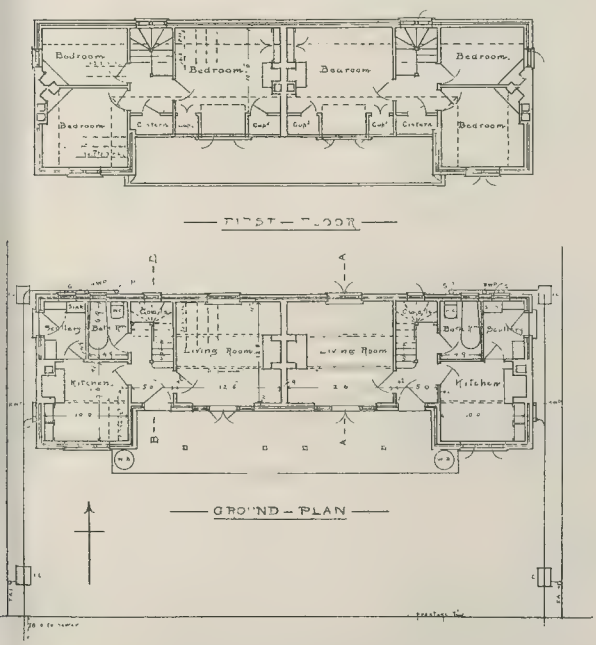
The allied societies, as one would expect, are practically in every case governed by the general practice of the R.I.B.A. as contained in the resolutions published in their *Kalendar*. These relate to the signing of buildings and display of names by architects, the making known to the client of the architect's interest in materials or devices used on buildings, the question of supplanting other architects, and the payment for the quantities by the client (a matter dealt with in the schedule of charges), and also include the recent regulation relating to participation in architectural competitions.

The Effect on the Profession.

Thus we find the architectural profession as a whole at present without any generally and publicly recognised schedule of the principles to be observed in practice, no publicly recognised competition regulations, no publicly recognised scale of charges, and no publicly recognised penal code, the regulations which are at present in force, excepting the one relating to competitions, being more in the nature of expressions of opinion and relying upon custom for their enforcement—so far at any rate as they relate to unattached architects.

Each member of the profession may set his own standard and is not amenable to any discipline beyond that implied in his voluntary obligation in respect of the rules of any professional body to which he may belong, which are usually confined, as previously stated, to a declaration against illicit commissions (now probably rendered unnecessary by Act of Parliament) and an undertaking to keep the rules, the most important of which, in the opinion of the member concerned, is probably that relating to the payment of dues.

In the rare cases, if any, where action has



Cottages at St. Helens, Hastings.
Mr. A. R. Jemmett, F.R.I.B.A., Architect.

been taken by an institution not acting under statutory powers against a member for unprofessional conduct removal from the roll of such institution on this ground, so far as the public or even the profession beyond those immediately connected with the case is concerned, has no more effect than if such removal was due to the relatively milder breach of the rules relating to the payment of the fees, seeing that the reason of the removal of the offender from the register is not made public, nor is he thereby debarred from continuing to practice.

The unattached architect, whose name is legion, has not even this deterrent, and is under no control within the limits of professional matters.

Suggestions for a Remedy.

This state of things can be remedied to some extent, and at present, so far as architectural societies are concerned, by the universal adoption by them of a schedule of principles and a penal code; but the unattached architect still remains uncontrolled, and, in my opinion, the only effective way of dealing with the whole matter is by statutory powers such as would be provided under a Registration Act.

Is it desirable under these circumstances that a schedule of practice and a code of ethics should be instituted for the architectural profession, and, if so, on what basis should the latter be drafted, bearing in mind the fact that architectural societies reserve to themselves power to regulate, if only to some limited extent and on certain points, the conduct of their members, and that it would appear that by laying down wider regulations they might possibly be hampered when dealing in a judicial capacity with these matters?

In my opinion, the desirability in principle for a schedule of principles of practice and a code of ethics is admitted, and that what is good for the societies concerned may be held to be good for the profession generally.

Here, however, we are faced at once with the difficulty already referred to, of dealing with that considerable body of architects outside any architectural society, who possibly could not be expected, and certainly could not be obliged to adhere to any general schedule or code, nor against whom could such a code be enforced in the absence of any controlling body representing the whole of the profession and vested with statutory powers.

A Board of Professional Control.

In the absence of, or in the anticipation of, such a controlling body as would be constituted under a Registration Act, I suggest the immediate formation by agreement between the architectural societies, of a board of professional control, representing every architectural society in the United Kingdom in such proportion as may be arranged.

By this means pressure could be brought to bear both on public bodies and members of the profession much more efficiently than under the present system, while it would be very difficult and highly undesirable for even the unattached architect to ignore the fiat of a body so constituted; indeed, in my opinion, one effect of the formation of such a body would be to encourage those outside to come into one or other of the Societies.

In other words, there would be unity of action and cohesion where there now exists weakness and impotency, and as, in my opinion, everything points to unity being presently secured under a Registration Act, I think we may well in the meantime lay down certain principles of practice and be prepared with a code of ethics acceptable to the various societies, with a view to general adoption now and their incorporation in an Act of Parliament in due time.

Essential Qualifications for the Practice of Architecture.

From a perusal and comparison of the various codes in use amongst architectural societies at home and abroad I have found them to be very much alike; and in regard to setting out the principles of professional practice I consider that the circular issued by the American Institute of Architects, which offers advice relating to professional practice, can hardly be improved upon in seeking to maintain a high standard of practice and conduct on the part of members of the profession as a safeguard of the important financial, technical, and æsthetic interests entrusted to them.

The profession of architecture, as the American Institute truly says, calls for men of the highest integrity, business capacity, and artistic ability. The architect is entrusted with financial undertakings in which his honesty of purpose must be above suspicion; he acts as professional adviser to his client, and his advice must be absolutely disinterested; he is charged with the exercise of judicial functions as between client and contractor, and must act with entire impartiality; he has moral responsibilities to his professional associates and subordinates; finally, he is engaged in a profession which carries with it a grave responsibility to the public. These duties and responsibilities cannot be properly discharged unless his motive, conduct, and ability are such as to command respect and confidence.

I am of the opinion that if the architectural societies will take a wider view of their responsibilities to the profession, while not neglecting their own immediate concerns as societies, and work together, by means such as I have indicated, on all matters of general interest to the profession or the public, they can even under present conditions do an enormous amount of good in the direction of maintaining a high professional standard and consequently in raising and maintaining the whole tone and standing of the profession and of the art in the estimation of the public.

No set of rules can be framed to include all the duties of the architect in his various relations to his clients, to contractors, to his professional brethren, and to the public, but the following may be enumerated as some of the main principles which should govern the conduct of members of the profession, and may serve as a guide in circumstances other than those enumerated.

Suggestions for a Code of Ethics, the Violation of any Items of which should Constitute Unprofessional Conduct.

The following items are suggested as a guide, but their enumeration should not be construed as a denial of the existence of others equally important, and just as the several items indicate offences of varying degress of gravity so the penalty for infringement would involve warning, reprimand, expulsion, or such other punishment as the board of professional control may at the time decide.

It is unprofessional for an architect—

(1) To engage directly or indirectly in any of the building trades, except as owner.

(2) To guarantee an estimate or contract by bond or otherwise.

(3) To accept any commission or substantial service from a contractor or from any interested party other than the client.

(4) To advertise.

(5) To take part in any competition the terms of which are not in harmony with the principles approved by the board of professional control.

(6) To attempt in any way except as a duly authorised competitor to secure work for which a competition is in progress.

(7) To attempt to influence either directly or indirectly the award of a competition in which he is a competitor or in which he is interested in any other capacity.

(8) To accept the commission to do the work, either personally or by partnership, for which a competition has been instituted if he has acted in an advisory capacity either in drawing up the programme or in making the award.

(9) To injure falsely or maliciously, directly or indirectly, the professional reputation, prospects, or business of a fellow-architect.

(10) To undertake a commission while the claim for compensation or damage, or both, of an architect previously employed and whose claim has been referred to arbitration, or issue has been joined at law, or unless the architect previously employed neglects to press his claim legally.

(11) To attempt to supplant a fellow architect after definite steps have been taken toward his employment.

(12) To compete knowingly with a fellow architect for employment on the basis of professional charges.

(13) To criticise in public print the professional work or conduct of another except over his own name.

(14) To deviate from the scale of charges without permission of the board of professional control.

General Observations.

There are five points in particular arising out of the proposed schedule of practice and code of ethics to which I would call attention—(*a*) The ownership of drawings; (*b*) scale of charges; (*c*) advertising; (*d*) competitions; (*e*) architectural societies; (*f*) public authorities.

In regard to (*a*), the ownership of drawings. The fact that an architect can be called upon to deliver up to a client all drawings and documents on completion of the work and payment of fees, in the absence of any express agreement to the contrary, renders it desirable in my opinion to consider the question of endeavouring to get the decision in "Gibbon *v.* Pease" reversed, and in the meantime, in works of any importance, for the architect to arrange procedure with the client previously.

In regard to (*b*), the scale of charges. The fact that the only authority and recognition which this scale has is based on custom renders it desirable, in my opinion, from this point of view to hasten an Act of Parliament under which such a scale would be legalised. On the question of the scale generally, I am of opinion that in the architectural profession payment by commission on the cost of the building is wrong in principle if not immoral, as it is exceedingly difficult to get away from the fact that the architect benefits materially in proportion to the amount spent by the client, though he may and does in the interest of his client make every endeavour to keep within the limit laid down.

The architect should not, in my opinion, be placed in a position where it may be inferred that his personal interests are likely to clash with those of his client.

Again, a minimum scale is not unlikely to be considered or to become a maximum one also.

I have no practical proposal to make at present for the redrafting of the scale as it now exists; but it has been suggested to me, why have a scale at all, why should not architects like other artists, adjust their charges in accordance with what they can command for their services?

In regard to (*c*), advertising. It all depends on the interpretation and definition of the term which, I take it, is intended to mean when applied to architects that they should not employ commercial methods of making themselves and their work known to the public—that is to say, by direct advertising."

[The other points arising out of the proposed schedule—*i.e.* (*d*), (*e*), and (*f*)—were also briefly dealt with by Mr. Butler.]

THE STATUTORY REGISTRATION OF ARCHITECTS.

The President of the Society of Architects, Mr. George E. Bond, J.P., has issued the following statement on "The Statutory Registration of Architects—The Society of Architects and the Royal Institute of British Architects: The Present Position and Future Programme of the Society and the Policy of its Council":—

"It is apparent from the communications I am constantly receiving from members of the profession that there exists a considerable amount of misunderstanding both in regard to the present position of the Society and the probable future action of its Council in reference to the above and other matters. Under these circumstances I think it desirable to make the following statement:—

As a result of negotiations between representatives of the Councils of the Royal Institute and of the Society, extending over fifteen months, certain proposals for the fusion of the Society with the Royal Institute and the promotion of a Registration Bill were agreed to, but on the scheme being submitted to a general meeting of the members of the Royal Institute on January 8 last the proposals were referred back to the Council of that body for further consideration.

The members of the Society have consequently not yet been called upon to express their opinion on the above proposals by voting; but they have severely and adversely criticised them by correspondence, more particularly with regard to the question and terms of the fusion of the two bodies. The opponents of the scheme on both sides claim that too much was to be conceded for the little to be obtained in return.

The Position of the Royal Institute.

The position of the Royal Institute is that it is pledged to Registration, and its Council have appointed a Committee to consider the matter in view of the situation created by the reference back to them of the proposals above mentioned.

The Position of the Society.

The position of the Society is exactly what was before—that is to say, it is pledged, as ways, to Registration, but not to any urse of action therein with the Royal stitute, and the Council of the Society will t initiate further steps in regard to the ion of the Society with the Royal Institute, ough they will be prepared to favourably nsider and discuss any reasonable proposition regard to the subject which may be sub-tted to them by the Council of the Royal stitute.

Registration.

n regard to Registration, a new situation has sen. The Society of Architects has been the neer in this movement for considerably over uarter of a century, and when the Council the Royal Institute adopted a Registration icy this enabled negotiations to be opened h them with a view to the promotion of a nt Bill.

n the early stages of the discussion it became parent that with regard to one of the main nts of the proposed Bill my colleagues and as representing an independent architectural ly, could not possibly agree with the view forward by the representatives of the Royal titute, and, as they were equally determined to accept ours, the question of amalgama-n was suggested to us as a way out of the iculty: for both parties recognised, as all ughtful persons must, that in the present gested state of public business in Parliament ontentious Bill would not have the least nce of reaching a Second Reading; and that her party could hope under these conditions pass a Bill through Parliament unless there unity of action.

s, however, the Council of the Society of hitects have laid down in the proposals for fusion of the two bodies the minimum ch they can recommend their members to ept, and as these proposals have been erely criticised by the members concerned, would seem unlikely that further progress be made in this direction, but there remains alternative of continuing the negotiations n regard to a joint Registration Bill; and are prepared and indeed desirous of con-ing them, hoping thereby to establish that y of action which is essential in that case uccess.

he opinion has been very freely expressed many influential members of both bodies t in order to secure the passage of a Bill ch will protect the interests of all practising nbers of the profession, and not merely se belonging to one institution, it is an ntial condition that the Society of Architects l continue its existence as a powerful pendent body.

may here state that at the time the otiations with the Royal Institute were first ned the Council of the Society had formu-d a certain course of action in regard to the oduction of the Society's Registration Bill Parliament, and the machinery which then ted is still available, and should it even-ly be found impossible to make progress any other way that machinery will be set notion. In other words, we are prepared, ecessary, to resume at any moment that re independent propaganda hitherto so easfully pursued, but which we temporarily ended in order to consider another means of ining the same end.

aving made clear the present position as veen the two bodies and the policy the Council of the Society in regard to Registration question, I would now call ntion to the fact that the work and rities of the Society in other directions being carried on exactly as before, with-reference to any matters pending between Councils of the Society and of the Royal itute.

arious schemes of the greatest importance he development of the Society and its work, h have been held in abeyance during the otiations referred to, have been resumed are being actively prosecuted. Among e may be mentioned the institution of a of ethics, the development of the students' on, and the introduction of graded examina-, involving the reorganisation of the ifying examination for membership, in nexion with which latter the Council are ously considering whether or not, at an date, admission to the Society in any shall be restricted to those who have ffied by examination.

Until further restrictions are imposed it is open to any qualified architect who can comply with the regulations to be nominated as a candidate for membership of the Society, and, on satisfying the Council of his eligibility and qualifications by production of evidence of the standard required in lieu of other examination, to be proposed for election.

Architects who are in sympathy with the proposals for Registration will appreciate the fact that the Society of Architects is the only architectural body which has made Registration one of its chief aims, and which is pledged to secure that end by one means or another; and it is on this account particularly that the Society has a claim to the support of all qualified architects, on whose behalf it has consistently and persistently advocated and upheld the principle of Registration for so many years, in the face very frequently of bitter opposition and misrepresentation.

The Society is a powerful and strongly established institution, with a total membership of nearly 1,200. It has its own premises and every facility and means for extending the scope of its operations and for the ultimate attainment of its principal object. It is incumbent on those who are with us in principle to be also with us in person, and I venture to express the hope that every eligible architect who possesses the necessary qualifications and is in sympathy with the aims of the Society will consider it his duty, apart from any personal advantages to be derived, to give to the Society that material and practical support which can only be evinced by joining its ranks and thus still further strengthening and consolidating its position and influence."

ARCHITECTURAL SOCIETIES.

The Royal Institute of the Architects of Ireland.

An ordinary Council meeting of this Institute was held on Monday last week at the Institute Rooms, No. 31, South Frederick-street, Dublin.

The Vice-President, Mr. R. Caulfeild Orpen, B.A., was in the chair. There were also present:—Messrs. C. H. Ashworth, P. L. Dickinson, L. O'Callaghan, J. H. Webb, G. C. Ashlin, W. Kaye-Parry, H. Allberry, A. G. C. Millar, G. P. Sheridan, and C. A. Owen, Hon. Secretary.

A considerable amount of correspondence was dealt with. The annual dinner was fixed for May 7, when his Excellency the Lord-Lieutenant of Ireland has promised to be present. The question of the best steps to be taken in order to have an architect assessor appointed to sit with the judge in building cases was referred to the Professional Practice Committee for report.

ENGINEERING SOCIETIES.

The Institution of Civil Engineers.

At a recent meeting of the Institution of Civil Engineers three papers were read on Glasgow Main Drainage Works, the following being abstracts:—

(1) "The Main Drainage of Glasgow," by Mr. A. B. McDonald and Mr. G. M. Taylor, MM.Inst.C.E. This paper commences with a retrospect of the many past endeavours to free the River Clyde from the pollution of the Glasgow sewage, going as far back as the year 1605. At this time the river was quite tideless and fordable in many places at Glasgow. Trade was insignificant, as seaborne traffic could reach the city only after transportage into small boats at Dumbarton. In 1662 the Town Council ordered a small quay to be built at the Broomielaw, and this was the commencement of the great transformation of the Clyde into one of busiest waterways in the United Kingdom.

In 1859, the late Mr. J. F. La Trobe Bateman, Past-President Inst.C.E., and the late Professor Anderson reported on the subject. Later reports were made by the late Sir Joseph Bazalgette, Past-President Inst.C.E., and the late Sir John Hawkshaw, Past-President Inst.C.E., and in 1878 Mr. Bateman again reported, but nothing was done, and the condition of the river became worse and worse.

Soon after this a Bill was deposited in Parliament for the construction of the Glasgow underground railway, which was projected in such a way as to dislocate the entire sewage system then in existence. The Corporation strongly opposed this measure, but eventually arrived at an agreement on obtaining from the promoters an undertaking that they would bear the expenses of reconstructing the sewers to the approval of the Council; and in conference with Sir Joseph Bazalgette a system was designed whereby the sewage of the north-eastern area was conveyed to Dalmarnock. The Corporation then engaged the late Mr. G. V. Alsing to design works for the purification of the sewage at Dalmarnock. The general arrangement of these works is at present as follows.

The sewage, amounting to an average daily flow of 18½ million gallons, is passed through vertical screens, and thence into two catchpits. The solids are removed from these pits by mechanical means. The sewage then flows into the pump-well, whence it is lifted by means of five centrifugal pumps into a mixing-pit, where the chemicals are added. The mixture is passed into precipitation-tanks, where the solids are allowed to settle. The tank-effluent passes direct into the river. The sludge from the precipitation-tanks is pumped into three storage-tanks, where it settles until about 50 per cent. of the top liquid can be drawn off. High-pressure rams then raise the sludge to the presses. About 247,000 tons of wet sludge are dealt with per annum.

The Dalmarnock works were regarded by the Corporation in the light of an experiment, and the results proved so satisfactory that it was resolved in 1895 to proceed on similar lines with works for dealing with the remainder of the City. Works were constructed at Dalmuir to deal with the north western part of the City, and at Shieldhall for the area lying south of the Clyde.

The process of purification at Dalmuir may be briefly summarised as follows:—The sewage, amounting to an average daily flow of thirty-six million gallons, passes through a screen chamber and thence into catchpits, where the heavier solids settle and are removed by means of a dredger. The chemicals are added to the catchpit, and the sewage then flows into one or other of eight precipitation-tanks, having a combined capacity of twelve million gallons. The sludge is pumped into an elevated tank, whence it flows by gravitation into the hold of the sludge-steamer. The steamer carries about 1,200 tons of sludge in closed tanks a distance of 40 miles from Dalmuir, and last year it dealt with over 300,000 tons of sludge.

The works designed for the treatment of the sewage of the southern district at Shieldhall deal with an average daily flow of twenty-three million gallons. They are to a large extent a repetition of those at Dalmuir. High and low level intercepting sewers have been constructed. The low-level sewage from the eastern part of this area is raised into the high-level sewers at the Kinning Park pumping-station, and the low-level sewage from the western half is raised to the works at Shieldhall.

Great difficulties were encountered in the construction of the works in the southern area. The sewers in many places were found to overlie coal workings of unrecorded date, necessitating a large amount of special construction in cast-iron segments. The erection of the Kinning Park pumping-station also proved a matter of great difficulty owing to the insecure nature of the substrata, which consisted mainly of silt, and at the purification works there was an abnormal amount of subsoil-water which rendered exceedingly difficult the construction of the deeper parts of the machinery buildings. These difficulties were overcome, and the whole of the works have been in successful operation since May, 1910.

The precipitation process adopted at all three works completely removes the suspended solids from the sewage, and effects a high degree of purification upon the liquid. In consequence, the condition of the Clyde has improved so much that in place of being a dead river it has returned to a live and satisfactory condition.

(2) "The Construction of the Glasgow Main-Drainage Works," by Mr. W. C. Easton, B.Sc., M.Inst.C.E. The Glasgow

Main-Drainage Works, as described in the previous paper, consist of three schemes. The two larger of these cost over two millions sterling, and the present paper deals with their construction, which covered the period from 1899 till 1910. Owing to the fact that, apart from sundry differences, the two schemes are similar, and that the construction of the second was not put in hand until an interval had elapsed after the completion of the first, there was naturally a great opportunity for developing the special ideas gained from the experience of the first in the construction of the second. The author consequently deals largely with a comparison between the methods employed.

Four leading developments in ideas obtained from the experience on the construction of the first were applied on the second, namely :—

(*a*) To standardise designs;

(*b*) To use tunnel in preference to open cutting, particularly if it involved the use of sheet-piling;

(*c*) To adopt longer drives and smaller sizes for tunnel;

(*d*) To take full advantage of the fact that the Glasgow Main Drainage staff was capable of executing the more difficult work without the aid of contractors

The more interesting portions of the works described are :—

The difficulties and expense incurred through the presence of old mineral workings. The most expensive case was where the cost of a 7-ft. sewer amounted to nearly 300*l.* per lineal yard.

The construction of the rising main, which affected its design considerably. Incidentally this work further illustrates the development of ideas already referred to.

An experiment in tunnelling in concrete segments, lined with brickwork.

The Kinning Park pumping-station provided the most difficult construction work on the schemes. This station is founded rather below the middle of a 44-ft. bed of running silt, closely surrounded by buildings and streets carrying tramways. The design—apart from the mechanical equipment—was entirely controlled by construction, and the whole station was a work which, from the difficulties of the site, gave the Glasgow Committee a great deal of anxiety. The five stages employed in the construction of the sub-structures are described; great care was taken in detail, such as the keeping of very close piling diaries. In an Appendix the measurement of the main work is given, priced on its actual cost to the Corporation, and amounting to about 37,000*l.*

Appendixes to the paper give an abstract of unusually thorough analyses of cost, made by the author on the instructions of the Town Clerk for Parliamentary purposes. The results show considerable economy effected by the developments in ideas applicable to the special conditions obtained from the experience of the western works. This economy was effected on the prices for the more difficult work, particularly where iron tunnel and air-pressure were used.

The opinion is expressed that the main factor in this result was the manner in which Glasgow used its Main Drainage staff in executing work without contractors. The author considers that this factor operated chiefly in a moral way, in making the staff leaders instead of directors. As the author had on these works over ten years' concurrent experience in the execution of work both with and without contractors, the paper concludes with some remarks on the general question of public bodies carrying out such work without contractors. The opinion is given that the factor of "youth" was one of the essentials.

Two deliberate, although somewhat paradoxical, conclusions are then stated on the general question, namely :—

(*a*) That, generally speaking, an attempt by a public body to create a department and carry out works without contractors is not likely to be attended with success.

(*b*) Under special circumstances such as those which ruled on the construction of the western and southern schemes of the Glasgow main-drainage works, the holding of a staff fit and ready at once to undertake, when called upon, the most difficult sections is an ideal method.

(3) "Glasgow Main Drainage: the Mechanical Equipment of the Western Works and of Kinning Park Pumping-Station," by Mr. D. H. Morton, M.Inst.C.E. This paper deals chiefly with the following items of the works :—The Partick pumping-station of the western works; the mechanical equipment of the Dalmuir purification works; the pumping-machinery for Clydebank drainage; and the overhead sludge tank at Dalmuir. The author also describes the mechanical equipment of the Kinning Park pumping-station.

At the ordinary meeting on the 2nd inst. new members and Associate members were elected. The elected members are Mr. J. M. Alexander, London-wall, E.C., and Mr. A. Don Swan, Montreal. The elected Associate members number seventy.

GENERAL NEWS.

The Royal Institute of British Architects.

The discussion of the papers on "The Newer Responsibilities of Architects," adjourned from the meeting of December 18 last, will be resumed at a meeting to be held on Monday, April 15, and a paper entitled "The R.I.B.A. Conditions of Contract: Some Points for Revision," will be read by Mr. A. Saxon Snell.

Art Union of London.

The Art Union of London, 112, Strand, publishes as its premium plate for 1912 an effective reproduction in colours, 23⅜ in. by 15⅜ in., after "Timber Haulers" by the late C. W. Furse, A.R.A. Subscribers of one guinea are entitled to a copy of the facsimile, with the chance of a prize at the Annual Drawing on April 30.

Old Sergeant's Inn.

The structure which has now been completed on the site of Old Sergeant's Inn will be known as Old Sergeant's-inn, and has been erected for the Law Union and Rock Insurance Company, who have this week removed their chief offices into the new building.

University College School of Architecture.

In the Annual Report of the University College Committee reference is made to developments in connexion with the School of Architecture. Better accommodation has been needed for many years, and the Senate, with financial help which fortunately came from an anonymous donor, were able to take up a scheme for the combination of the Schools of Architecture of University and King's Colleges. Professor Simpson is the architect of the new building. Mr. and Mrs. Baily's] gift of 1,000*l.* for the rearrangement and decoration of the south cloisters and cloak-rooms is noteworthy. During the last session certificates in architecture were awarded, and Dr. J. J. Burnet was appointed Architect-Visitor to the class of Advanced Academic Design.

The Royal Sanitary Institute.

The York Congress and Exhibition, 1912, will be held from July 29 to August 3. The lecture to the Congress will be by Professor Karl Pearson, M.A., LL.B., F.R.S., on "Eugenics and Public Health," and the popular lecture will be by Professor Henry R. Kenwood, M.B., D.P.H., F.R.S.E., on "The Open Window." The President of the engineering and architecture section is Mr. J. Walker Smith, M.Inst.C.E., Chief Engineering Inspector, Local Government Board for Scotland; the Recording Secretary, Mr. A. Saxon Snell, F.R.I.B.A., Southampton-buildings, Chancery-lane, W.C.; and the Local Secretary, Mr. H. E. Henderson, Lic.R.I.B.A., York. The set subject for discussion is entitled "Modification of the Model Building By-laws from the Rural Point of View," to be opened by Mr. Halsey Ricardo, F.R.I.B.A. (Rural Housing and Sanitation Association). A Conference of engineers and surveyors to county and other sanitary authorities will be presided over by Mr. A. D. Greatorex, M.Inst.C.E., Borough Engineer and Surveyor, West Bromwich, the Recording Secretary being Mr. J. S. Brodie, M.Inst.C.E., Borough Engineer, Blackpool, and the Local Secretaries: Mr. H. Smith, Assoc.M.Inst.C.E., Borough Surveyor, Scarborough, and Mr. C. Triffit, Assistant City Surveyor, York. Subjects to be discussed are :—"Housing and Town Planning Progress," to be opened by Mr. H. Gilbert Whyatt, Assoc.M.Inst.C.E., Borough Engineer and Surveyor, Grimsby; and "Sewage Disposal in Rural Districts," to be opened Mr. Ascough Rodwell, Surveyor, Skip Rural District Council.

Sewage Disposal, Llanwrst.

Mr. P. M. Crosthwaite, M.Inst.C.E., a Local Government Board Inquiry at L rwst recently into an application by Urban District Council to borrow 5,000*l.* purposes of sewerage and sewage dispo and also for the compulsory acquirement land for sewage disposal works. Harry W. Taylor, Assoc.M.Inst.C (Messrs. Taylor & Wallin), Newcastle-u Tyne and Birmingham, explained the posed works at the inquiry.

COMPETITION NEWS.

Port of London Offices.

In response to the competition annou in November last, inviting the submissio preliminary sketch designs for new H Offices for the Authority, 170 designs v received. The Authority, on the advice their assessor, Sir Aston Webb, C.B., R have selected the six designs sent in by following architects :—

Mr. Robert Atkinson, A.R.I.B.A., Mes J. A. Bowden & T. Wallis, Mr. Ed Cooper, F.R.I.B.A., Messrs. Lanchester Rickards, FF.R.I.B.A., Mr. J. Regi Truelove, Mr. Ernest W. Wray.

The authors of these designs will be inv to take part in the final competition, at honorarium of 200 guineas each. Authority do not propose to exercise the they reserved to themselves of invi designs from architects other than those took part in the preliminary competition.

Federal Capital City, Australia.

The names of the jury appointed to adjudi on the designs sent in for this competition given in a "Note" on p. 416.

The Weir Hospital, Balham.

The trustees of the Weir Charity, entru with the building of a hospital for the be of the inhabitants of Streatham and neighb hood, have selected from the designs submi in competition that of Mr. R. J. Thom F.R.I.B.A., of Wimbledon. The scheme been approved by the Charity Commissio and the work is to be proceeded with forthw A perspective view appears on p. 415.

Miners' Federation Hall, Bolton.

The first premiated design in this c petition is by Messrs. Bradshaw, Gass Hope, 19, Silverwell-street, Bolton. second premiated design is by Messrs. Sy & Evans, Salisbury-chambers, 7, Cha walks, Manchester. The third premi design is by Messrs. Thos. E. Smith & S Central-chambers, Fold-street, Bolton. designs are not to be exhibited. assessor was Mr. Jonathan Simp F.R.I.B.A.

FOREIGN AND COLONIAL.

Building in the Netherlands.

The following information is from the re by H.M. Consul at Amsterdam (Mr. W Churchill) on the trade of that district in which will shortly be issued :—

The building trade was active during and is expected to continue so during next two or three years; in fact there never before been so much building goin in Amsterdam at one time. A new S Exchange, large shops, offices, and reside buildings are in course of erection, and t is a project to build a new royal palace. activity will produce a demand for consi able quantities of building materials, furnit sanitary engineering, heating, and illumi ing appliances, etc.

Library Building and Fittings, Roumani

The *Nachrichten für Handel und Indu* (Berlin) of March 15 announces, on authority of the German Consul at Bucha that a building is to be erected at that p for a large public library. It will con book space for one million volumes, and acc modation for one hundred ordinary rea and thirty students. It is desired that building should be erected as soon as possi consequently, adds the Consul, no time wil lost in inviting tenders. The contract include heating, lighting, ventilation arra ments, etc.

DITORIAL SUMMARY.

ne leading article, "Patriotism in Architec-" is suggested by the discussion at the last ting of the Architectural Association, when ers on the subject were read by Mr. C. A. sey and Mr. Arthur Keen.

"Notes" Column (p. 416) will be found rvations on: "The Abuses of Advertise-ts"; "Street Accidents and Street Shel-"; "The Byzantine Revival"; "London versity Site"; "Federal Capital City, Aus-a."

meeting of the Architectural Association bined Camera, Sketch, and Debate Club held recently, when Mr. Alan Snow read a r, entitled "Neo-Grec?" An abstract ars on p. 417.

Architects from George IV. to George V." e title of a paper read before the Glasgow tute of Architects, an abstract of which ars on p. 418.

meeting of the Society of Architects was on Thursday, when the Secretary of the ety, Mr. C. McArthur Butler, F.C.I.S., read per on "Some Principles of Professional tice." An abstract appears on p. 421.

short article on "The Municipal Buildings nsion, Glasgow," is given on this page.

ne Monthly Illustrated Review of Construc-(p. 427) includes: "Some Ancient Brick es": "Reinforced Concrete in Great ain"; "Weston's Patent Wall Straight-"; and "Protective and Decorative llic Coatings."

ne Building Trade Section (p. 431) contains: ade Disputes and Colonial and Foreign slation"; "Trade Unions, 1908-10"; cal By-Laws"; "Railway and Canal ic": "Gas Power and Steam"; "Pro-d New Buildings in the Provinces"; "Applications under the London Building "

ook Notices (p. 434) include: "The Art of Romans"; "A History of the Church of Giles, Northampton"; "Technical Arith-e and Geometry."

"Legal Column" (p. 435) will be found rvations on: "What is Repair?" "Trade n Law."

Law Reports (p. 436) will be found the wing: "Simpson *v.* Wright"—Action nst a Contractor; "Dellar Bros. *v.* y"—an Appeal Case

MEETINGS.

FRIDAY, APRIL 12.

Institution of Civil Engineers.—Students' meeting. H. G. Hoskings on "Exminster Sewage Disposal s." 8 p.m.

SATURDAY, APRIL 13.

nburgh Architectural Association.—Visits to (1) rood Palace and Chapel; (2) Thistle Chapel.

MONDAY, APRIL 15.

Royal Institute of British Architects.—Resumed ssion on "The Newer Responsibilities of Archi-" and paper by Mr. A. Saxon Snell on "The R.I.B.A. itions of Contract: Some Points for Revision."

Architectural Association.—Mr. Lawrence Weaver, ., on "Some Scottish Houses of the Renaissance." .m.

Incorporated Clerks of Works' Association enters' Hall, London-wall). — The thirteenth l meeting. 7 p.m.

TUESDAY, APRIL 16.

Institution of Civil Engineers.—The Hon. Sir is J. E. Sprung, M.Inst.C.E., on "The Re-lling and Equipment of Madras Harbour," and Hugh Henry Gordon Mitchell, M.Inst.C.E., on Alteration in the Form of Madras Harbour."

Illuminating Engineering Society (at the Royal y of Arts, Adelphi, W.C.).—"The Lighting of Private s by Gas and Electricity," by Mr. W. H. Y. er and Mr. W. R. Rowlings. 8 p.m.

WEDNESDAY, APRIL 17.

Institution of Civil Engineers. - Students' visit e Constructional Steelworks of Messrs. Joseph wood & Co., Napier-yard, Millwall.

Royal Archæological Institute (at Burlington House).—Mr. Talfourd Ely, M.A., D.Litt., F.S.A., on "Excavations near West Marden and in Hayling Island," and Mr. Phillip Nelson, M.D., Ch.B., F.S.A., on "The XVth-Century Painted Glass in the Church of St. Michael, Ashton-under-Lyne." 4.30 p.m.

Edinburgh Architectural Association. 8 p.m.

Junior Institution of Engineers (at the Institution of Electrical Engineers, Victoria-embankment).—Paper on "The Lay-out and Erection of Electric Power Plant," by Mr. E. Kilburn Scott, M.Inst.E.E. 8 p.m.

Royal Society of Arts.—Mr. John Henry Coste, F.I.C., F.C.S., on "Municipal Chemistry." 8 p.m.

THURSDAY, APRIL 18

The Institution of Mechanical Engineers.—Anniversary dinner, Hotel Cecil.

Society of Antiquaries. 8 p.m.

Institution of Electrical Engineers. — Adjourned discussion on the following subject: "The Causes Preventing the More General Use of Electricity for Domestic Purposes." 8 p.m.

FRIDAY, APRIL 19.

The Institution of Mechanical Engineers.—Paper by Dr. Walter Rosenhain and Mr. S. L. Archbutt on "Tenth Report to the Alloys Research Committee: On the Alloys of Aluminium and Zinc." 8 p.m.

MUNICIPAL BUILDINGS EXTENSION, GLASGOW.

For some time past the question of the designing of the proposed extension to Glasgow Municipal Buildings has been before the Corporation and the public, and we are glad to note that the advocates of "Municipal Architecture" have received a check. The Council have, by the small majority of three votes, refused the recommendation of the Sub-Committee, proposing to place the work in the hands of the City Engineer, and decided to invite competitive designs for the new buildings. This decision has given great satisfaction to architects locally, as for some time past the policy of the Corporation has been to place large works in the hands of officials. These include the reconstruction of the Tontine Buildings, destroyed by fire, and the McLellan Art Galleries. Much credit is due to the local Institute of Architects for the vigorous stand it has taken in the matter, and it is largely owing to their efforts that the present decision has been obtained. Mr. A. N. Paterson, A.R.S.A., along with a deputation of the Council of the Institute, waited on the Corporation on the 21st ult. and made a protest against the policy of employing officials in carrying out large architectural works.

The following among other points were made by Mr. Paterson:—

"(1) All experience of departmental work of this nature shows the cost in relation to the value of work to be greater, where everything is accounted for, than where done by outside men. Figures are not available to us for the city, but in the Scottish Board of Works Office it has been shown to be equal to 8 per cent., and in all the English instances investigated considerably more.

(2) The lack of personal responsibility on the part of the designer when an official tends to indulgence, on his part, in extravagance in design and finish, and this is accentuated when his experience has been confined to that of a public office where the personal interest is not closely involved in controlling expenditure. On the other hand, an independent architect, being freed from inside influences and accustomed to be held personally responsible for ultimate cost, is in a much better position to look after his client's interests in that respect.

(3) The Corporation, with an independent architect employed, and a competent official to advise it, is not deprived of the value of expert criticism on the design of buildings to be erected for it as it is when the official is also the designer."

In conclusion, it was pointed out that the City Engineer, while fully qualified for departmental duties, was not a trained architect, and was therefore not in a position to adequately supervise the work, which was therefore bound to fall more or less into the hands of his architectural assistants who, no matter what their qualifications were, were not personally responsible for it.

CORRESPONDENCE.

Competition Reform.

Sir,—Having had the honour of addressing you from time to time on the subject of the unnecessary expense to architects in competition work, I venture to again call attention to the subject and to make a suggestion.

I greatly regret that Sir Aston Webb could not grant the omission of the perspective view in the Port of London Offices Competition, but thank him for limiting expenditure in other directions.

Seeing that some 600*l.* was probably expended in the views alluded to, I suggest that in future if an assessor desires to see the effect of a design in perspective he should be empowered to call in assistance in respect of such designs as he considers to be in the running—the expense of so doing falling upon those who initiate the competition.

Surely a rich Corporation like the Port of London Authority can better stand the small cost of such proposal than the larger aggregate expended by the 164 unsuccessful competitors.

L.

INTERCOMMUNICATION COLUMN.

Damp Houses.

Sir,—Can you tell me of some remedy for a damp house? The dampness shows very markedly on one outer wall, and the tenants complain of dampness generally. If you can tell me of some inexpensive means I shall be very much obliged. Ab Extra.

ILLUSTRATIONS.

Royal Academy Schools, 1911.



Our plates this week illustrate some of the drawings sent in for the minor prizes offered by the Royal Academy. Mr. W. H. Gummer's "Design for a Place on the South Side of the River Thames," though not successful in the competition possesses many features of interest.

FIFTY YEARS AGO.

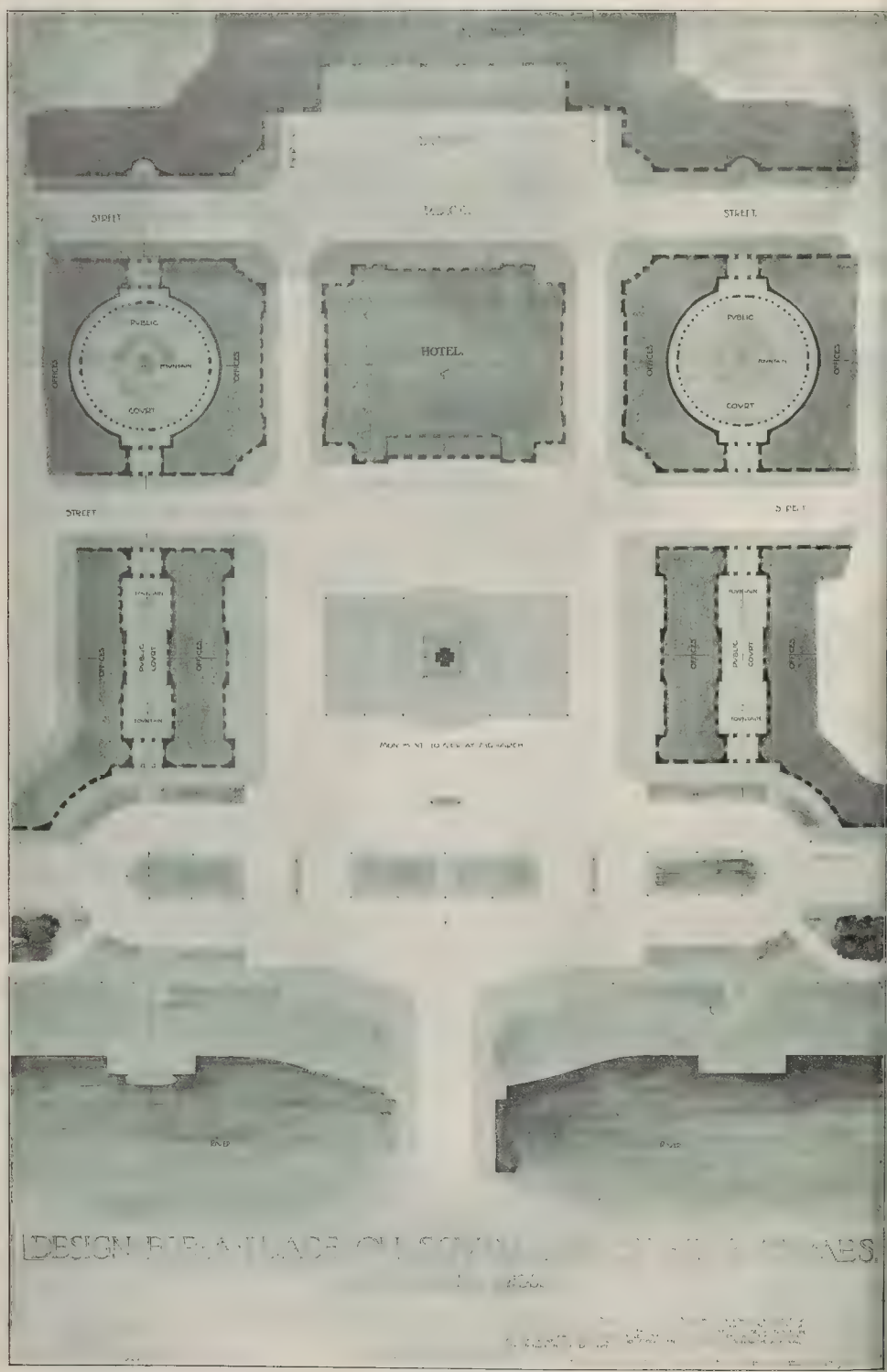
From the *Builder* of April 12, 1862.

"London Monumental."

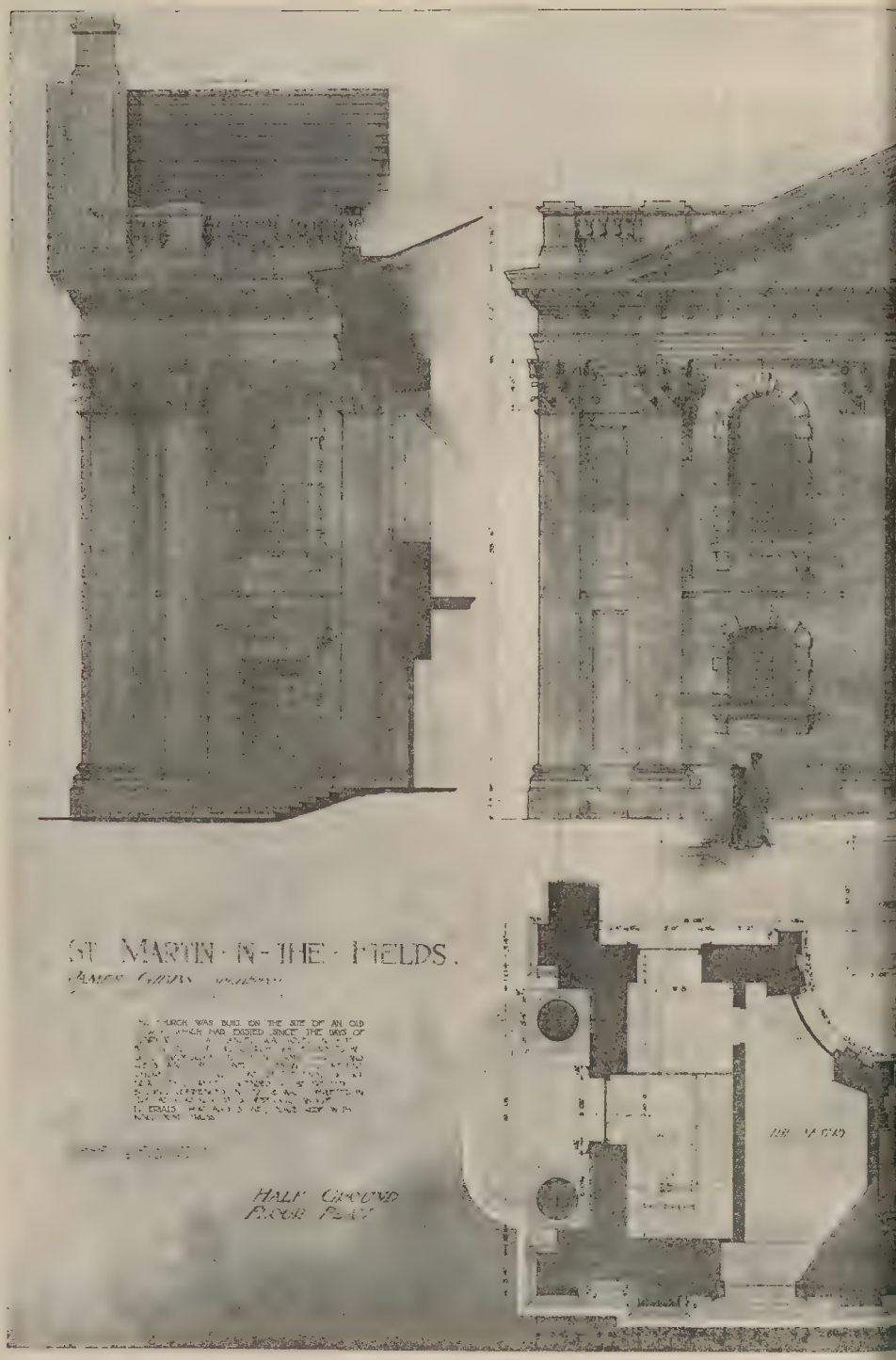
In our number of March 22 we gave utterance to our thoughts touching the laying out the Green Park in a way, as we believed, worthy of our world-renowned capital, the chief city of the largest empire in the world, upon which, it is said, the "sun never sets," and yet, for all this might and power, there is scarcely a small German or Italian capital that does not excel us in our street architecture. Ours is detestable, some late examples excepted. Look at our miles of ugly brick houses begrimed with smoke, without one feature of architecture the weary eye can look satisfactorily on; it is literally all "desert from Dan to Beersheba." We have heard that foreigners, after travelling some hundreds of miles, in other instances some thousands, to visit the modern Babylon, which, alas, it only resembles in its size and its sins, have asked to be shown "the *grande place*" and Trafalgar-square has been exhibited to them. Let anyone place himself on those steps leading to the two or three rooms which we bombastically call our National Gallery, and look southwards at the higgledy-piggledy wretched-looking habitations that alone meet the eye from Charing Cross downwards, unrelieved except by a couple of drinking fountains, to which there have never been caps, and a Corinthian pillar erected to the memory of Nelson some twenty-five years ago and never yet finished.

THE WORK OF MR. ARNOLD MITCHELL.

In our issue for March 29 we gave some illustrations of metalwork, wood, and stone carving, etc., and we are asked to state that the work was carried out by Messrs. H. H. Martyn & Co., Ltd., sculptors and architectural decorators, of Cheltenham.

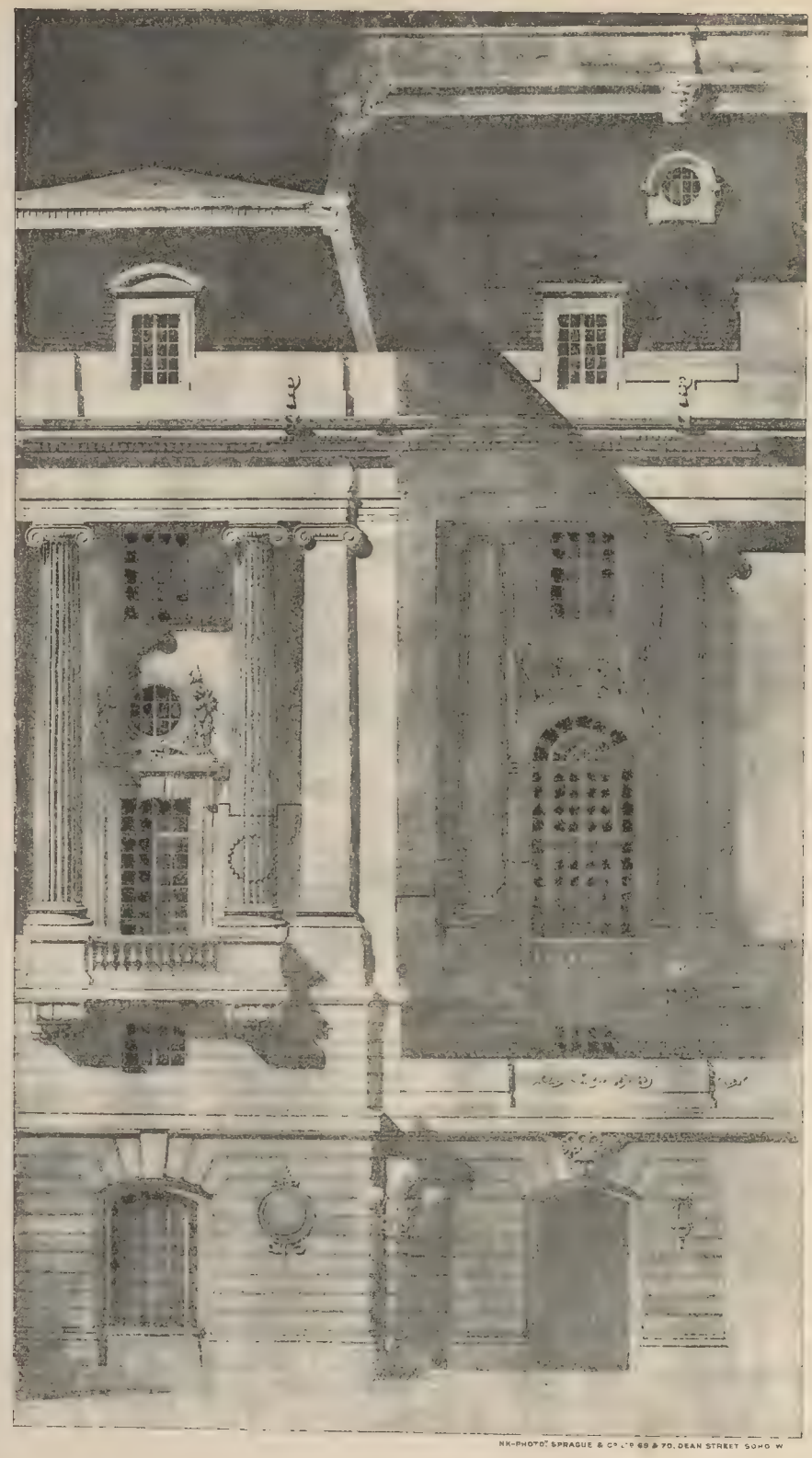


R.A. Schools, 1911 : Detail of an Architectural Design.
By Mr. W. H. Gummer, A.R.I.B.A.

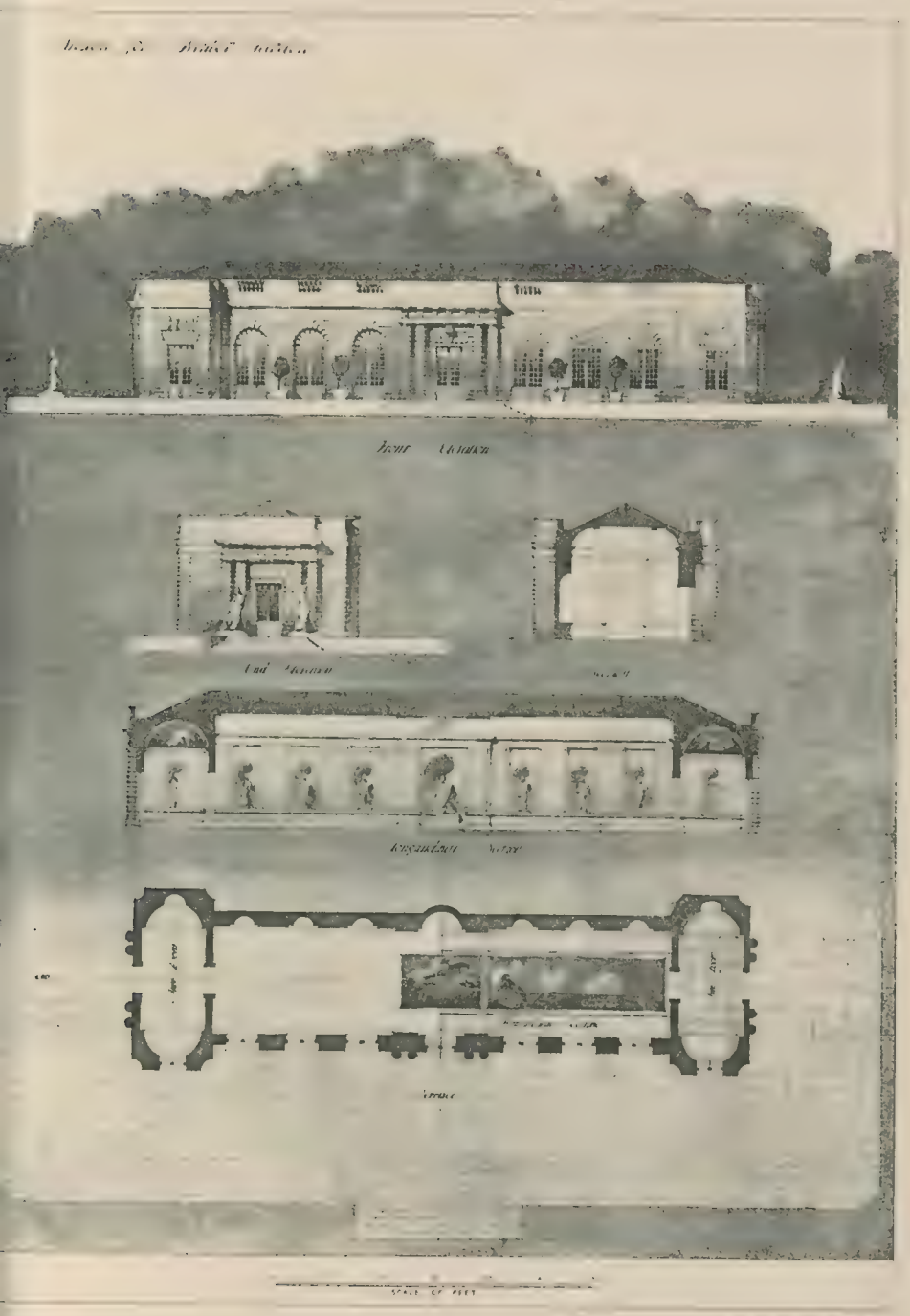

ST MARTIN-IN-THE-FIELDS.
HALF GROUND
FLOOR PLAN



d Silver Medal By Mr Walter Llewellyn Clark

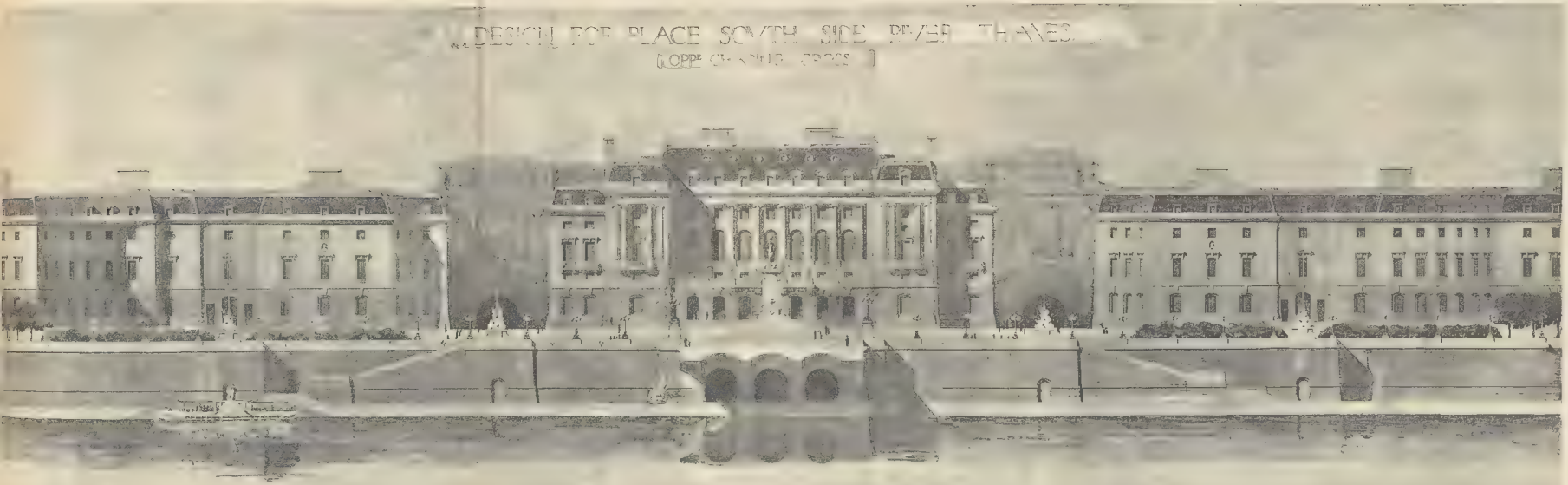


R.A. SCHOOLS, 1911: DETAIL OF AN ARCHITECTURAL DESIGN.—By Mr W. H. Gummer, A.R.I.B.A.



R.A. SCHOOLS, 1911: Design awarded Bronze Medal.—By Mr Cyril A. Farey.

DESIGN FOR PLACE SOUTH SIDE RIVER THAMES
(OPPE CHARING CROSS)



FACADE TO RIVER.

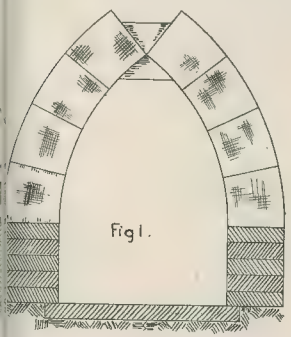
R A SCHOOLS, 1911 AN ARCHITECTURAL DESIGN By Mr W H Gimmer A R I B A

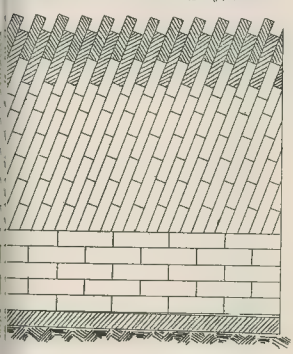
MONTHLY REVIEW · *of* · CONSTRUCTION.

SOME ANCIENT BRICK ARCHES AND A NEW ARCH.

By H. Slicer.

THE ancient Egyptians made use of the arch in their buildings, perhaps not to any great extent, but the examples to us show that they were aware of some the possibilities as an adjunct to construction. Several of their arches are built upon "corbel" principle by simply projecting ry upper brick beyond the end of the in the course beneath *ad lib.* until the ning was spanned by the projecting bricks m both sides meeting at the centre of the ning, a method employed later by the eks (as in the Treasury of Atreus) and zantians.





Assyrian Drain. BC.772.

n the Temple at Abydos, commenced by I. and completed by Ramessu II. (1330), are seven vaulted chambers built side side. The vaults are composed of tile- bricks, built in horizontal courses upon corbel principle, thus having horizontal ts. This type of vault gives no lateral ıst, being more stable than the ordinary ssoired arch, but it is a form unsuitable large spans, the rise being high. It is able for pointed arches similar to the asury of Atreus, but does not readily lend f to semicircular arches.

he bricks of the vaults of the great erooms of the Ramesseum behind the ple, built by Ramessu II. (1330 B.C.) at u-Simbel, Ipsamboul, are 14 in. long by wide and 2½ in. thick, laid four courses k, and at intervals extra rings are added strength. Mariette found a brick arch bydos of the period of the sixth dynasty ng brick voussoirs with a limestone stone, the joints being "galetted" in tar—*i.e.*, having joints with small stones ded therein. In the valley of El-assanif, Thebes, a brick semicircular arch ng nine rings was discovered in the wall surrounding the tombs. This dates back to about 700 B.C.

All forms of arches were used, though the favourite type seems to have been the elliptical. Even the inverted arch was employed to more equally distribute the load along the footings in the way it is employed to-day. The reason for the favour shown to the elliptical arch seems to have been due to constructional reasons. The bricks, being composed of mud, were more easily crushed than burnt brick or stone, and any semicircular arch built of such bricks would fail first by crushing at the crown. To overcome this a sharper curve was necessary at this portion of the arch, hence arose the general adoption of the parabolic form of arch, as in the Ramesseum vaults. As a protection against the weather the top of the vault was covered with a deep layer of sand and gravel, which quickly absorbed the rain like a sponge.

Although thin arches were built by the Egyptians similarly to the voussoir method of to-day, they preferred to use their thin bricks, dispensing with centering—as they do to this day—adopting an ingenious method of erection, depending during erection upon the adhesive power of their mortar and its quick-setting properties. The end walls were first erected, and upon these the outline of the arch was marked. They then built the lower courses horizontal to as great a height as practicable, thus lessening the span, and the remaining arch bricks were laid upon these on end, the first ring being formed by building one course flat against the wall. The second course was built up against this, the whole process depending upon the adhesive properties of the mortar. Thus was the vault built. In some cases the end walls were "skew-backed" along the arch line, and the tile-like bricks laid thereon to form the arch, each course thus supporting the following one as laid, the adhesion of the mortar not being a necessary factor to be relied upon. The bricks were thus placed at an angle to a vertical plane passing across the span. This arch is much stronger than the first, gaining also extra support from the end walls. The successive layers were often built at opposite slopes, thus causing the rings to cross one another. This is somewhat similar to the construction of Fig. 1, which shows an Assyrian drain (taken from a drawing by M. Place). The arch does not lie in a vertical plane, but at an angle to the vertical. M. Place shows these bricks specially shaped and not rectangular, but Sir H. Layard says that the drain he discovered in the North-West Palace at Nimroud had only common bricks for its voussoirs, and that they were not specially shaped for vaulting; the space at the top being open, was filled in with ordinary bricks. The reader will notice that each ring (Fig. 1) forms a pointed arch lying in an inclined plane. It would therefore be practically impossible to build one ring alone, for it would not stand unsupported; and as for loading it, that would be out of the question. There are obvious advantages, however, attached to this inclining of the arch bricks, and if the arch could be made stable (I refer to every arch ring separately), these could be utilised. In Figs. 2 to 4 are shown such a type of arch which I have devised, the bricks being inclined to the vertical, but the whole arch falling within two vertical planes.

The bricks are really portions of the surface of a half-cone, as will be seen from Fig. 2, the intrados as it were of each ring being of varying radius instead of constant, as in the case of ordinary arches. The whole arch (Fig. 4) being built of several rings, has an intrados of constant radius, as is also that of the extrados. That each ring is staple will be seen from a consideration of any parallel slice in the ring, for such a slice fulfils all the conditions of an arch.

Such an arch is capable of a variety of treatments, and there is no reason why as an architectural feature it should not also be successful. The lower edges of the bricks could be moulded, or various coloured bricks could be judiciously employed.

Ordinary tiles could be used; being thin, there would be only a slight increase in the opening of the joints at the extrados, but to produce the best work the bricks would have to be slightly curved and narrower at one end than the other, as shown in the projection (Fig. 2).

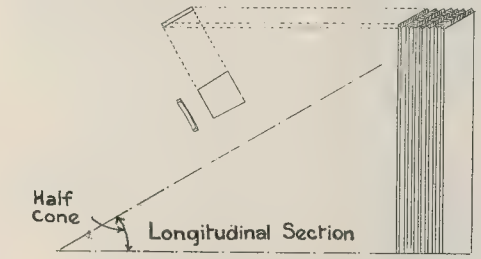
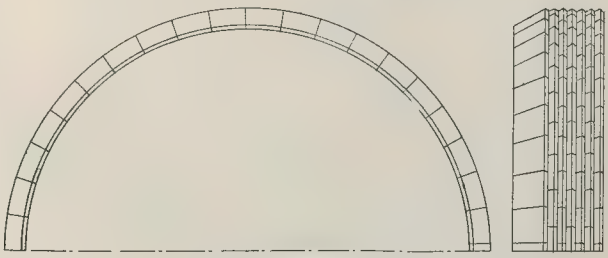


Fig 2.



Arch elevation

Fig 3.

Side elevation.

Fig 4.

REINFORCED CONCRETE IN GREAT BRITAIN.—V.

BY W. NOBLE TWELVETREES.

(Continued from page 377.)

Indented Bar System.—In all designs prepared by the Indented Bar and Concrete Engineering Company, Ltd., of Westminster, the patent indented bar is employed, all projects designed by the company being based upon approved principles of architectural and engineering practice.

Indented bars are used simply because the company consider them to be better than ordinary round bars for theoretical and practical reasons, but their application in no way influences the general character of designs.

Consequently it will be seen that there is no indentel bar "system," using the term in a strict sense.

Indented bars of the types employed by the British company were patented in 1904 by Mr. A. L. Johnson, of St. Louis, U.S.A., and also by Mr. Lindau, under the title of Corrugated Bars, which have been largely employed in America by the Expanded Metal and Corrugated Bar Company, of St. Louis.

In his British patent Mr. Johnson claims that in his improved bar "the projections are so arranged and proportioned as to contribute to the tensile strength," this being accomplished "by arranging the projections and spaces so that any transverse section will pass through at least as many projections as spaces. The projections preferably have flat faces and bevelled edges, the latter inclined at an angle not less than the angle of friction for concrete on iron or steel, the object being to prevent splitting of the concrete by the projections of the bar. The patent covers corrugated bars of any suitable cross-section, but as made in this country the bars are either of square or circular section, as illustrated in Figs. 1 and 2.

The main advantage claimed for the indented bar is the mechanical bond it provides between the concrete and the steel, whatever be the quality of the steel of which the bar is rolled

Although prepared to produce their bars in mild or any other variety of steel, t company state that the result of the experience is that a medium steel having yield point of about 50,000 lb. per square inc with an extension of not less than 15 per cen in a length of 8 in., combines all t advantages of a higher yield point with t ductility and reliability of the mildest steel.

The mechanical bond is stated to be special advantage :—

(1) In structures exposed to shock, vibr tion, or moisture.

(2) For web reinforcement in beams whe the links or stirrups are necessarily short.

(3) For use in concrete of low adhesi power.

(4) In cases where high tensile stresses a developed in the steel.

(5) In members where tension cracks ma be developed in the concrete, the effect of t mechanical bond being to distribute t cracks and to prevent their concentration one or two points.

Although, as previously stated, the compar do not tie themselves to any one arrangeme of the bars in reinforced concrete construcio the following are forms of design which ha been largely adopted by them in Gre Britain.

In beams the main tension and compressi bars are applied in the customary manne some of the tension bars being bent up fro different points in the length of the bea towards the supports so as to provide f resistance to shear and diagonal tension the web, while in the case of continuo beams the bars are of length sufficient enable them to be continued near the upp surface of the concrete across the support thus providing the requisite resistance stresses due to negative bending moment Slabs between and working with beams a usually reinforced by two series of bars right angles to one another, the bars bei bent up so as to pass through the upp portion of the supporting beams.

Columns, which may be of any desir cross-sectional shape, are reinforced by fo or more longitudinal bars, braced lateral by ties of soft iron wire spaced at sho distances apart.

For the reinforcement of curtain walls a interior partitions in buildings indented ba are applied horizontally and vertically to fo a network near each face of the concrete.

The "Dentile" floor is a new syste recently introduced by the Indented Bar a Concrete Engineering Company, combini the advantages of reinforced concrete a hollow tile construction. This floor is ma in three styles for various conditions :—

(1) Mitre tiles, with two-way reinforcemen

(2) Bridge tiles, with one-way reinforcemen

(3) Bridge and L-shaped tiles, with tw way reinforcement.

Fig. 3 illustrates the mitre tile floor, whe each unit consists of four triangular sectio fitting together to form a closed hollow bloc The arrangement permits the slab reinforc ment to be placed in two directions, and should be noted that the lip of each tile a as a spacing piece, ensuring uniformity in t width of concrete between the tiles.

Fig. 4 shows the application of bridge tile arranged in parallel rows separated by stri of reinforced concrete constituting a series beams. This type of floor can only reinforced in one direction.

Fig. 5 illustrates a modification of t bridge tile floor, formed by the insertion L-shaped tiles by which the rows of brid tiles are broken so as to permit the introdu tion of transverse strips of reinforced concre thus making the construction of equal streng in either direction.

The Dentile flooring can be constructed spans of 30 ft. by 30 ft. or more withe projecting beams, and it is stated that a reliable contractor can carry out the we without previous experience, as full details the reinforced concrete and tiles are suppli by the company, together with the prop quantities of tiles and reinforcing bars.

The specialities of the Indented Bar a Concrete Engineering Company are suppli freely to all purchasers at fixed rates, with without designs for their application. Desig for structures in reinforced concrete, or the Dentile flooring, are prepared for arc tects free of charge, providing it is understo that the specialities of the company will specified. The company accept full respon bility for all designs prepared by th engineering department.



Fig. 1. Indented Bar (Square Section).



Fig. 2. Indented Bar (Circular Section).

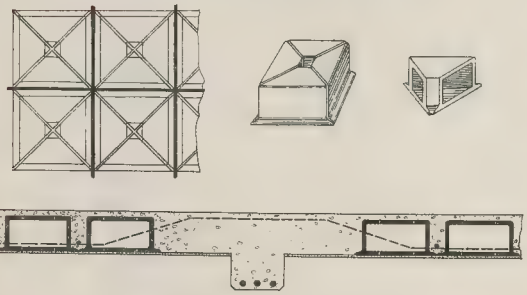


Fig. 3. Dentile Floor (Mitre Tile Type).

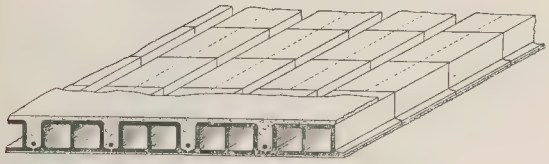


Fig. 4. Dentile Floor (Bridge Tile Type).

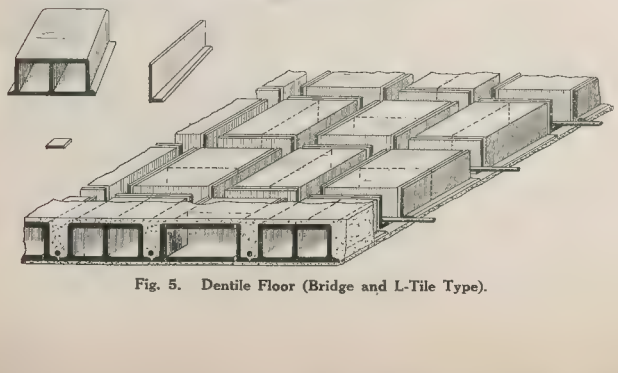


Fig. 5. Dentile Floor (Bridge and L-Tile Type).

ie System. Messrs. Leslie & Co., of Kensington, have patented a system nstruction which depends upon a special of secondary reinforcement for beams loors. The object is to provide for ing together the whole of the reinforce- rigidly and securely, so that none of the nts can be displaced accidentally or vise while the concrete is being deposited. 1 represents in perspective the on reinforcement for a continuous beam. main reinforcement consists of straight ent tension bars, the ends of the latter carried over the supporting column and nued for a sufficient length beyond to tension due to negative bending nts.

e web reinforcement, which is the special e of the Leslie system, consists of rs formed of steel strip bent over at end to enclose the main bars, or to e one bar while the other end is bent ht angles for anchorage in the concrete rts where there is no bar in the upper n of the beam. The hangers are locked ace by means of links driven over the -shaped bent-over ends, as shown by o details at the bottom of Fig. 1. The rs may be placed vertically or at an . as may be preferred, and the complete ton reinforcement for beams can be bled before being placed in the moulds. e chief advantages claimed for this n are thus stated by the patentees :— nangers are rigid, of any length, and any ng; there are no loose members; the od of manufacture eliminates errors of manship; and the method of building up skeleton beforehand obviates the risk splacement.

is also claimed that the rigid attachment e vertical hangers to the main bars is as efficient as if the vertical members formed out of the main bars, and that s the advantage of enabling the hangers e spaced at various distances apart as red.

ree forms of transverse reinforcement for ns adopted by Messrs. Leslie & Co. llustrated in Figs. 2, 3, and 4. One of (Fig. 2) is simply a single wire tie ng around the longitudinal bars, another 3) is a similar arrangement wherein the re continued in the form of a diagonal dditional reinforcement of the core, and hird (Fig. 4) shows a spiral winding.

ssrs. Leslie & Co., Ltd., are contractors engineers, and themselves carry out all s designed by them on their patented ms, and take full responsibility for both ns and actual construction.

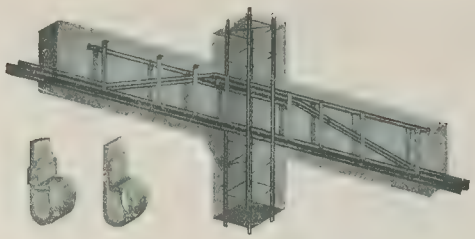


Fig. 1. Reinforcement for Continuous Beams.

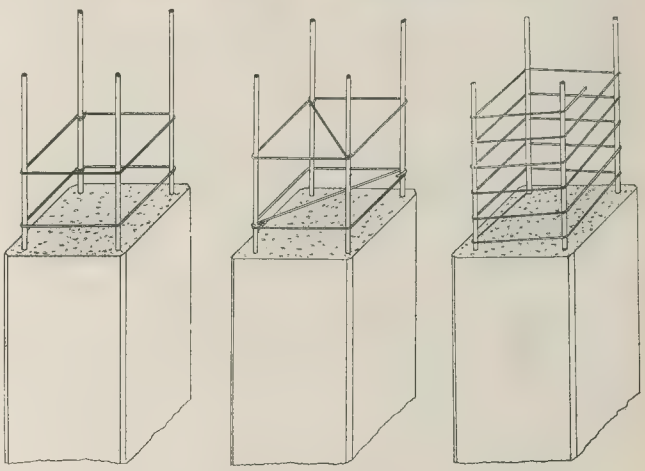


Fig. 2. Fig. 3. Fig. 4.

Leslie System. Column Reinforcement.

ESTON'S PATENT WALL STRAIGHTENER.

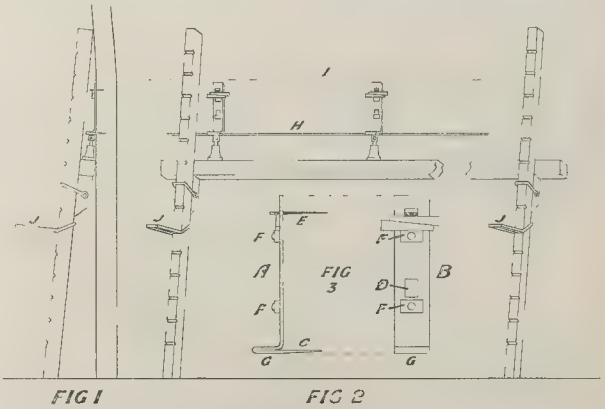
ERY District Surveyor will tell us that ay to straighten a wall when it is out of perpendicular is to pull it down and ld it. The remedy is an old and excellent but the man who foots the bill may wish less costly alternative.

at is the aim in the system here shown, t is claimed that the wall will be stronger he treatment. In the sketch, Fig. 1 sents a cross-section of the wall, Fig. 2 nt elevation. Supports of square timber used of suitable height, which incline st the wall; these carry the horizontal er, which is adjustable in height to suit lift as the work progresses.

e wall is first freed from structural attach- , if any, and upon the overhanging side owest point is found at which the wall s to incline out of plumb. Here the is raked out, much more deeply than for ing, and at intervals cut with a thin ent chisel 4½ in. deep. Into these are the brackets, which are shown enlarged ig. 3, A being edge and B front view. toe, C, is driven in up to the back plate, through the holes D are driven tapering chisels E into the joint, the heads of being wedged up from the abutment F. hat when fixed in place the bracket nes a part of the wall. There must be ushing of the brick or movement of the ket. the size of which and the number isel grips it contains will depend upon weight or mass to be lifted, and upon extent of the work will depend the ber of brackets required, in order to ise the movement as much as possible, although they may be removed from one end and applied again at the other as the work proceeds, if the length necessitates that.

Assuming that the brackets are in place, a lifting jack resting upon the cross-timber is placed under the heel G of each bracket. The lifting requires care, and it is best to move the screws a little at a time with pauses between, in order that no vibration or rocking movement is set up, during which time the wall should be examined with a plumb rule. A crack will have opened in the joint, which may now be cleared out and wetted, cement and sand being used as a bedding for a length of ⅜ in. light hooping, which is placed therein, passing under the brackets and being turned up into a vertical joint at either end. The joint is now filled with cement, and slate is driven in above the hooping with a caulking tool, which leaves the joint ready for pointing. It will now be found that the jacks can be removed without unscrewing, as the slate has taken the weight off them. The sketch illustrates that a lift has been taken at the open joint H, and that the wall is vertical to that height; the next lift is to be taken at the dotted line I. The brackets J hold a couple of scaffold boards, from which the jacks and brackets are manipulated.

It will be manifest that in the horizontal measurement of any wall partially out of plumb or bulged the distance between any two points must be greater measured at the top or bulged part than at the base; therefore



A Patent Wall Straightener.

it must be seen that provision exists, or is made, for the closing up again of the vertical joints that have opened as a consequence of the leaning.

If it be a boundary wall, for instance, probably the pointing at the top would make it rigid, and it would require a joint cutting out with a thin cross-cut chisel at short intervals across the top, otherwise it would lift in coming back to the straight line.

With the means here shown the work of straightening is very quickly and cheaply carried out, and when the wall is pointed it is stronger by reason of the iron bond than when newly built. It is convenient to remember that pulling down and rebuilding is not the only remedy for a leaning wall, yet it is only occasionally that such a thing is needed, and appliances of this sort therefore are more the province of those who would specialise and undertake such work, which extends to the treatment of sinkages as well, in some cases avoiding the necessity of underpinning.

Mr. B. S. Weston, No. 5, Parkholme-road, Dalston, N.E., is the author of the patent.

PROTECTIVE AND DECORATIVE METALLIC COATINGS.

THE earliest known process is that of copper upon iron, by the dipping of the iron article in a solution of copper sulphate; followed early in the XIXth century by the electrical deposition of zinc, copper, nickel, silver, and the rarer metals.

The protection thus afforded from atmospheric corrosion, and the production of artistic effects, has been extended to cases where economy was an important consideration, and hot dipping of iron and copper sheets in tin, known as "tinning," and of iron sheets and bars in zinc, known as galvanising, has become very general. The last named, hitherto the least expensive method, has not, however, been wholly satisfactory, either to the manufacturer who has experienced loss of zinc by contamination with iron, or to the user who has frequently found the coating defective as a protector, and the cause of weakness in the iron covered.

Some articles could not be treated because they suffered distortion when dipped hot; and others that required "tempering" were spoilt by the temperature of the operation.

As the result of some experiments made in 1902 upon the annealing of cast-iron, Mr. Sherard Osborn Cowper-Coles, of Westminster, found that zinc dust when in contact with another metal, say, a piece of iron, and heated to a temperature of several hundred degrees below its melting point, is quickly coated with zinc. He found that at 200 deg. C. a beautifully adherent deposit of zinc was thus obtained, as contrasted with 418 deg. C., the melting-point of zinc necessary for the dipping method. Another advantage is that the deposit is beautifully smooth, and even small screws may be treated in this way—now known as "Sherardising," from the Christian name of the inventor—without it being necessary to re-thread them.

As to the protective value of the process, seven or eight years ago, in its early days, pulley blocks were "Sherardised," which have been in use in the open air ever since, and which are as good to-day as when they left the factory, with the exception of the wear and tear on the chains. They have been exposed every winter and summer to all changes in the weather.

Another important point with regard to this process was that it showed mechanical faults in the articles. If a bad weld were present, or a crack in a tube, it was revealed by the process. Again, owing to the time character of the operation, a slow rise of temperature followed by a slow cooling, the articles were extremely well annealed; and the result was that chains and such articles as were struck from a bar, or bolts or nuts which were struck in a machine and immediately cooled by a flow of water, were actually stronger and would stand work much better after the process than before. In the case of chains, and many other goods, the increase of strength was about 5 per cent. Springs also can be "Sherardised" without their temper being affected, and large quantities of springs are treated for exposure out of doors.

The temperature of treatment, began at 160 deg. C. with mild steel, and is 200 deg. C. with cast-iron. The use of a quarter of an ounce of zinc per square foot, applied by "Sherardising," was quite as effective as 2 oz. applied by wet galvanising, a consumption of only one-eighth of the protecting metal.

The zinc coating shows for a short time a slight yellowish powder, but this soon washes off, and the protection thus afforded is very resistant to atmospheric corrosion, for the iron does not rust even when the zinc surface has been removed by abrasion.

Mr. J. W. Hinchley believes the correct explanation of the "Sherardising" as above described is that the deposition begins at a temperature just above that required to produce a film of magnetic oxide on the iron, and the deposit invariably contains iron. He concludes that the coating is a closely adherent film of a solid solution of iron in zinc produced by the interaction of the metallic zinc in the zinc dust and the film of magnetic oxide of iron.

This is an important consideration taken in conjunction with the fact that iron is now largely protected by the Bower-Barff process, which is essentially the formation of a coating of magnetic oxide of iron. That substance, $Fe_3\ O_4$, is formed upon the surface of perfectly cleansed iron by the interaction with the metallic iron of superheated steam. By heating the articles within a red-hot retort and passing thereinto a jet of superheated steam, an effectual protection is secured. Rustless iron pans are now in general use, and several of the London gas companies treat their cooking stoves in this way with very satisfactory results.

But distinct from "Sherardising" Mr. Cowper-Coles has a method, where the materials to be coated are not brought into contact with the molten metal or any of its compounds; they are placed in a separate chamber filled with zinc vapour, or placed above the molten zinc. A modification of this vapour process is applied to the inlaying and decorating of metallic surfaces. The *modus operandi* briefly consists in coating the article to be decorated with a stopping-off composition, those portions which are to be inlaid being left exposed. The stopping-off composition is applied by hand, or by stencils; or the whole of the surface is coated, and those protions which are to be inlaid removed with a suitable tool. The metal object thus prepared is then placed in an iron receptacle containing the metal which is to be inlaid in a powdered form, or subjected to metallic vapour by the process just referred to. If zinc is the metal to be inlaid, zinc dust is the powder employed. When the article has obtained the desired depth of inlay and onlay, it is allowed to cool, and then removed and brushed with a stiff brush to remove the stopping-off composition.

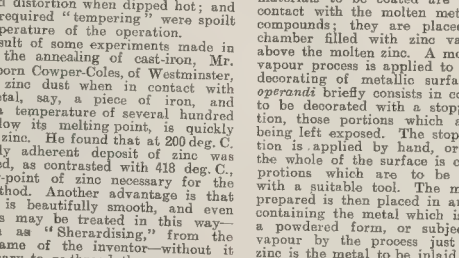
The vapour process, says Mr. Cowper-Coles, enables a variety of effects to be obtained and a number of metals to be blended together which hitherto has been impossible, and alloys of many colours and tints to be obtained in the one operation. The thickness and depth to which the metals are to be inlaid and onlaid can be controlled at the will of the operator. This vapour process of burning in and blending metals enables very beautiful colour effects to be obtained, the colours ranging from silver-white to yellow brass and bronzes of various shades, graduating to copper. A unique and charming effect that the inlay has not the sharp line of demarcation of damascening and similar process but a soft transititon from the inlaid me to the surrounding one. For example, w an inlay of zinc in copper, the zinc is s rounded by a band or halo of a gold coloured alloy. This process of inlaying not confined to zinc and copper, it has b successfully applied to such metals as nick cobalt, antimony, and aluminium.

A method having distinctive features in procedure and in its range of applicabil is that of Mr. U. Schoop, of Zurich, descri in the *Comptes rendu* of 1910.

Objects can be covered with a deposit any fusible metal or alloy, containing components in eutectic proportions, by p jecting the fluid through a suitable jet, means of some indifferent gas under pressu A coating of from ·02 mm. = 0·008 in. to seve millimetres in thickness can be thus produc upon almost any material. The temperatu of the steam of metallic particles just o side the jet is between 10 deg. and 60 deg. The pressure used is high, being 20 to 25 ki per square centimetre = 284 lb. to 355 lb. square inch, or approximately 20 to 25 atm spheres. With the latter pressure the metal particles have a speed calculated to be equal $12\frac{1}{2}$ miles per second. This enormous speed twenty-five times that of the bullet from gun used in the German army—of the metal mist produces metallic surfaces of a surprising high density. For instance, one of sprayed was of density 7·42, almost equal to that rolled tin, namely, 7·47. Tin, lead, copper, aluminium, and its alloys, can be deposit by this process, which is also adaptable to making of *clichés* (stereotype plates). T object to be coated is passed through a cha ber, *i*, into which the molten metal from crucible, *e*, is projected in a highly atomis condition. The spray is produced by forci the metal from the crucible by an inert gas a pressure of about 25 atmospheres into very fine nozzle, *g*, when it meets a jet of previously heated in a coil, *c*, and passing right angles to the nozzle, *g*. By using oxidising gas at the jet a coating of oxi may be obtained in some cases—*e.g.*, le peroxide may be deposited in a firmly adh ing film in this way. Alloys may be deposi by simultaneously spraying two differe metals from separate jets. Among oth applications, the process may be applied the coating of wood, paper, and glass, and a balloon an aluminium coating $\frac{1}{10}$ millime thick is sufficient to render it quite gas tigh

It is possible to coat otherwise inflammab materials, because the metallic mist is at comparatively low temperature when impinges upon them, say, 40 deg. to 60 deg. in spite of the fact that the molten metal h a temperature of several hundred degre (*e.g.*, for zinc, 418 deg. C.) at the instant efflux, and so also has the atomising ga This sudden reduction of tension of the g cools it, and in turn it assists in cooling t metal mist which presents, relative to weight, an enormous surface. Paper, woo celluloid, and wax may consequently covered, and that with a metal film of hard ness greater than that of metallic films p duced by casting or rolling. The individu particles of the metal when atomised described, lose their surface tension and the globular form, and are pressed out on t surface presented as a circular film. The films overlapping, become, at the high veloc of the particles, automatically welded in a continuous homogeneous coating. Micr scopic examination of the resulting surfa shows it to be absolutely homogeneous, a has shown that, under the pressures employe metals alloy much more readily and quickl than under the pressure of a single atm sphere. Different metals have, of course, be treated according to their melting-poin fluidity, oxidising property, specific gravity etc., whilst the crucibles employed must suitable, *e.g.*, for aluminium and its allo steel crucibles cannot be used; but in thi respect there is nothing new to metallurgica practice. The surface to be coated is fir freed from oxide or adhering dirt, and whe metals are to be coated it is an advantage although not a necessity, to heat the surfac before spraying upon it. Paper may b coated with metal; the wooden propellers o aeroplanes coated in this manner have their friction considerably reduced, and wall paper textiles, and stage scenery can all receive metallic coating.

With a portable apparatus metallic struc tures, such as bridges, machinery, and the like, could be readily coated with aluminium and thus made to withstand atmospheric influences better than any known method.



Apparatus for Metallic Coating.

THE BUILDING TRADE.

ADE DISPUTES AND OLONIAL AND FOREIGN GISLATION.

' a time when this country is recovering from a strike affecting one of the chief necessaries of life a Yellow of considerable interest has made its ance in the form of memoranda prepared Labour Department of the Board of Trade operation of certain laws in the British ions and foreign countries affecting and lock-outs. We in this country far iscouraging strikes and lock-outs may be ther to have encouraged them. It is not ry here to trace the history of the trade or the evolution of the law of conspiracy nexion with these societies. To support ve proposition it is sufficient to refer to ade Disputes Act, 1906, which in the f trade disputes amended the law of racy, legalised "peaceful persuasion," l contracts of employment to be inter- ith, or the rights of persons to dispose ir labour and capital to be subject ference, without an action being open to whose rights were trespassed upon, and, which prohibited an action being brought court against a trade union in respect of s or wrongful acts alleged to have been ted by or on behalf of the trade union.

in this country strikes are not only not but persons acting "in contemplation or ance" of trade disputes are placed in a ed position, and societies who organise and lock-outs have their funds secured so rsons who have suffered damage through strumentality can have no redress in the

A trade union acting in contemplation nerance of a trade dispute can instigate nbers to smash windows without being able to pay compensation out of its funds. ing the case, it is interesting to see what attitude of some foreign countries and f our colonies towards this question of but the subject is too large to be dealt all comfortably in one short paper.

ng regard to the course of events in this , the points deserving most attention in s of other countries would appear to be attitude of Dominion and foreign on towards lock-outs and strikes gener- ?) special provisions in regard to what wn as services of public utility ; (3) the of trade unions and their members ; attitude of the Legislatures as regards ful persuasion."

regards the first head, the great variety arious laws do not permit of them being in detail here, but it may be stated y that in the Dominions the tendency ern legislation has been to restrict the f combined action in industrial disputes. ial courts have been established and the of persons to lock-out and strike are to restrictions. In Queensland alone appear that no restrictions are placed right to lock-out and strike, and in the restriction is very limited. In the ons this legislation is often general in its and therefore the services of general hough subject to special conditions, are distinctly legislated for as in other s. In Western Australia, and possibly South Wales, lock-outs and strikes to be absolutely prohibited. In the l foreign countries the tendency, on the and, is to legislate specially for services ic utility. In France and the United here is less restriction than in other s, and it is a matter of common know- at industrial disputes of a serious nature erienced in these countries. It may, , be observed in this connexion that the ental memoranda contain no informa- o the law in Norway and Sweden.

s regards the "services of public these are variously defined in the colonies and countries. In New Wales "necessary commodities" include s, water for domestic purposes, and any f food the deprivation of which may endanger human life or cause serious njury." In New Zealand, besides gas, y, and water supply, are included the supply of meat, the supply of milk, the sale or delivery of coal, and the transport services. In the foreign countries the legislation is aimed at securing to the public the necessary services of public utility. In these services strikes are absolutely prohibited in Russia, Holland, Belgium, Italy, and Roumania. The absence of mining from these services is a noticeable feature, but in Canada, Austria, Nova Scotia, and the Transvaal we find it specified.

III. As regards the liability of trade unions, not very much information can be gathered from the memoranda, but it must be borne in mind that the general legislation restricting industrial disputes has an important bearing on this subject, because the powers of unions are more limited than in this country. However, we find that in New South Wales, where a member of a union has been convicted of an offence against the law relating to lock-outs and strikes, the industrial court may order the trustees of the union or any branch of it to pay out of the funds a sum not exceeding 20*l*. In Western Australia no part of the funds of a union are to be employed in aiding strikes and lock-outs. In New Zealand the unions may sue or be sued, and when a majority of members are party to a strike the union is deemed to have instigated the strike.

IV. With reference to "peaceful persuasion," this seems hardly to be either legalised or prohibited in express terms, most of the legislation being directed to intimidation. In this country we have seen fit to legalise "peaceful persuasion" without duly safeguarding the abuse of this privilege.

The nearest case we can find to a limitation on peaceful persuasion appears in the Spanish law: "Any person who, in order to organise, maintain, or prevent associations of employers or workpeople, strikes or lock-outs, shall make use of violence or threats, or shall *exercise pressure* of such a nature as to constrain or force the will of workpeople or employers in the free and legal exercise of their trade or work," shall be liable to imprisonment or a fine. Again, in the Report of the United States Industrial Commission some doubt is expressed as to the legality of even peaceful persuasion. In Belgium the freedom to work is safeguarded by rendering liable to imprisonment for a period of one month to two years and a fine of from 50 francs to 1,000 francs those who "threaten the liberty of masters or workpeople by congregating in the neighbourhood of the works or the dwellings of those who direct the work or by committing acts of intimidation against people going to, or returning from, work."

In Germany, "whosoever by means of physical force, threats, insult, or defamation" shall persuade or endeavour to persuade others to take part in or to withdraw from combinations is liable to imprisonment.

In Portugal it is an offence "in any way to use pressure tending to diminish the liberty of the employed or employers in the legal exercise of their work or industry."

In the limited space of one article little more can be done than to indicate the general trend of legislation in relation to industrial matters, but much may be learnt from the collective experience expressed on these subjects by the laws of other countries. The establishment of industrial courts, besides imposing restrictions on industrial warfare, encourages conciliation, and we may at the moment in especial point out that during the currency of disputes the intervention of an industrial tribunal is far to be preferred to legislative interference by Governments. The security also of services of public utility would seem to deserve attention in this country after recent experiences.

In conclusion, it may again be pointed out that we, among all nations, appear to stand alone in the departure we have taken in the Trade Disputes Act in encouraging, rather than restricting, the militant action of trade unions and their members in relation to trade disputes.

COUNCIL OFFICES, SHERINGHAM.

These new offices have been erected at a cost of about 1,285*l*. from the designs of Messrs. Stanley Simons & Co., architects, of Sheringham, and the contractors were Messrs. Blyth & Son, also of Sheringham.

TRADE UNIONS, 1908-10.

THE Board of Trade have recently issued a Report on trade unions for the three years 1908-10. Whilst so much is being thought and said about the militant attitude which trade unions have especially adopted since they sought to become political societies it is well to remember that they have other functions, and a reference to the pages of this Report will show that their expenditure in the three years under review on sick, superannuation, funeral, and other benefits amounted to the sum of 3,180,000*l*., an increase of 14 per cent. on the three preceding years. In the same period the dispute benefit amounted to 1,120,000*l*., and unemployed benefit to 2,650,000*l*. The above are the figures relating to 100 principal trade unions, which have three-fifths of the total number of trade union members. It appears from the Report that years of slack employment tend to diminish the number of trade union members. The bad years of 1908-9 were marked by a diminution in membership of 57,000, but the more prosperous year 1910 showed an increase of 73,600 members.

In the building trade at the end of 1910 there were sixty-eight trade unions with a membership of 155,923, but all the unions in this trade showed a diminished membership as compared with 1907, the mean income per head was nearly seventeen shillings higher than in the last triennial period, a consid rable advance in contributions having been rendered necessary by the slack condition of the trade. In the three years under review the total expenditure of the principal unions in the building trade was 1,344,005*l*., of which only 5 per cent. was on dispute benefit, 31·1 per cent. on unemployment, 22·9 per cent. on sick and accident benefit, 18 per cent. on superannuation benefit. The expenditure on dispute benefit was much lower in proportion than that of many of the other unions.

LOCAL BY-LAWS.

OF recent years the work devolving upon the contractor has been rendered more arduous than formerly by the fact that he has to conform to local by-laws. Whatever the vagaries of the local authority, they must be respected, provided they are embodied in by-laws which will be upheld as reasonable by the Court. In view of the fact that those who are employed in and about the erection of a building—namely, the builder and the architect—are presumed to know sufficient of the law to protect the building owner, a few notes on local by-laws may not be out of place.

A by-law is an ordinance affecting the public, or some portion of the public, imposed by some authority clothed with statutory powers ordering something to be done or not to be done, and accompanied by some sanction or penalty for its non-observance. In order to be valid a by-law must be certain and reasonable. Lord Russell of Killowen once declared that by-laws would be unreasonable "if they were found to be partial or unequal in their operations as between different classes; if they were manifestly unjust; if they disclosed bad faith; if they involved such oppression or gratuitous interference with the rights of those subject to them as could find no justification in the minds of reasonable men." A by-law is also invalid if it is repugnant to the general law of the land, or if it adds something inconsistent with the provisions of a statute creating the same offence; but if it adds something not inconsistent that is not sufficient to make it bad or repugnant.

The due observance of by-laws which govern the erection of buildings is of great importance to the builder, for it has been held that a contract to erect a wooden structure containing the provisions of a statute is illegal, and the builder cannot sue upon it. By a parity of reasoning, the cost of work done on a building erected contrary to the provisions of a valid by-law could probably not be recovered. It was held in a Canadian case that where a man contracted to erect a building the construction of which was rendered illegal by a

subsequent by-law, he could not recover either on a contract or as on a *quantum meruit*.

Again, from the point of view of the building owner, the erection of a building in contravention of a by-law may be fraught with serious consequences. Thus, where a contract has been entered into to erect an illegal building, and any substantial part of the contract has been performed, instalments paid by the employer cannot be recovered back by him.

Another important point is that where by-laws have once been validly made and confirmed, and are in force in a district, the local authority which made them cannot dispense with their requirements in any individual case, unless the by-laws themselves give the local authority such a dispensing power. For example, it was held in Yabbicom *v.* King (1899), 1 Q.B. 444, that a local authority empowered to make by-laws for the regulation of buildings within its district has no power to sanction plans in contravention of the by-laws properly made. If, however, upon hearing an information for a breach of a by-law the justices are of opinion that, having regard to the purposes for which the by-law was made, it is unnecessary to enforce it in the special circumstances of the case, they may in the exercise of their discretion, notwithstanding that a breach has, in fact, been committed, dismiss the information or impose only a nominal penalty.

RAILWAY AND CANAL TRAFFIC.

THE annual general meeting of the Mansion House Association on Railway and Canal Traffic for the United Kingdom was held on the 26th ult., at the Westminster Palace Hotel, London, S.W. The meeting was followed by a conference of members of the Association and representatives of county, municipal, and local authorities, and chambers of commerce and agriculture, and other kindred organisations, presided over by Sir Alfred Mond, Bart., M.P. (the President of the Association), at which the proposed Government legislation respecting the Railway and Canal Traffic Act, 1894, and also certain matters dealt with in the Report of the Departmental Committee on Railway Agreement and Amalgamations were considered.

After a discussion the following resolutions were unanimously adopted:

1. "That this Conference is of opinion that the proposed Government legislation respecting the Railway and Canal Traffic Act, 1894, as explained by the President of the Board of Trade, would be prejudicial to trade and agricultural interests, and resolves, therefore, to oppose such legislation, or any measure which may be calculated to destroy or diminish the protection afforded by the Act."

2. "That this Conference is apprehensive that legislation giving effect to certain of the recommendations of the Departmental Committee on Railway Agreements and Amalgamations will be detrimental to traders and agriculturists, as that Committee, while expressing themselves in favour of 'the more complete elimination of competition' between railway companies, and giving them greater freedom to enter into agreements with each other, fails to recommend any safeguards for traders and agriculturists under such new conditions; and resolves that no legislation will be satisfactory to traders and agriculturists that does not remedy their long standing grievances, and, in particular, restore to them the right of appeal against any rate or charge."

The gentlemen present at the Conference were subsequently received, as a deputation by Mr. J. M. Robertson, M.P., Parliamentary Secretary to the Board of Trade, in the unavoidable absence of the Right Hon. Sydney Buxton, M.P., the President of that Department.

The deputation was introduced by Sir Alfred Mond, who was supported by Mr. Basil E. Peto, M.P., and other speakers. Mr. Robertson informed the deputation that their views should be placed fully before the President of the Board of Trade.

GAS POWER AND STEAM.

IN a lecture before the Society of Engineers and Metallurgists on the economy of gas power over steam, Mr. Alan Chorlton, of Messrs. Mather & Platt, Ltd., Manchester claimed that so completely satisfactory and reliable had the gas engine now become that every day saw its application extended to duties so difficult and onerous that only a few years ago they would have been thought impossible of achievement. The invention of the producer, its progress and improvement to date, had, of course, extended the field of the gas engine enormously. Mechanical and thermal efficiencies had steadily increased in recent years, and the reliability of the gas engine had been brought up to the standard of the one-time omnipotent steam engine. A waste gas that was at present receiving more attention even than that from blast furnaces was that which was obtained from the by-product coke ovens. These ovens were now at work or being laid down in considerable numbers in this country, but even in this matter we were far behind the expansion that was taking place in Germany. Such was this expansion that, with the typical German ability of working together, the coke-oven owners were now selling large quantities of waste gas from these ovens for illuminating purposes in the adjacent towns. In this country the only place where such illumination was carried out was Little Hulton. Mr. Chorlton predicted that when further progress of this nature took place in districts adjacent to coalfields it would last of all affect Sheffield, which already compared favourably in the price of gas supplied retail (11d.) with that supplied in gross by the German concerns (8½d.).

GENERAL BUILDING NEWS.

NEW PARISH CHURCH, KIRKINTILLOCH.

The plans for the new parish church at Kirkintilloch have just been approved by the local authorities, and the work will be proceeded with immediately. They have been prepared by Messrs. Clarke & Bell, architects, of Glasgow, and provide for a building to seat 1,212 persons. The church is to be built on the vacant ground in front of the existing manse, and the total cost is estimated at 14,000*l.*, half of which has been subscribed, while the other half will be raised by an assessment on the heritors of the parish. The principal feature of the exterior will be a tower, about 120 ft. high, which marks the main entrance to the building. Internally, an end gallery only will be provided.

CHURCH OF ST. JAMES, ALPERTON.

The Bishop of London consecrated the new Church of St. James, Alperton, on Easter Eve. The new church, which lies between Wembley and Perivale, provides accommodation for 750 persons, and consists of nave, aisles, a morning chapel being upon the south side of the chancel. The church is built of brick with red dressings and Castleton stone externally, with Farleigh stone internally, and plastered walls; the roofs are covered with hand-made tiles. A narthex extends over the west front. The cost was about 7,800*l.* The architect was Mr. William A. Pite, F.R.I.B.A.

NEW BUILDINGS IN LONDON.

Picture palace, Lewisham, S.E.; Mr. A. Roberts, architect, 113, Lewisham High-road, S.E. Additions to Messrs. John Knight's soap works, Silvertown, E.; Mr. W. Stewart, architect, 2, Aldgate, E. Imperial College of Science, Prince Consort-road, Kensington, S.W.; Messrs. Dove Brothers, builders, 15, Studd-street, Islington, N. Shops, Notting Hill, W.; Mr. S. Newcumbe, architect, The Studios, Pembroke-road, W. Granary at Kidd's Flour Mills, Isleworth, W.; Messrs. Simon, Ltd., milling engineers, Mount-street, Manchester. Warehouse, Earl-street, Finsbury, E.C. Messrs. Gordon & Gunton, architects, Blomfield House, E.C.; Messrs. Ford & Walton, builders, 242, High street, Kilburn, N.W.

TRADE NEWS.

The contract for the complete installation of lifts for the new buildings of the Institution of Civil Engineers, London, has been entrusted to Messrs. Smith, Major, & Stevens, Ltd., of London and Northampton, their Standard machine with Vee wheel drive, which renders overwinding impossible, having been selected. The three main passenger lifts will be fitted with their patent full automatic button system of control.

Horden Church, Co. Durham, is being ventilated by means of Shorland's patent exhaust roof ventilators, supplied by Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester.

APPLICATIONS UNDER LONDON BUILDING ACTS, 1894 to 1909.

AT the last meeting of the London County Council before the Easter recess the following applications under the London Building Acts were dealt with. (The names of the applicants are given in parentheses):—

Lines of Frontage and Projections.

Dulwich.—Erection of porches to two houses on the eastern side of Underhill-road, Dulwich (Mr. R. Johnson).—Consent.

Finsbury, East.—Projecting swing cra the rear of No. 38, Finsbury-square, Fins next to Wilson-street (Messrs. Dav Emanuel for Messrs. A. Oppenheimer & C Consent.

Hackney, North.—Retention of four ste No. 4, Market-parade, Stamford Hill (M Joel).—Consent.

Hampstead.—Retention of a bay-windo the erection of a hood at a house upon abutting upon a proposed new road le out of St. Cuthbert's-road, Hampstead (M Rix & Wilkins).—Consent.

Kensington, North.—Illuminated sig Notting Hill-gate Tube railway-station, street, Notting Hill (Mr. R. Moss fo Central London Railway Company).—Co

Lewisham.—Erection of a one-story ad to the house known as "The Retreat," S ham Park-road, Forest Hill (Mr. A. R. worth for Mr. F. Day).—Refused.

Norwood.—Retention of a building us a coal store at No. 1, Carnegie-terrace, H Hill-road, Norwood (Mr. H. T. Gardn Consent.

Wandsworth.—Bay-windows, porches, jecting mouldings and sham half-timber in the gables of thirteen houses on the western side and twelve houses on the eastern side of Brookview-road, Stre (Messrs. E. & A. Wates).—Consent.

Westminster.†—Illuminated sign at N Victoria-street, Westminster (Mr. E. R. more for Mr. Maison Stehr).—Consent.

Width of Way.

Woolwich.—Addition at No. 56, Vic road, Woolwich, at less than the pres distance from the centre of the roadw such street (Mr. E. H. Wright for M Townley).—Consent.

Width of Way and Lines of Fronta

Hammersmith.—Erection of a buildi the western side of Galena-road, King Hammersmith (Mr. J. T. Weatherbu Consent.

Lewisham.—Erection of eight houses south-western side of Cliff-view-road, ham, with porches, half-timber work bargeboards (Mr. F. Howkins).—Consent

Peckham.—Erection of a one-story ad at the rear of Nos. 91, 93, and 95, Ry Peckham, to abut upon the northern Moncrieff-street (Messrs. North & Rol Consent.

Woolwich.—Erection of a two-story window in front of No. 56, Bercsford Woolwich (Mr. R. J. Bolton).—Consent.

Lines of Frontage, Space at Rear, Projections.

Greenwich.—Erection of three houses one-story wooden bay-windows on the so side of Ravensbourne-place, Greenwich G. T. Young for Mr. A. Bentley).—Con

Line of Frontage, Space at Rear, Working-class Dwellings.

Fulham.—One-story building on the w side of site (Mr. V. Wilkins for the Gov of the Peabody Donation Fund).—Conse

Lines of Frontage and Constructio

Clapham.—Iron sign at the entrance premises of the Direct Supply Aerated Company, Ltd., on the eastern side of hill, Clapham (Mr. J. F. Wetherell f Direct Supply Aerated Water Company, —Consent.

Lewisham.—Erection of a wood and building of a temporary character upon on the south-eastern side of Bovene Lewisham (Messrs. Bingham & Brough Consent.

Marylebone, East.—Iron and glass she the entrance to, and one at the exit Baker-street station, Marylebone-road Marylebone (Mr. W. Willox for the politan Railway Company).—Consent.

Marylebone, West.—Erection of an ir concrete stand at Lord's Cricket Grou the north-western side of St. John's Woo St. Marylebone (Messrs. McDowall, Ste Co., Ltd., for the Middlesex Cricket C Consent.

Paddington, South.—Wood and glass case at No. 134, Westbourne-grove, Pa ton (Mrs. A. Rubinstein).—Consent.

St. Pancras, South.—Erection of an ir glass shelter at the entrance to the Hotel, Tottenham Court-road. St. P (Messrs. Seth Smith & Monro).—Conse

Wandsworth.†—Wooden coffee-stall of porary character on the northern s Blackshaw-road, Tooting (Mr. G. Manw —Consent.

Space at Rear.

Deptford.—Water-closet building at th of No. 3, Lewisham High-road, D

Messrs. Harling Brothers for Miss Dixie).—Consent

Space at Rear and Projections.

Marylebone, East.—Erection of a block of ats upon a site abutting upon the eastern de of Upper Baker-street, St. Marylebone Mr. W. Willox for the Metropolitan Railway ompany).—Consent.

Alteration of Buildings.

Chelsea.—Erection of a water-closet and athroom addition at the rear of No. 41. ing's-road, Chelsea (Mr. W. Withers).—onsent.

Lewisham.—Additional story at No. 145, erry-vale, Lewisham (Mr. A. R. Westworth or Mr. M. Healy).—Consent.

St. George, Hanover square.—Alterations at o. 25, Hanover-square (Messrs. Bannan & owe).—Refused.

Cubical Extent.

Bow and Bromley. Additional cubical extent at the premises of Spratt's Patent, Ltd., awe-street, Poplar (Messrs. Max Clark & arbutt).—Consent.

Finsbury.—Additional cubical extent in espect of a proposed bank and factory building at the corner of Goswell-road and Upper harles-street, Finsbury (Messrs. F. Boreham, on, & Gladding).—Refused.

Uniting of Buildings.

City of London.—Uniting of Nos. 13 and 14, lomfield-street with No. 46, New Broad-street, ity, so far as relates to the erection of a azed partition across the room used as a erk's office at the rear of No. 46, New road-street, at the first-floor level, and the nstruction of two skylights in the roof of is room (Mr. A. R. Conder).—Consent.

Hackney, South.—Formation of a further pening between two factory buildings on the uthern side of Tynte-street, Hackney (Messrs. . S. Thomson & Co., Ltd.).—Consent.

St. George, Hanover-square.—Uniting of the erkeley Hotel, Berkeley-street, with adjoining premises on the northern side of Dover-rd (Mr. R. Griggs for the Berkeley Hotel ompany).—Consent.

Strand.—Formation of openings in the party ll at the basement and ground floor levels tween No. 100, Regent-street and No. 47. asshouse-street (Mr. A. Dawkins for the uascutum Company).—Consent.

Strand.—Uniting of No. 1, Duke-street with ulkner's Hotel, Villiers-street, Strand, by ans of openings at the first, second, and rd floor levels (Messrs. Batt & Hart for ulkner's Hotels).—Consent.

Westminster.—Formation of further openngs in the division walls of a warehouse ilding on the southern side of Vauxhall idge-road, Westminster (Mr. H. S. Stowell the Hovis Bread Flour Company, Ltd.).—nsent.

The recommendations marked † are contrary to the views of the Metropolitan Borough uncils concerned.

ROJECTED NEW BUILDINGS IN THE PROVINCES.*

BERGELE. Extensive alterations to station the London and North Western Railway mpany.

mersham (Bucks).—Isolation hospital; Mr. Hilsden, Surveyor, Rural District Council ces, Amersham.

xbroath.—Extensions to engineering works Messrs. James Keith & Blackman Com-y, Ltd.

edlington (Northumberland).—School; Mr. F. Forrest, architect, Moot Hall, Newle; Messrs. J. D. Cowieson & Co., builders.

rles street, Newcastle.

irkenhead.—Institute (3,000*l.*); Vicar, St. hael's Church, Birkenhead.

ournemouth. — St. Stephen's Vicarage, idley road; Mr. H. E. Hawker, architect, Peter's-chambers, Bournemouth.

radford.—Proposed buildings for epileptics imbeciles, Rooley lane (22,300*l.*); Mr. M. Crowther, Guardians' Offices, Bradford.

righton.—Royal Crescent Hotel, Marine ade; Messrs. Clayton & Black, architects. nce Albert-road, Brighton; Messrs. J. tth & Son, Ltd., builders, 106, Old Bond-et, W.

ristol.—Houses; Messrs. Oatley & Lawe, architects. Orchard street, Bristol. day-school; Messrs. W. V. & H. Gough, itects, 24, Bridge-street, Bristol; Messrs. tumphreys & Son, builders, Woodborough l, Bristol. Christian Assembly Rooms: ssrs. Oatley & Lawrence, architects, Edin-rgh-chambers, Baldwin street, Bristol; Mr. Dowling, builder, North-road, Bristol.

See also our list of Competitions, Contracts, on another page.

Burnley.—School, Lionel-street (6,000*l.*); Mr. H. H. Dunn, County Surveyor, Central-chambers, Cambridge.

Carnforth.—School (9,000*l.*); Mr. W. Rush worth, architect, Shire Hall, Durham.

Castleford Chapel, Carlton-street (5,000*l.*); Trustees, Wesleyan Chapel, Castleford.

Chatham. School, Ordnance street; Mr. C. Day, Surveyor, Town Hall, Chatham

Chorley. Extensions to bleachworks, Common Bank, for the Chorley Bleaching Company, Ltd.

Clitheroe.—School (14,850*l.*); Messrs. J. Bleayard & Sons, 9, Railway-view, Clitheroe.

Coatbridge.—School, corner of Drumpellier street (6,000*l.*), for the Old Monkland School Board.

Coventry.—Rectory (1,500*l.*); Vicar, St. John's Church, Coventry.

Deal.—Enlargement of school, North Wall (100 extra places); Mr. T. C. Golder, Surveyor, Town Hall, Deal.

Droylesden. — Extensions to premises (2,500*l.*) for the Co-operative Sundries Manufacturing Company.

Durham. — Parochial hall, St. Margaret's Church; Mr. W. H. Wood, North Bailey, Durham.

Easington.—Hotel, Seaside-lane, for Messrs. Nunmo & Sons, Ltd.

Eastleigh. — Isolation hospital (5,060*l.*); Messrs. H. Stevens & Co., builders, 126, Above bar, Southampton.

Eccles.—A plan has been passed for fifteen houses and house and shop, Matlock-street, for Mr. W. A. Norman

Edinburgh.—Motor garage, King Stables-road (3,000*l.*); Mr. T. D. Rhind, architect, 28, Rutland-street, Edinburgh. Picture theatre, Nicholson-square (2,000*l.*); Mr. W. N. Thomson, 87, Constitution street, Leith.

Elderslie (Johnstone).—Manual instruction centre at public school for the Paisley Landward School Board.

Erines.—Alterations and additions to Erines Mansion (5,000*l.*); Mr. W. Todd, architect, Lochgilphead.

Frampton (Boston, Lincs).—Vicarage; Mr. Jas Rowell, architect, 25, Norwood crescent, Southport; Messrs. J. Langley & Son, contractors, Kirkton, near Boston

Freshwater (Isle of Wight). Mansion; Mr. E. Harvey, architect, Grove road, Ventnor, Isle of Wight.

Frodingham.—Church of St. Lawrence; Sir Charles Nicholson & Corlette, architects, 2, New-square, Lincoln's Inn, W.C.

Gateshead.—Alterations to school, High West street (2,385*l.*); Messrs. Raven & Hitcham, builders, Gateshead

Gedling.—School, Mapperley Plains road (3,965*l.*); Mr. T. Bow, builder, Lemartine street, Nottingham

Gellifaelog.—School; Mr. J. L. Smith, architect, Aberdare; Messrs. Enoch Williams & Son, builders, Merthyr

Gerrard's Cross.—Banking premises and shops; Messrs. Cheston & Perkin, architects, 5, Union court, Old Broad-street, E.C.

Glasgow.—Additions to printing works; Mr. George Simpson, architect, 233, St. Vincent-street, Glasgow. Extensions to Sentinel Works, Polmadie road, for Messrs. Alley & Maclellan, Ltd.

Grays Special instruction centre (2,735*l.*); Messrs Brown Brothers, builders, Grays.

Haworth.—Public abattoir (800*l.*); Mr. James Redman, Surveyor, Council Offices, Haworth

Highcliffe (near Christchurch).—Residence; Mr. D. J. Barry, architect, 50, High-street, Reigate; Messrs. Thomas & Edge, builders, Anglesey-avenue, Woolwich, S.E

Hillhead (Glasgow).—Motor garage, Vinnicombe-street; Mr. D. V. Wyllie, architect, 102, Bath-street, Glasgow.

Hull.—Plans have been passed as follows:—Thirteen houses, Wellesley-avenue, for Mr. W. Garbutt; ten houses, Westbourne-avenue, for Mr. F. Neal; alterations, Waterloo Hotel, Wellington-lane, for the Hull Brewery Company, Ltd.; laboratory, Cato Mills, Wincolmlee, for the British Oil and Cake Mills, Ltd.; warehouse, Cottingham-road, for Mr. J. Mallison.

Ipswich.—Factory for the Diesel Engine Company.

Kirkheaton.—Addition to church; Vicar, Parish Church, Kirkheaton

Leeds.—Church, Buckingham House Estates (10,000*l.*), for the Christian Scientists.

Liversedge.—Extensions to warehouse, Mill bridge, for Messrs. Cooke, Sons, & Co.

Longfleet (Dorset).—Extension to church (5,000*l.*); Vicar, Longfleet.

Luton.—Factory; Messrs. J. R. Brown & Son, architects, Castle-street-chambers, Luton.

Maesmarchog.—Church; Mr. E. Evans Bevan, owner of Maesmarchog, Onlyn, and Seven Sisters Collieries, Neath.

Midsomer Norton.—Co-operative premises; Mr. W. F. Bird, architect, Midsomer Norton.

Newbiggin.—Institute (1,500*l.*); Mr. C. F. Murphy, architect, Morpeth.

Newbury.—Eleven houses (1,750*l.*); Messrs Hoskings Brothers, builders, West Mills, Newbury.

Newquay. — School; Mr. S. Williams, Builder, Bridgend, Wadebridge.

Northampton.—Plans have been passed as follows:—Ten houses, The Broadway, for Mr. A. Glenn; additions to Messrs. Rice & Co.'s foundry, Bridge street, for Messrs. P. Phipps & Co., Ltd.; four houses, Harborough-road, for Mr. H. Weaver; addition to factory, Lower Mounts, for Messrs. Wright Brothers; additions to "Good Intent" public-house, West-street, and "New Town House" public house, Lower Thrift street, for Messrs. P. Phipps & Co., Ltd.

Norwich.—Beet sugar factory. Mr. R. H. Weymouth, architect, 3, Victoria-street, S.W.

Nottingham.—School, Mundella-road. Mr. Frank B. Lewis, City Architect, Town Hall, Nottingham. Buildings, Pinder-street, for Messrs. Boot's Pure Drug Company.

Nuneaton.—Dining hall at workhouse (1,325*l.*); Mr. T. H. Smith, builder, Nuneaton.

Pickering.—Club premises, Market-place; Secretary, Conservative Club, Pickering.

Prospect.—Misison hall and adaptation of old chapel as Sunday-school, etc. (6,000*l.*); Bradford Mission Committee.

Rawdon (Yorks).—Woollen shed and engine and boiler house at Park Mills; Mr. George Foggitt, architect, Ashfield, Yeadon, Yorks.

Reading. — Enlargement of Kendrick Schools; Mr. H. T. Pugh, Secretary, Education Committee, Town Hall, Reading.

Rossington.—School; Mr. J. Stuart, County Hall, Wakefield.

Ryhope.—Parish offices (1,800*l.*); Mr. G. Brown, architect, 51, Fawcett-street, Sunderland.

Salford.—Building, Chapel-street; Messrs. D. C. Thomson & Co., Ltd., Dundee. School (14,640*l.*); Mr. A. Hodgkinson, builder, Manchester. Plans have been passed for alterations and additions to "Pickwick Inn," Oldfield street, and "Park Inn," Tatton street, also for works, Derwent-street.

Seacliff (Haddingtonshire). — Signalling station; Mr. G. Cunninghame, builder, Victoria-street, Dunbar.

Siddall (Halifax).—Church (8,000*l.*); Messrs Walsh & Nicholas, architects, Harrison-road, Halifax.

Silverhill (St. Leonards).—Church hall; Mr. P. Tree, architect, 63, Queen Victoria-street, E.C.

Southampton.—A plan has been passed for six houses, Hill-lane and Lumsden-avenue, and additions, 195, Shirley-road, for Messrs. Jurd & Sanders. Mr. J. Smith has lodged plans for twenty-eight houses in Wilton-road.

South Hiendley.—School; Mr. J. Stuart, County Hall, Wakefield.

South Ockenden.—Enlargement of school (2,800*l.*); Mr. F. W. Burtwell, builder, High street, Brentwood.

South Shields. Works at school, Ocean-road (1,410*l.*); Messrs. S. Sheriff & Son, builders, Back Woodbine street, South Shields.

Stepps (Glasgow).—Church hall, Parish Church (2,500*l.*); Mr. John Fairweather, architect, 136, Wellington-street, Glasgow.

Swansea.—Business premises, Castle-street; Messrs. Margrave & Peacock, architects, 20, Royal Exchange, Swansea; Messrs. J. & F. Weaver, builders, Mansel ton Steam Joinery Works, Swansea.

Tottington (near Bury). Premises for the Equitable Co-operative Society.

Twickenham.—A plan has been passed for six houses, Cambridge road, for Messrs. E. Evans & Sons

Wakefield. Building (4,000*l.*) for the Y.M.C.A. Wakefield. Extensions to infirmary, Messrs Simpson & Firth, architects, Wakefield.

Warrington.—A plan has been passed for twenty-two houses in Orford-lane for Mr. Peter Lawton. The Hon. Miss Wilson Patten has lodged plans for erection of Patten Hall, Museum-street.

Wednesbury.—School of science; Mr. Hutchings, Education Offices, Stafford.

Wellingborough.—Additions at schools; Mr G. Henson, builder, 149, Midland-road, Wellingborough.

West Aberdeen.—Factory, North Esplanade (2,000*l.*); Messrs. Wilson & Walker, 181A, Union-street, Aberdeen.

West Bridgeford.—School; Mr. L. Maggs, Shire Hall, Nottingham.

Woodhouse (Notts).—Golf clubhouse; Secretary, Sherwood Forest Golf Club, Woodhouse.

York.—Additions to premises, Mill-street, for the Tadcaster Tower Brewery.

Youghal.—Carnegie free library; Messrs. Chillingworth & Levis, architects, Cork.



The Demolition of Trentham Hall.

THE DEMOLITION OF TRENTHAM HALL.

TRENTHAM HALL, the country residence for a long period of the Duke and Duchess of Sutherland and their predecessors, is now in the hands of the housebreakers, and is in process of destruction. The Duke, for various good reasons, felt it was no longer desirable as a country residence, and his offer of it to the local authorities as a gift for the benefit of the people of the Potteries, to which it is adjacent, having been refused on the score of the cost of maintenance, there was nothing for it but to sell or destroy it, and the latter course is being taken, a sale by auction for demolition purposes having previously taken place. The tower is to be preserved elsewhere.

LOWER THAMES VALLEY DISTRICT SURVEYORS' ASSOCIATION.

A MEETING of this Association, presided over by the President (Engineer and Surveyor to the Chiswick Urban District Council), was held at the Town Hall, Twickenham, on Saturday, 30th ult., and was well attended.

A further discussion was raised on the motor omnibus and similar classes of traffic passing over all classes of roads. At the Association's meeting on February 3 the following resolution was passed :—"That, having regard to the great damage caused by motor omnibuses and other similar vehicles passing over various classes of roads not originally constructed to carry such traffic, this Association is of opinion that further powers should be conferred on Local authorities, enabling them to define the routes (other than county main roads) to be taken by any service of motor omnibuses or other motor vehicles licensed for hire or for the carriage of goods into or through their respective districts." It was further resolved : - "That a copy of the above resolution be sent to the Institution of Municipal and County Engineers, and that the Council of the Institution be requested to consider the subject-matter of such resolution, and to take such action as they may deem necessary." The Association received a letter from the Secretary of the Institution of Municipal and County Engineers stating that the Council had given careful consideration to the above resolution, and, on the recommendation of the Roads Committee, to which the matter was referred, the Council had resolved with regret that the resolution is of so far-reaching a character as to lend itself to unreasonable application, and, having regard to representations made by the Institution to the Local Government Board, pressing for amendment of the Highways and Locomotives Act, and the Heavy Motor Car Order of 1904, they could not see their way at present to take any further steps in the direction suggested by the resolution. The above Association were unanimously of opinion that possibly the wording of the resolution had not sufficiently marked the importance that it was intended to give powers dealing with district roads and not main roads, and recommended that the Institution of Municipal and County Engineers be again asked to consider the matter apart from the wording, and to consider it in the spirit of the resolution. It was further resolved that the Committee who had this matter under consideration be requested to allow the President of the Association to interview them regarding this matter, so as to be able to draw their attention to the views taken by this Association, they feeling that this matter is one of the greatest importance, more especially that, since passing the above resolution, the matter has been taken up on somewhat similar lines by the Metropolitan borough councils.

The Association also had under consideration the district nominations to the Council of the Institution of Municipal and County Engineers.

The Association also had under further discussion the visit to the sewage disposal works now in course of construction at Surbiton, when a vote of thanks was passed to Mr. Mather, the Engineer, and it was decided to request him to read a paper with reference to the works at an early date in the next session.

BOOKS.

The Art of the Romans. By H. B. WALTERS. (Methuen.)

MR. WALTERS's book is fortunate in the time of its appearance. Last year's National Exhibition at Rome, the recent foundation of the Society for the Promotion of Roman Studies, the re-organisation of the British School in Rome on broader lines now under discussion are a few of the many circumstances which have tended to revive interest in the art of ancient Rome, which had, perhaps, been rather overshadowed of late by the more penetrating fascination of Hellenic art. If the Roman art never reached the same calm heights of faultless achievement, it is yet of permanent importance in the general history of European art. For if Rome originated little or nothing in the strictly artistic domain she borrowed from various sources, combined and assimilated, then transmitted and diffused, and thus provided the starting-point of much that came afterwards. In art, as in politics, the Romans were great as organisers and administrators. But before they came under the spell by which Greece enslaved her conquerors they were by national temperament rather contemptuous of art. Mr. Walters aptly quotes the prophecy of Capys—"Leave to the Greek his marble nymphs"—though, by the way, he is unfair to poor Macaulay, who may have been, as he says, a Philistine, but cannot be convicted of it on such evidence as this. Had he not expressly stated in his preface that "the author speaks not in his own person, but in that of ancient minstrels," we might have guessed that the words of "Capys, the sightless seer," do not express Macaulay's own sentiments any more than Lady Macbeth does those of Shakespeare. Be this as it may, Mr. Walters does a useful w attempting to estimate the extent and of Rome's debt to Greece and the sh to the Etruscans and other races al in the Roman dominion, as well as in our attention to those branches of which Rome can claim some originali architecture, while the Romans them or the foreign artist whom they em never made a completely artistic between their own arcuate constructi the columnar architecture of Greece, retaining the latter as a decorative and applying it to far more varied use removed it out of its own limited and thus extended the range of its tialities. In this they rendered a service to architectural evolution, as that genius for co-ordination which them to conceive plans of the utmos plexity, comprising numerous buildin apartments, yet so grouped as to pro single orderly and symmetrical whole. the author is not an architect hims gather from his rather odd use of architectural terms. Thus, on pa "entablatures curved or triangular spoken of, when "pediments" wo clearer; and on page 40 the ar Titus is described as having a "doo where "opening," "arch," or " opening" would be more usual. It n doubted whether the claim which Walters appears to make for the Rom a monopoly of circular buildings is justified. In Greece several examp circular temples are known—*e.g.*, a dauros, Delphi, and Olympia. It is u ful, however, to quibble at these unimp details, for the chapter which he dev Roman architecture is as good as any book. It gives a clear and concise of the subject, and brings out ext well the salient points in connexion Roman methods of construction, pla and decoration. Some branches of tion are, furthermore, fully treated c later chapter devoted to painting and A garden scene here reproduced fro walls of Livia's Villa at Porta Prima, is a peculiarly attractive example of of fresco, and throws some light on garden design. It appears to represe wilder portion of a garden as seen ov balustrade from within the more pleasaunce. Under mosaics, as, indeed where, special attention is devot examples found in Britain.

In the domain of sculpture Rome's Greece is enormous. To Roman adm of Greek sculpture we owe the prese of many works of the great period might otherwise have perished, while were perpetuated by reproduction and tion. Again, a great part of the definitely Roman sculpture was execu Greeks. As Mr. Walters points out ever, individual Greek works were copied literally, the artists aiming ra reproducing types created by the masters or the style of some school or and allowing themselves considerable l in their interpretation.

Rome also owed much to Etruscan tion and influence. Though this probab in most cases, was an indirect debt Hellenes, this was less so in respect trait sculpture, which was practise immense vigour and success in Roma so much so, indeed, that it may be re as the Roman art *par excellence*. Etruscans had produced remarkably sepulchral effigies from very early tim the Romans themselves, with their cu keeping *imagines* or wax likenesses of d ancestors in their *atria*, were favoural posed towards portraiture. Their pr matter-of-fact character inclined then more than the idealising Greeks to t petuation of the actual features and i sion of individuals. But if realistic p likenesses are thus among the pr achievements of Roman art, that it incapable of some degree of idealisa proved by the creation of the be Antinous type. The same objective the Roman temperament also tended production of vivid *genre* scenes to greater degree than was the case w Greeks.

Mr. Walters has much that is insti to say on other aspects of the subj

ophagi and monumental reliefs, on the ntinuous" style and "illusionism," on ous branches of metalwork, on gems and ery, and his book provides a most useful mary of the views held by various *savants* hese and kindred subjects. If we have quarrel with him it is that he is too lest. We sometimes wish that he could et Riegl and Mrs. Strong, Wickhoff and ygowski, and speak with the authority hich his learning entitles him.

History of the Church of St. Giles, orthampton. By Rev. R. M. SERJEANTON, M.A., F.G.A. (Northampton: W. ark & Co. Price 7s. 6d. net.)

ood deal of architectural interest pertains wo of the old churches of the ancient ugh of Northampton, namely, those of Sepulchre and St. Peter. All Saints, central church of the town, though rebuilt r the great fire of the XVIIth century, esses a history closely linked with the ous important incidents that tell of the and religious evolution of the townsmen. story of these three churches has already successfully told by Mr. Serjeantson, in any volumes, at intervals during the last years. He has now crowned his work producing a fourth book of some 400 s, lavishly illustrated, descriptive of Giles, the last of the four old churches. pecial interest attaches to the last of e churches, for the municipal life of a ving and energetic borough centred round a remarkable extent. It was within nave or the churchyard of St. Giles the often turbulent and exciting assem- of the burghers took place, and here, the mayors, bailiffs, coroners, and other officials were elected year by year. ntually, after a disastrous election in h there was loss of life, an Act of iament was passed in 1488 whereby the chise of the burghers was considerably icted, and the elections placed in the ds of a select company known as the y-Eight. Henceforth, the annual pro- ings took place within the small Town . Churches dedicated to St. Giles stand the most part in lonely districts, and in cases where they were connected with centres of population they were usually d without the town walls. This was the with regard to St. Giles, Northampton, founded in the early Norman days. It stood on the outside of the Anglo-Nor- wall to the east of the town. When the mediæval walls were built about 1300 church was brought within the extended d area, near to the east gate of Abing- street. Mr. Serjeantson's conjecture as ne reason of the townsmen, in their aim dependence, selecting St. Giles for their ing place, rather than the central and r building of All Saints, is probably ct. This church was the farthest re- d from the overshadowing influence of royal castle on the west of the town, also equally remote from the ecclesi- al control of the powerful priory of St. ews, which stood just within the ern gates.

idents of the early municipal history of and will not be surprised to find the sfolk of Northampton using the nave church for their assemblies. Mr. Ser- son instances like usages (at Grantham at several of the Cinque Port towns), but a usage appears to have been the m up and down England rather than xception. Such instances as Cambridge, rich, and Salisbury readily come to .

. Serjeantson shows much painstaking rch in all his investigations, particularly the pedigrees and life stories of those lies which were in any special sense ected with the church and parish. He been able to add no fewer than eleven s to former lists of the vicars of St. , which he takes back to the year 1239. wo particulars he supplies special in- ation on points of far more than local est. Fairly able ecclesiologists often go g on the subject of anchorites or re- , for whose retired lives special cells not infrequently built, attached to the els, and occasionally to other parts of eval church fabrics. There was at St. an anchoress or female recluse, in XIIIth century, of the name of Eva, who obtained a considerable repute for sanctity. On this incident the writer has built up an excellent, reliable, and tersely written essay which sets forth the real facts associated with the lives and customs of such individuals.

The other point of yet wider interest is an outline life of Robert Browne, the founder of the Congregationalists or Independents This able but imperious and fickle man, after a quarter of a century of peaceful life as a beneficed priest of the Church of England, when over 80, again quarrelled with the authorities, was placed in gaol at Northampton, where he died, and was buried at St. Giles on October 6, 1633. Mr. Serjeantson has unearthed a considerable number of facts from the records at Peterborough, altogether unknown to his previous biographers.

The long chapter on the architectural history has been entrusted to the capable pen of Mr. A. Hamilton Thompson, F.S.A. The fabric, consisting of chancel with north and south chapels, central tower with transepts, clearstoried nave with south aisle, two north aisles, and north and south porches, well merits closer attention than it has hitherto received. The plan of the early Norman church was cruciform with a central tower space, and was probably aiseless. There are evidences that the south aisle has been built up against a previously-unpierced wall, and the same was presumably the case with the northern arcade. A blocked-up south door way of XIIth century, or possibly XIth century date, shows that the chancel was longer than an ordinary early Norman chancel. Restorations have renewed most of the arches of the base of the central tower, but they are known to have been distinctly Norman, and some remains of the original archway on the north side of the tower have been recently uncovered. The west and north doorways of the body of the church are also early Norman, though in both cases set back, rebuilt, and not a little renewed. As the XIIth century proceeded important alterations took place. The high square turret at the north-east corner of the tower, with newel staircase, is of massive form, and was probably intended originally to be external. The belfry doorway, with sections and mouldings, is boldly drawn by Mr. Thomas Garrett, who also supplies other architectural sketches.

At the dawn of the Gothic period the chancel was enlarged in width as well as in length, and by this proceeding the turret was brought wholly within the fabric. Two of the lancets of that period remain, and the upper part of a third. The rebuildings and enlargements of the XIVth century are next discussed and described with much lucidity, the new east wall, the transeptal chapels, the chancel chapels of different dates, and the aisles and arcades of the nave. The late XVth century and early XVIth century work was chiefly confined to enlarged windows. A record allusion to "the new work of our Lady Chapel" is of the year 1512.

About a century, however, after the completion of these last alterations there came about the disastrous fall of the central tower. The exact date of the collapse of the tower and its rebuilding are thus concisely preserved in a contemporary MS. :—

"1614, St. Giles steeple fell downe.
1616, St. Giles Church began to be reared.
1617, St. Giles Church was leaded."

The tower in its fall destroyed much of the nave. The Jacobean tower is a notable piece of construction, and presents a dignified appearance. Over the first pillar to the west of the tower is a bold piece of lettering, the rhymed effort of Dr. Sibthorpe, a celebrated Northamptonshire incumbent, who at that time held the vicarage of St. Giles :—

"Rob. Sibthorpes to God's true feare,
This downfalne church got helpe to reare.
1616, Will. Dawes, mason."

In the middle of last century a complete scheme of restoration was carried out by Mr E. F. Law, on the report of Sir Gilbert Scott, whose brother was at that time curate-in-charge. Twenty years later much money was spent on the chancel and its side chapels.

The remarkable architecture of the round church of St. Sepulchre and the profusion of late enriched Norman of St. Peter's church has always made Northampton a favourite place with architectural students. With this book of Mr. Serjeantson's in our hands it will be found that Northampton possesses a third church well worthy of close attention.

Technical Arithmetic and Geometry. By C. T. MILLIS, M.I.Mech.E. Second Edition, revised. (London: Methuen & Co., Ltd. Pp. 290. 3s. 6d.)

HAVING reviewed the first edition, we need merely point out some of the more important modifications and additions embodied in the present issue. In Chapter II. the greatly increased use of decimal fractions has been suitably recognised. The additional exercises now included should be generally appreciated by both teachers and pupils, and the addenda to the concluding chapter ought also to be found of value. As a text-book combining arithmetic, geometry, and mensuration the treatise occupies a unique position, particularly as the author never steps beyond the boundaries of an elementary course of instruction.

LEGAL COLUMN.

What is Repair?

In our Law Reports last week we reported a case heard at the West London Police Court, in which the District Surveyor contended that notice should have been given under sect. 145 of the London Building Act by contractors who were reroofing a workshop with zinc. The brickwork of the walls and the woodwork under the roof had remained untouched, but the zinc was renewed with the exception of the clips. It was contended that this work came within the exception contained in sect. 209, being "necessary repair not affecting the construction of any external or party wall," and Counsel particularly inquired how could you repair a zinc roof except by renewing it? The Magistrate accepted this view, as the main structure of the roof was untouched, and he dismissed the summons; but he commented on the difficulty of construing the London Building Act.

A case where part of the woodwork had to be renewed will be found reported, the *Builder*, July 7, 1911, where the summons was also dismissed.

Each case has necessarily to be decided on its merits, and there appears to have been no case in which any exhaustive definition of "repair" in such a connexion has been given, but the term has been considered in an endless number of cases, as between landlord and tenant, and it may be suggested that the question to be answered is—Does the operation being carried out in any way alter the nature or character of what is being renewed or repaired?

If the character of a roof, for instance, is altered it is not merely "repair," but something beyond repair; but where new material of the same nature as the old is merely replaced on a structure, which as such also retains its own character, then what is done appears simply to amount to "repair."

Trade Union Law.

Two cases of importance on the liability of trade unions to be sued in respect of their actions have recently come before the Courts. In Vacher & Sons *v.* London Society of Compositors the defendant trade union had published a libel on the plaintiffs. The libellous statements are not set out in the report of the case, but they related to the plaintiffs' trade methods, and the question to be decided was whether sect. 4 of the Trade Disputes Act applied so that the plaintiffs had no right of redress by action in a Court of law.

The decision by the Court of Appeal of this case has done little to elucidate the law on this section. The majority of the Court held that as the libel related to matters affecting trade unions and workmen, and it was published in contemplation or furtherance of a trade dispute, the section applied, and the plaintiffs' action would not lie. Lord Justice Farwell dissented from this judgment, and it is to be hoped that the case will be carried to the House of Lords. The proposition that a union can deliberately publish a libel upon members of the public without in any way being called to account in a Court of law, or being enjoined from repeating it, is one that surely cannot be tolerated in a civilised country. As Lord Justice Farwell observed, no honest trade unionist could be found to say that the publication of lies could be either necessary or expedient in the interests of his union, and the only advantage we can see from such a decision is that it emphasises

in a marked degree the absurdities to which the Trade Disputes Act lends itself.

The decision is important as it raises a question under the Act which requires revision. Sect. 4, sub-sect. 1, which grants immunity to trade unions from being sued for torts in any Court of law, is in general terms, no mention being made in this sub-section of the tort being committed "in contemplation or furtherance of a trade dispute." In this case, although the majority of the Court found that the libel was published in contemplation or furtherance of a trade dispute, it appears that they did not consider this essential to enable the union to claim the benefit of the section. This is an important question, as it enlarges the powers of the unions. There have been two decisions on this point in a Court of First Instance. In *Bussey v.* Amalgamated Society of Railway Servants the Court intimated, where a dispute was in contemplation or in existence, that a libel was within the protection of the section; but in Rickards *v.* Bartam, where the libel was unconnected with a trade dispute, the Court held it had jurisdiction to entertain the action. The Court of Appeal have by inference repealed the latter decision. The above cases will be found noted the *Builder*, December 26, 1908.

The second recent case was decided in the County Palatine of Lancashire. It was brought by three miners, Gaskell and others, against the Lancashire and Cheshire Miners' Federation. The Federation, in order to compel the plaintiffs to join the Federation, gave notice to cease work at the colliery, and in consequence the plaintiffs were discharged. The Federation set up sect. 4 of the Trade Disputes Act, and the Court held that there was a dispute in existence between union and non-union men, and that sect. 4 applied, and the Court had no jurisdiction. Other points were decided in the case, as, for instance, that the existence of rules held illegal in Osborne's case did not deprive the union of the benefit of the section. This was a struggle between union and non-union men, and the non-union men, deprived of their right to work, were held to have no remedy by reason of the Trade Disputes Act. The lesson to be learnt from the recent strikes is that it is essential to the community that men should be free to dispose of their labour as they think fit, and that compulsion should not be brought to bear upon them to compel them to join unions and federations. These federations first terrorise the men into joining them and then combine to enforce their will on Parliament and the public.

LAW REPORTS.

KING'S BENCH DIVISIONAL COURT.
(Before Justices DARLING, PICKFORD, and BANKES.)

Dellar Brothers *v.* Drury.

THIS was the appeal of Messrs. Dellar Brothers, Ltd., builders, from a decision of Mr. Horace Smith, the magistrate sitting at Westminster Police Court, under the London Building Act.

The respondent to the appeal was Mr. Drury, a Surveyor under the Act for the District of Westminster.

From a special case stated for the opinion of the High Court, it appeared that on April 5, 1911, the respondent preferred an information against Messrs. Dellar Brothers under sect. 153 of the London Building Act, alleging that they had failed to comply with a notice served upon them by the respondent under the Act. The information was heard, and the magistrate made an order upon the appellants to comply with the notice and to pay the respondent twenty-five guineas costs.

It appeared, further, that Messrs. Bipsine (1910), Ltd., were the holders of the lease of a piece of land at the rear of their works at Westminster. In February, 1911, negotiations were commenced with the Territorial Forces Association of the County of London for the erection of an iron shed on the land for the purpose of storing the Association's waggons. On March 27, the negotiations having been successfully terminated, Messrs. Dellar Brothers were asked to build the shed according to plans approved by an officer of the Association. It was admitted that the building was not in accordance with the London Building Act.

On March 28 a building notice under the Act was duly served upon the respondent by the appellants, and on March 31 a notice as to the irregularity of the building was served on the appellants by the respondent. As that notice was not complied with a summons was applied for by the respondent. On April 8 the property of the Association was brought to the shed, which was completed shortly afterwards. The shed in question was not a building which could be lawfully erected with the approval of the Act.

On April 20 the matter came before the magistrate. Then sect. 22 of the Act was read as follows:—

"There shall be exempted from so much of the provisions of the Act as relates to buildings and structures—every building, structure, or work vested in the occupation of his Majesty, either beneficially or as part of hereditary revenues; to the Crown to use in trust for the public services; also any building, structure, or work vested in and in the occupation of any department of his Majesty's Government, or to the Metropolitan Police, etc."

It was contended by the appellants that the said exemption clause applied to the said premises, or, in the alternative, the said premises were being erected for the Crown, and that because of the exemption the provisions of the Act could not apply. It was further contended that the premises were vested in and in the possession of the Territorial Association at the date of the hearing of the summons, and there was, therefore, no power in the magistrate to enforce the order.

The respondent contended (1) that the Association was not a department of his Majesty's Government, and (2) that the said premises were not "vested in" the Association within the meaning of the Act. He also contended that in the true construction of the Act the Crown was bound, at any rate, by the provisions relating to buildings and structures, and that the appellants' contentions were erroneous.

The magistrate held that the Association was not a department of the Government, and that in the circumstances the premises were vested in the Association on April 1; but that possession was not taken by them until April 22. Therefore, he made an order upon the appellants, enforcing the notice.

Appearing for the appellants, Mr. S. A. T. Rowlatt said the question was an important one to builders from many points of view. The notice served upon the appellants was in connexion with the irregularity of the building which they had erected, and as they did not comply with it the magistrate made an order that appellants should do so. If they did not, the District Council would have the authority to go in and pull the building down. At any rate, at the time the order was made the building in question, which was constructed of iron and could not possibly be said to comply with the Building Act, which required all buildings to be constructed of bricks, was vested in the Territorial Association, and, therefore, under the Crown. Therefore the question came to this: Was a building used for the purposes of the Crown and the defence of the realm liable to be pulled down summarily because it did not comply with the provisions of the London Building Act?

Mr. Justice Pickford: The first point, then, is whether this building was in the occupation of the Crown?

Mr. Rowlatt: Yes, that is one point, but there is also a question whether it comes within the exemption. Then a question also arises—whether the order was made when the builder was in possession or occupation. Supposing the Crown was having something done to its own buildings, as is happening at the Law Courts at present, the District Surveyor cannot summon the builder who is doing the work for doing anything outside the Act.

Mr. Justice Pickford: Take the new Territorial headquarters at the Duke of York's Schools?

Mr. Rowlatt: Yes. You can't summon a builder for not putting in a proper compliance as demanded by the Act in such a building as that.

Mr. Justice Bankes: Supposing the foundations only are laid, is the Crown in occupation then?

Mr. Rowlatt said he thought they could be. The Crown could employ a builder to come in on land in its occupation to build under the direction of the Crown. Proceeding, Counsel said there was one section which dealt with buildings other than of brick. That section was 82, which, in effect, was where builders were desirous of putting up an iron building which other parts of the Act made impossible, he should make application to the County Council and produce plans. If the Council were satisfied with the plans and particulars, they could give sanction to the erection of the building in writing. Therefore if a builder wished to erect a structure which was out of the ordinary run, he had to go to the Council and obtain a dispensation. In this case the builders went to the Council for that dispensation, and were told that, as the building belonged to the Crown, such sanction was not required. Yet when the Surveyor came upon the scene he that the building had been erected i vention of the Act, and served the no the appellants.

Mr. Ryde, K.C. (for the respond he hoped his friend would not bring thing which did not come within the

Mr. Rowlatt said he really thoug a quarrel between two surveyors.

Mr. Justice Bankes: It may be a of fees.

Mr. Justice Darling: Yes, I have se of that sort of thing.

Mr. Ryde said he was not disput the Territorial Association was acti servant of the Crown, and whether technically a department or a servan Crown seemed to him to be irrelev contention would be that Dellar Brot not at the time of the issuing of the the servants of the Crown so far as t ing was concerned.

Mr. Rowlatt said there was no d if this building came within the e as being within the occupation of th Messrs. Dellar Brothers came also w exemption. Even at the date of the the interests of the Crown were suff prevent a summons being obtained t proceedings, which would in effect the pulling down of the building.

Mr. Justice Pickford: Can't you lease of property and yet not be in occ

Mr. Rowlatt: Oh, yes!

His Lordship: Isn't that the case i it not a fact that the Association lease on April 5, and did not take oc until some weeks afterwards?

Mr. Rowlatt: That may be so; it on whether you draw that inference.

His Lordship: The magistrate ha that inference, and we are bound by

Mr. Justice Darling: Suppose a built a private house which did not with the London Building Act, and t went to live in it at the time of the of the summons against the build Crown would be exempt, and there builder would be exempt and could ordered to pull the house down?

Mr. Rowlatt: That is so. No suc could be made upon him. If he h mitted a minor offence against the Ac the King took possession, which involved a small fine, he could not, *facto*, be released from that. I say building cannot be ordered to be pull because of a contravention of the Building Act.

Mr. Justice Bankes: Supposing a said:—"This building is exempt, and not pull it down," can any further taken against him?

Mr. Ryde said he thought there was dealing with that.

Mr. Justice Bankes: If that is so, i that the order in this case was right, the building cannot now be touched.

Mr. Rowlatt said if Mr. Ryde wa and further steps could be taken a builder in respect of a building for the the result would be amusing, beca penalty for non-compliance of the or 40s., and 40s. per day until the build pulled down.

Mr. Justice Darling: If you pull Crown building, what are you not li

Mr. Ryde argued that it could not that a half-finished building could b in the Crown or be in its occupation.

Mr. Justice Darling said the build now vested in the Crown, and, in re Ryde said his submission was that the of the builder under the Act crystal April 5, when the summons was app and when the building was vested Association.

Counsel added that a suggestion h made that the District Surveyor was for his fees. That was not the fa Surveyor was the one who first t builders to go to the County Cou apply for sanction to build.

Mr. Justice Darling: And when th back after being told that they did r sanction because they were exempted veyor was not satisfied.

Mr. Rowlatt said he would withdr remark he had made which would give to the Surveyor. He had no do Surveyor was acting under a sense of

Delivering his judgment, Mr. Justice said in this case it was sought by the S for the District of Westminster, un Building Act, for the Metropolis, to an order made by the magistrate in to a building in the occupation of the and for the purposes connected w defence of the country. That build

put up by the appellants upon a piece of land on which it now stood, and had been found by the magistrate to have become vested in the Territorial Association on April 5, 1911. The magistrate also found that it was in the occupation of the Association a few weeks later. The summons taken out by the Surveyor was for alleged contravention of the Act, and it was taken out on April 5, but it was not heard until July 20, when the magistrate made the order upon appellants to comply with the notice. Compliance with the notice would have meant the carrying out of certain requisitions of the Act, so that the building would become as the Act directed it should be. The appellants, however, did not comply, and that being so, the order of the magistrate meant that if they did not do as the Act told them to the Council could, after having given seven days' notice of their intentions, enter with a sufficient number of workmen and do what was necessary to enforce the requisitions in the notice. But by July 20, when the order was made, there was very little use in it, for the building had become the property of the Crown, and, therefore, an order on the builder that he should comply with the Act was somewhat out of place, for it would mean that the building would have to be demolished and put up again. Such an order could not be enforced with regard to a building in the occupation of the Crown, and therefore he (his Lordship) thought it did not matter when the summons was taken out; what they had to consider was the date the order was made, and he found that on that date there was no power in the magistrate to make an order in respect of the building in question. The appeal would, therefore, be allowed, and the order struck out.

Justices Pickford and Bankes agreed.

COURT OF APPEAL.

(Before Lords Justices FARWELL and KENNEDY.)

Action against a Contractor: Simpson *v.* Wright.

IN this case the defendant, Mr. G. T. Wright, a contractor carrying on business in Leeds, appealed from a decision of Mr. Justice Channell, in Chambers, refusing to stay the action under sect. 4 of the Arbitration Act.

Mr. Tindal Atkinson, K.C., in support of the appeal, said that the plaintiff, Mr. E. O Simpson, a solicitor, purchased part of an estate near Oberford, which formerly belonged to Sir William Vavasour, together with a mansion or hall known as Hazlewood Castle. He desired to turn the Castle into a private residence for himself, and he entered into a contract with the defendant, whereby the latter contracted to make certain alterations in the premises, which had not been occupied for a considerable time, and which were in a dilapidated condition. The contract was for a lump sum of 3,950*l*., "subject to all deductions and additions." The architects were Messrs. Sidney D. Kitson and George Frederick Bowman, to whom all disputes arising between the parties were (under the terms of the contract) to be referred. By his statement of claim the plaintiff alleged that, having paid to the defendant in respect of work done on the alterations sums amounting to 3,750*l*., on April 4 the defendant forwarded to him a document which purported to be a final certificate for 451*l*., signed by Mr. Kitson, the amount being subsequently reduced by Mr. Kitson to 441*l*. Plaintiff's case was that the certificate was not issued in accordance with the contract; that in arriving at the amount the terms of the contract were wholly ignored; that the whole of the work had been remeasured and charged for on the basis of "measure and value" contract; and that no distinction had been made between the work to be paid for by a lump sum and the variations and extras. Plaintiff brought the action, claiming a declaration (1) that the contract dated October 4, 1909, was binding upon the parties; (2) that the liability of the plaintiff to pay the defendant for the work arose under the contract, and not otherwise; (3) that the defendant was not entitled as against the plaintiff to any sum under any certificates of the architects other than certificates issued in accordance with and on the basis of the terms of the contract; and (4) that the plaintiff was entitled to leave to revoke the submission to arbitration under the contract. In these circumstances the defendant took out a summons, asking that the action be stayed and the dispute referred to the arbitration of the architects, as provided for in the contract. His (Counsel's) submission was that the dispute was properly one which ought to be referred. During the course of the work the alterations were found to be so extensive that it was impossible to apply the terms of the contract—that was to say, it was impossible to take a lump sum first and then find what the variations were. Consequently the whole work had to be remeasured, and the plaintiff alleged that the architects in so acting had misconceived their duty. The best persons to judge were the architects who advised the work, and only they could say what the variations and additions were. Because the architects had taken a perfectly honest view of their duty and had already expressed a very decided opinion on the matters in dispute they ought not, he contended, to be precluded from giving an honest decision hereafter as to whether they were right or wrong in the view they formerly took.

Mr. Gore-Browne, K.C., for the respondent, contended that the action ought not in the circumstances to be stayed. Not only did the dispute involve the question of whether the whole of the work should be remeasured, but it raised a further question as to the architects' fees for remeasuring the work.

In the result their Lordships allowed the appeal, and made an order staying the action.

LONDON COUNCILS.

Barking.—Plans have been passed for Mr. C. H. R. Taylor for four houses in Hulse avenue.

Barnes.—Plans submitted by the Surveyor have been approved for making-up a portion of Madrid-road.

Chelsea.—Plans have been lodged with the London County Council by Mr. E. Warren for the re-erection of Shelley House, Chelsea-embankment.

Croydon.—The tenders of Messrs. James Smith & Sons, Ltd., Junction Works, South Norwood, have been accepted at 1,710*l*. and 2,255*l*. for the erection of a boiler house, chimney, etc., at the Borough hospital, and for carrying out alterations and additions to the boiler house at the Surrey-street Waterworks, respectively. The following plans have been passed:—Mr. C. S. Banks, 16, Oakfield-road, sixteen houses, Kilmartin-avenue, and three houses, etc., in Woodside-avenue; Mr. P. Crowley, Burlington-road, ten houses, Ashburton-avenue; Mr. A. Gosheron, 6, Station-approach, Thornton Heath, twenty-six houses, Winterbourne-road; Mr. C. M. Crickmer, London, W.C., sixteen houses, Pollard's-hill South and Pollard's-hill West.

Greenwich.—The following plans have been passed:—Messrs. A. Bentley & Son, three houses, Ravensbourne-place; Mr. A. M. Torrance, six houses, Kidbrooke-grove; the London Building Estates Development Company, Ltd., four houses, Eastbrook-road.

Hanwell.—For carrying out alterations at the Free Library the tender of Mr. W. J. Dickens, at 650*l*., has been accepted by the Urban District Council.

Hendon.—The Education Committee have accepted the tender of Messrs. Moss & Son, at 16,400*l*., for the erection of the Garden Suburb School.

Heston and Isleworth.—Murray-avenue and part of Hounslow-avenue are to be made-up as new streets. Plans have been passed for Messrs. Walter Jones & Sons for a factory at The Limes, Staines-road, Hounslow, also for Mr. H. R. Peake, for additions to the new Hounslow Hospital, Staines-road, Hounslow.

Holborn.—The tender of the French Asphalte Company, Ltd., has been accepted by the Council for repaving parts of the carriageways of Hart-street, Bloomsbury-square, Woburn-place, and Southampton-row, with compressed rock asphalt; also for repairing the existing concrete foundations The carriageway of a portion of High Holborn is to be paved with fine dressed granite setts grouted with bitumen, upon a new concrete foundation, and tenders are to be invited for the work. For repaving the carriageway of the west side of Woburn-square and making good the existing concrete foundations the tender of the Acme Flooring and Paving Company (1904), Ltd., has been accepted at 11s. per yard super. for patent sectional wood blocks, and 17s. 9d. per yard cube for concrete.

Kingston.—The following tenders have been accepted:—British Trust Corporation, Ltd., recoating Surbiton-road, 297*l*. 10s.; Roadament Company, Ltd, recoating Portsmouth road, 2,375*l*.; Messrs. W. Griffiths & Co., Ltd., wood-paving portions of five roads, 11,495*l*.; Improved Wood Pavement Company, Ltd., wood-paving three roads, 2,370*l*. 15s. 6d.

Lambeth.—Permission is to be granted Mr. A. H. Williams to drain nine houses proposed to be erected in Rosendale-road. Messrs. Searle & Searle, on behalf of Messrs. Brand & Co., Ltd., have lodged plans with the London County Council for the erection of a factory on the site of Nos. 1, 3, and 5, Miles-street, South Lambeth.

Leyton.—It has been decided to asphalt portions of seven roads, amounting, approximately in all to 12,760 yds. super. A plan has been passed for Mr. E. F. Selby for eleven houses in Forest-road.

Poplar.—During the quarter to end June 30 next Stebondale-street and parts of Brickfield-road and Lochnagar-street are to be paved at an estimated cost of 2,625*l*. During the same period repairs are to be carried out to ten macadam roads at an estimated cost of 559*l*. The sewer in Wade-street is to be reconstructed in 12-in. pipes at an estimated cost of 360*l*.

Southgate.—The second section of Chimes-avenue is to be made up. The following plans have been passed:—Messrs. Edmondsons, Ltd., ten houses, Queen's-avenue, Winchmore Hill; Mr. A. Ingram, pavilion, Brownlow-road, Bowes Park; Mr. H. C. Keene, three houses, Orpington-road, Winchmore Hill; Mr G. W. S. Ingram, eleven houses, Belmont avenue, Palmer's Green; Messrs. Christie & Co., Ltd., re-erection of Orange Tree public house, Highfield-road, Winchmore Hill; Mr. W. Binfield, additions and alterations to Cock Inn, Green Lanes, Palmer's Green.

Stepney.—The sewer between Nos. 130 and 170, Devonshire-street, is to be reconstructed with 9-in. and 12-in. glazed ware pipes at an estimated cost of 240*l*. Plans have been lodged with the London County Council by Messrs. Joseph & Smithem for the erection of a club, drill hall, etc., on the west side of Half-Moon passage, Great Alie-street.

Watford.—The following plans have been passed:—Messrs. J. Rodwell & Son, rebuilding four houses, Chapman's-yard, High-street; Messrs. J. Andrews & Sons, five houses, King-street; Watford Manufacturing Company, additions to Vi-Cocoa Works.

West Ham.—Plans have been passed for Mr. M. W. Hudson for the erection of a waggon factory, etc., showroom, and offices at Albert Works, Albert-road, Stratford. Mr. A. Foster has lodged plans for carrying out extensions to the cinematograph hall at the corner of Beckton-road and New Barn-street, Canning Town.

Willesden.—The Engineer has been directed to prepare plans and estimates of the cost of making-up part of Wotton-road.

TRADE CATALOGUES.

Messrs. Anselm, Odling, & Sons, Ltd., of 132, New North-road, London, and Exchange Wharf, Liverpool, send us a coloured leaflet illustrating the wide variety of marbles imported by them. Among work executed by the firm are the marble columns, steps, and flooring at the Oratory, Birmingham; the marble staircase and wall lining at the New Sessions House, Old Bailey; and granite front for the Union of London and Smiths Bank, Ltd.

Messrs. E. H. Shorland & Brother, Ltd., warming and ventilating engineers, Manchester, have just published a new catalogue, No. 30, of their warm-air ventilating patent Manchester grates, patent Manchester stoves with open fires, patent exhaust roof and special inlet ventilators. The catalogue is divided into three sections, on white, red, and blue paper, so as to facilitate easy reference, a few words of introduction being given at the commencement of each of the three sections. The first series of Manchester grates illustrated are those with the latest patent low-fire projecting back. These grates having no bars to interfere with the radiating properties of the fire better results are attained with this form of grate. The next series of Manchester grates illustrated are those which have bars fitted with the improved projecting back. With regard to the patent exhaust roof and inlet ventilators which are printed in the red section of the catalogue, the ventilators are made by special machinery. The patent Manchester stoves in the last section of the catalogue are now fitted with the latest patent warm-air mixing chamber, which increases the heating capacity of the stove without any additional consumption of fuel. These patent Manchester stoves are made either single or double-fronted, and with ascending or descending smoke flues, thus allowing the stove to be fixed in the most desirable position. The Manchester stoves are supplied in a variety of designs and finishes, but the internal construction is the same, irrespective of the design and finish selected. When the Manchester stoves are fixed with ascending smoke flues the smoke flues are encased in either glazed faience, or with iron outer casing with outlet in this outer ventilating casing near the ceiling level for the extraction of the vitiated air, thus forming a combined warming and extract ventilating system.

List of Competitions, Contracts, etc.

For some Contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) are advertised in this number:** Competitions, —; Contracts, iv. vi. viii. x.; Public Appointment, xvi.; Auction Sales, xxii.

Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Competitions.

APRIL 13 **Birmingham.** BATHS Twenty and 10 guineas for second and third designs. Applications for conditions to be sent to the Superintendent Engineer, Kent-street, Birmingham.

APRIL 13. — **Ormskirk.** — CLUB-HOUSE. -Competitive plans are invited for proposed clubhouse for Ormskirk Golf Club. See advertisement in issue of March 1 for further particulars.

APRIL 20. —**Birmingham.**—BLUE COAT SCHOOL. —Limited to local architects. Assessors, Mr. G. H. Hunt, F.R.I.B.A., and Mr. C. E. Bateman, F.R.I.B.A. Particulars from the Secretary, the Blue Coat School, Birmingham.

MAY 1.—**Rhos Ruabon.**—PAIR OF WORKMEN'S COTTAGES.—Premiume of 10*l.* and 5*l.* Assessor, Mr. Raymond Unwin, F.R.I.B.A. Particulars from Mr. G. Meirion Griffiths, Rhos Ruabon.

MAY 1. — **Wombwell.**—SWIMMING BATHS.—The Wombwell U.D.C. invite designs in competition for public swimming baths, to be erected in Hough-lane, Wombwell, Yorkshire. Three prizes of the value of 40*l.*, 30*l.*, and 20*l.* respectively are offered for the designs placed first, second and third respectively by the assessor. See advertisement in issue of February 16 for further particulars.

MAY 11. —**Hastings.** -SUNK ARENA AND BANDSTAND. Cost not to exceed 4,500*l.* Premiums 15 and 10 guineas Particulars from the Town Clerk, Hastings.

MAY 15. —**Portland.** COUNCIL OFFICES.—The Portland U.D.C. invite competitive designs and plans for Council Offices. See advertisement in issue of March 8 for further particulars.

MAY 22.—**Southend-on-Sea.**—HAMSTEL COUNCIL SCHOOL.—Architects practising in the borough only. Premiums, 25*l.*, 15*l.*, and 10*l.* Particulars from the Education Office, Municipal Buildings, Southend-on-Sea.

JUNE 1.—**Dunfermline.**- INSTITUTE AT NETHERTOWN. —Cost not to exceed 7,000*l.* Premiums of 20*l.*, 15*l.*, and 10*l.* Assessor, Mr. E. A. Jamieson. Particulars from the Secretary, Carnegie Trust, Abbot-street, Dunfermline

JUNE 28 —**Hale, Cheshire.**—TOWN PLANNING SCHEME. —Premiums 50*l.* and 25*l.* Particulars from the Council Offices, Hale

JUNE 30.—**Padiham.** -TOWN HALL, BATHS, ETC. —Premiums 40*l.* and 20*l.* Particulars from Mr. J. Gregson, A.M.Inst.C.E., Surveyor's Office, Padiham.

JULY 1. — **Dusseldorf.** — A plan for the extension of the City of Dusseldorf. Premiums of 1,000*l.* to 375*l.* Conditions on application to the Chief Burgomaster, Dusseldorf. A translation appeared on page 365, September 29.

JULY 1. **Port of London.** -NEW OFFICES.—Limited to those mentioned in "Competition News" (p. 424).

AUGUST 30. — SAXON SNELL PRIZE. — Fifty guineas; with medal, is offered for essay on a hospital subject. Particulars from the Sanitary Institute, 90, Buckingham Palace-road, S.W

NO DATE. — **Cardiff.** — FOOTBALL STANDS.—Premiums 30*l.*, 20*l.*, and 10*l.* Particulars from Mr. C. S. Arthur, 53, Queen-street, Cardiff.

NO DATE.—**Jordanhill, Glasgow.**—PROPOSED TRAINING COLLEGE.—Limited to six firms, named in Competition News, December 1, page 635.

NO DATE.— **Sheffield.** - CRIPPLES' HOME. — Limited to local architects. Mr. E. M. Gibbs, F.R.I.B.A., and Mr. F. E. P. Edwards, F.R.I.B.A., assessors

NO DATE. — **Warrington.** — SCHOOL. — The Warrington Education Committee invite competitive plans for the erection of a public elementary school. See advertisement in issue of February 16 for further particulars

Contracts.

BUILDING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

APRIL 12 **Rowley Hill.** -SCHOOL.—For erection of new Sunday-school Plans seen, and quantities from Mr. J. Berry, architect and surveyor, 3, Market-place, Huddersfield.

APRIL 12.—**Thurnscoe.**—HOUSES.—Erection of eighty houses, in blocks of ten. Plans and particulars seen, and quantities from Mr. W. T. Turner, architect, Market-hill, Barnsley.

APRIL 13. -**Bothwell.** EXTENSION.—For proposed extension to Cemetery, near Fallside Station. Specification, quantities, and tender, on deposit of 1*l.*, fom M. George Park, C. and M.E., 58, Bath-street, Glasgow.

APRIL 13.—**Nantybwch.**— HOUSES.—Erection of eight dwelling-houses at Nantybwch. Plans and specification at the Full Moon Inn, Scwrfa, Tredegar. Deposit of 1*l.* 1s Mr. Ivor Davies, architect, Charles street, Tredegar.

APRIL 13 **Widnes.** SCHOOL For erection of a riding-school Plans and specifications, with quantities, with the architect, Mr. J. P. Fraser, 14, Elliot-street, Liverpool.

APRIL 14.—**Derryheen.**—RECTORY. -Erection of a new rectory at Derryheen, County Cavan. Drawings and specifications with Messrs. Blackwood & Jury, architects, 41, Donegall-place, Belfast.

APRIL 15.—**Basford.** SCHOOL.- Erection of a school, Scotland-place, Basford. Plans seen, and specification, quantities, and form of tender from Mr. Frank B. Lewis, City Architect, Guildhall, on deposit of 2*l.* 2s.

APRIL 15. — **Carn Brea.** — PREMISES.—For rebuilding premises. Plans and specification with Mr. S. Hill, architect, Green-lane, Redruth.

APRIL 15. - **Fetterletter.** - HOUSE.—For additions to dwelling-house at Fetterletter. Plans and specifications with the tenants

APRIL 15.- **Golcar.** BUNGALOW. Erection of a bungalow, Rob Royd, Wellhouse, Golcar. Plans seen, and quantities from Messrs. Lunn & Kaye, architects and surveyors, Huddersfield.

* APRIL 15 **Southend-on-Sea.** SCHOOL. The Essex Education Committee (Rochford Hundred Higher Education Sub-Committee) invite tenders for erection of a new secondary school at Southend-on Sea. See advertisement in this issue for further particulars

APRIL 16. - **Abersychan.** — DWELLINGS.—Erection of workmen's dwellings and other works as follows:—Fifty dwellings at Garndiffaith; fifty dwellings at Abersychan; thirty-six dwellings at Pontnewynydd; construction of streets, etc., at Garndiffaith, construction of streets, etc., at Pontnewynydd; construction of streets, etc at Abersychan Plans and specifications with Mr. Edward Whitwell, Council Offices, Abersychan. Deposit of 1*l.* 1s.

APRIL 16.—**Barking.** COTTAGES. -Erection of a block of six cottages as a temporary administrative block of the Upney Isolation Hospital. Plans, specifications, and conditions of contract seen, and form of tender from Mr. C J. Dawson, F.R.I.B.A., architect, 16, Cambridge-road, Barking.

APRIL 16.—**Cork.** —ADDITIONS, ETC.—For additions and alterations to residence, Cregg Olympry, Fermoy, Co. Cork. Drawings and specifications with Mr. W. F. Maye, C.E., architect.

APRIL 16 - **Duns.** ALTERATIONS For alterations on retort-house and purifiers, and erection of a new retort-bench, erection of a new exhauster, scrubber, etc Drawings and specifications from Mr. J. Herriot, Secretary, Duns Gas-light Supply Company, Duns, Scotland, on deposit of 1*l.* 1s.

APRIL 17. - **Llangefni.** — SCHOOL —For additions, alterations, and repairs to the Council school. Plans and specifications with Mr. Jos. Owen, F.R.I.B.A., County Architect, Menai Bridge.

APRIL 17.—**New Hey.** -WAREHOUSE.—Construction of a cotton warehouse at New Hey. Plans seen, and quantities and specification with the Engineer, Lancashire and Yorkshire Railway, Hunts Bank, Manchester.

APRIL 17 -**Yardley.** -COTTAGES. The Birmingham Tame and Rea District Drainage Board invite tenders for the erection of three cottages at their Cole Hall works, Yardley. Quantities and form of tender from Mr. John D Watson, M.Inst C E., Engineer to the Board, Engineer's Office, Tyburn, Birmingham.

APRIL 19. -**Barming Heath.**—ADDITIONS, ETC. —For alterations and additions at the Kent County Lunatic Asylum, Barming Heath, near Maidstone. Drawings and specifications at the Asylum, Barming Heath. Quantities on deposit of 2*l.* 2s

APRIL 20. — **Pontllanfraith.** — SCHOOL, ETC. — Erection of a new Council school, with a manual training room, at Pontllanfraith, Mon Plans and specification seen, and quantities from Mr. John Bain, F.R.I.B.A., County Council Offices, Newport. Deposit of 2*l.* 2s

APRIL 22. - **Tonypandy.** PREMISES. -For rebuilding business premises, Dunraven-street. Plans and specification seen, and quantities, on deposit of 1*l.* 1s., from Messrs. Gibson, Parry Williams, & Co., architects and surveyors, Capital and Counties Bank-chambers, Pontypridd

APRIL 23. -**Worthing.**—CELLS, ETC.—For additional cells and other works in connexion with refuse destructor Form of tender, plan, and other particulars from the Borough Surveyor. Municipal Offices, Worthing.

APRIL 24.— **Bootle.** — BUILDINGS.—Erection steel-frame and brick buildings for a new electric light station. Quantities and particulars the Borough Engineer's Office. Deposit of

APRIL 24. **Bootle.** SHAFT Erection of a chimney-shaft at new electric light st Quantities and particulars from the Bo Engineer. Deposit of 1*l.* 1s

* APRIL 24.—**Dartford, Kent.** -REBUI CHIMNEY STACKS. The Metropolitan Asy Board invite tenders for taking down a reb ing chimney stacks at Darenth Asylum, Dartford, Kent. See advertisement in this for further particulars

* APRIL 24.—**London, S.W.** WOOD FLOO —The Guardians of the St. George's Union i tenders for supplying and fixing wood flo at Union Infirmary, Fulham-road, S.W. advertisement in this issue for fu particulars.

APRIL 24. **Sheerness.** -ANNEXE. -Erecti an annexe, with ladies' and gentlemen's c rooms, etc. Plans and specifications at Masonic Hall.

* APRIL 26 **Southgate.**—WORKMEN'S DW INGS —The Southgate U.D C. invite tender workmen's dwellings. See advertisement in issue for further particulars

APRIL 29. **Beccles.** — SCHOOL Erection new public elementary school in St. Bened road. Quantities and form of tender from J. Webb, the Committee's Surveyor, Educ Office, County Hall, Ipswich. Deposit of 1

APRIL 29. **Ipswich, etc.** SCHOOL, ETC. tion of new public elementary school at near Ipswich; a new classroom at Ketlebi Council School, near Framlingham. specifications and forms of tender with M Webb, the Committee's Surveyor, Educ Office, County Hall, Ipswich. Deposit of 1

* APRIL 30 **Eltham.** HOSTELS AND KI BLOCK, ETC.— The London C.C invite tender erection of hostels and kitchen block, the tion of Southwood House as a permanent h etc. See advertisement in this issue for fu particulars.

* APRIL 30.— **Thetford.** - WORKMEN'S DW INGS, ETC The Thetford U.D.C. invite te for erection of fifty workmen's dwellings, See advertisement in this issue for further ticulars

* May 2, — **Wandsworth.** — CHIMNEY-SHA The Wandsworth Guardians invite tenders repairs to the chimney-shaft at the Workh See advertisement in this issue for further ticulars

* May 4.—**Denbighshire.** -DRILL-HALL, E The Denbighshire Territorial Force Associa invite tenders for drill-hall, etc., at Chirk. advertisement in this issue for fu particulars.

* May 6.—**Farnborough.**—WORKHOUSE AL TIONS AND ADDITIONS. — The Bromley (E Guardians invite tenders for certain alter and additions to the Workhouse at Farnboro See advertisement in this issue for further ticulars.

NO DATE.—**Ansley.**—AISLE.—For erection north aisle to St. Laurence's Church, An near Nuneaton. Messrs. R. Scrivener & S architects, etc., Hanley, Stoke-on-Trent.

NO DATE.—**Belfast.**—VILLA.—For erection villa at Hampton Park Plan and specifi with Messrs. J. Fraser & Son, civil engineers architects, 117, Victoria-street, Belfast.

NO DATE. **Chase Town.** -INSTITUTE Erec of a county mining institute at Chase Town Walsall). Mr. Graham Balfour, Director Education, County Education Offices, Stafl Deposit of 1*l* 1s. for quantities

NO DATE. — **Eckington.**—MORTUARY. —Erec of a mortuary. Plans, specification, and q tities with Mr. W. Cecil Jackson, M.S.A., a tect and surveyor, 29, Knifesmith-gate, Che field.

NO DATE.—**Ferryhill.**—EXTENSIONS.—For tensions to the Ferryhill and District Workm Club and Institute, Ltd Mr. J. G. Bur Llc R.I.B.A., Market-place-chambers, Durh 1*l.* 1s deposit for quantities

NO DATE **Folkestone.** - HOUSE, ETC. Erec of house, lodge, and stables, etc, on the A Estate, near Folkestone Quantities from architect, Mr Henry F Mence, St. Peter's-st St Albans. Deposit of 2*l.* 2s.

NO DATE. — **Leeds.** — EXTENSIONS For ex sions to factory for Messrs Holgates, Ltd. W S. Braithwaite, architect, 6, South par Leeds.

NO DATE.—**Lower Walmer.** -PICTURE-HA Erection of a new picture-hall at Lower Wal Plans and specification with Mr. C. L. Crowt architect, Queen-street, Deal. Deposit of 1 for quantities.

NO DATE.— **Pontefract.** — HOUSES. — For erection of 102 houses. Plans and specifica

BUILDING—*continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

rom Mr. W J. Tennant, architect and surveyor, Pontefract.

No DATE.—**Port Talbot.** —THEATRE, ETC.—Erection of a new theatre, shops, offices, and exchange. Specifications and plans seen, and quantities, on deposit, from Mr. W Ben Jones, architect and surveyor, 41, Wind-street, Swansea.

No DATE.—**Salesbury.**—ADDITIONS.—For additions to Salesbury (C.E.) School. Messrs. Stones, Stones, & Atkinson, architects, 10, Richmond-terrace, Blackburn.

No DATE. —**Salisbury.** — ALTERATIONS. — For alterations and additions to 17 and 19, Catherine-street, Salisbury. Mr. F Bath, F.R.I.B.A., S.I., architect and surveyor, Salisbury.

No DATE. — **Salterhebble.** —CHAPEL.—Erection of a Wesleyan school-chapel. Mr. W. W. Longbottom, Lic R.I.B.A., architect, George-street, Halifax.

No DATE.—**Snaith.**—VILLAS.—For erection of new villas. Architect, Mr. T. H. Johnson, 20, Priory-place, Doncaster.

No DATE. — **Thongsbridge.** — COTTAGE.—For erection of a detached cottage at Thongsbridge, near Huddersfield. Messrs. J. B. Abbey & Son, architects and surveyors, 34A, New-street, Huddersfield.

ENGINEERING, IRON, AND STEEL.

APRIL 15.—**Accrington.**—PLANT.—For erection of a system of coal elevating and conveying plant. Mr. C. Harrison, General Manager, St. James's-street, Accrington.

APRIL 18.—**Ipswich.**—BRIDGE.—For the widening of the brick bridge, known as the Seven Arches Bridge, London-road. Quantities and drawings from Mr. E. Buckham, Borough Surveyor, Town Hall, Ipswich.

APRIL 23.—**Aberdeen.**—HEATING.—For alterations on the heating of the Aberdeen poorhouse hospitals. Specifications and quantities from Mr. Mackinnon, architect, 245, Union-street.

APRIL 27.—**Derby.** BOILER.—For the construction of a new Cornish boiler for Union Workhouse. Mr. N. Twigge, Clerk, Poor-Law Offices, Becket-street, Derby.

FURNITURE, PAINTING, MATERIALS, etc.

APRIL 12.—**London.**—PAINTING, ETC.—The West London Extension Railway invite tenders for the cleaning and repainting station buildings, bridges, etc. Specification seen, and forms of tender and quantities from the Engineer, at Paddington (G.W.Ry.) Station.

APRIL 15. — **Abergavenny.** — PAINTING. — For painting at the old and new cemeteries. Specification from Mr. W. Llewellin, Clerk to Joint Burials Committee, Town Hall, Abergavenny.

APRIL 15. — **Chester.** — PAINTING.—For outside painting at the Upton Asylum, Chester. Specifications from Mr. H. Beswick, F.R.I.B.A., County Architect, Newgate-street, Chester.

APRIL 15.—**Hastings.**—PAINTING.—For painting fourteen covered seats on the sea front. Specification and form of tender from the Borough Engineer, Mr. P. H. Palmer, M.Inst.C.E., Town Hall, Hastings.

APRIL 15. **Saffron Walden.**—BATH, ETC.—For supplying and fixing nineteen new water-closets and one new bath, and sundry plumbers' and builders' work, at the Workhouse. Plan and specification at the Workhouse

APRIL 18. **London.** PAINTING.—For painting, whitewashing, etc., at Infirmary, Highgate-hill. Specification and conditions of contract from Mr. Edmund J. Harrison, of 9, Gray's Inn-square, W.C Deposit 2*l.*

APRIL 18. **Plymouth.** PAINTING.—For painting at Victoria Park. Specifications seen, and forms of tender from Mr. J. Paton, Borough Engineer and Surveyor.

APRIL 20. **Finsbury Park.** — BOWLING-GREENS, ETC.—Tenders are invited for laying-out grounds and forming bowling-greens, tennis-courts, and croquet-lawns. See advertisement in this issue for further particulars

* APRIL 22.—**London.**— PAINTING, COLOURING, AND OTHER WORKS.—The Guardians of the Poor of the Parish of St. Marylebone invite tenders for painting, colouring, cleansing, repairs, and alterations at their Infirmary, Hackham-street, Notting Hill, W. See advertisement in this issue for further particulars.

* APRIL 22. **London, N.W.** PAINTING, ETC. The Managers of the Central London Sick Asylum District invite tenders for painting and sundry other works in Medical Superintendent's house at Asylum in Colindale-avenue, Hendon, N.W. See advertisement in this issue for further particulars.

* APRIL 23. **Bromley, E.**—PAINTING.—The Managers of the Poplar and Stepney Sick Asylum District invite tenders for external painting of whole of the buildings at Asylum, Devons-road. See advertisement in this issue for further particulars.

* APRIL 24.—**Margate.**—CLEANING AND PAINTING.—The Metropolitan Asylums Board invite tenders for cleaning and painting works at East Cliff House, Cliftonville, Margate. See advertisement in this issue for further particulars.

* APRIL 24. **Tooting, S.W.**— PAINTING, ETC.— The Metropolitan Asylums Board invite tenders for cleaning and painting works and repairs at Tooting Bec Asylum, S.W. See advertisement in this issue for further particulars.

* APRIL 29.—**Ramsgate.**—PAINTING.—The Kent Education Committee invite tenders for painting and redecorations at secondary school. See advertisement in this issue for further particulars.

* MAY 1. **Hampstead.** PAINTING. The Guardians of St. John, Hampstead, invite tenders for cleaning and painting work to interior of Workhouse premises at New End. See advertisement in this issue for further particulars.

* NO DATE — **Croydon.** — CONCRETE FOUNDATIONS, ETC.—Tenders are invited for labour and materials for concrete foundations and about 800 yds of new or old grabite pitching paving. See advertisement in this issue for further particulars.

ROADS, SANITARY AND WATER WORKS.

APRIL 15.—**Ashford.**—MATERIALS.—For supply of materials. Particulars and forms of tender from Mr. A. Sims, Surveyor, 3, Queen-street, Ashford.

APRIL 15. **Matlock.**—SEWAGE.—For the construction of main outfall and subsidiary sewers. Plans and specifications seen, and quantities and form of tender from the engineers, Messrs. James Diggle & Son, 14, Victoria-street, Westminster, S.W. Deposit of 5*l.*

APRIL 15. — **Port-Glasgow.** — STREETS. — For causewaying John Wood-street and the eastern portion of King-street. Specifications from Mr. James Murray, Burgh Surveyor, Anderson-street.

APRIL 15.—**Saffron Walden.**—DRAINAGE, ETC.—For laying in a new system of soil drainage and building manholes, etc., at the Workhouse. Plan and specification at the Workhouse.

APRIL 15. **Swansea.** DRAIN.—For construction of a surface drain at Parkhill-road, Treboeth. Plans, specifications, and conditions of contract with the Engineer, Mr. T. T. Williams, Alexandra-road, Swansea.

MAY 15.—**Teddington.**—SEWAGE.—For construction of buildings, chimney-shaft, roadways, sewers, tanks, filters, and other works. Drawings and specification with Mr. Marshall Hainsworth, Surveyor to the Council, Public Offices, Teddington, and Mr. William Fairley, M.Inst.C.E., Parliament-mansions, Victoria-street, Westminster. Quantities and form of tender on deposit of 5*l.* 5*s.*

APRIL 16.—**Dundee.**—ROAD.—For reconstructing 5 miles of the Dundee-Coupar Angus road. Specifications from Mr. J. B. Robertson, Road Surveyor, Downfield, on deposit of 2*l.*

APRIL 17. **Carshalton.** ROADS. For making-up Avenue-road and approach roads. Plans and specification with Surveyor, Mr. W. W. Gale, A.M.Inst.C.E. Quantities on deposit of 1*l.*

APRIL 17.—**Mayfield.** WATERWORKS.—Erection and construction of a pumping-station and reservoir. Plans with Mr. Luther Adams, Surveyor to the Council, Stanton, near Ashbourne. Specification and quantities on deposit of 2*l.* 2*s.*

APRIL 18. **Mansfield.**—SEWAGE.—For the laying and jointing of stoneware pipe sewers and granite concrete tube sewers in tunnel. Drawings, specification, and conditions seen, and quantities and form of tender from Mr. Thos. P. Collinge, A.M.Inst C.E., Borough Engineer and Surveyor, Exchange-row, on deposit of 3*l.* 3*s.*

APRIL 18.—**Stockport.**—SEWAGE.—For sewering Islington-road. The plan, specification, and general conditions seen, and form of tender from Mr. John Atkinson, A.M.Inst.C.E., Borough Surveyor, Town Hall, Stockport.

APRIL 20. **Bacup.** — SEWAGE. — For work of sewerage in Lake-street district, Stacksteads. Plans seen, and specifications, quantities, and form of tender from Mr. W. H. Elce, A.M.Inst.C.E., Borough Engineer, on deposit of 1*l.* 1*s.*

APRIL 22.—**Hale.**—ROAD.—For the making-up of Nursery-avenue. Plans and specifications seen, and quantities and forms of tender, on deposit of 1*l.* 1*s.*, from the Council's Surveyor, Mr. T. Blagburn, Council Offices, Ashley-road, Hale, Cheshire.

APRIL 22. — **Ilford.** — ROAD. — For making-up Sunnyside-road. Plans and specification seen, and quantities and form of tender from Mr. H. Shaw, M.Inst.C.E., Engineer and Surveyor to the Council, on deposit of 2*l.* 2*s.*

APRIL 22. **Walsall.**— SETTS.—Supply of granite setts. Particulars and forms of tender from the Borough Surveyor, Council House, Walsall.

APRIL 23. **Porthcawl.**—STREETS. Construction of one, two, or three new streets off South-road, Porthcawl. Drawings, etc., seen, and quantities, on deposit of 2*l.* 2*s.*, from Mr. Fred J. Veall, architect, 6, Arcade-chambers, High-street, Cardiff.

APRIL 24. — **Edenbridge.**—SEWAGE.—Construction of stoneware pipe sewers, with manholes, etc. Drawings and specifications seen, and form of tender from the Surveyor, Mr. John N. Prior, Wood Grange, Marlpitt Hill, Edenbridge. Deposit of 1*l.* 1*s.*

APRIL 24.—**Hungerford.**—DRAINAGE.—For constructing a new drainage scheme at the Workhouse. Plans and specifications with Mr. W. Stephenson Raine, M.Inst.C.E., Engineer, Hungerford.

* APRIL 24.—**London, N.**—REPAIRS TO ROADS, ETC.—The Metropolitan Asylums Board invite tenders for repairs to roads and re-paving at Northern Convalescent Fever Hospital, Winchmore Hill, N. See advertisement in this issue for further particulars.

* APRIL 24.—**London, S.W.**—ROAD, ETC., REPAIRS.—The Metropolitan Asylums Board invite tenders for road and paving repairs, etc., at South-Western Fever Hospital, London-road, Stockwell, S.W. See advertisement in this issue for further particulars.

* APRIL 24. **Sevenoaks.**—SEWERAGE WORKS.— The Sevenoaks R.D.C. invite tenders for the Edenbridge sewerage works, consisting of about 1,988 yds. of 9-in. stoneware pipe sewers, with manholes, etc. See advertisement in this issue for further particulars.

APRIL 26.—**Brighton.**—PAVING, ETC.—For laying of wood paving and lithofalt blocks Specification and form of tender from the Borough Surveyor, Town Hall, Brighton

APRIL 29. **Hastings.** SEWER.—For laying of 9-in. pipe sewer, and other work at Winchelsea-road, Ore, Hastings. Drawing and specification seen, and form of tender from the Borough Engineer, Mr. P. H. Palmer, M.Inst C.E., Town Hall, Hastings.

* APRIL 30. **Thetford.**—ROADS, SEWERS, ETC. The Thetford U.D.C. invite tenders for new roads and sewers, etc. See advertisement in this issue for further particulars.

MAY 6. **Horsham.** ROAD.—For the making-up of Victoria-road, Albany-road, and Princess-road, Crawley Specification, quantities, and form of tender from Mr. W. Dengate, 58, Park-street, Horsham, the Surveyor to the Council. Deposit of 1*l.*

Public Appointment.

Nature of Appointment.	By whom Advertised.	Salary.	Application to be in
VALUER AND SURVEYOR (IRELAND)	Civil Service Commission	Not stated	April 18

Auction Sales.

Nature and Place of Sale.	By whom Offered.	Date of Sale.
WALLPAPER, COLOUR, ETC., MERCHANT'S STK.—At 21, Hartfield-rd., Wimbledon, S.W.	H. W. Smith	April 16
BUILDING MATERIALS, LEWISHAM.—On the Premises	Hatch & Hatch	April 17
FREEHOLD FACTORY PROPERTY, GREENFORD—At the Mart	S. Walker & Son	April 18
SHOP FRONT.—At 82A, Aldersgate-street, E.C.	Frank G. Bowen	April 18
FREEHOLD BUILDING SITES, KINGSLAND-RD., N.E., AND CROYDON—At the Mart	Furbers	April 22
DEALS, BATTENS, BOARDS, TIMBER, ETC.—Great Hall, Winchester House, E.C.	Churchill & Sim	April 24
FREEHOLD ESTATE, DULWICH, S.E.—At the Mart	Douglas Young & Co.	April 24
FREEHOLD BUILDING LAND, MAIDSTONE, KENT—At the Mart	Douglas Young & Co.	April 24
FREEHOLD ESTATE, HOCKLEY, ESSEX—At the Mart	Douglas Young & Co.	April 24
FREEHOLD BUILDING ESTATE, SOUTHALL—At the Mart	Ferris & Puckridge	April 26
FREEHOLD ESTATE, HIGHBURY, N.—At the Mart	Joseph Stower	May 9
FREEHOLD SITE, SHOPS, AND HOUSES, NOTTING-HILL—At the Mart	Joseph Stower	May 9
BUILDING SITE, HAMPSTEAD HEATH—At the Mart	Joseph Stower	May 9
FREEHOLD ESTATE, UPPER NORWOOD—At the Mart	Trollopes	May 15

PATENTS.

APPLICATIONS PUBLISHED *

5,770 of 1911.—Chubb & Son's Lock and Safe Company, Ltd., and Charles Edward Pierce: Shelving and partitions and fittings connected therewith.

6,146 of 1911.—Albert Flint: Double-action butt-hinge for casement windows.

6,250 of 1911.—Otto Arndt: Scaffolding for use in making and finishing ceilings.

6,354 of 1911.—Frederick Thomas Hopkinson: Means and apparatus employed for loading and transporting excavated material.

6,500 of 1911.—John Murray Leighton: Construction of concrete piles.

6,936 of 1911.—William Henry Baraclough: Machinery for the manufacture of wood-paving and floor blocks.

10,139 of 1911.—Thomas Glover: Construction of back for gas fires and the like.

10,218 of 1911.—Arthur John Hollick: Erection of reinforced or other concrete structures.

10,403 of 1911.—Arthur John Hollick: Erection of reinforced or other concrete structures.

12,264 of 1911.—Albert Edward Horsman: Domestic firegrates.

18,786 of 1911.—William Hasler: Door latch.

19,817 of 1911.—Thomas Henry Cosgrove: Stagings or platforms for use outside buildings by window-cleaners, painters, and other workmen.

20,591 of 1911.—Samuel Charles Beresford: Sliding window-sashes.

21,008 of 1911.—J. & C. G. Bolinders Mekaniska Verkstads Aktiebolag: Machines for joining and cutting up matched boards into sections of different size.

22,278 of 1911.—Società Anonima Italiani Gio. Ansaldo, Armstrong, & Co.: Case-hardening processes for articles of iron, steel, and steel alloys.

27,115 of 1911.—Charles Arthur Allison (Excello Products Company): Clearing and flushing devices for waste pipes.

27,446 of 1911.—Arthur Henry Mountain: Pipes for sewers, drains, and the like, and the method of and means for jointing the same.

29,173 of 1911.—Abraham Ashworth: Draught and dust excluders for doors.

1,842 of 1912.—David Edward Kennedy: Construction of floors.

1,844 of 1912.—David Edward Kennedy: Construction of floors.

* All these applications are in the stage in which opposition to the grant of Patents upon them can be made.

SOME RECENT SALES OF PROPERTY:

ESTATE EXCHANGE REPORT.

March 8.—By J. KITTOW & SON.

Callington, Cornwall.—Agricultural Estate, 955 acres, f. £27,981

March 14.—By CARR & STEPHENSON.

Gunby, Yorks.—Gunby Hall Farm, 395 a. 3 r. 14 p., f. 13,290

By ELLIOTT & SONS.

Brighton.—35, 37, and 39, Hendon-st., f., w.r. 39l. 235

25, 26, 27, 32, and 33, Gardner-st. (s.), f., y.r. 240l. 2,900

22 and 24, North-rd. (s.), f., y.r. 85l. 950

2, Clermont-rd., f., y.r. 36l. 620

2, East-st., c., p. 800

March 19.—WALLER & KING.

Southampton, Hants.—5, 13, 15, and 17, Belmont-rd.; 14 and 16, Westridge rd., f. 2,420

19 to 24, Orchard-pl., f., w.r. 133l. 16s. 1,250

March 20.—By HENRY DUKE & SON.

Powerstock, Dorset.—Farms, small holdings, etc., 990 acres, f. 23,097

March 22.—By LEWIS & SPAIN.

Wood Green.—33 and 35, Truro-rd., f., w. and e.r. 67l. 12s. 510

Pimlico.—43, Cumberland-st., f.g.r. 8l., reversion in 21 yrs. 380

By F. W. TALBOT & Co.

Hampstead.—61, Heath-st. (s.), c., y.r. 65l. 800

30, New End, f., y.r. 30l. 300

1, Holly Mount, f., y.r. 45l. 575

Islington.—156 and 158, Liverpool-rd., f., y.r. 63l. 350

By HANSON & WHEELDON.

Stourton-by-Stow, Lincs.—Swinnows and Taylor's Farms, 270 acres, f. 6,460

March 25.—By ELLIOTT, SON, & BOYTON.

South Kensington.—Bute-st., Zetland Arms, p.h., f.g.r. 130l., u.t. 32 yrs., g.r. 77l., with reversion in 5 yrs. 1,500

Oil Kent-rd.—Manor-gr., f.g. rents 35l. 8s., reversion in 38 and 41½ yrs. 615

Ornside-st., f.g. rents 14l. 8s., reversion in 16 yrs. 220

Peckham.—Queen-rd., f.g.r. 30l., reversion in 50 yrs. 580

5 and 37, Clifton-rd., u.t. 34 yrs., g.r., etc., 14l. 11s. 9d., y. and e.r. 56l. 305

Marylebone.—10, Wyndham pl., u.t. 15 yrs., g.r. 35l., p. 630

By G. E. LUCAS.

Crouch End.—25, Couch Hall-rd., f., e.r. 52l. 10, Shanklin-rd., u.t. 75 yrs., g.r. 6l. 6s., e.r. 32l. 4600

Holloway.—88, Marlborough-rd., u.t. 64 yrs., g.r. 6l. 6s., y.r. 32l. 355

52, Corbyn-st., u.t. 58 yrs., g.r. 6l., y.r. 30l. 220

By WILKINSON, SON, & WELCH.

Brighton, Sussex.—53, 54, and 55, Ship-st. (s.), f., y.r. 245l. 210

Hove, Sussex.—Shoreham-rd., Hove Park Club, f., p. 1,235

March 26.—By HAMPTON & SONS

Richmond.—Queen's-rd., Otavarria, u.t. 45 yrs., g.r. 15l., p. 1,400

By HASLETT.

Finchley.—High-rd., Torrington Arms p.h., lease for 984 yrs., g.r. 11l. 1,030

By REYNOLDS & BASON.

Holborn.—38, Great Queen-st. (s.), f., y.r. 125l. 5,900

Bethnal Green.—340 and 342, Bethnal Green-rd. (s.), f., y.r. 88l. 12s. 2,000

352 and 354, Bethnal Green rd. (s.), f., y.r. 51l. 8s. 1,800

364, Bethnal Green-rd. (s.), f., y.r. 70l. 14s. 1,210

7 and 9, Hague-st., f., w.r. 72l. 16s. 1,250

Cranbrook, Kent.—Freehold cottage, w.r. 10l. 8s. 610

By F. WARMAN.

Walworth.—Carter-st., l.g. rents 66l. 4s., u.t. 33 yrs., g.r. 37l. 125

14 and 16, Cavour-st., u.t. 31 yrs., g.r. 6l., y.r. 56l. 430

Old Ford.—18 and 19, Totty-st., u.t. 20 yrs., g.r. 6l. 6s., w.r. 46l. 16s. 285

Notting Hill.—45, Chesterton-rd., u.t. 59 yrs., g.r. 8l., e.r. 40l. 100

By DREWEATT & WATSON.

Newbury, Berks.—Andover-rd., three cottages, f. 240

Essex-st., Boundary Cottage, f. 425

March 27.—By H. J. BROMLEY.

Dulwich.—56, Park-rd., f., p. 270

New Cross.—23 and 23a, Pomeroy-st., u.t. 77 yrs., g.r. 10l., w.r. 50l. 14s. 660

Catford.—11 to 19 (odd), Clarens-st., u.t. 65 yrs., g.r. 25l., w.r. 123l. 8s. 180

By CHARLES SPARROW & SON.

Brockley.—24 and 30, Manor-rd., u.t. 48 yrs., g.r. 11l. 10s., y.r. 82l. 650

By DOUGLAS YOUNG & Co.

Chelsea. 438, King's-rd. (s.), u.t. 32 yrs., g.r. 5l., y.r. 65l. 600

Battersea. 20, Anhalt-rd., u.t. 68 yrs., g.r. 7l., p. 525

Clapham.—38, Hemberton-rd., u.t. 70 yrs., g.r. 8l. 8s., y.r. 36l. 300

By MADDISON, MILES, & MADDISON.

Winterton, Norfolk.—House and shop, c., p. .. 230

Three cottages, c., w.r. 18l. 255

By DUDLEY W. HARRIS & Co.

Staines, Middlesex.—47 and 49, High-st. (s.), f., y. and e.r. 120l. 257

By WOODCOCK & SON.

Rendham, Suffolk.—Church Farm and two cottages, 56 a. 0 r. 31 p., f. 1,600

By WOODS & Co.

Northampton.—256, Wellingborough-rd. (s.), f., y.r. 25l. 1,450

10, Alexandra-ter. (s.), f. 430

26 and 28, Upper Mounts, f. 330

March 28.—By FULLER, MOON, & FULLER.

West Croydon.—135, 137, and 139, Handcroft-rd., f., w.r. 78l. 250

By BAXTER, PAYNE, & LEPPER.

Bromley, Kent.—50, Crescent-rd., f., y.r. 26l. .. 675

By BEN ALLSOP.

Hammersmith.—48, Westcroft-sq., f., e.r. 40l. 300

By CARR & GREEN.

Muswell-hill.—6, Donovan-av., u.t. 88 yrs., g.r. 12l., y.r. 65l. 305

By S. B. CLARK & SON.

Regent's Park.—6, York-ter., u.t. 9 yrs., g.r. 10l. 10s., p. 600

By NEWBON & SHEPHARDS.

Clerkenwell.—Northampton-rd., l.g. rents 68l., u.t. 21¼ yrs., g.r. 6l. 1,600

Caledonian-rd.—No. 266, u.t. 39½ yrs., g.r. 8l., y.r. 42l. 510

2 and 3, Charlesworth st., u.t. 39½ yrs., g.r. 12l., w.r. 85l. 16s. 125

Greenwich.—Burney-st., f.g.r. 6l., reversion in 13½ yrs. 240

Highgate.—Bismark-rd., f.g.r. 6l. 10s., reversion in 64 yrs. 180

Manor Park.—Rosebery-av., f.g. rents 20l., reversion in 85 yrs. 165

Contractions used in these lists.—F.g.r. for freehold ground-rent; l.g.r. for leasehold ground-rent; i.g.r. for improved ground-rent; g.r. for ground-rent; r. for rent; c. for copyhold; l. for leasehold; p. for possession; e.r. for estimated rental; w.r. for weekly rental; q.r. for quarterly rental; y.r. for yearly rental; years; ln. for lane; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; cres. for crescent; av. for avenue; gdns. for gardens; yd. for yard; gr. for grove; b.h. for beerhouse; p.h. for public-house; o. for offices; s. for shops; ct. for court.

TERMS OF SUBSCRIPTION.

"THE BUILDER" (Published Weekly) is supplied DIRECT from the Office to residents in any part of the United Kingdom at the prepaid rate of 19s. per annum, with delivery by *Friday Morning's Post* in London and its suburbs.

To Canada, post-free, 21s. 8d. per annum; and to all part of Europe, America, Australia, New Zealand, India, China, Ceylon, etc., 26s. per annum.

Remittances (payable to J. MORGAN) should be addressed to The Publisher of "THE BUILDER," 4, Catherine-street, W.C.

PRICES CURRENT OF MATERI

*** Our aim in this list is to give, as far as poss *average* prices of materials, not necessarily the Quality and quantity obviously affect prices which should be remembered by those who mak this information.

BRICKS, &c.

Per 1000 Alongside, in River.

Best Stocks.....
Picked Stocks for Facings .....

Per 1000, Delivered at Railway Depôt.

	£ s. d.		
Flettons	1 13 0	Best Blue Pressed	
Best Fareham Red	3 12 0	Staffordshire...	
Best Red Pressed Ruabon Facing	5 0 0	Do. Bullnose.....	
		Best Stourbridge Fire Bricks ...	
GLAZED BRICKS—			
Best White, Ivory, and Salt Glzd. Str'tch'rs	11 7 6	Double Headers One Side and two Ends	
Headers	10 17 6	Two Sides and	
Quoins, Bullnose, and 4½ in. Flats	14 17 6	one End	
D'ble Stretchers	16 17 6	Splays & Squints	

Second Quality £1 10s. per 1000 less than b

	s. d.	
Thames and Pit Sand	6 9	per yard, d
Thames Ballast	5 6	"
Best Portland Cement	31 0	per ton,
Best Ground Blue Lias Lime	19 0	"

NOTE—The cement or lime is exclusive ordinary charge for sacks.

Grey Stone Lime ..... 13s. 0d. per yard d
Stourbridge Fireclay in sacks 27s. 0d. per ton at

STONE.

Per Ft. Cube.

BATH STONE—delivered on road waggons
Paddington Depôt .....
Do. do. delivered on road waggons, Nine Elm Depôt .....

PORTLAND STONE (20 ft. average)—
Brown Whitbed, delivered on road waggons
Paddington Depôt, Nine Elms Depôt, o
Pimlico Wharf .....
White Basebed, delivered on road waggon
Paddington Depôt, Nine Elms Depôt, o
Pimlico Wharf .....

Per Ft. Cube, delivered at Railway Depôt

	s. d.		
Ancaster in blocks..	1 10	Closeburn Red	
Bear in blocks	1 6	Freestone	
Greenshill in blocks	1 10	Red Mansfield	
Darley Dale in blocks	2 4	Freestone	
Red Corsehill in blocks	2 3	Talacre & Gwespy Stone	

YORK STONE—*Robin Hood Quality.*

Per Ft. Cube, Delivered at Railway Depôt

Scappled random blocks .....

Per Ft. Super., Delivered at Railway Depôt

6 in. sawn two sides landings to sizes (unde 40 ft. super.) .....
6 in. rubbed two sides ditto, ditto .....
3 in. sawn two sides slabs (random sizes) .....
2 in. to 2½ in. sawn one side slabs (random sizes
1¼ in. to 2 in. ditto, ditto .....

HARD YORK—

Per Ft. Cube, Delivered at Railway Depôt

Scappled random blocks .....

Per Ft. Super., Delivered at Railway Depôt

6 in. sawn two sides landing to sizes (under 40 f super.) .....
6 in. rubbed two sides ditto .....
3 in. sawn two sides slabs (random sizes) .....
2 in. self-faced random flags .....

SLATES.

Per 1000 of 1200 at Railway Depôt.

In. In.	£ s. d.	In. In.	
20×10 best blue Bangor	13 2 6	20×10 best Eur'ka unfading green	
20×12 ditto	13 17 6	20×12 ditto	
20×10 1st quality ditto.....	13 0 0	18×10 ditto	
20×12 ditto	13 15 0	16×8 ditto	
16×8 ditto	7 5 0	20×10 permanent green	
22×10 best blue Portmadoc.....	12 12 6	18×10 ditto	
16×8 ditto	6 12 6	16×8 ditto	

TILES.

At Railway Depôt.

	s. d.		
Best plain red roofing (per 1000)	42 0	Best "Hartshill" brand, plain sand faced (per 1000)	
Hip and Valley (per doz.).....	8 7	Do. pressed (p 1000)	
Best Broseley (per 1000)	50 0	Do. Ornamental (p 1000)	
Do. Ornamental (per 1000)	52 6	Hip (per doz.)	
Hip and Valley (per doz.).....	4 0	Valley (per doz	
Best Ruabon red, brown, or brindled (Edw'ds) (per 1000)	57 6	Staffords. (Hanle Reds or Brindl (per 1000)	
Do. Ornamental (per 1000)	60 0	Hand-made san faced (per 10	
Hip (per doz.)...	4 0	Hip (per doz.)	
Valley (per doz.)	3 0	Valley (per do	

WOOD.

BUILDING WOOD.

	At per stan		
Deals: best 3 in. by 11 in. and 4 in. by 9 in. and 11 in.....	£ 14	s. d. 0 0	...
Deals: best 3 by 9	13	10 0	...
Battens: best 2½ in. by 7 in. and 8 in., and 3 in. by 7 in. and 8 in.	11	10 0	...
Battens: best 2½ by 6 and 3 by 6...	0	10 0	1
			7 in.
Deals: seconds	1	0 0	less t
Battens: seconds	0	10 0	"
2 in. by in. and 2 in. by 6 in. ...	9	10 0	...
2 in. by 4½ in. and 2 in. by 5 in.	9	0 0	...

WOOD (*Continued*).

LDING WOOD (*Continued*)—	At per standard. £ s. d.	£ s. d.
gn Sawn Boards—		more than battens.
. and 1¼ in. by 7 in.	0 10 0	
		„
mber: best middling Danzig	At per load of 50 ft.	
demel(average specification)	5 0 0 ...	5 10 0
onds	4 10 0 ...	5 0 0
all timber (8 in. to 10 in.) ...	3 17 6 ...	4 0 0
all timber (6 in. to 8 in.).....	3 5 0 ...	3 10 0
edish balks	2 12 6 ...	3 0 0
-pine timber (30 ft. average)	5 5 0 ...	6 0 0

JOINERS' WOOD.	At per standard.			
e Sea: first yellow deals,				
in. by 11 in.	24 10 0	...	25 10 0	
in. by 9 in.	22 10 0	...	23 10 0	
attens, 2½ in. and 3 in. by 7 in.	17 0 0	...	18 0 0	
ond yellow deals, 3in. by 11in.	19 0 0	...	20 0 0	
„ „ 3 in. by 9 in.	18 0 0	...	19 10 0	
attens, 2½ in. and 3 in. by 7 in.	14 0 0	...	15 0 0	
ird yellow deals, 3 in. by				
1 in. and 9 in.	14 0 0	...	15 0 0	
attens, 2½ in. and 3 in. by 7 in.	11 10 0	...	12 10 0	
rsburg: first yellow deals,				
in. by 11 in.	21 10 0	...	22 10 0	
Do. 3 in. by 9 in.	18 10 0	...	19 10 0	
Battens	14 0 0	...	15 0 0	
ond yellow deals, 3 in. by				
1 in.	16 10 0	...	17 10 0	
Do. 3 in. by 9 in.	15 0 0	...	16 0 0	
Battens	11 10 0	...	12 10 0	
ird yellow deals, 3in. by 11 in.	13 10 0	...	14 10 0	
Do. 3 in. by 9 in.	13 0 0	...	14 0 0	
Battens	10 10 0	...	11 0 0	
a Sea and Petersburg—				
rst white deals, 3 in. by 11 in.	15 0 0	...	16 0 0	
„ „ 3 in. by 9 in.	14 0 0	...	14 10 0	
Battens	11 10 0	...	12 10 0	
cond white deals, 3in. by 11in.	14 0 0	...	15 0 0	
„ „ 3 in. by 9 in.	13 0 0	...	14 0 0	
Battens	10 10 0	...	11 0 0	
-pine: deals	19 0 0	...	21 0 0	
der 2 in. thick extra	0 10 0	...	1 0 0	
w Pine—First, regular sizes	32 0 0		upwards.	
dments	32 0 0		„	
conds, regular sizes	33 0 0		„	
dments	28 0 0		„	
i Pine—Planks per ft. cube.	0 4 6 ...	0 6 0		
zig and Stettin Oak Logs—				
rge, per ft. cube	0 3 0 ...	0 3 9		
nall „ „	0 2 6 ...	0 2 6		
nscot Oak Logs, per ft. cube	0 6 6 ...	0 8 0		
Wainscot Oak, per ft. sup. as				
inch	0 0 10 ...	0 1 0		
n. do. do.	0 0 8½ ...	—		
„ „				
Mahogany—Houndras, Ta-				
basco, per ft. super. as inch..	0 0 10 ...	0 1 1		
lected, Figury, per ft. super.				
as inch	0 1 6 ...	0 2 6		
„ Walnut, American, per ft.				
super. as inch	0 0 10 ...	0 1 0		
k, per load	18 0 0 ...	22 0 0		
erican Whitewood planks,				
per ft. cube	0 5 0 ...	0 6 0		

WOOD (*Continued*).

JOINERS' WOOD (*Continued*)—	Per square. £ s. d.	£ s. d.
Prepared Flooring, etc.—		
1 in. by 7 in. yellow, planed and shot	0 13 6 ...	0 17 0
1 in. by 7 in. yellow, planed and matched	0 14 0 ...	0 18 0
1¼ in. by 7 in. yellow, planed and matched	0 16 0 ...	1 0 0
1 in. by 7 in. white, planed and shot	0 12 0 ...	0 14 6
1 in. by 7 in. white, planed and matched	0 12 6 ...	0 15 0
1¼ in. by 7 in. white, planed and matched	0 15 0 ...	0 16 6
¾ in. by 7 in. yellow, matched and beaded or V-jointed brds.	0 11 0 ...	0 13 6
1 in. by 7 in. „ „	0 14 0 ...	0 18 6
¾ in. by 7 in. white „ „	0 10 0 ...	0 11 0
1 in. by 7 in. „ „	0 12 9 ...	0 15 0

6 in. at 6d. to 9d. per square less than 7 in.

JOISTS, GIRDERS, &c.

	In London, or delivered Railway Vans, per ton. £ s. d.	£ s. d.
Rolled Steel Joists, ordinary sections	7 10 0 ...	8 0 0
Compound Girders, ordinary sections	9 10 0 ...	10 0 0
Steel Compound Stanchions	11 0 0 ...	12 0 0
Angles, Tees, and Channels, ordinary sections	9 10 0 ...	10 0 0
Plitch Plates	9 10 0 ...	9 10 0
Cast Iron Columns & Stanchions, including ordinary patterns ...	7 10 0 ...	8 10 0

METALS.

IRON—	Per ton, in London. £ s. d.	£ s. d.
Common Bars	9 0 0 ...	9 10 0
Staffordshire Crown Bars, good merchant quality	9 5 0 ...	9 15 0
Staffordshire "Marked Bars"	11 0 0 ...	—
Mild Steel Bars	9 5 0 ...	9 15 0
Hoop Iron, basis price	10 0 0 ...	—
„ „ Galvanised	17 10 0 ...	—
(*And upwards, according to size and gauge.)		
Sheet Iron Black—		
Ordinary sizes to 20 g.	10 5 0 ...	—
„ „ 24 g.	11 5 0 ...	—
„ „ 26 g.	12 15 0 ...	—
Sheet Iron, Galvanised, flat, ordinary quality—		
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15 10 0 ...	—
Ordinary sizes to 22 g. and 24 g.	16 0 0 ...	—
„ „ 26 g.	17 0 0 ...	—
Sheet Iron, Galvanised, flat, best quality—		
Ordinary sizes to 20 g.	18 10 0 ...	—
„ „ 22 g. and 24 g.	19 0 0 ...	—
„ „ 26 g.	20 10 0 ...	—
Galvanised Corrugated Sheets—		
Ordinary sizes, 6ft. to 8ft. 20 g.	15 0 0 ...	—
„ „ 22 g. and 24 g.	15 5 0 ...	—
„ „ 26 g.	16 15 0 ...	—

METALS (*Continued*).

IRON (*Continued*)—	Per ton, in London. £ s. d.	£ s. d.
Best Soft Steel Sheets, 6 ft. by 2 ft.		
to 3 ft. to 20 g. and thicker.....	12 10 0 ...	—
Best Soft Steel Sheets, 2 g. & 24 g.	13 10 0 ...	—
„ „ „ 26 g.	15 10 0 ...	—
Cut Nails, 3 in. to 6 in.....	11 0 0 ...	11 10 0
(Under 3 in., usual trade extras.)		

LEAD, &c.

	£ s. d.	
LEAD—Sheet, English, 4lb. and up	20 0 0 ...	—
Pipe in coils	20 10 0 ...	—
Soil pipe	23 10 0 ...	—
Compo pipe	23 10 0 ...	—
ZINC—Sheet—	In casks of 10 cwt.	
Vielle Montagne	33 10 0 ...	—
Silesian	33 5 0 ...	—
Zinc, in bundles, 1s. per cwt. extra.		
COPPER—		
Strong Sheet ..... per lb.	0 1 0 ...	—
Thin „ ..... „	0 1 1 ...	—
Copper nails ..... „	0 0 10 ...	—
Copper wire ..... „	0 0 10 ...	—
BRASS—		
Strong Sheet ..... „	0 0 11 ...	—
Thin „ „	0 1 0 ...	—
TIN—English Ingots..... „	0 1 11 ...	—
SOLDER—Plumbers' ..... „	0 0 9 ...	—
Tinmen's ..... „	0 1 0 ...	—
Blowpipe ..... „	0 1 2 ...	—

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

15 oz. thirds	2½d.	26 oz. fourths	3½d.
„ fourths	1½d.	32 oz. thirds.....	5d.
21 oz. thirds.....	3½d.	„ fourths	4½d.
„ fourths	2½d.	Fluted Sheet, 15 oz.	3½d.
26 oz. thirds.....	4d.	„ 21 oz.	4½d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

⅛ Rolled plate	2½d.	Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white.....	3½d
⅛ Rough rolled and rough cast plate..	2½d.		
⅛ Rough rolled and rough cast plate..	3d.	Ditto, tinted.....	5d.

* Not less than two crates.

OILS, &c.		£ s. d.
Raw Linseed Oil in pipes	per gallon	0 3 4
„ „ „ in barrels.....	„	0 3 5
„ „ „ in drums	„	0 3 7
Boiled „ „ in barrels.....	„	0 3 7
„ „ „ in drums	„	0 3 10
Turpentine in barrels	„	0 2 11
„ in drums	„	0 3 1
Genuine Ground English White Lead, per ton		27 10 0
Red Lead, Dry	„	24 0 0
Best Linseed Oil Putty	per cwt.	0 10 6
Stockholm Tar	per barrel	1 12 0



The KEY *to* Efficient Lighting

is to install a system that is Inexpensive, Safe, Reliable, Simple, Healthy.

The only system to fulfil all these requirements is

Acetylene

For all particulars apply—

ACETYLENE PUBLICITY, LTD.,
105, CHEAPSIDE, LONDON, E.C.

PIKETTY SYSTEM OF REINFORCED CONCRETE -

GIVES

The MAXIMUM of Strength and Durability with the MINIMUM of Cost.

Equipped solely to render service as "Specialists" to Architects, Engineers, and Surveyors, and not to enter into competition with them.

ESTABLISHED 12 YEARS.

Full Particulars from:

PAUL PIKETTY & CO.,
Reinforced Concrete Experts,
14, 16 & 18, BLOOMSBURY STREET,
LONDON, W.C.

VARNISHES, &c.	Per gallon. £ s. d.
Fine Pale Oak Varnish	0 8 0
Pale Copal Oak	0 10 6
Superfine Pale Elastic Oak	0 12 6
Fine Extra Hard Church Oak	0 10 0
Superfine Hard-drying Oak, for seats of Churches	0 14 6
Fine Elastic Carriage	0 12 0
Superfine Pale Elastic Carriage	0 16 0
Fine Pale Maple	0 10 0
Finest Pale Durable Copal	0 18 0
Extra Pale French Oil	1 1 0
Eggshell Flating Varnish	0 18 0
White Pale Enamel	1 4 0
Extra Pale Paper	0 12 0
Best Japan Gold Size	0 10 6
Best Black Japan	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Knotting	0 10 9
French and Brush Polish	0 10 6

TO CORRESPONDENTS.

NOTE.—All communications with respect to literary and artistic matters should be addressed to "THE EDITOR" (and not to any person by name); those relating to advertisements and other exclusively business matters should be addressed to "THE PUBLISHER," and not to the Editor.

All communications must be authenticated by the name and address of the sender, whether for publication or not. No notice can be taken of anonymous communications.

The responsibility of signed articles, letters, and papers read at meetings rests, of course, with the authors.

We cannot undertake to return rejected communications; and the Editor cannot be responsible for drawings, photographs, manuscripts, or other documents, or for models or samples, sent to or left at this office, unless he has specially asked for them.

All drawings sent to or left at this office for consideration should bear the owner's name and address on either the face or back of the drawing. Delay and inconvenience may result from inattention to this.

Any commission to a contributor to write an article, or to execute or lend a drawing for publication, is given subject to the approval of the article or drawing, when received, by the Editor, who retains the right to reject it if unsatisfactory. The receipt by the author of a proof of an article in type does not necessarily imply its acceptance.

N.B. Illustrations of the First Premiated Design in any important architectural competition will always be accepted for publication by the Editor, whether they have been formally asked for or not

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than 6 p.m. on Wednesday.* [N.B.—We cannot publish Tenders unless authenticated either by the architect or the building owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is stated, nor any list in which the lowest Tender is under 100*l.* unless in some exceptional cases and for special reasons.]

* Denotes *accepted.* † Denotes *provisionally accepted.*

BEACONSFIELD.—For house in Penn-road, for Mr. C. A. Maggs. Messrs. Veale & Gibbs, architects and surveyors, 72, Finsbury-pavement, London, E.C.:—

Dither	£2,545 0 0	Y. J. Lovell & Sons	£1,742 0 0
W. Johnson & Co., Ltd.	2,247 0 0	C. W. Cox & Son	1,693 0 0
Eldridge & Sons	2,185 0 0	C. T. Costin	1,684 0 0
F. Froude	1,805 9 2		

CLECKHEATON.—For erection of boundary walls, bandstand, shelter, etc., for the Cleckheaton Coronation Committee. Mr. C. Lund, M.I.M. and C.E., engineer, Cleckheaton. Quantities by engineer:—

Masons: Robinson & Crowther	£1,049 0 0
Joiner: W. Isherwood	53 7 0
Plumber: E. Nutter	24 15 0
Iron railings: S. Clough	175 15 0
Slater: Robinson & Crowther	33 13 2

[All of Cleckheaton.]

CHANDLERSFORD.—For erection of a hospital for infectious diseases at Fryern-hill, for Eastleigh and Bishopstoke Urban District Council. Mr. W. Wallace Gaudy, Architect, Engineer, and Surveyor to the Council. Quantities by Architect:

Perry & Co. (Bow), Ltd.	£5,736 0 0
Playfair & Toole	5,700 0 0
Kirk & Randall	5,360 14 7
F. Osman & Co.	5,443 5 5
Jenkins & Sons, Ltd	5,287 0 0
Mussellwhite & Sapp	5,199 0 0
J. Doughty	5,143 11 7
H. Stevens & Co., Southampton*	5,090 0 0
A. J. Colborne	4,880 5 1

CHOLSEY. For the erection of a pair of estate cottages, for Mr. S. W. Cozens. Mr. Edwin G. Hearness, architect, 9, High-street, Wallingford:—

S. G. Munday	£658 15	Bosher, Son, & Co.	£554 10
G. H. Wheeler	600 0	M. Burgess & Son, Cuddesdon*	525 10
H. Bowden	570 0		

DONEGAL.—For erection of a dwelling-house at Oldcourt, Co. Cork, for Mr. John Walsh. Mr. W. F. Maye, C.E., architect, Fermoy. Quantities by architect:

J. Murphy	£250	P. Spillane	£240
C. O'Connell	247	P. Walsh, Fermoy*	239

EASTBOURNE. For erecting Sunday-school buildings, for the Longstone Hall Building Committee. Mr. A. Waring Venner, architect, Station-approach, Redhill.

Miller & Selmes	£1,015	Bainbridge & Son	£976
A. G. Phillips	985	J. Bodle, Eastbourne†	925

LONDON. For alterations and additions to the Marsh-street Boys' School, Walthamstow. Mr. H. Prosser, M.S.A., architect. Quantities by Mr. G. W. Francis:

F. J. Coxhead	£1,465	A. G. Barton	£1,322
Webb & Co.	1,398	J. Sands, Walthamstow*	1,234
Braud, Pettit, & Co.	1,385	R. & E. Evans	1,198
J. & J. Dean	1,370		

RHONDDA.—For erection of manager's house at Wattstown. Messrs. A. O. Evans, Williams, & Evans, architects, Pontypridd:—

Evans Bros., Cardiff*	£1,770

RUSTINGTON.—For erection of a timber groyne on the foreshore, west of the sea mill. Mr. C. W. Leney, surveyor, The Croft, Angmering. Quantities by surveyor:—

Jarrett	£285	Senwin & Co.	£182
Swales	239	Burrell & Handen, Littlehampton*	165
Linfield & Sons	185		

THORNLEY.—For alterations to the W Club at Wheatley-hill. Mr. H. Gradon, Durham:—

H. C. Howe	£520 0 0	Whittingham & Sons	
J. W. White	515 0 0		
W. H. Ayton	490 0 0	J. Hedley	
T. Coates, jun.	473 0 0	J. W. Ridley, Sunderland*	
J. Oliver	457 15 0		

TURRIFF.—For additions to steading, King Edward, for Sir Richard Nicolson, B W. L. Duncan, architect, Turriff, Scotland:—

Mason: R. Morrison, Macduff*	)
Carpenter: A. W. Teunon, Turriff*	£2
Slater: A. G. Ross, Macduff*	)

Ham Hill Stone.
Doulting Stone.
Portland Stone.
The Ham Hill and Doulting Stone Co.,
(incorporating the Ham Hill Stone Co. and C. Tras The Doulting Stone Co.).
Norton, Stoke-under-Ham, Somer
London Agent:—Mr. E. A. Wil
16, Craven-street, Strand.

Asphalte.—The Seyssel and Metall Asphalte Co. (Mr. H. Glenn), Office, 42, E.C.—The best and cheapest materials f courses, railway arches, warehouse flo roofs, stables, cow-sheds and milk-room aries, tun-rooms, and terraces. Asphal tractors to Forth Bridge Co. T.N. 2644 C

SPRAGUE & CO., Ltd.,
PHOTOLITHOGRAPHERS,
69 and 70, Dean-street
Soh

OGILVIE & CO., Telephone DAL Many years with the late W. H. LASCELLE of Bunhill
Amhurst Works, **DALSTON LANE**
EXPERTS IN HIGH-CLASS JOINE
ALTERATIONS AND DECORATIONS.

ASPHALTE
For Horizontal & Vertical Damp Co
For Flat Roofs, Basements, & other

J. J. ETRIDGE, Jr.
SLATE MERCHANTS. LTD.
EXPERTS IN
SLATING, TILING.
BEST WORK ONLY.
Telephone 2685 Wall, or write—
BETHNAL GREEN SLATE WORKS,
BETHNAL GREEN, LONDON, E.

The best materials and workmanship are sup
THE
French Asphalte
Whose name and address should be inserte specifications.
For estimates, quotations, and all inform apply at the Offices of the Compan
5, LAURENCE POUNTNEY L
CANNON STREET E.C.

EWART'S
Cures in 19 cases out of 20.
"EMPEROR"
Write to-day for Illustrated Catalogue Free to
EWART & SON Ltd.,
346-350, Euston Road, London, N.W.
Established 1834.
Telephone: 2570 North.
SMOKE-CURE

THE BUILDER

VOL. CII.—No. 3611. APRIL 19, 1912.

CONTENTS.

PAGE

E Crawford Municipal Technical Institute, Cork ... 443
Country Planning ... 443
ent's Quadrant ... 444
tes ... 445
e Royal Institute of British Architects ... 445
e Architectural Association ... 448
ners' Hall Competition, Bolton (with plans) ... 450
neral News ... 451
rrespondence ... 451
rcommunication Column ... 453
mpetition News (with Illustration) ... 453
ty Years Ago ... 453
itorial Summary ... 454
etings ... 454
tes to Illustrations ... 454
chitectural Societies ... 456
nthly Historical Review:—
The Architecture of Portugal.—II. (with Illustrations) ... 457

PAGE

Monthly Historical Review (*continued*):—
Gwalior Fort (with Illustration) ... 459
Ancient Monuments in Ireland ... 460
The Brass of Sir John Cassy and Wife, 1400, Deerhurst, Glos. (with Illustration) ... 460
Notes ... 461

The Building Trade:—
Recent Workmen's Compensation Cases ... 462
Building Notes from Australia ... 462
Labour in the Building Trade ... 463
Ipswich Building Trades Association ... 464
General Building News ... 464
Projected New Buildings in the Provinces ... 464

The Surveyors' Institution ... 465
Engineering Societies ... 466
The Architects' Benevolent Society ... 466
Books ... 467

PAGE

Legal Column ... 468
London Councils ... 468
Trade Catalogues ... 468
Patents ... 468
List of Competitions, Contracts, etc., Open ... 469
Foreign and Colonial ... 471
Some Recent Sales ... 471
Prices Current ... 471
Tenders ... 472

Illustrations.

Lindsey Hall, Kensington, W. Mr. Ronald P. Jones, Architect.

House at Champion-hill, S.E. Mr. G. Ll. Morris, Architect.

Business Premises, Berners-street, W. Mr. Louis A. Hayes, A.R.I.B.A., Architect.

The Palace of Man Singh, Gwalior.



The Crawford Municipal Technical Institute, Cork.

This building, which occupies the site of Arnott's Brewery, is situated in Fitton-street, or Sharman Crawford-street, as it has been renamed in honour of the donor of the site and buildings already there. The architect was Mr. Arthur Hill, B.E., F.R.I.B.A., and the contractor Mr. Samuel Hill. The building was opened in January.

COUNTRY PLANNING.

As it is only in recent years that serious attention has been devoted to the comprehensive and æsthetic anning of our cities and urban districts, is hardly a matter for surprise that our ral districts have hitherto been entirely eglected.

Yet there seems no reason why the rrangement of the country should not ceive as much attention as the arrange- ent of the towns. The opportunity r serving the needs of humanity and r adding to the amenities of life is at ast as great.

In our small island, with its over crowded population, the value of skilful planning seems obvious, and, judging from our love of country life, anything which tends to increase its charm should appeal most forcibly to the interest of the general public.

It may perhaps be anticipated that the attention which is now being paid to the towns will in time spread to the country, if only as considered in relation to the towns. It is no doubt true that, with regard to such matters as outlying suburbs, commons, and woodlands, our large cities are already establishing spheres of influence in which the general lay-out of the country, considered as the approach to the town, or as the playground of its citizens, will receive attention. But all such general ideas seem to stop at a certain point, and do not concern themselves with the country as such, or with its proper arrangement to serve the needs of those who live in it.

Most schemes at present must of necessity perhaps be conceived as patterns on a background which is left to take care of itself and to be altered or developed at the dictates of physical necessity alone, and with no regard to æsthetic considerations. Yet there would

seem to be need, and ample scope, for such considerations in every part of the country that is brought under cultivation.

There is surely an art in laying out ground, whether intended for profit or for pleasure; as much opportunity for skilful planning in the arrangement of a farm as in the arrangement of a public park. In so far as such planning adds to the beauty of the neighbourhood and to the amenities of life it may rightly be considered to rank as a fine art and to be a matter of some concern to the architect.

With the exception of the work done by the Romans this country was settled and enclosed by uncivilised people with no capital but their brains and sinews, who added field to field, taken from forest, moor, or fen, in haphazard manner to satisfy the immediate pressing needs of existence. As they left it, so, to a large extent, we see it to-day.

A detail map of any part of the country will show the fields divided up by hedges or stone walls in the most wasteful, inconvenient, and haphazard fashion that has no direct relation to modern methods of agriculture, to the convenience of the farmers, or the beauty of the landscape. We find the roads sometimes winding about in an aimless manner that has no connexion with present needs and conditions, making wide detours or climbing steep hills, it may be, to avoid swamps which no longer exist, or at other times running straight between points where direct communication is no longer necessary.

How far the dwellers in the country districts are hampered in their business or their social pursuits by bad arrangements it would be difficult to say, but it seems evident that neither the field enclosures nor the roads have kept pace with the general progress of the country.

Probably the main reason that accounts for our lack of interest in the development of the country districts in harmony with our high degree of material civilisation is the growth of industrialism, which, by drawing the country people to the towns, has shifted the centre of interest to the large centres of population. If we have failed to establish adequate road communication between these centres it is no doubt due to the introduction of railways, which altered the whole problem of planning for both town and country.

No sooner, however, do we appear to begin to make an effort to adjust our roads to the dominating position obtained by the railways than the invention of motor traction again alters the problem reinstates the country roads in their previous position of importance, and renders their improvement a matter of immediate and pressing necessity. This improvement has already been taken in hand with the help of the Road Board, but in a piecemeal fashion, and without much consideration, we fear, for the æsthetic questions involved.

However valuable may be the local improvements effected on these lines, far better results might be obtained if they were all carried out in conformity with some generally recognised principles and related to a central and comprehensive scheme.

If the ultimate problem involved is really the general lay-out of the whole country to render it even more exactly fit for the present-day needs of its inhabitants, the first essential to be considered, as in the lay-out of a town, is the proper disposition of the main traffic arteries from end to end of the country, or between the great centres of population.

When we remember that the Romans had long ago driven main high-roads across the country, many of which have since been encroached upon or allowed to fall into disuse, we cannot help wondering how far it would be possible to repair and rewiden them and bring back to them something of their former glory as the great arteries of national life.

A complete survey of their present and original condition, studied in relation to the present and probable future centres of population, would show how far it was possible to harmonise historic continuity with present-day necessity.

If the general trend of social development, as exemplified by recent legislation, leads to the division of large properties and to the return of the peasant proprietor or the smallholder, another movement is set on foot which will also tend to make this question of country planning a matter of practical politics.

Fears have been expressed that the coming of the smallholder will not improve the aspect of the countryside, that he will cut down trees, lay out the more fertile districts in small rectangular plots, each with its jerry-built shanty, and so destroy the woodlands and meadows which give so much character and charm to English scenery.

The more truth there is in this forecast the more need there is that every effort should be made to ensure by skilful arrangement and regard for the amenities that whatever old-world charm is of necessity destroyed shall be replaced by features which, in their turn, will be the delight of future generations.

Taking into account both aspects of this general question, there is little doubt that great changes may be anticipated in the near future, which if not carried out in a right spirit may ruin for many generations to come the charm of our villages and our rural districts.

But in these days of widely-diffused taste and knowledge, with an architect in every country town, there is no reason why the improvements rendered necessary either by the invention of motor traction or by changes in our system of land tenure should not be placed in the hands of those specially skilled in planning and qualified to take a broad view of the æsthetic problems involved. Neither is there any reason why a central authority should not see that all improvements are related to a general scheme and are carried out in accordance with generally accepted principles which make due provision for the amenities of life and for the charm of the countryside.

WESTMINSTER CATHEDRAL.

The mosaic work in the Shrine of the Sacred Heart is now completed. Under the vaulting, which is encrusted with gold and red vitreous mosaic, is a representation of the Sacred Face by the late Mr. W. C. Symons, and given by Mrs. Murray; in front of the statue hangs a silver lamp, designed for Sir Paston Cooper; electric-light pendants are suspended from beams at the springing of the vaulting; the walls are veneered with plates of green and white marble.

REGENT'S QUADRA

THE reopening of the q as to the unsuitability approved design for R Quadrant for the pu of the retail trader indicates that it based on a mere ephemeral dista novelty of treatment, but on a rooted conviction that if it is enfor all the prospective lessees the cl business hitherto carried on at this will be driven elsewhere and th mises diverted to such other purpo would be independent of a ma attraction to the casual passer-by.

It may be all very well to scoff uses of advertisement and to say they are inconsistent with the h forms of architectural dignity, but tisement takes various forms, and the best is the attractive display of offered to those who aim at edu themselves in what is the right an able thing to purchase. To say architecture is incapable of cater this would be, we think, an adm most injurious to the interests of th Architecture is surely an expressio need—one need may be more exalte another—but surely in an org community all legitimate need entitled to call in the aid of the arc to enhance the material expressi purpose, and for the architect to say he is out of sympathy with the pu and to persist in expressing some else places him in quite a false positi

This is substantially what has place in the case of Mr. Norman S façade in the Quadrant. No one deny to this design certain qualiti dignity and breadth, and even if think it a little out of scale with street in which it stands, this is no main point. The crux of the mat whether it does or does not expres requirements of the purpose for wh is built. Undoubtedly the popular is that it does not, and, making all a ances for conservative prejudices, are bound to say that in this cas believe that the popular view is correct one.

This places the Londoner in a dif position. There are several alterna before him in regard to the compl of the Quadrant. Shall the exi block be refronted? This can h be recommended on practical gro Shall the present building be disrega in the future work? Such a course s unthinkable—to the architect, at rate. Shall Mr. Norman Shaw's d be completed even at the cost of interests affected? After what we said, we feel that this would be a mistake, especially as there is yet an alternative open. Let us accept Shaw's building (except in regar its western bay) and set to work t if a design cannot be produced that in its general lines harmonise with block, but which will provide for all reasonable requirements of the r traders who would naturally occupy premises.

The problem is a difficult one, but we believe, insoluble, and the import of finding a means of reconcili between the interests of Lond commerce and her architectural dig

is so great that, with a view to helping towards so desirable a consummation, we have decided to institute a competition for an architectural design that, while accepting the present façade as a *fait accompli*, shall continue it in such a fashion as may not be open to the destructive criticisms that have been levelled at Mr. Norman Shaw's design.

Particulars of this competition will be found on p. 453, and we would urge our younger architects to enter, not so much for the trifling reward we are in a position to offer as for the sake of London's civic need of good architecture, and an adequate solution of one of the numerous difficulties in which, through past failures, she has become involved.

NOTES.

The British School at Rome. PARTICULARS have been published in a White Paper issued from the Privy Council Office of the Royal Charter which it is proposed to grant to the British School at Rome, to be erected on the site of the pavilion which contained the British Section of Fine Arts in the International Exhibition held last year in Rome. The Articles of the Charter are of interest and importance, setting forth the object and constitution of the School, and further reference will be made to the proposals in our next issue. The appointed members of the Council will include two appointed by the Royal Institute of British Architects, both of whom will be architects, and four by the Royal Academy of Arts, one of whom will be an architect and one a sculptor.

Port of London Competition. THE letter from Mr. C. H. B. Quennell which we publish in another column calls attention to an aspect of our method of conducting competitions which, from the point of view of their educative value, may certainly be considered a defect. The efforts of 164 competitors, many, no doubt, the ablest men in the profession, devoted to the solution of an unusually interesting and important problem, should certainly not be lost to the profession. We see no reason why the preliminary designs in a double-barrelled competition should not be retained and exhibited with the selected ones when the final award is made. This would add to the interest of the exhibition and have advantages other than educational. Considering the importance to the promoters, as well as to the profession, that the best general ideas should be chosen in a preliminary competition, there seems as much need for publicity in one case as the other. As the Port of London preliminary designs have, we believe, been returned to their owners, there may be some difficulty in exhibiting them in this case. After the final award is made, however, we hope to be able, with the assistance of the competitors, to give illustrations of some of the various ideas as to the general lay-out of the site and treatment of the building.

Another Hastings Competition. A CORRESPONDENT draws our attention to the conditions of a competition for a Sunk Area and Bandstand promoted by the County Borough of Hastings, which do not appear to be in conformity with the Institute regulations. The usual deposit of one guinea is to be retained by the Corporation, the two premiums offered are insufficient in proportion to the cost of the undertaking, and no assurance is given that the competitor placed first will be entrusted with the work. Although the President of the Institute is to be asked to nominate an assessor, it is difficult to see how he will be able to act unless these conditions are first brought into line with the Institute's requirements. Failing this, a deadlock will arise which might so easily have been avoided. As a general rule, promoters of competitions recognise the advantage of approaching the Institute in the first instance, so that the assessor may be appointed to draw up the conditions on terms which allow architects of repute to compete, so ensuring more satisfactory results to the promoters. It is, however, gratifying to note that the Corporation of Hastings fully appreciate the importance of obtaining the best available architectural skill for a class of work which, though powerfully affecting the appearance of a town, has been too often carried out without it. Once they realise that these conditions are likely to defeat their object and to be prejudicial to their own interests they will no doubt take steps to reconsider them. That an offer of premiums only amounting to a total of twenty-five guineas, while a charge of one guinea is made to each competitor, might look like an attempt to finance or even to make a profit out of the competition, would probably never occur to promoters who had no such intention.

How Many Houses to the Acre? MR. RAYMOND UNWIN, in a letter to the *Times*, points out that in limiting under a town-planning scheme the number of houses to be built on an acre of land the speculator is tempted to erect larger houses on each plot, which may come to be occupied by two or more families, thus perpetuating a state of affairs that it is one of the aims of the Town Planning Act to abolish. It is pointed out that in arranging the number of houses some consideration should be given to their size; but this appears to us to add a complication to the procedure that would render it almost unworkable. Now, why not solve the problem by simply stipulating that not more than a certain amount of cubic feet of building should be constructed per acre? This would allow the utmost freedom in erecting the class of property most nearly suited to the requirements without putting a premium on the larger house, which may become liable to misuse.

The Teaching of Design. FROM the Report of the examiners for 1911 on the selected works of schools of art and technology recognised under the regulation of the Board of Education we gather that these schools continue to be weakest where they should be strongest viz., in the art of design. Good progress is reported in work from the life and in other imitative studies, but it does not appear to be so noticeable in the application of the technical skill thus obtained to the purposes for which these schools were founded. When the examiners point out that certain designs are not up to the level of ordinary trade work, the remark, we presume, is intended as a severe criticism. But when we remember that these schools were organised for the very purpose of raising the level of ordinary trade work, the fact that it is still so low as to suggest this observation appears to constitute an even more damaging criticism on the practical utility of the whole system of education. That the examiners in architecture should deplore the lack of competent direction in the general conception of designs, and in the elements of design, is not to be wondered at, for their criticism might, we think, equally apply to our regular architectural schools from the Academy downwards. Having recognised the lack of competent teaching, the next step is to recognise the lack of competent teachers, and then to make a determined effort to provide them, even if we, like the Americans, have to bring them in from another country.

The *Titanic*. WHILE this is not the time to enter into technical questions connected with the national disaster that has befallen us in the loss of the *Titanic*, we feel impelled to offer our condolences to those whose friends are among the missing. Of the many distinguished names on this list we should draw attention to those of Mr. F. D. Millet, the eminent American painter; and Mr. Christopher Head, who, as Mayor of Chelsea, took such a keen interest in artistic matters affecting London.

A SPECIAL meeting of the Royal Institute of British Architects was held on Monday at No. 9, Conduit-street, under the Chairmanship of Professor Blomfield, A.R.A.

Mr. Guy Dawber, in the absence of the Hon. Secretary, said he had to announce, with regret, the decease of Mr. Elijah Poole, who was elected an Associate in 1869 and a Fellow in 1874, and who was placed on the retired list of Fellows in 1911.

THE NEWER RESPONSIBILITIES OF ARCHITECTS.

The Chairman explained that the object of the meeting was to resume the discussion of the papers on "The Newer Responsibilities of Architects," which were read by Mr. W. H. White and Mr. E. Greenop at the meeting on December 18, and Mr. A. Saxon Snell had been good enough to resume the subject by preparing a paper on "The Royal Institute of British Architects' Conditions of Contract: Some Points for Revision."

Mr. Snell then read his paper, of which the following is an abstract:—

"This evening I have to confine myself to certain clauses and provisions in the R.I.B.A. conditions, which directly affect our responsibilities as architects, and with so short a time at my disposal I can only deal with two points:—

(*a*) The employment of special tradesmen as sub-contractors; and (*b*) the effect of the arbitration clause.

Sub-Contracts.

The average building owner generally imagines that the building contractor is the direct employer of craftsmen in all trades. Indeed, this is implied in our conditions of contract, for we have a clause enabling the contractor to sub-let portions of the work subject to the architect's approval of the sub-contractor. As a matter of fact, we know that in modern contracts it is not unusual to sub-let carting, plastering, plumbing, slating, etc. Possibly the arrangement makes for better work, especially if the sub-contractor is himself a master craftsman. As architects, we are concerned only to know that the sub-contractor can, and will, do the work properly. We do not interfere with the financial or any other arrangement between the parties. We stipulate only that our specification and drawings shall be followed, and that the contractor shall not thereby contract himself out of his liabilities under the contract with the building owner.

In earlier times, when contracting was a fairly-paid business, and longer time was allowed for the erection of a building, friction seldom occurred, but in these days of quick building and small profits a dilatory sub-contractor may cause serious delay and inconvenience; and many contractors feel that they should have more adequate means of control, and, more especially, the power to withhold payment. On the other hand, experience teaches us that if this power is conceded it may be used for inadequate reasons, or for purposes which, from our point of view, are not legitimate.

It must be acknowledged that in Clauses 20 and 28 this matter is dealt with in a manner which meets the difficulty—almost. Indeed, it seems to hold the balance admirably between both parties. Clause 20 may be regarded as safeguarding the contractor and Clause 28 the special tradesmen. Nevertheless, the provision for direct payment to the latter by the building owner is an awkward circumstance, which may lead to unexpeced decisions in a court of law. The case of Crittall *v.* The London County Council is a case in point.

My own practice is to nominate the special tradesmen and to fix the net amount to be paid to them. They are made to understand that they can look only to the building contractor for payment, who is solely liable. On the other hand, I have a provision in the building contractor's contract that he must pay these special tradesmen in full such amounts as I may certify from time to time, and the amounts so paid are not included in any payment to him by the building owner until he (the contractor) can produce evidence that they have actually been paid.

My own limited experience leads me to believe that there is no half-way house between taking this strong line and that of leaving the contractor that full control over the special tradesmen which he exercises over his own sub-contractors, reserving to ourselves only the right of nomination and fixing the price to be paid for the work. I am not at all sure but that the latter is in all circumstances (and more especially in our interests) the better of the two methods. On the contractor's side it removes a possible grievance; and the special contractor—well, the special contractor would look after himself. He should have means of protecting himself, and, in any case, he is not obliged to accept a contract under the terms.

Arbitration.

Perhaps the most serious defect of these conditions is that the architect is reduced to the level of mere agent for the building owner. He is deprived of judicial powers. It is a position which we think "unfair to the contractor, not in the long run to the interest of the building owner, dangerous to the architect, and derogatory to the dignity of our profession."

There used to be a clear distinction in our relations to the building owner before and during the carrying out of a contract. In the first place, we were his expert advisers in determining what forms the realisation of his desires should take, and his agents in drafting these forms for the purpose of instructing the building contractor. So soon as a contract was entered into between the parties to our duties as agent to the building owner in superintending the work was added the honourable one of arbitrator upon points of dispute between him and the building contractor.

This dual position so long held by the architect has been challenged. It is an inconvenience in the eyes of a certain class of building owner and an offence to his legal advisers. On the other hand, his Majesty's judges have generally upheld it as eminently reasonable.

I have had the privilege of reading through Mr. Bryce's paper on "The Law Relating to the Architect's Certificate," and it is very interesting and instructive. But it seems to show that lawyers are obsessed with the idea of "agency" in the architect's position; and, to speak frankly, I think they will always do all they can to deprive us of those judicial functions, which, they consider, can only be exercised by members of their own profession. It is a very natural opinion, and not by any means based on selfish considerations. Their training and experience give them a better grasp of the principles of law and equity. Where, in our opinion, they fail is in their limited knowledge of the conditions under which a building is conceived and carried into execution and their failure to perceive that supervising building work is, in fact, one long arbitration.

In the carrying out of a building contract innumerable points of difference may, and, in fact, do, arise between the parties—questions as to interpretation of the drawings and specification and as to the quality of materials and workmanship. There are infinite grades of excellence in all kinds of work, and the architect has to decide from time to time whether the grade contracted for is supplied.

As to whether a certain piece of work has or has not been done is a question of fact, but as to whether is has been done properly is a matter of opinion, and, in giving his opinion, the architect is bound to exercise judgment as between the divergent views of building owner and building contractor.

Is it not absurd and unreasonable that because one party or the other is dissatisfied with the architect's judgment a specially appointed arbitrator must be called to decide between the parties? Bear in mind that the building owner selects the architect and that the contractor accepts him, and is not bound to enter into the contract if he distrusts the architect.

In the old form of contract our final certificate was given this character of an award from which there was no appeal (except on grounds of fraud or collusion) by either party. On the whole the arrangement worked well, and it certainly did prevent a good deal of contention as between building owner and building contractor.

In the present form no decision of the architect binds either party, and certainly not the final certificate. The architect is reduced to the position of mere agent to the building owner, and as such may be sued for exercising his judgment in a way which may not be indorsed by the arbitrator. In spite of this there are those who assure us that the architect who does his duty fairly and reasonably need not fear the perils of the law; but a case such as that of Lanning *v.* Davis scarcely inspires confidence in that comfortable belief.

The deeper one goes into the intricacies of these, and, indeed, all conditions of contract, the greater is the impression that we have lost sight of the fundamental relations between building owner, contractor, and architect. The failure of one party to realise the legitimate limits of his own interests leads him to make undue claims, which the other meets with counter-claims perhaps equally exaggerated.

Is there no way out of this "comedy of errors"? May not a reconsideration restatement of the fundamental rela referred to bring us back to the reaso our association and the benefits which party may rightly expect to gain there and which the others should be willi concede?

We are at the present time seekin obtain a more definite and better-recog position in the community; and it wou well to take the opportunity of consid what in fairness should be our relations the limits of our responsibilities to parties to a building contract. To a extent it is for us to determine limits. Building owners and contra alike may well ask themselves whethe economical grounds alone it is worth to quarrel. A careful examination of records of building actions affords con ing evidence that in most cases only lawyers and expert witnesses benefit. the fruits of victory are dearly boug the cost of worry and the interference the ordinary course of business."

Mr. Harrison said he was responsible for the legal side c conditions of contract of the Institute. took five years to elaborate, and he was unrepentant. He thought they were goc the time, and he did not consider they were now, although it was very probable that a law changed they might require modern Discussing the cases mentioned by Mr. Wh his paper, Mr. Harrison said that two of ought to be eliminated altogether. In the case the architect had taken upon himsel function of a speculative builder, and he hardly have expected that the result w have been different from what it was. regard to the case of Lanning, he did not thi was quite fair to say that the verdict thre would throw upon architects any new or n responsibilities at all. The case of the Leic Board of Guardians *v.* Trollope was one in ing a 100,000*l.* job, which took three yea complete. It was a job for the erection infectious hospital of nine one-story build all exactly alike. The architect had made ingenious arrangements by which the floo was to be absolutely isolated from the soil, upon the carrying out of those proceed depended the permanence of the build The architect, in his evidence, said he had attended the job ten times in the course of year, and the judge came to the conclusion he had not given sufficient supervi Evidently the clerk of works had let him There could not be said to be anything ne the case, because they all knew that it was duty of an architect to superintend the erec of his works. As to sub-contractors, functions of the architect were only to nomi or select or approve—he had nothing else t and he thought that the practice recommen by Mr. Saxon Snell in that regard was a fectly sound one. On the general questio responsibility, there was, he thought, no d that the liability of all professional men been more rigorously enforced during the twenty-five years, but it had not been alte The only professional man who had a l immunity was the barrister, and for very reasons. He did not think that immu would ever be given to members of the archi tural or other professions, and the only rem they had was to pay much more strict atten to the business side of their business. When instructions were given by telephone it always wise to get them confirmed by a let which would often be the means of sa conflict of evidence. He was afraid that most cases the person at the bottom of t trouble was the clerk of works; and their remedy was to charge a higher fee and be t own clerk of works. Until they did that he afraid they would never be rid of the incess troubles to which they were subjected. T must never forget that all professional were at the service of the public, and it wa very difficult and dangerous thing for them take any step which was not very clearly in interests of the public. They would find t there was a law that they were liable as agent of the man who employed them. such they were able to sue for their fees, they were liable to be called to account for neglect or omission in the services which t rendered their client. He was not at all that the architect did not better serve person who employed him if he did not occ

is position of arbitrator, and he had often eard it said that a builder who knew that he as in the hands of a very strict architect would ideavour to get a little bit of his own back in her ways. With regard to their conditions, ey had made a slip in Clause 30. The agreeent in 1907 was founded on two principles. ne builders said, we will come in and make a agreement on one condition—that everything referable to an ultimate and outside arbiator. That point was considered and delibeted upon most carefully by a most able mmittee, and was eventually accepted. On e other hand, the architects said, we are lling to accept that principle, but we will not relegated to the position of being a superior erk of works—we must be master of the job d master of the contractor, although we are reeable to be amenable to some outside ibunal. The point he wanted them to conder was that if they altered that the public ould say that the alteration was not being ade for their benefit or for the benefit of the ntractors, and it was, therefore, for them as chitects to decide whether in these days it ould be a wise policy to attempt to make any ange.

r. Atkin Berry,

seconding the motion, said it seemed to him at the papers scarcely justified their title. ey were supposed to be on "The Newer sponsibilities of Architects," but he could not d anything in them that was new in regard to eir responsibilities. He thought the papers ght quite properly have been called "Some the Responsibilities of Architects," or "A w Light upon the Responsibilities of Archiets." That was perhaps best illustrated in e cases which had been put forward by Mr. eenop. What he (Mr. Atkin Berry) wished emphasise was that they must not form their inion upon the bare wording of the judgents. They must put themselves in possesn of all the facts and know all the details of e evidence, because those judgments were sed upon one particular point, and unless ey gripped the exact purport of that point ey missed the true effect of the judgment. e case of Lanning *v.* Davey & Salter was a scarriage of justice from the beginning, but it s a risk which every citizen stood who might ve an unjust action brought against him. the end the final judgment was in favour of e architect. The case of the Leicester Board Guardians *v.* Trollope did put architects in very difficult position, and Mr. Harrison had t quite satisfied them as to how they could otect themselves against an action of that nd. The architect might take every possible caution to design his building and draw his cification and to direct execution of the rk, and yet, through some bit of devilry on e part of somebody else, something went ong which he had no means of discovering, d he was held liable while the builder escaped. Mr. Harrison could show them how they could otect themselves against responsibilities of at kind he would be doing them an enormous vice. The case of Roberts *v.* Hickman was e in which the architect had withheld his tificate under the influence of the building ner. It was a maxim with them that that s a most improper thing to do, and if an hitect did such a thing as that he must take e consequences. That was no new responsiity. It could not be said that that was an ire reversal of the decision in the case of bins *v.* Goddard—the two cases did not bear nparison. The case of Crittall *v.* The London unty Council gave them pause, and they had ask themselves what course an architect was take in putting the work in hand which he shed a sub-contractor to do. The course ich Mr. Snell had suggested was one which s familiar to them all, and which most of em would adopt. Mr. Snell had put in a plea greater simplicity in their conditions of ntract and for more mutual confidence ween the builder and the contractor. That s a counsel of perfection and a consumman devoutly to be wished.

r. William Woodward

d he quite agreed with Mr. Harrison and Mr. kin Berry that really there were no newer ponsibilities for architects. He believed t forty or fifty years ago the architect was responsible to his client for the proper conuction of his building as he was now, but at had undoubtedly arisen was a greater ire on the part of clients to bring into the courts those cases which forty or fifty years ago would have been settled outside. With regard to sub-contractors, he had just read a work by Mr. J. W. Smith, in which he said that their conditions of contract failed in this one important respect—that it did not give them the power to withhold payment to the general contractor until they saw the receipt from the sub-contractor. Mr. Smith had made it quite clear that he would not pay the general contractor until he was assured that the sub-contractor had been paid, but there was no power in the conditions of contract to withhold the certificate to the general contractor and say that he should not be paid until they had seen the receipt of the sub-contractor. That was a point the Institute was now dealing with, and he hoped they would find that the new conditions of contract would fairly deal with that. The case of Crittall would have been all right except that the general contractor became bankrupt before payment had been made to the sub-contractor. The sub-contractor sued the London County Council and recovered, and it was against that very great risk that they, as architects, had to try to guard themselves. With regard to the question of agency and how far an architect was able to pledge the credit of his client and how far he was empowered to add to the amount of the contract by additions for which he had not got the previous consent of his client, he claimed that, as agent of the client, the architect was empowered to order extras to any extent he liked so long as those extras were not detrimental to the building itself. On the question of arbitration, if he were a contractor he would under no circumstances sign a contract where the architect was left as sole arbitrator.

Mr. Douglas Mathews

said he must differ with Mr. Atkin Berry that there were no new responsibilities upon architects. When one considered what were the duties and responsibilities of architects forty or fifty years ago as compared with the present day he could not help saying that there were a good many new responsibilities which operated most seriously against the architect in his practice. [Mr. Atkin Berry: I did not say that there were no new responsibilities; I said in these papers.] Mr. Douglas Mathews, continuing, said that in former days builders were men who took a real interest in their work, and the architect did not have to supervise his building to anything like the same extent as he did now. At the present day, while many builders were doubtless good organisers, they were not practical men, and the architect was turned over to the manager or foreman. That in itself was a very great responsibility, because they were practically at the mercy of men who did not care twopence about their work. With regard to the position of an architect as architect, if he could not be trusted by his employer it was a very serious thing for both of them. It meant that if they had to go to an outside arbitrator for every little difference between the architect and the builder the owner was going to be pinched. The architect should be the go-between between the employee and the employer, and he should be looked upon as a man of position and a man of strict integrity, to be trusted by both parties. The architect should not be made responsible for work which he had not done.

Mr. Lovell

said the question was undoubtedly a very involved one, and to one who had, like himself, been practising abroad it was even more involved. As they were aware, the question was raised at the International Congress at Rome, and there were three distinct references to it. In one case it became apparent that in France the question of the sub-contractor practically disappeared, because in that country each trade contract was lot separately. In Italy it would appear that the architect almost became the contractor, inasmuch as he gave a price for the completed buildings. In Spain and South America generally the custom was to have two architects—one was the architect for the contractor, who did the bulk of the work of the drawings, and the other was the architect for the building owner, and between them was an arbitrator to settle any disputed questions. His idea was that it was an exceedingly difficult question to determine that the architect could be anything more than the agent for the building owner, but he thought it was only fair that there should be somebody beyond him to whom questions in dispute should be referred. He could not help feeling that the trouble lay with the clerk of works, and if that person could be supplanted by the young architect they would get a better class of man controlling the workmen, and they would be educating their young architects in a class of work which would be exceedingly valuable to them.

Mr. H. D. Searles-Wood

said he did not wish it to go out to the world that architects were trying to safeguard themselves too much. The responsibilities they were considering were their clients' responsibilities as well as their own, and that was the light in which he hoped the public would look upon the discussion; and not that they were trying to make things too easy for themselves.

Mr. Blanco White

said Mr. Woodward had raised the question as to how far the architect had authority to order variations in a building. His (the speaker's) view was that if the variation was detrimental to the building then the contractor was not obliged to obey the architect. He knew that was an idiotic answer, because in practice he did not see how a contractor could possibly be expected to say whether any particular order was detrimental to the building or not. The second question was what was the architect's position with regard to the building owner if the architect ordered a variation without first consulting the owner? If at the beginning of the job the architect made it plain that the plans were only provisional, and that other work might be found necessary, he took it that the architect would be safe, but not otherwise. As to how far the architect was liable for an action for negligence, and how far he was exempt because he was acting in the position of a quasi arbitrator, was a matter that depended upon the wording of the contract. In so far as the architect was the agent of the building owner, it was only just that he should be liable for negligence if it was his fault; but, on the other hand, if he was acting in a judicial capacity between the building owner and the contractor, he ought not to be liable, and he thought it was clear that he was not.

Mr. Alan Munby

said that most of them used some form in connexion with sub-contractors, but very often it was not acceptable either to the builder or the sub-contractor, and wrangling ensued. He thought it was very desirable if they could have some form showing exactly how far their responsibilities with regard to sub-contractors went.

Mr. G. Ernest Nield

referred to the case of Crittall *v.* The London County Council, and said it was the general practice in accepting sub-contractors' estimates to get them confirmed and make the contractor take over the liability. They should recollect that their form of contract went far beyond the Institute.

Mr. Douglas Wood

asked whether it was a fact that the builder's responsibility ceased when the final certificate was given, while the architect's responsibility continued for a period of six years? If that was so he did not consider it a fair arrangement. He was confident that no architect wished to avoid responsibility which rightly attached to him, but he knew of no other body of professional men who would be such fools as to take up a responsibility for which they were not justly liable.

Mr. Max Clarke

said that with regard to sub-contractors it appeared to him that it was quite possible for architects to guard themselves and their clients by putting in a clause in the contract that they were to see the receipts for payments to sub-contractors. He always did that himself, and he never found any difficulty in getting the receipts. After all, their responsibilities were much the same as they had always been, but they had become much more complicated and intricate as compared with thirty or forty years ago. Nowadays bricks were bad, the Portland cement was often too hot, and the steel, unless they looked very carefully after it, came from Belgium. All those things required much more careful and personal supervision, and the moral of it all was that they ought to pay four times the amount of attention to their work, and

they ought to ask their client for four times the amount of time to carry it out. They should all alter the contract with regard to employer's liability and workmen's compensation. Personally he thought they were making too much trouble for themselves with regard to the form of the contract, and not paying nearly enough attention to the carrying out of their building, and that if they talked less and did a little more they would be all the better for it.

After a few remarks from the Chairman, the vote of thanks was carried, and was acknowledged by Mr. White, Mr. Greenop, and Mr. Saxon Snell.

The Chairman announced that the next meeting will be held on Monday, 22nd inst.



SOME SCOTTISH HOUSES OF THE RENAISSANCE.

MR. GERALD C. HORSLEY (President) took the chair on Monday night at the Rooms, Tufton-street, at an ordinary meeting of the Architectural Association.

Mr. H. A. Hall (Hon. Secretary) announced that an exhibition of ½-in. scale drawings and photographs, and smoking concert, will be held on May 3. The exhibition will be opened by the President at 7.30 p.m., and the concert will commence at 8.30 p.m. The exhibition will remain open for a week.

The Elections.

A report by the scrutineers stated that 298 members voted for the election of officers, and there were four papers invalid. The officers elected for Session 1912-13 were as follows:—*President*—Gerald C. Horsley; *Vice-Presidents*—W. Curtis Green and Maurice E. Webb.

Ordinary Members of Council—Arthur T. Bolton, Cecil C. Brewer, F. C. Eden, G. Leonard Elkington, Theodore Fyfe, Stanley Hamp, Alick G. Horsnell, Geoffry Lucas, F. Winton Newman, A. Gilbert Scott, W. J. Tapper.

Hon. Treasurer—Arthur Keen.

Editor of the Architectural Association "Journal"—P. Cart de Lafontaine.

Hon. Librarian—W. H. Ward.

Hon. Secretary—Herbert A. Hall.

Votes of Thanks.

On the motion of the President, votes of thanks were accorded to the scrutineers; the retiring members of the Council (Messrs. C. Wontner Smith, Horace Field, and P. May); the professional Press; and to Messrs. Lan chester & Rickards for their kindness in allowing a party of members to visit the new Wesleyan Church House on March 30 (Sixth Spring Visit); also to Mr. E. C. Howell, the clerk of works, for conducting the party over the building.

Mr. Lawrence Weaver then gave an address on "Some Scottish Houses of the Renaissance," his remarks, which were delivered without notes of any kind, being illustrated by a large number of lantern slides. He said that the treatment of house planning in Scotland was rather different from that of England. In his book on the growth of the English house Mr. Gotch said the English house was developed from the Castle keep. He (the speaker) thought this was somewhat inaccurate, and that it would have been more accurate to say that the keep was an occasional incident owing to need of defensive operations, but that the English house grew around the hall. When they came to Scotch architecture he thought that Mr. Gotch's generalisation would be accurate, for there were very few houses in Scotland, and he himself had seen none earlier than the XVIth century, built at all on the typical hall plan. There was one rather important general point with regard to Scottish houses which was brought out by the use of a colloquialism in respect to building. Whilst in England they always referred to bricks and mortar, in Scotland they spoke of stone and lime, and with very good reason, because no bricks were used in early buildings at all. It might be a wide statement to say there were no houses built of bricks earlier than the XIXth century, but there were almost certainly none before the XVIIIth century. They had generally looked on Scottish architecture as being a somewhat limited affair, which began and ended with what was known as the baronial building, and that idea had to a large extent arisen because the literature of Scottish architecture was limited. There was one very notable book by McGibbon and Ross, but the authors were very Gothic in spirit and somewhat lacking in sympathy with the full Renaissance. They touched very slightly on the Renaissance buildings introduced by Sir Wm. Bruce, and the result was that it had been rather felt that there was nothing in Scotland except the ordinary baronial house. He proposed to show that evening that this was somewhat of a misunderstanding, and that, although there was nobody at all in Scotland to take the place of Inigo Jones and Wren, and the big men who followed them in England, yet there was a very serious school of neo-Classic architecture in Scotland started by Sir Wm. Bruce. The important dates with regard to Scotland were 1539 and 1671. The first introduction of the Renaissance in Scotland was in 1539. McGibbon and Ross did not lay great stress on the introduction of Renaissance detail, and did not attach to Sir Wm. Bruce, the King's Surveyor in Scotland during the reign of Charles II., the importance that was his due. When he (the lecturer) came to write something about Scottish houses he thought that it was important to find who actually introduced the Renaissance into Scotland, and he rather fancied he had tracked the man who was responsible. In the reigns of James IV. and James V. a very disastrous state of affairs existed in Scotland, and the habit was to try and get rid of the King at an early stage, with the result that the next king was always a minor. The usual procedure then was for the great lords to quarrel for the possession of the young King in order that they might administer the affairs of Scotland as it seemed best to them without any very special reference to the good of the country. History had a greater effect on the architecture of Scotland than elsewhere. The extreme turbulence of manners of the Scottish noblemen of the XVIth century had a great effect on Scottish architecture. Amongst these turbulent men were the Earls of Arran, and one of them, Sir James, had an illegitimate son called Hamilton of Fynnart, who became a very important person at Court. He was brought up with the young King, and no doubt had a great deal of influence with James V. Hamilton started his architectural career rather early in the XVIth century by killing a carpenter named Gavin. He went to France, and at the Court of Francis I. no doubt learned a great deal of the great change in architectural tendencies then going on. Anyhow, about 1539, when King James came back to Scotland with his second bride he was struck with the rudeness of the house in which he lived, and set about altering Falkland and Stirling Castles. The rebuilding of Falkland had been started at the end of the XVth century, and in the course of the work some French masons were introduced. One was Le Roy, and he (the speaker) had no doubt but that these men were introduced by Hamilton. At all events, they first got Renaissance treatment between 1539 and 1542. The King was killed shortly afterwards, and the new influence dropped for about fifty years. Hamilton was Master of the King's Works at Falkland and Stirling. The important point was that in 1539 he was appointed Surveyor generally of all the King's palaces in Scotland, which was a way of showing that Hamilton had done something special in the way of building and had introduced a new into Scottish architecture. Unfortunate account of his habit of bickering they ex him, and so the Renaissance stopped time. It was interesting to notice that was nothing of any importance in Renai building at all from 1541, when Hamilto executed, for about another sixty years, regard to planning, the military el continued very steadily in all Scotch h and the only place where it was softened in the XVIth century w Falkland, which was built as a huntin The defensive idea became an obsessi the minds of Scottish house-builders, an would be seen by the plan shown on the of Scots Tarbet Castle, in Fife. One suppose it was a house built for a warlike tain, but it was built for Sir John Scot was not a person violent by nature or

Sir John Scott had travelled a good abroad, and he prepared a survey of several Scottish counties and went to Amsterdam saw it through the press. The house wa soon after 1620, only a few years befo Banqueting Hall at Whitehall was built. that plan before them built at such a dat would realise that they could not expect an very elaborate in the way of Scottish planning, nor did they get it. Mr. Weave showed the plan of Hatton House, a few east of Edinburgh; this being the house Bothwell lay the night before he abducted Queen of Scots. Up to about 1670 the lands lived in the house, which did not much degree of comfort, but later it was to. Winton Castle was said to have been by Inigo Jones, which was obviously a Kellie Castle was built about 1580, and again they saw the typical L-shaped Sc tower plan. When they remembered was being done in England at the same they would see how simple it was. Fa Palace was the most elaborate plan XVth century. Mr. Weaver showed the tion of the Great Hall which Mr. John K had traced when carrying out work fo Marquis of Bute at the Palace. At House they again saw the ordinary L-s tower. The Earl of Dunfermline was responsible for the new government ar ments when King James came to Lo and evidently having been brought contact with the great nobles of En who were then building stately house went back to Scotland and added con ably to the house. He built a galle the upper floor, with a painted ceiling. and the Earlshall galleries were the firs in a Scottish house. From 1600 to 1630 E influence became somewhat marked in Sco but not to any extraordinary extent. Hol Palace was more typical of the late X century. When Sir Wm. Bruce, in 1671, s to make it a suitable house for Charles very wisely repeated the old Scottish and filled in with the usual Palladian pla A view of the garden plan of the house of Si Bruce in Fife was shown, the vista dow central garden being closed by the Bass R a most effective close. Kinross House large Palladian house built, it was sa Sir Wm. Bruce on the chance that the D York would not succeed to the throne. an the house would be bought for him. Ho the Duke did succeed, and Bruce himself in the house. Dalkeith Palace had be altered that the plan was a little diffic follow. At the end of the XVIIth cen large part was added, it was said, by Vanb but it was obviously the work of Mr. Smith, who followed Sir Wm. Bruce. lecturer next showed a number of views exteriors of various houses, and also so the principal features of the interior decora In the inner court of the north side of Fa Palace they saw the first touch of Renai work in Scotland by Hamilton, and were very typical French roundels of James V. and his wife. This was done be 1539 and 1542. The other side of the was not touched by Hamilton, and the but shown were extremely rare in Scotland a period. The chapel screen was added 1620. Falkland had been most adm restored by the Marquis of Bute, but h Weaver) attributed the excellence of the to Mr. Kinross, the architect. There w particular Renaissance detail about S Castle, but on one side it could be seen the masons imported by Hamilton beginning to have effect. They saw the shafts carrying figures. It was

fortunate thing that Stirling Castle had been mutilated in the XIXth century, but now it l been taken over by H.M. Office of Works ey could be sure that no further mischief uld be done. Kellie Castle had had the good tune to be restored by Sir Robert Lorimer, ose father had taken a long lease of it. nderave, in the Highlands, had a delightful ver, which Sir R. Lorimer had restored, and e they got dog-tooth, which was dated 94, and which disturbed all one read in text-books. Earlshall, which was altered rtly after the union of the two kingdoms, wed a long gallery with a painted wooden ling which clearly came from England. It had n admirably restored by Sir Robert Lorimer. photograph of the plaster ceiling in the Vine- m at Kellie Castle was shown, which Mr. aver thought was of about 1620. Scotch sterwork was particularly fine after 1610, en he expected they imported a number plasterers from England. Traquair had the at merit of not having been restored by ybody. All Scotch designers seemed to have ned at height, which was more or less the essary outcome of the tower plans they lowed. Craigievar was, on the whole, the st impressive tower house in Scotland, and l been most wonderfully preserved. The ners had always been very conservative, l had added nothing. At the place there was hing more modern than an XVIIIth-century een. The house had seven stories. The only eration was that the windows had been slightly arged. Photographs of the fireplace in the at Hall and some of the beautiful plasterwork re shown. At Pinkie a Jacobean fountain was cted about 1618, very much like the one at mbridge. The painted gallery, he imagined, s done by an Italian artist. Winton was ite one of the finest things in Scotland. He l found in the manuscripts of the Winton ily the diary of the Earl of Winton who ered it. It was the work of George Wallace, naster mason, who afterwards started Heriot's spital at Edinburgh. Amongst the manu- ipts were all the accounts for the slaters and penters and so on. None of the men employed the work seemed to have been English, and erefore, although people said Winton was the come of English influence, there was nothing the accounts to support the view. The rl of Winton of that day, however, went to ndon a good deal, and there was an entry of paying a man *l.* to show him round the bey. Some of the ornaments on the ceilings Winton were the same as at Pinkie House, l he thought it was clear that John White l the work at both places. Glamis had been nsiderably added to. There was some fine sterwork, rather more advanced in design an a good deal of the other work at the time, ne of which was extremely barbarous. Bal- res House had been hopelessly spoilt. The dens were probably laid out early in the /IIth century, and, so far as was known, lowed the same design now. Cawdor was a rking mediæval building. It gave a romantic es of the defensive precautions adopted by builders, and it was a very fortunate thing t it had continued unaltered in large measure this day. The mantelpiece was dated 1667, and seemed incredible that such work could have en done at that time, seeing what was being ne in other places at that date. The garden neme at Drummond Castle was also illus- ted. Thirlestane was built or largely ered about 1670 by the Earl of Lauderdale, d there was an interesting correspondence isting between the Earl and Sir Wm. Bruce, d also some correspondence with the clerk works. The Earl took great interest in the rk, and sent some notes and drawings to clerk of works, and also some tobacco, d asked him to sit down and smoke his pipe d think how he could carry out the Earl's shes. He had noticed that Mr. Starkie rdner, in his book on "Ironwork," was zzled about the iron gates at Ham House. om the correspondence he had referred to seemed that the Earl of Lauderdale was very endly with the lady who lived at Ham House. d that Bruce designed the gates for her. dcaskie was Bruce's own house. Bruce was id to have been the emissary between General nk and Charles II., and after the Restora- on Charles gave him the office of Clerk of lls, which had to do with the Excise and stoms, and apparently a good deal of money ick to Bruce's fingers. He was also a King's ssenger, and apparently did not start archi- ture till about 1665, when he either built is house from the ground or built it round an earlier keep. There was no particular evidence to support the latter view. Bruce must have been doing something in the way of architecture between 1660 and 1670, because he went to Holland to buy mantelpieces for the Earl of Lauderdale, and when Lauderdale realised that it was necessary that Holyrood Palace should be rebuilt he got Charles II. to sign a warrant in favour of Sir Wm. Bruce. It had been said that Holyrood was designed by Milne. There were no fewer than eleven Milnes who held important posts as the King's Master Mason and so on. What Bruce's training may have been he had no idea. One of the Milnes prepared a scheme for the rebuilding of Holyrood, and it had been suggested that one of the Milnes was the real architect. From the correspondence, however, between Lauderdale and the King there seemed no doubt that Bruce did spend a great deal of time in preparing the plans for the rebuilding of Holyrood, and that he did really get the job on those plans. If Balcaskie was designed by Bruce, it must have been the first thing he did, and it must have been between 1665 and 1670. It still showed a devotion to the ordinary sort of Scottish tradition, and had none of the fuller Renaissance manner which appeared in Holyrood and later in Kinross. Passing to Caroline Park, near Edinburgh, Mr. Weaver said they were the most attractive roofs he knew of in Scotland. They were very small purple slates. It was said to have been designed by Sir Wm. Bruce, but there was no evidence of it. It was built about 1686. There was an extremely fine ironwork railing to the new staircase, and the ceiling, done about 1690, was probably by the same English plasterers who worked at Holyrood. The house belonged to the Duke of Buccleuch, but was now used as the office of a firm of ink merchants, who, however, took great pride in it and kept it in fine order. Drumlanrig was built for the Duke of Queensberry, and was of typically Scotch treatment. The men who did the stone carving afterwards went on to Kinross. Some were Dutchmen and some Scots. At Holyrood the ceiling at the top of the great staircase was done by English workmen between 1671 and 1679. The Office of Works had now cleared out a lot of the Victorian stuff put in sixty years or so ago, and had tried to make the Palace somewhat like it was before. Kinross House was started in 1685 and finished about 1691. It was near here that the Adam brothers were born. The vista from the Fish Gate of the gardens ended with the castle on the island in Loch Leven, where Queen Mary passed nearly a year in prison. The staircase at Kinross House was the only one of the kind he knew of at Scotland. Melville House was attributed to Bruce, and also to James Smith, "one of the most experienced architects in Scotland," as Colin Campbell called him. It was a dull house, but the inside was rather good. Dalkeith Palace he was satisfied was built by James Smith, and inside there was some carving which he did not hesitate to say was by Grinling Gibbons. New Hailes House, just outside Musselburgh, was built about 1720, and was of interest apart from architecture by the fact that it was in the library that Lord Hailes advised Boswell to pursue Johnson's acquaintance, which resulted in Boswell's "Life of Johnson." Whether the house was designed by Wm. Adam or not he did not know, but it was not very attractive. Drum House, near Edinburgh, was the authentic work of Wm. Adam. It was interesting, but he was not enthusiastic about it. Gosford House owed its existence to the game of golf. Lord Wemyss ordered Robert Adam to come up and build the house so that he might avoid having to go 6 miles to play the game; but the house proved so damp that no one lived in it for eighty years, and then Young was called in and altered it a great deal. In conclusion, Mr. Weaver showed several modern houses designed by Sir Robert Lorimer, and also a house built in Fife by Mr. Frank Deas, which has a most curious planning to meet the wishes of the occupier.

The lecturer hoped that his audience would not pin him to the exact years of the dates he had given, as it was difficult to carry precise figures in the memory. He believed, however, that they were correct enough for the purposes of the argument.

Mr. L. Guthrie

said he rather thought the garden at Drumlanrig was modern. He was told by an old gardener that a great deal of it was copied from a Paisley shawl which Queen Victoria gave to the Duchess of Buccleuch. He saw Kinross many years ago before the garden was laid out and now, and agreed with Mr. Weaver that it was a pity the summer-house had been moved. He was glad they had been shown some modern examples of Scotch houses, because there was no doubt that the best spirit of Scottish Renaissance was still carried on by a few architects, who knew what they were doing and seemed to be inspired by the romance they found in old examples. Mr. Weaver had rather "slanged" the barbarous work found in Scotland, but it was explained by the difficult circumstances under which the work was done. He was amused at Mr. Deas' house, and it reminded him of a house built by a painter of the Glasgow school, who had peculiar views on diet. He built a little hen-house outside the kitchen range, and at the back of the range there was an opening through which he could put his hand to get an egg. Unfortunately, the house was never finished.

Mr. W. H. Ward

said he had been under the impression that there was a good deal of XVIth-century work in Scotland, and he would like to know if there was no other Renaissance work of the XVIth century beyond the few examples which had been shown. There was a general impression in Scotland that Scotch Renaissance was derived direct from France, and, as they all knew, the political connexion between Scotland and France up to the end of the XVIth century was a very strong one. During the fifty years that Mr. Weaver said there was no Renaissance work in Scotland Mary of Guise and Mary Stuart were in close intercourse, whilst another fact was that a number of Renaissance houses around Aire and Dumfries seemed to suggest French influence.

Mr. A. T. Bolton

said that they could not expect anything other than what Mr. Weaver had told them of Renaissance work in Scotland when they considered the disturbed state of affairs at the period which made architectural pursuits practically impossible. They knew that in the North of England they had the Peel Castle, which corresponded to the same condition of affairs, and it was curious that that type of Peel Castle, which was the military introduction of the block-house employed in the South African War, seemed to have come south as far as Woollaton. He had seen Heriot's Hospital, but was told that it had been so altered as no longer to give one a good idea of the work. He must say that Holyrood Palace was disappointing from the Palladian point of view, but the ceilings inside were of most delightful plasterwork. Similar work existed in Kilmainham Hospital in Ireland. Architectural interest in Scotland began, one might say, with the Adams, and Robert Adam, the cleverest of the four brothers, did some extraordinarily interesting buildings. There was always something about his work which impressed one.

Mr. Curtis Green

remarked that he knew little of Scottish architecture beyond having had glimpses of it at various places. He, like Mr. Ward, was surprised that there was so little of the French influence in the examples which had been shown them.

Mr. C. C. Brewer

asked what was the date of the introduction of the sash-window into Scotland, and if the samples shown in the photographs were introduced at a later date. He further observed that he had heard that the name was derived from the Dutch word for sluice.

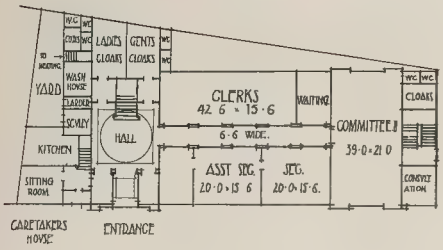
Mr. H. W. Brittan

observed that Mr. Weaver had thrown some light on an interesting historical matter in regard to the Restoration. He had told them that Bruce was the emissary between Charles and General Monk, and this explained how it was that Monk was able to leave Scotland for Dover and time his arrival exactly with that of Charles.

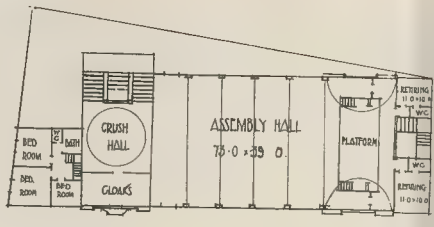
The vote of thanks having been heartily agreed to,

Mr. Weaver,

in reply, said he went up to Scotland with the strong feeling that he would find a great deal of



GROUND FLOOR PLAN.



FIRST FLOOR PLAN.

Bolton Miners' Hall Competition: First Premiated Design.

By Messrs. Bradshaw, Gass, & Hope.

definitely French work in some of the earlier things, but the more he saw the less he felt that the French interest was very great. The outstanding fact was that the Renaissance did reach Scotland direct from France, but there was not as much definite French detail as one might expect. When they got to 1603, and James VI. came down to England and brought many Scotch people with him, they began to see the effect of English ideas, and from that time onwards it was only to be expected the influence was English rather than French. He agreed that Heriot's Hospital had been much altered, and also that there was an immense interest about Adams' houses. The photographs he had shown were merely the spoils of one visit to Scotland, and he had since had photographs taken of a great many other houses, which included several by Wm. Adam. The whole question of sash-windows was one which should be further inquired into. He had no reason to suppose they were introduced into Scotland until Bruce's time. In the Lauderdale correspondence there was an interesting note about his going to Germany about 1670 to get joiners to work at Ham House, and he did not suppose they were generally introduced into Scotland until the XVIIIth century. He had read the diary of an old Baptist minister, who said that there was only one house in Chichester with sash-windows at the beginning of the XVIIIth century.

MINERS' HALL COMPETITION, BOLTON.

As we announced in our last week's issue, the result of the competition for hall and offices for the Lancashire and Cheshire Miners' Federation at Bolton is as follows :—

First premium, Messrs. Bradshaw, Gass, & Hope, of Bolton; second premium, Messrs. Sykes & Evans, of Manchester; third premium, Messrs. T. E. Smith & Sons, of Bolton.

Mr. Jonathan Simpson, F.R.I.B.A., of Bolton, was the assessor. The competition was limited to architects in practice within 30 miles of Bolton, and, as this area includes both Liverpool and Manchester, as well as most of the large Lancashire towns, it is not surprising that forty-five sets of designs were submitted.

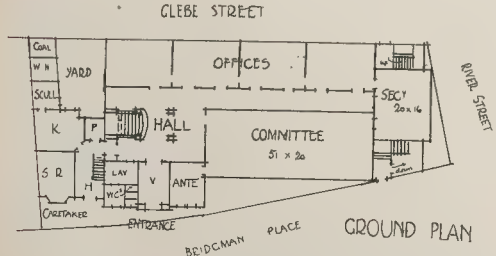
The requirements set forth in the conditions were very straightforward. The offices of the Federation were to be placed on the ground floor, and were to consist of entrance-hall, clerks' offices, rooms for the Secretary and Assistant Secretary, a large committee-room and anteroom, and staff lavatory. The large hall, to accommodate about 450, was to occupy the first floor, and there were to be provided the necessary retiring-rooms behind the platform, and cloakrooms and lavatories for the public. A caretaker's house and yard was also required. As no special difficulty was presented by the site either in respect of its shape or its levels, there being a good frontage on one side to a fine main road opposite an open space of fair size, and streets on two other sides, the competition was one in which a special standard of excellence in planning might be expected, and such an expectation is amply justified by the result. In a competition only limited geographically it is a relief to find an absence of those tortured intricacies which too often pass for clever planning—the evidence of desperate efforts to squeeze in all the devices the competitor can think of. Instead, there is a high standard of clear and sane planning, and if the number of centre lines drawn on the plans were any indication of the direction of competitors' efforts, we should deduce laudable leanings towards axial planning.

There does not appear to be much divergence of opinion as to the general lines to be followed; indeed, the simplicity of the problem hardly allowed for it. The fact that the plans submitted may, broadly speaking, be divided into two distinct types is due to the one point of vagueness in the conditions. It was left for architects to decide whether the office and hall entrances should be common or separate. As all the premiated designs are based on the former alternative, it is clear that there was a distinct preference on the assessor's part for this arrangement, in which the Committee presumably shared. The point is entirely one of organisation, and it is unfortunate that the Committee did not give an indication of their preference in response to the questions asked by competitors. Quite a large number of plans based on the other alternative were of equal merit to the second and third premiated designs.

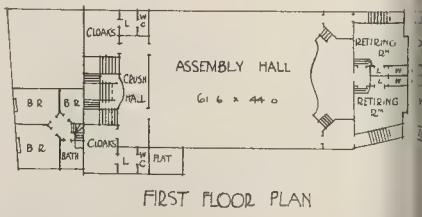
The assessor's award of the first premium to Messrs. Bradshaw, Gass, & Hope is unquestionably the right one, and we congratulate the Federation on the splendid workmanship of the plan they have obtained. Among many excellent schemes submitted this one is super-excellent. It is high praise to say that where any point of utilitarian requirement is set up the authors have met it adequately, and have added to their good working arrangement a real sense of breadth and dignity, but such praise is amply justified. We may point to the simplicity of the entrance-hall and staircase, the cloakrooms and the retiring-rooms behind the platform, and the arrangement of the offices and committee-room, and had the competition been one for the caretaker's house this firm would still have taken the premium. There is the appearance of ease in planning which always evidences greater study than the strange devices that complicate other schemes. The plan is rhythmical from one end to the other. There is scarcely a wall that does not fall naturally upon the axial framework, and convenience is sacrificed to that end. Rather does it appear that the lucidity of the plan is largely due to this principle, and, in addition, it gives a sense of scale and symmetry unusual in so small a building.

We turned to the elevations with expectation raised high. With so much architecture already achieved in the plan, we looked for its continuation in the façade. We would compliment the authors on the composition they have produced. It is sane, dignified and logical; there is an absence of meretricious detail. When we say our expectations were disappointed we do but point out a compliment. The authors show that they are of the few who might have reached the highest, and when a little more purity of style and a little more sincerity in expression the plan is all that is missing we experience a disappointment that would not occur to our minds if we had found ourselves dealing with the usual order of mediocrity.

The second premiated design is very able and in some respects not much inferior to the first. But we feel that the authors have started out with an initial mistake by placing



GROUND PLAN



FIRST FLOOR PLAN

Bolton Miners' Hall Competition: Second Premiated Design.

By Messrs. Sykes & Evans.

the building parallel to the small, unimportant street at the rear. This would ruin the main street line, and the building askew with the sweep of the building line would give the beholder a nasty jerk as he followed the direction of the adjoining frontages, and would suggest that the building did not fit its site. But for the obvious preference for a common entrance to the hall and offices a few other designs submitted should have been placed before this and the third premiated design. The axes of the crush space and the assembly-hall are at variance, and this would produce results as unfortunate in execution as on paper. We would commend the excellent working arrangement of the plan. The cloakrooms are well considered, the offices well lighted and conveniently planned; and here again the caretaker's house has received more than cursory attention. The elevations are a fair example of that weak variety of English Classic which discards the attached column, but has not the courage for plain wall surfaces, and so adopts in its place an expressionless type of pilaster, treated at the top with a species of antæ cap, from which droop two or three layers of the familiar 'apron.' The draughtsmanship of this set is very good.

The third premiated design, while direct in its arrangement, has no outstanding feature of excellence to justify its position. The arrangement of the staircase is not unlike that of the winning scheme, and the author has adopted a similar position for his committee-room, but the cloakroom arrangements are not good, and the exits from the platform end of the hall and the approaches to the retiring-rooms are clumsy. The elevations are more serious in aim than those of the second design, but do not reach to more than an average standard of merit.

One feature of great interest in this competition is the variety of cube-saving devices in the sections of the hall. Great skill is in many cases displayed in designing a ceiling which shall be high inside and at the same time low in measurement for cube, nearly always involving the adoption of means that would be more expensive than 4 ft. or 5 ft. of additional height in the hall.

GENERAL NEWS.

The Ideal Home Exhibition.

The Ideal Home Exhibition at Olympia was opened on the 12th inst. by Princess Alexander of Teck. The Princess was conducted by Mr. Wareham Smith and Mr. F. E. Bussey (Organising Secretary) through the Exhibition. The ideal house, which is the central feature of the main hall, was visited, the Dutch village was explored, and a tour was made of the Arts and Crafts Section and of that devoted to modern European furniture. Here rooms or portions of rooms are to be seen, furnished and decorated after the distinctive fashions of France, Holland, Belgium, and England. A visit was also paid to the Indian House. In the various sections in the main hall are nearly 200 stalls, and the exhibits are grouped as follows:—Furnishing, hygiene and cleaning, music and recreation, sanitation and ventilation, construction and decoration, heating and lighting, food and cookery. An article on the Exhibition will be given in our next issue.

The G.P.O. Arts Club.

The annual exhibition of the G.P.O. Arts Club will be opened on Tuesday next by the Assistant Postmaster-General, Captain Cecil Norton, M.P. The exhibition is to be held on the ground floor of the old General Post Office in St. Martin's le Grand, and will remain open for a fortnight.

Structural Mechanics.

A course of instruction on this subject is to be given by Mr. Percy J. Waldram, M.S.I., at the London County Council Central School of Arts and Crafts on Thursday evenings from 7 p.m. to 9 p.m., beginning on April 25. This course has been specially designed in preparation for the Intrance Examination, Intermediate, and Final of the R.I.B.A. Applications for admission to the class should be made to the Secretary at the School.

Ghent Exhibition, 1913.

This Exhibition will be held next year in the Park in conjunction with the quinquennial flower show of the Royal Society of Agriculture and Botany. There will be as many as twenty-seven "Palaces of Industry," all side-shows being excluded. India, Canada, New Zealand, the United States, Germany, France, Italy, Greece, Japan, and China will be officially represented, and an invitation has been addressed to the Exhibition Branch of the Board of Trade to organise a British Section. The London offices are at No. 1, Southampton-row, W.C.

Latin-British Exhibition, Shepherd's Bush.

The foreign exhibits will be contributed this year by France, Italy, Spain, Portugal, and the South American Republics, as representing the Latin races. The French Section of pictures and sculpture is under the administration of the Department of the Minister of Fine Art; a Fine Art Committee for the British Section includes Mr. J. J. Shannon, R.A. (Chairman), Mr. Lionel Cust, Mr. D. O'Brien, P.R.H.A., Mr. W. Orpen, A.R.A., and Sir F. Powell, P.R.S.W.; and, as a Sub-Committee for Sculpture, Sir G. Frampton, R.A., Mr. W. S. Frith, Sir W. Goscombe John, R.A., Mr. F. W. Pomeroy, A.R.A., Mr. W. Reynolds-Stephens, and Mr. J. Havard Thomas.

Pompeii.

Professor Spinazzola is proceeding with his excavations in the thoroughfare known as the Street of Abundance, leading from the Forum to the Amphitheatre. He has uncovered the house near the Nola Gate, and seven houses with balconies, one of the balconies having a decoration of spiral columns. The house walls are plastered and stuccoed, and beautified with frescoes; on the street fronts are inscriptions with notices relating to municipal elections—Smyrina and Asellina advocate the election as duumvir of Pollius Fuscus. Close at hand have been found a wineshop in excellent preservation, with vessels, jars, bottles, etc., and cashbox, and its sign, in fresco, of amphoras and wine-jars, and a temple with a frieze of the Cerealia.

Memorials in France to Queen Victoria and King Edward VII.

The memorial statue of Queen Victoria at Nice unveiled on April 12 is the work of M. Maubert, a student of the Ecole des Beaux-Arts, and a pupil of M. Denys Puech. He was the sculptor of the Gambetta monument at Nice, and twelve years ago exhibited his first important work—"Nuit de Noël"—in the Salon. The subsidiary figures are emblematical of the towns of Nice, Mentone, Cannes, and Grasse. M. Puech, who sculptured the memorial to King Edward VII. at Cannes, inaugurated on April 13, studied in the free art school of the Ste Geneviève Library and the Ecole des Beaux-Arts; in 1884 he won the Prix de Rome, and a medal at the Salon for his bust of Mlle. Sangalli. He was the sculptor of "La Seine" (1887), of the Leconte de L'Isle, Sainte-Beuve, and Jules Simon memorial busts, and of "La Pensée," "La Sirène," "La Muse d'André Chénier," and portrait busts of M. Loubet and Mlle. Bartel.

New Government Offices, Whitehall-gardens.

The property which the Office of Works propose to take for new offices of the Board of Trade and other Departments is bounded by Victoria-embankment (east), Whitehall-gardens (west), Horse Guards-avenue (north), and the grounds of Montagu House (south). It consists of the six terrace-houses of Whitehall-gardens, and of the block, to the north, of buildings now occupied by the Board of Trade. That block comprises Pembroke or Harrington, Malmesbury, and Cromwell Houses. In the stone-built basement of Cromwell House are four bays, in two aisles, of the vaulted crypt of the Wine Cellar next west to the Great Hall of York Place, which Wolsey ceded to Henry VIII. in 1529-30; one shield in a spandrel of the doorway bears, *per pale*, the Cardinal's own coat-arms, and those formerly borne by the See of York, as on a boss in the vaulting of Christchurch Gate, Canterbury (1517). Malmesbury House was built, and, it appears, in 1722—the date of a cast-lead cistern in the basement with the initial letters J. H. B.—upon the site of the "organ builder's workhouse," the workshop of Bernard Schmidt, and his son-in-law and successor, Christopher Schreider. In 1788 it was leased to James Harris, first Earl of Malmesbury. Colin Campbell built Pembroke House (illustrated in his "Vitruvius Britannicus") for Lord Herbert, afterwards Earl of Pembroke and Montgomery, who in 1744 obtained a new lease and took in part of Queen Mary's-terrace; in 1838 Robert, Earl of Pembroke, granted a sub-lease to Charles, fourth Earl of Harrington. The decorations and fittings are very handsome; the principal rooms have mahogany double doors. In the garden, extended by the construction of Victoria-embankment, is the old boathouse. Nos. 1-6, Whitehall-gardens were begun in 1806 on the site of the Queen's wardrobe, Mr. Chiffinch's rooms, the apartments of the Countess of Suffolk, the Earl of Bath, and the Maids of Honour, and part of the King's lodgings, in the old palace; the former river wall marked the line of Queen Mary's "terras walk," or "little garden," which absorbed the Privy Stairs, No. 4 was built in or about 1824 by Sir Robert Smirke for Sir Robert Peel, who died there on July 2, 1850. Lord Beaconsfield lived in No. 2 in and after 1873. The several buildings we mention cover a considerable portion of the XVIIth-century palace as plotted in detail in Fisher's plan of about 1670, and it is proposed to give to the London Museum the relics and other antiquities that may be discovered.

CORRESPONDENCE.

"The Ideal Builder."

SIR,—Your very interesting article under this heading must have given rise to reminiscent thought in many of your numerous readers who have had practical experience in the work of carrying out and supervising large building undertakings.

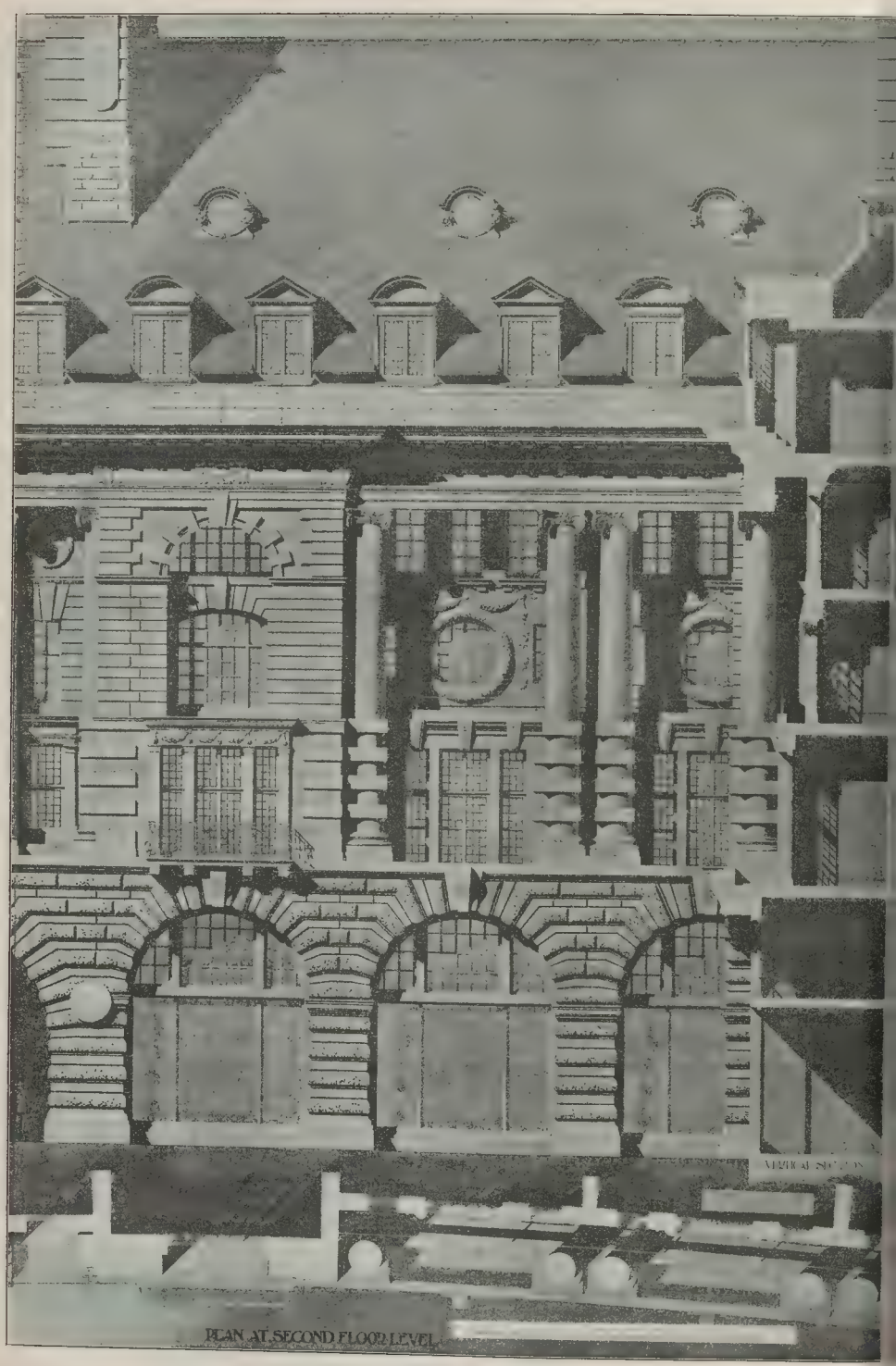
Every completed building is the combined expression, so to speak, of the architect, the builder, and the clerk of works, each of these men playing his part, the personal element or ego in each one of them being the dominating and determining factor which makes for success or failure in the product of their combined labours, the happiest results being attained where these three can work co-operatively and harmoniously—alas, not always the case!

Most architects of a large practice soon find out the builder (or builders) who comes nearest (or *vice versâ*) the ideal builder—the one who gives least trouble, who is in sympathy with his work, and who is "straight" and businesslike in his dealings. To such he naturally gives the preference; for, of all men, the architect's mind needs to be somewhat free of one job while projecting another, and a job once in the hands of a reputable builder and a competent clerk of works should give him little further trouble.

The builder of to-day is a builder by choice or circumstances—not for the purpose of building, but for the purpose of making profits. This is the one central idea and thought to which all others converge in the maintenance and transacting of his business. And around him are the various merchants and sub-contractors who supply him with material and labour for his undertakings, each and all imbued with the same thought and feeling, and who without which would soon be driven to the wall by the mere force of recognised economic conditions. By the man supervising building works this should never be lost sight of in the interest of the client and the contractor alike—especially of the client—for it is here more than anywhere during the progress of and at the completion of the works that the personal element or factor shows itself.

To one contractor a proposed building may be as a sponge from which every particle of financial moisture shall be squeezed; to another an undertaking which shall yield an adequate profit and credit to all concerned. But this can only be settled by the ethics of pricing, for cheap and nasty holds nowhere more true than in building; and the two men represented above are types of the ideal and the unideal builder.

But we must remember that most under-



Detail Elevation for Part of Regent's Quadrant.
Mr. R. Norman Shaw, R.A., Architect.

kings to-day are not actually carried out the parties to the contract, but by their presentatives—the builder's foreman and architect's clerk of works. How often do see the advertising foreman describing nself in the columns of the *Builder* as ood at extras"!

It is reasonable to assume that the adver- er is a "hustler," whose proper antidote d offset is a clerk of works who is strong omissions and deductions. But there are emen, and many of them, whose training practical workmen has created in them a ire for good work; for not by "hustling," t by the alchemy of methodical manage- nt, are businesses built up and profits de.

The greatest misfortune that can befall a lding is for it to be entrusted to a builder ose knowledge of building is confined to £ s. d. columns of his ledger, or to a eman who has not worked at one or other the building trades, for in neither of se men can be found sympathy with their rk. One occasionally meets them, and the perience is such that one never afterwards gets them!

There are workmen who do love their rk, and who as a consequence sometimes fer for it. They do not constitute the lk of the workmen, and when any unusual ce of work requiring additional skill and cience has to be done it is to these men it es; they are found on every job in more less numbers, generally less.

To the writer of this letter it always seems safe to generalise in comparisons between skill and workmanship of the builders d artisans of past centuries and to-day. the first place, the Middle Ages (476 to XVth century) knew no builders in the ancial sense as they exist to-day; for, s Professor Thorold Rogers in "Six nturies of Work and Wages," "One dable fact in the economy of the XVth tury is the development of the capitalist isan. At a previous period of social tory in England this personage has rcely an existence. The farmer, land- ner, or noble, the monastery, or lay cor- ration, when it wants products on which craftsman's skill is required, buys the terial in a raw state and hires the smith other artisan to fashion it. . . . But the middle of the XVth century small airs were done by craftsmen, who send in ir charges with a bill of particulars. w the growth of this system proves that artisan was beginning to accumulate such pital as would enable him to wait for and l with customers, and therefore is indirect dence that wealth was growing."

n the erection of our great mediæval ldings the commercial instinct seems to re had no place; "hustling" was not wn, for time did not count in an age when at and religious-minded men were content h the consummation of one noble achieve- nt in their lives. And then, again, the ddle Ages (apart from its feuds and the uggle between Church and State for pporal supremacy) was an age of rest. e prospective craftsman served his term apprenticeship to his guild and then com- nced his Wanderjahre (as in the German lds), to later complete his masterpiece, ing him coequal fellowship in the guild. was an age in which every man had his ce (one of the chief recommendations of dalism), with a healthy, invigorating airy permeating the members of each tion of society, calculated to bring out of han the best he had in him to give.

"These workmen," said I to a Church nitary conducting me through Hereford hedral, "must have loved their work." They loved Almighty God!" was the quick ponse. Yes, we like to think of the diæval craftsmen as "aureoled workmen"; l William Morris stands credited with the ing that a present-day mason could not rk a stone with the skill of a mediæval son. But Morris was a mediævalist in ught and craftsmanship, and this must taken as one of the exaggerations of his alism.

n spite of the fact that all the conditions re highly favourable to the production of d work, one does occasionally find when ng through our cathedrals and minsters ividual pieces of workmanship which in ecution would not pass muster in work of the present day. And however much has been said, written, and sung of the builders and craftsmen of the past (at the mention of whom one sometimes feels disposed to bare his head), we have to-day buildings in point of constructive soundness which we venture to say cannot be surpassed—nay, cannot be equalled—by buildings of any past ages.

And this in spite of the fact that our apprenticeship system is gone—for what parent would now consign his son to a seven-years' apprenticeship, with the prospect of uncertain and casual employment at the termination of that period? For master and man now stand facing each other (unfortunately) in exacting attitudes, all sympathy between employer and employed eliminated, "like an Egyptian pitcher of tamed vipers, each struggling to get its head above the others." "We see the causes of disease in operation," say you. "Whence," we may ask, "is to come the remedy?" Echo answers, "Whence?"

F. Walker,
Clerk of Works.

Port of London Authority Competition.

Sir,—With reference to the publication in last week's *Builder* of the names of the six architects selected by the assessor to send in designs in the final competition, the same give promise of an interesting result and the hope of a fine building in the end. One hundred and seventy designs were submitted in all, and, as it is estimated that each would have cost 300,000*l.* to build, they may be taken as representing the architectural equivalent of 51,000,000*l.* of bricks and mortar.

Under the system of a double-barrelled competition, 164 of these designs vanish into the obscurity of the lumber-room, and the good that is in them dies; that is to say, the educational value they may have to other competitors by way of comparison, and even consolation, if, peradventure, one may be found worse than one's own. Sent out as most competition drawings are, like spoilt children whose parents have lost their sense of proportion, there is great good resulting in their being placed side by side with robuster specimens.

It is quite conceivable that in the 164 designs returned this week to their authors there may be a plan, perhaps too wildly "Futurist" for staid citizens, but of which parts are as excellent as the curate's egg; yet another may have some wrinkle as to the correct method of indicating the latest "Neo-Grec" type of elevation, which, rendered negative by lack of planning, would yet be informing to the competitive aspirant.

The competition was an extremely interesting one in that it was combined with a piece of town planning, and it is fair to assume that the lay-outs and resulting sites and plans for the Authority building are varied in type; it is equally fair to assume that the assessor will have selected the six all very much on the same line, and the one that he considers the proper one. The object, then, of this letter is to urge that steps should be taken to publish, in miniature if need be, as many of the varied treatments as it may be possible to obtain.

This course is not suggested with any other motive than that of making competitions as educational as possible. It would have been infinitely preferable if the heavy load of responsibility could have been shared by a jury of assessors, but so long as architects are content to compete, and possibly win, under one man, the converse holds good, and they must lose cheerfully under the same conditions.

C. H. B. Quennell.

INTERCOMMUNICATION COLUMN.

Damp Houses.

Sir,—Your correspondent is not very precise as to his trouble, but I understand from one who has successfully prevented damp from coming through outer walls that he merely painted the inner side of his walls with milk. He used country milk—not the London product—and tells me that there is no after effect, such as the smell of stale milk, and that he absolutely cured dampness by the process.

S. Whitmore Robinson.

COMPETITION NEWS.

Competition for a Façade, Regent's Quadrant.

In view of the importance of securing a suitable architectural treatment for Regent's Quadrant, the proprietors of the *Builder* have decided to institute a competition for designs suggesting a façade in harmony with the Piccadilly Hotel, but giving more consideration to the requirements of the retail trader.

An illustration of Mr. Norman Shaw's design is published herewith, and remarks on the question will be found in our article on page 444 of this issue.

Drawings.

The drawings should show a suggested façade for the frontage between Piccadilly-circus and the hotel, which is to be 220 ft. in length; they should be prepared to a scale of one-eighth of an inch to the foot, and include an elevation, with such plans and sections of the front wall as are necessary to explain the design.

The rendering must be in monochrome, but in other respects the competitor is free to select his method of presentation.

The drawings to be mounted on one strainer or card without margins, and bearing no name or motto.

The author's name to be enclosed in a sealed envelope firmly attached to the drawing.

Dates

Any questions should be addressed to the Editor of the *Builder* on or before April 29. Replies will be printed in our issue of May 3.

Drawings must be delivered at the office of the *Builder*, 4, Catherine street, W.C., on or before 5 p.m., Friday, June 14.

Assessors.

The adjudication will be made by Mr. E. A. Rickards, F.R.I.B.A., and Mr. Alan E. Munby, A.R.I.B.A.; their decision will be final and binding on all parties.

Premiums.

The sum of 25 guineas will be paid to the author of the design placed first by the assessors, and a further sum of 25 guineas will be divided between the authors of other designs in such proportions as may be decided on by the assessors.

Publicity.

All the designs submitted will, by kind permission of the Architectural Association, be exhibited in their galleries at Tufton-street for at least one week. The public Press will receive notification of the Exhibition, at which the names of the authors will be attached to the drawings, unless a request to the contrary is enclosed in the sealed envelope. The *Builder* will publish reproductions of the premiated designs.

BOOKS RECEIVED.

Pattern Making. By Joseph G. Horner. (London: Crosby Lockwood & Sons. 7s. 6d. net.)

Applied Methods of Scientific Management. By Frederic A. Parkhurst, M.E. (London: Chapman & Hall. 8s. 6d. net).

FIFTY YEARS AGO.

From the *Builder* of April 19, 1862.

The Embankment of the Thames.

On the 10th inst. a deputation from the vestry of the parish of Chelsea waited by appointment on the Right Hon. W. Cowper, the Chief Commissioner of Works, at the House of Commons, to urge upon him the desirability of having the embankment of the Thames continued from Westminster to Battersea Bridge and the low-level sewer carried under it. Mr. Tite explained the objects of the deputation; and Mr. Cowper, in reply, said he fully agreed with them that the present was the time to move in the matter: but as the case of Chelsea differed from that of the Strand and Fleet-street, and had no excessive traffic of which to be relieved, he did not see how any portion of the coal dues could be applied to the work of embankment there.

EDITORIAL SUMMARY.

The leading article is entitled "Country Planning."

A second article deals with the question of the new buildings in Regent's Quadrant (p. 444). In this connexion, particulars of a competition instituted by the proprietors of the *Builder* will be found on p. 453.

In "Notes" Column (p. 445) will be found observations on: "Another Hastings Competition"; "How Many Houses to the Acre?"; "The Teaching of Design"; "Port of London Competition"; "The British School at Rome."

A report will be found on p. 445 of the meeting of the Royal Institute of British Architects, held on Monday, when the discussion was resumed on "The Newer Responsibilities of Architects," and a paper read by Mr. A. Saxon Snell on "The R.I.B.A. Conditions of Contract: Some Points for Revision."

A meeting of the Architectural Association was held on Monday, when Mr. Lawrence Weaver, F.S.A., read a paper on "Scottish Houses of the Renaissance." Our report will be found on p. 448.

Some notes, with illustrations, on the Miners' Hall Competition, Bolton, are given on p. 450.

In "Correspondence" columns (p. 451) will be found letters on: "The Ideal Builder"; "The Port of London Competition."

In Architectural Societies (p. 456) will be found brief reports of: "The Gloucestershire Architectural Association" and the "Bristol Society of Architects."

The Monthly Illustrated Historical Review (p. 457) contains: "The Architecture of Portugal—II."; "Gwalior Fort"; "Ancient Monuments in Ireland"; "Brass of Sir John Cassy"; and Notes.

The Building Trade Section, on p. 462, includes: "Recent Workmen's Compensation Cases"; "Building Notes from Australia"; "Labour in the Building Trade"; "Ipswich Building Trades Association"; "Projected New Buildings in the Provinces," etc.

At the Surveyors' Institution on Monday a paper was read on "The Cost of Labour in Connexion with the Erection and Maintenance of Buildings." An abstract appears on p. 465.

A report of the annual general meeting of the Architects' Benevolent Society appears on p. 466.

Book Notices (p. 467) include: "Local Legislation, 1909 to 1911"; "The Workmen's Compensation Act"; "Butterworth's Workmen's Compensation Cases"; "Practical Sewerage and Sewage Disposal," etc.

Legal Column (p. 468) includes notes on: "The London Building Act: Government Buildings."



Lindsey Hall, Kensington.
Mr. Ronald P Jones, Architect.

MEETINGS.

FRIDAY, APRIL 19.

The Institution of Mechanical Engineers.—Paper by Dr. Walter Rosenhain and Mr. S. L. Archbutt on "Tenth Report to the Alloys Research Committee: On the Alloys of Aluminium and Zinc." 8 p.m.

The Royal Institution.—Mr. Alan A. Campbell Swinton, M.Inst.C.E., on "Electricity Supply: Past, Present, and Future." 9 p.m.

SATURDAY, APRIL 20.

The Royal Institution.—Lectures on "The Architecture of the Renaissance in France, 1494-1661," by Professor Reginald Blomfield, A.R.A., M.A., F.S.A. I.—"1494-1547: The Amateurs." 3 p.m.

MONDAY, APRIL 22.

The Royal Institute of British Architects.—Mr. C. Harrison Townsend on "The Royal Institute Library and Some of Its Contents." With lantern illustrations. 8 p.m.

Liverpool Architectural Society.—Annual general meeting. 2 p.m.

TUESDAY, APRIL 23.

The Surveyors' Institution.—The annual dinner, Whitehall Rooms, Hotel Metropole. 7 p.m.

Nottingham Architectural Society.—Annual general meeting. 8 p.m.

The Institution of Civil Engineers.—Papers on "The Remodelling and Equipment of Madras Harbour," by the Hon. Sir Francis J. E. Spring, K.C.I.E., M.A.I., M.Inst.C.E.; "The Alteration in the Form of Madras Harbour," by Hugh Henry Gordon Mitchell, M.Inst.C.E. 8 p.m.

WEDNESDAY, APRIL 24.

Royal Society of Arts.—Mr. G. Fletcher on "Technical Education in Ireland." 8 p.m.

Edinburgh Architectural Association.—Annual business meeting and President's Valedictory Address. 8 p.m.

FRIDAY, APRIL 26.

The Society of Architects.—Twenty-eighth annual dinner, Holborn Restaurant. 6.30 p.m.

The Institution of Civil Engineers.—Lecture on "Principles and Practice of Accountancy in relation Engineering Design and Work," by T. Frame Thom M.Inst C.E. 8 p.m.

SATURDAY, APRIL 27.

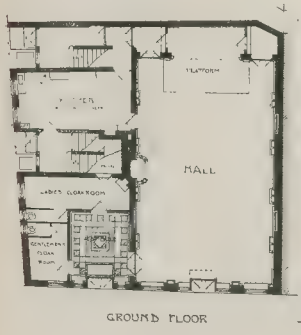
The Royal Institution.—Lectures on "The A tecture of the Renaissance in France, 1494-1661, Professor Reginald Blomfield, A.R.A., M.A., F. II.—"1547-1574: Architecture and the Cou 3 p.m.

Junior Institution of Engineers. Visit to the Engin ing Workshop and Laboratory and Electrical Labora of "The Polytechnic," 307-311, Regent-street, Lon 3 p.m.

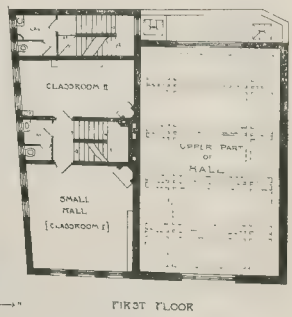
ILLUSTRATIONS.

Lindsey Hall, Kensington.

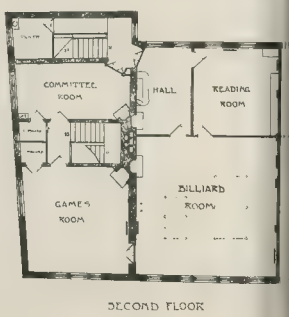
THIS building, recently completed the gift of Mr. Edwin Tate Church Institute in connexion Essex Church, Kensington. It tains three distinct sets of rooms, approac independently, and each self-contained, capable if required of being opened up thro out. The main hall on the ground floo reached through a vestibule, panelled in with a floor of verte antique and Sicilian mar leading also to the cloakrooms. The measures 45 ft. by 27 ft., and will seat ab 200. The walls are panelled in oak and divi into bays by pairs of Ionic pilasters; stage is partly a projecting platform and pa a recessed stage behind proscenium curta while over the emergency door at the other



GROUND FLOOR



FIRST FLOOR



SECOND FLOOR

Lindsey Hall, Kensington.
Ronald P. Jones, Architect.

here is a balcony to carry the electric lantern, hus avoiding the danger and inconvenience of lacing the lantern in the centre of the floor pace.

The ceiling ribs are decorated with a foliage and copied from an example at Ham House, while the wreath and festoon panels between he pilasters were modelled for their position.

The room is heated by radiators recessed in he walls, and faced with pierced brass grilles; lso by an open fireplace in cipollino and icilian marble with a carved oak mantel ontaining Mr. Tate's coat-of-arms, and, above he shelf, a brass-faced clock recessed in the anelling.

The electric light is arranged in eight Holohane pendants, with brass fittings, which, like ll the details of metalwork, carving, etc., were pecially designed by the architect to harmonise ith the general treatment of the hall.

The rest of the ground floor is occupied by wo entrances and staircases from the side reet, and between them a kitchen for the reparation of light refreshments, which can lso be entered from the hall. The western ntrance forms an emergency exit from the age end of the hall.

The east staircase, which has a tiled dado, ads to the small hall on the first floor, a square oom panelled in green stained wood up to the ornice, and fitted with cupboards and bookases; the classroom opposite communicates ith the kitchen by a service lift, and can be sed as a tearoom for meetings in the small hall.

The west staircase leads direct to the second floor, which is occupied by the rooms of the Essex Church Men's Club, providing accommodation for billiards and other games, library and reading-room, committee and music room, etc., for a membership of about 150. All these rooms are heated by radiators, and, if necessary, gas fires; they have green stained wood dados and joinery, and distempered walls, and the floors throughout the building are of oak block laid herring-bone (that of the large hall being oak parquet).

As a small hall of this type is much needed in Kensington for private concerts, receptions, At Homes, etc., the entrances are so arranged that when the hall is not required by the societies of the church it can be let for such purposes, without interfering with the use of the other rooms in the building.

The exterior is faced with red sand-faced bricks in two shades, with a Portland stone cornice, and roofed with "Perry" green Westmorland slates.

The architect was Mr. Ronald P. Jones, M.A., Stone-buildings, Lincoln's Inn; general contractor, Mr. J. A. Hunt, of Hoddesdon, Herts (who also executed the oak panelling and the decorative leadwork on the exterior); heating and sanitation, Messrs. Matthew Hall & Co.; electric lighting, Messrs. Dickinson; carving in oak and brick and decorative plasterwork, Messrs. Jackson & Sons; marble, Messrs. Farmer & Brindley; metalwork—radiator fronts, clock face, glazed panels to swing doors of hall, and electric light fittings, the Artificers' Guild; lock plates and door-handles, the Birmingham Guild of Handicraft; ventilation, Messrs. Boyle; tile dado, Messrs. Van Straaten.

The furnishing and equipment was carried out by Messrs. Waring & Gillow, who specially wove the decorative bands for the hall curtains to suit the design and colour scheme of the hall.

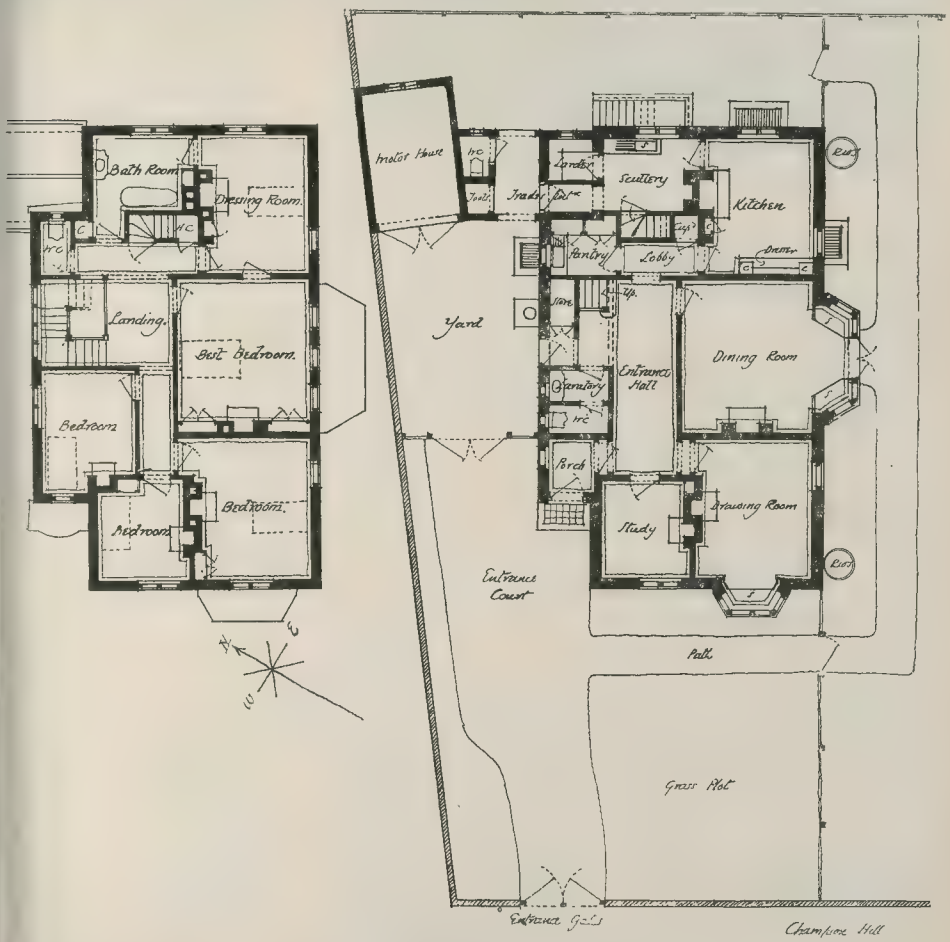
House at Champion-hill.

This house was built for Mr. A. B. Falkner. The walls are 14-in. brickwork, with the quoins slightly emphasised by means of a brick course projecting every two courses; the same applies to the chimneys. The roof is covered with hand-made tiles. The conditions of the site necessitated the narrow front to the road, the principal front facing the garden. The general character of the house is Georgian, with Adam detail in the finishings and woodwork generally.

Mr. G. Ll. Morris, of Finsbury-square, E.C., is the architect.

Business Premises, Berners-street.

This building was erected for Messrs. Arthur Sanderson & Sons, Ltd., wallpaper manufacturers. The basement and sub-basement are used for storage and other purposes; and in the sub-basement is installed electric plant, which provides the current for the lighting, lifts, and water supply, the latter being pumped up from the well in the basement of No. 53, Berners-



House at Champion-hill for Mr. A. B. Falkner.
Mr. G. Ll. Morris, Architect.



House at Champion-hill for Mr. A. B. Falkner: View from Road.
Mr. G. Ll. Morris, Architect.

street. On the ground floor is a large showroom and a van garage at the rear. Over the garage are four floors of offices used by Messrs. Sanderson's staff; and over the showroom fronting on Berners-street are six floors of offices let off to different tenants. The new buildings are connected with No. 53, Berners-street and the ground and basement floor levels, the openings being fitted with fire-resisting sliding doors. Secondary and external fire-escape staircases are provided. The floors and roofs are of reinforced concrete and steel, the principal floors are "sound-proofed," and the rest constructed on the "Kahn-bar" system. The general contractors were Messrs. Holloway Brothers (London), Ltd. The architect was Mr. Louis A. Hayes, A.R.I.B.A.

Gwalior Fort.

THESE illustrations are referred to in the article in the Monthly Historical Review (p. 459).

ARCHITECTURAL SOCIETIES.

The Gloucestershire Architectural Association: Tower and Spire of Cheltenham Parish Church.

A meeting of this Association was held on Thursday, March 28, at the Northgate-mansions, Gloucester, the President (Mr. Walter B. Wood) being in the chair. The business on the agenda having been attended to, Mr. T. Overbury (Fellow) read a paper entitled "The Recent Reparative Work to the Tower and Spire of the Parish Church, Cheltenham: The Use of Ferro-Concrete in Connexion therewith."

After a brief historical description of the church, Mr. Overbury gave a detailed description of the work that had been done under the direction of his firm (Messrs. Healing & Overbury) in repairing the tower and spire. Serious cracks had appeared in the spire, and it was decided that these were due to the oscillation caused by the ringing of the peal of ten bells, which were badly hung on an oak frame at different levels, the walls of the upper stage of the tower carrying the squinch arches being exceptionally thin and without buttresses, and pierced by lights on all sides. It was found necessary to take down and rebuild the top 14 ft. of the spire, and the vane and rod, which were defective, were replaced with new, while the old weathercock discarded at a previous rebuilding was refixed again. The thin walls of the upper stage of the tower were strengthened internally by a framework of ferro-concrete piers and cross-beams on the Hennebique system, these piers being dovetailed into the walls at intervals.

The bells were rehung at one level on an iron frame carried off the thicker walls of the lower stage. While the work was in progress an additional two bells were presented to the church, and of necessity these had to be hung at a higher level, but carried by the main frame, thus making a peal of twelve bells.

The cracks were pointed up and a few defective stones cut out and replaced, the whole of the work being carried out with the least possible cutting to the existing fabric. Messrs. Frankland Phillips & Co. were the steeplejacks, and the ferro-concrete work was carried out by Messrs. Hobrough & Co., of Gloucester.

The lecture was illustrated with numerous lantern slides, detail drawings, and models. A hearty vote of thanks was accorded Mr. Overbury for his most instructive and interesting paper.

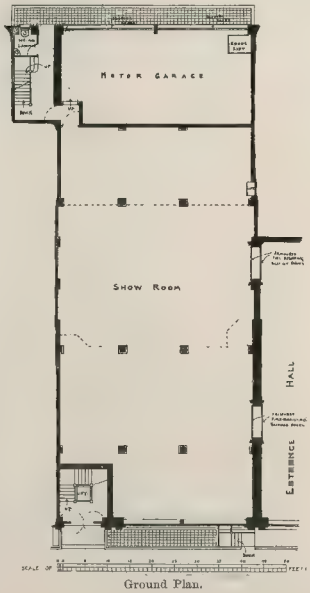
Bristol Society of Architects.

The annual general meeting of this Society was held at the Fine Arts Academy, Queen's-road, Clifton, on Monday evening. The election of Council and Officers for Session 1912-13 resulted in the following gentlemen being elected:—President, Mr. G. H. Oatley, F.R.I.B.A.; Vice-Presidents: Messrs. J. Foster Wood, F.R.I.B.A., and Mowbray A. Green, F.R.I.B.A. (Bath). Members of Council: Messrs. G. C. Awdry, F.R.I.B.A., T. H. Weston, F.R.I.B.A., G. C. Lawrence, A.R.I.B.A., F. W. Wills, F.R.I.B.A., R. C. James, F.R.I.B.A., W. L. Bernard, F.R.I.B.A., and Mr. C. F. W. Dening, Lic.R.I.B.A., Hon. Secretary. Associate Members of Council: Messrs. B. Wakefield, Lic.R.I.B.A., and A. B. Botterill, A.R.I.B.A. Mr. Botterill was appointed Hon. Treasurer.

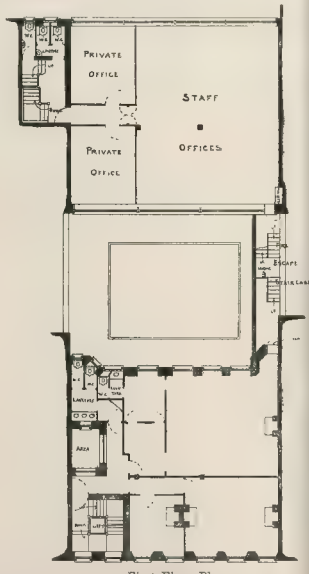
Mr. Mowbray Green (Bath) proposed, and Mr. G. C. Lawrence seconded, a hearty vote of thanks to the retiring President, Mr. J. Foster Wood. Both gentlemen spoke in eulogistic terms of Mr. Wood's services to the Society. Mr. Wood suitably responded. The thanks of the Society were also accorded to the retiring Secretary, Mr. T. H. Weston, Mr. R. C. James proposing and Mr. C. F. W. Dening seconding the vote to Mr. Weston, who during his three years of office has very ably conducted the affairs of the Society.

A most interesting collection of drawings by Bristol architects of the last generation was on view and added considerably to the enjoyment of the evening.

Any communications dealing with the Society should in future be addressed to the Hon. Secretary, Mr. C. F. W. Dening, Gaunt House, Orchard-street, Bristol.



Ground Plan.



First Floor Plan.

Business Premises, Berners-street.



Sprague & Co., Ltd. Printers, 63 & 70, Dean St. Soho, W.







THE PALACE OF MAN SINGH: An Interior Courtyard.



A "Leogryph" Bracket.

GWALIOR FORT.

Sprague & Co., Ltd., Printers, 69 & 70, Dean St., Soho, W.



FIREPLACE IN LARGE HALL.



Sprague & Co., Ltd., Printers, 69 & 70, Dean St., Soho, W.

DOORS FROM LARGE HALL TO VESTIBULE.

LINDSEY HALL, KENSINGTON, W.—Mr. Ronald P. Jones, Architect.



EXTERIOR.



DETAIL OF ENTRANCE.

Sprague & Co., Ltd., Printers, 69 & 70, Dean St., Soho, W.

BUSINESS PREMISES, BERNERS STREET, W.—Mr Louis A. Hayes, A.R.I.B.A., Architect.

MONTHLY HISTORICAL REVIEW.



Fig. 4. Alcobaça: Cloister of the Abbey.

THE ARCHITECTURE OF PORTUGAL.—II.

(*Continued from page* 303.)

N 1095 the county of Portugal, extending from the Galician border as far south as Oporto, was granted as a fief by the ag of Castile to Henry of Burgundy, and in 9 his son, Alfonso Henry, assumed the royal e. For two and a half centuries his descend- s carried on a constant struggle with the ors, in the course of which, in spite of iodical reverses, they gradually drove them ther and farther south to the Tagus and ond it. The kingdom reached its present ensions, and Lisbon became its capital in 0.

Since its growth was from the north south- ds, it is in the north that we must look for first beginnings of a national Christian hitecture. There, as in Spain, the Roman- ue type of church was introduced from nce, and a number of XIth and XIIth tury churches, remarkable for nothing but ir small size and extreme simplicity, not to their rudeness, due in part to the hardness he granite they are built of, are to be found ttered along the northern border and, in ening numbers, as far south as the Tagus. plan they usually consist of a rectangular ve and chancel, the former being occasionally ceded by a narthex, and the roofs are of low h. Such are São Miguel at Guimarães and Martin de Cedo Feita at Oporto.

After the foundation, in 1078, of the great hedral dedicated to St. James at Santiago Compostella, on the model of St. Sernin at ulouse, and probably under the guidance of nchmen, a more developed form of church hitecture began to arise. The churches of s new type followed a basilican plan, with nsept projecting beyond the nave aisles, and idal chapels to the east of the transept, and s became established as the national plan, y varied in a few of the more important later rches, such as the cathedral of Lisbon, by addition of an ambulatory with radiating pels carried round the choir, a feature already nd in their South French prototype. This se of church, owing to the gradual advance of Portuguese kingdom, is to be found even th of the Tagus. The most perfect example the Romanesque period is the beautiful Velha, or Old Cathedral, of Coimbra with its austere fortress-like exterior and its long sombre nave (Fig. 6), culminating in a richly-gilded altar-piece gleaming in the fuller illumination of the transept. It was built probably at the close of the XIIth century. The aisles have quadripartite groined vaults and the nave a barrel-vault strengthened by transverse arches and supported by continuous half-barrel-vaults over the triforium galleries, there being no clearstory. The arches are semicircular or stilted and unmoulded, the vaulting and arcade shafts semicircular in plan, and attached to square piers. The capitals are beautiful and extremely varied, some approximating to Byzantine types. The whole ground story of the interior, including the piers, was till lately entirely veiled in a rich embroidered robe of tiles of Moorish design probably of the XIVth century, which a recent "restoration" has seen fit to strip off. (See Fig. 1, March 15.) The mellow splendour of the effect thus produced can be guessed at from the portions spared on the chapel walls. Apart from a window over the west door, the church is chiefly lit by windows in the transepts, and in the lantern over the crossing. Externally the walls, pierced only by a few round-headed openings and almost without horizontal members, are carried up as a battlemented parapet concealing the roof (Fig. 5). Owing to the long struggle which filled the Middle Ages in Portugal, many of the churches served as forts, and bear traces of the fact in their appearance to this day. The Cathedrals of Oporto and Evora are other

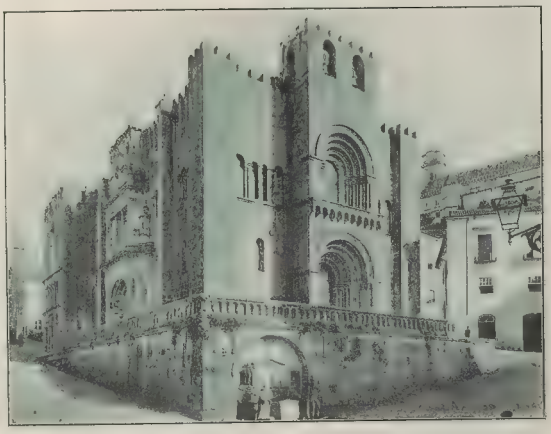


Fig. 5. Coimbra: The Old Cathedral from the North-West.



Fig. 6. Coimbra: The Old Cathedral. Nave looking East.

cases in point. The battlements assume a great variety of forms. The Old Cathedral of Coimbra has an oblong bellcote at the centre of the west end over a sort of projecting porch, but a more usual arrangement is found in the twin stumpy west towers of Oporto and Braga Cathedrals. At Coimbra, again, the central lantern is square, with a low domical roof, covered externally like those of the apses with Moorish tiles, but at Evora is a lantern of more northern type, octagonal, with a steep conical roof, flanked by bold pinnacles. Portuguese roofs are in general of low pitch, and it early became usual there, as in Spain, to roof the entire vaulted portions of churches with flats of accurately fitted slabs of stone, as we shall see later on at Batalha. Many churches of this early period have interesting variants on the familiar type of round arched doorway with receding Orders, square in section and variously enriched, and with corresponding shafts carrying them. Considerable taste, and even delicacy, is exhibited in the design and carving of the ornament. A peculiarly elaborate example of such a doorway recalling that of our Temple Church, but with fantastically twisted shafts, is the west doorway of São Cristobão at Coimbra, an edifice now unfortunately undergoing reconstruction.

The Transitional period in Portugal is represented by two classes of church—one like the remarkable polygonal Church of the Templars at Thomar (*c.* 1165) or the Sé at Evora (*c.* 1200), where the construction and detail is Romanesque, but the arches and windows pointed, and a second in which, as at the early XIIIth-century church of São João de Alporão at Santarem, the construction and detail are already Gothic, though the arches remain round.

But Romanesque did not develop here independently into a pointed style any more than in Italy or Germany, and Portugal owes her earliest Gothic monuments to foreign importation. The most important example of these is the Cistercian church at Alcobaça, the largest church in Portugal, serving what grew into one of the largest monasteries in Christendom. It was begun in 1158 and finished in 1211. Its plan, which is almost identical with that of Clairvaux, and was probably designed by a Frenchman, consists a nave of twelve bays with aisles, a double aisled transept with three bays in each arm and a semicircular choir, consisting of one rectangular bay (corresponding to the eastern aisle of the transept) and a semicircular apse with an aisle and nine radiating chapels. It is doubtful whether the foreigners employed carried out more than the choir, for, apart from the plan, the rest of the church shows a wide departure from northern practice. Though the apse vaults are supported by flying buttresses the builders of the nave (Fig. 8), while they adopted a system of pointed quadripartite ribbed vaulting, did not venture on a similar system, and possibly to replace the native practice of using half-barrel-vaults over the triforium to buttress a barrel-vault over the nave, they carried up the aisle vaults to the same level as those of the nave. Their timidity is also shown in the excessive massiveness of the piers, which almost conceal the arcade and of the transverse ribs or, rather, arches which almost conceal the remainder of the vaults. Many of the half-round shafts which carry the transverse ribs are carried on corbels in order to accommodate the stalls destroyed by the French in the course of Masséna's retreat in 1810, which proved so disastrous to the art treasures of the country. This was no haphazard havoc wrought by a demoralised soldiery, but a systematic work carried out by order, parties being detailed for the destruction of specified works, for the complete execution of which scaffolding was actually erected in the church. There is, therefore, now nothing left to relieve the gaunt severity of this vast interior except a pair of charming pulpits perched high up on opposite piers and, in the distance, the exceedingly florid barocco decoration of the choir, which in its faded paint and tarnished gilding provides a not unpleasant splash of gorgeous colour amid the prevailing greyness.

Though pointed arches and rib vaults are used at Alcobaça, the timidity of the vaulting system and the exclusive use of round-headed windows illustrate the strength of conservatism in Portugal. Indeed, Romanesque tradition in one form or another prevailed in church architecture for many years after the erection of this church. On the whole, however, the XIIIth century, the heroic age of mediæval architecture in Northern Europe, was almost barren in Portugal, while the churches produced in the more fertile period of the XIVth century bear most of the characteristics which mark the work of preceding centuries in France and England.

Thus Santa Maria dos Olivaes at Thomar, the mother church of the Templars throughout the Portuguese dominions, has single or coupled lancet windows and piers, whose capitals and bases are of the simplest form, passing from the octagon of the shaft to the square of the abacus by means of a curved splay. It has a wooden roofed nave and three polygonal vaulted apses and is one of the earliest churches built on the Franciscan or Dominican plan probably imported from Galicia. The slightly later Cathedral of Silves is of the same type, but with



Fig. 7. Oporto: The Cathedral from the North-East.



Fig. 8. Alcobaca: The Abbey Church. Nave looking East.

barrel-vaulted transept. Though not finished ill after 1327, the church of Sta Clara, on the ft bank of the Mondego, at Coimbra, would ass anywhere else for a work of the end f the XIIth century, with its bold square uttresses, its saddle-backed tower, with single ght windows in two recessed Orders, its corbel ble and circular lights, only one of which now tains its wheel tracery. The floods of the ver have silted up the floor of the nave to the ringing of the arcade, but it still retains its ointed barrel-vault. More refined and delicate its proportions and detail, but not much more dvanced in style, is the charming ruined chapel f the Castle at Leiria, which is not earlier than 324. It consists of a single unvaulted nave, ow roofless, and a vaulted polygonal apse. ne of the most important buildings of the ntury was the choir of the Sé at Lisbon, built after an earthquake, which occurred in 344, in the form of a long eastern arm with diating chapels, but of this little was left anding by the great earthquake of 1755.

To the XIVth century also are due many of he cloisters, which, as planted with palms, roses, nd a host of flowering shrubs and aromatic lants set in box borders and refreshed by lashing fountains, are one of the chief delights f Portuguese churches to this day. Cloisters re not, as a rule, placed, as in northern countries, or warmth and shelter on the south of the hurch, but rather on the shady northern side, r sometimes to the east or west. The earlier omanesque type had timber roofs carried by continuous arcade with coupled columns, as een at Cellas, near Coimbra, which, however, as late as about 1300. This type was after- ards generally replaced by a more advanced ne, divided into vaulting bays with bold uttresses, between which were two, three, or our arched openings under one wide arch. he enclosed, as well as the enclosing arches, re either semicircular or pointed, while the atter are even occasionally segmental, and the pandrel is pierced by a large circular opening, ften without tracery, as in the case of the athedral cloister at Oporto, built in 1385. he Old Cathedral of Coimbra has the lidest example of such cloisters, dating from he late XIIIth century (now undergoing a storation amounting to reconstruction), while hose of the monastery of Alcobaça and the Cathe- ral of Lisbon were begun about 1310. The lava- ory which is often found in such cloisters, in one ngle or the centre of a side, is an extremely harming feature. The Claustro do Silencio f Alcobaça contains one of great beauty Fig. 4), which, in spite of its date, corresponds n almost every characteristic to early XIIIth- entury French work. The curious later ountain which it contains is set askew, with hat purpose it is not clear. The pierced stone filling of the spandrel lights in this cloister illustrate the curious inability of the Portuguese builders to grasp the principles of Gothic tracery. The use of tracery in windows is, as a rule, extremely restricted in Portugal, and, where it occurs, it seldom grows in a natural way out of the treatment of the mullions and jambs, as in France or England, but appears like a piece of independent design inserted into the opening. The patterns used often bear traces of Moorish influence in their use of rectilinear geometrical motives or their resemblance to Cairene lattice-work, or to the Oriental type of wood and plaster tracery, covering the entire opening with small openings filled with bits of brilliantly-coloured glass, a method of glazing also actually employed in Portugal.

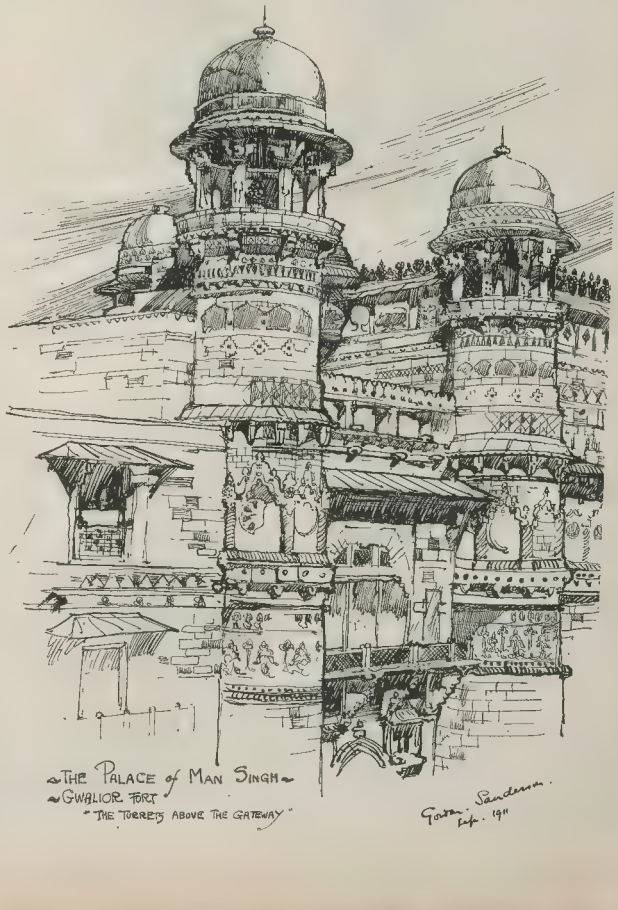
GWALIOR FORT.

THE fort at Gwalior, formerly the stronghold of the Maratha chiefs of the house of Scindhia, is perhaps one of the most interesting examples of mediæval Hindu architecture in India. The palace of Man Singh, which occupies the north-east corner of the fort plateau, was built about A.D. 1500. It was the admiration of the first Mughal emperors, and without doubt served as a model for their own edifices. The east façade, some 100 ft. in height, is divided up by a series of towers, each crowned with a cupola or chattri. Blue, green, and yellow tiles, in the form of candelabra, elephants, geese, and peacocks, give to the wall surface an unrivalled charm and lightness. The interior consists of courtyards in which the same tile decoration is found. An interesting feature are the parapets, set so as to form comfortable backs for the palace inmates reclining on the roof.

In one courtyard the brackets are in the design of leogryphs—a common feature in Buddhist and Brahmanical sculpture. The fort also contains about a dozen Jain and Hindu temples of no little interest, while the rock sculptures are, according to the late General Cunningham, "unique in Northern India." They were unfortunately mutilated by Babar, the first Mughal Emperor, in A.D. 1527. In his memoirs he refers to the sculptures, and says:—"They have hewn the solid rock of this *Adwa*, and sculptured out of it idols of larger and smaller size. On the south part of it is a large idol, which may be about 40 ft. in height. These figures are perfectly naked. *Adwa* is far from being a mean place; on the contrary, it is extremely pleasant. The greatest fault consists in the idol figures about it. I directed them to be destroyed."

The Mughal Emperors, Jahangir and Shah-jahan, in their turn added to the palace buildings, but their additions are of little interest architecturally. The fort has seen stirring times. First besieged without avail by Mahmud of Ghazni in 1023, it was taken by Muhammad Ghori in 1196. The Muhammadans were turned out in 1211, but Altamsh, Sultan of Delhi, recovered it in 1231, after a year's siege. Then, after several other sieges, it was eventually turned into a State prison by the Emperor Akbar, and continued as such until the decline of the Mughal Empire. In 1761 the city was taken by the Jats, and a few years later was wrested from them by the Mahrattas. The East India Company took it in 1780 and restored it to the Jat Rana. Four years later the Mahrattas again gained possession, but were evicted by the English in 1803. In 1805 it was restored to the Mahrattas, in whose possession it now is.

The present Chief, Colonel Maharaja Sir Madho Rao Scindhia, G.C.S.I., takes a keen interest in the preservation of the ancient monuments of his dominion, and some most creditable conservation work has been carried out in the fort during recent years





Sir John Cassy and Wife, 1400 (Deerhurst, Gloucestershire).

ANCIENT MONUMENTS IN IRELAND.

THE Commissioners of Public Works in Ireland have just issued a Report of their proceedings for the year 1910-11 in connexion with buildings of which they are owners or guardians under the Irish Church Act, 1869, the Ancient Monuments Protection Acts, 1882 and 1892, and the Irish Land Act, 1903. The structures vested in the Board under the Irish Church Act number 137, and of these twenty-five have been repaired during the past year, and works executed to arrest their dilapidation. The number vested under the Ancient Monuments Acts has been increased by the addition of two during the past year, making a total of eighty-one now vested in the Board under these Acts. At twenty-one of these it was found necessary to carry out works of preservation in 1910-11. Under the Irish Land Act of 1903 the Estates Commissioners offered a number of structures, and it was found practicable to accept the guardianship of two as ancient monuments. The number of monuments or groups of monuments now vested or placed on the Schedule of Structures in charge of the Board under the various Acts is 218. This figure, however, does not give a correct idea of the extent of the work done, as in many cases there are several structures included under one group. An analysis by classes gives the following result :—Round towers, forty-two; earthworks, nine; stone forts, sixteen; cromlechs, tumuli, ogham stones, and beehive structures, eighty eight: castles, ten; oratories, primitive churches, and ruined cathedrals, 171; Cistercian abbeys, ten; Augustinian, Franciscan, and Dominican priories, forty-two; crosses, fifty-two; total, 440. The care of these ruined buildings entails besides their structural maintenance the removal of vegetation, enclosing, provision of notice boards, and the prevention of injury by visitors and trespassers. Great difficulty arises in preserving certain ecclesiastical ruins in a state of decency, because the ground inside and around their walls is used for the purpose of a graveyard, and is not under the Board's jurisdiction. Too often in such places the provisions of the Burials Act are disregarded, and the local authority fails to exercise any proper control over burials. The unsightly condition of the interior of Holy Cross Abbey and the Graveyard at Clonmacnois are examples of this neglect.

The two new structures offered by private owners for vesting in the Board, and which have been accepted, are Inch Abbey, Co. Down, and Kilcooley Abbey, Co. Tipperary. The former is a Cistercian foundation of 1180, erected by De Courcy. It has the choir walls standing, with the three-light east window, and a pair of side windows in the north and south walls of the choir in a comparatively good state of preservation. Kilcooley Abbey is another Cistercian foundation of the date of A.D. 1200, the same year as the foundation of the Abbey of Corcomroe.

In addition to the structures already referred to, the Board have become responsible for advising as to the repair and preservation of several valuable historic buildings in charge of Government Departments. Four historic Irish castles being in use by the War Department, it was suggested that an arrangement should be made similar to that which exists in Great Britain between the Army Council and the Office of Works, and after due consideration it has been decided that the buildings shall remain in the occupation of the War Department, and that any necessary repairs shall be carried out by that Department, but that no structural alterations shall be carried out without reference to the Commissioners of Public Works, and that the advice of the Inspector of Ancient and National Monuments shall be available for the War Department when any question arises on which his knowledge and experience would be of value. The castles referred to are the following :

Limerick Castle, with the adjoining bridge over the River Shannon, was built in the time of King John. It was placed to command the bridge over the Shannon, and has five towers and a connecting wall; the westward tower nearest the bridge is most injured by cannon, and its top story has been removed. The entrance was on the north side, and was flanked by two circular towers, which are still perfect externally.

Athlone Castle and the bridge over the Shannon were built in the time of King John on the site of an earlier castle and bridge of the O'Connors. In 1455 and 1490 it was taken and retaken, and in 1537 it is stated that the King's castle had been recovered from the "usurpation of Irishmen." It was held in 1690-91 for King James, but eventually surrendered. Sir Henry Piers, writing in 1682, says :—"On the side that faceth the river are the rooms and apartments which served always for the habitation of the Lord President of Connaught, Governor of the Castle." In the centre is the principal pile, an irregular, ten-sided structure, rising from a circular base; it is circular in plan internally.

Carrickfergus Castle was erected during the Anglo-Norman occupation of Ulster early in the XIIIth century on the site of an ancient Irish fortress. It was occupied by King John when in pursuit of De Lacy. During the short period that Edward Bruce assumed the sovereignty of Ireland, he made the castle his chief residence. The castle, like other structures of its kind, had its numerous "repayrings" after frequent burnings and spoilings by "rebells and Scotts, our enemies," but the external walls, being 10 ft. to 12 ft. thick, have remained secure.

Enniskillen Castle, only a small fragment of which now remains, stood on the left bank of the River Erne, having been converted into a military barrack.

THE BRASS OF SIR JOHN CASSY AND WIFE, 1400, DEERHURST, GLOS.

JUDGE CASSY was chief Baron of the Exchequer. The minever lining of his mantle is well shown, and his corf, which is of two pieces laced together over his head. His feet rest on a lion, and he lies under a fine double canopy,

h his wife beside him. She rests her feet her pet dog Terri, whose name is written rneath. This is now the only surviving mple of a pet commemorated on a brass. ither existed at Ingham, Norfolk, to a kke," but this brass, with many others, sold for old metal in 1800.

he lady wears the characteristic dress of the od, of which large mittens are perhaps the t striking feature. Her hair is enclosed in t.

his brass has, since the rubbing was taken, the figure of St. John the Baptist; the r figure is of St. Anne and the Virgin. he marginal inscription is in raised letters h foliage and a strange little dragon. The ttes in the centre of the pediments should noticed.

he length is 7 ft. 4 in.; width, 3 ft. 1 in.

HISTORICAL NOTES.

e Corbridge xcavations.

In the annual report of the Council of the Newcastle Society of Antiquaries reference is made to the excavas of the Roman city of Corstopitum (Corge) and to the discovery of gold coins in llent preservation. The latest date represed in the hoard was A.D. 159. The importe of this hoard and that of 1908 to Roman hæology, it was said, was the illustration ch they gave of two periods of disturbance, ely differing in time, and by their help and of the pottery obtained archæologists were oming able to construct the history of this portant site. It was known in the time of ricola, and occupied, possibly with periods abandonment, until the eve of the departure the Romans from Britain. The work of estigation had already occupied six succesr summers, and yet a seventh year's work uld be entered upon with promise of even ater achievement; for, notwithstanding all t had been accomplished up to the present, than half the site had as yet been explored, a task of years remained to be done. The ncil hoped that a proposal to re-erect the old ite Cross in Newcastle as a memorial to the King Edward would be carried out.

Winchester Cathedral.

In the wall of the retro-choir of the Cathedral Mr. N. C. H. Nisbett, architect to the Dean and Chapter, has discovered, ing the replacement of the missing canopy Bishop Æthelmar's monument, a cavity taining a leaden casket, beneath which was ole covered with a loose piece of lead. The hop, who died in Paris in 1260, directed that heart should be buried in the cathedral, and conjectured that his heart was placed in the den casket which has just been found.

reservation of Ancient Welsh Monuments.

At a recent sitting of the Royal Commission on the Ancient Monuments of Wales, held at the Royal Commission House, Mr. W. H. More, Crown Receiver of Woods and ests of Wales and Monmouthshire, gave dence concerning ancient monuments upon wn lands. The question arose to whom hæological finds discovered on the lands ed from the Crown would belong. Mr. More d that there were no clauses in existing leases ling with the matter, because he was of nion that such finds would naturally belong the Crown. In the case of quarries the ees had rights to work only natural stone—e *in situ*—and celts would surely come ter the head of manufactured stone. The ness agreed that it would perhaps be an antage to insert a clause dealing with finds en new leases were made out.—Sir Robert nter, Chairman of the Executive Council he National Trust for the Preservation of es of Historical Value and Natural Beauty, lained that the trust had promoted a Bill the preservation of monuments. He had also read Mr. Buxton's Bill on the same subject, but he did not agree with the principle of compensation introduced.—Mr. Thackeray Turner, ex-Secretary of the Society for the Protection of Ancient Buildings, said that when people wanted a building restored they raised a fund and got a contractor to do the work. Instead of that there should be on the spot an architect who understood the history of the building. A contractor often in his ignorance destroyed the most valuable thing. When monuments came under the control of the Government we should get a school of skilled repairers who would be set to work under the architect.

Wanborough Church, near Guildford.

The church and churchyard of Wanborough, near Guildford, are to be sold by auction in June, as part of the Manor House Estate, by instructions of the owner, Mr. George McKibbin. The church is a very ancient structure, having existed at a time when Cistercian monks occupied Waverley Abbey, near Farnham. The edifice is mentioned in the "Domesday Book," and by muniments of the XIVth century appears to have been dedicated to St. Bartholomew. For a long time it was unendowed, and when after the dissolution of the monasteries it came into lay hands no arrangement was made to provide the minister with a stipend. It was closed for a period of 200 years or more, during which time it served as a carpenters' shop and timber shed. An attempt at restoration, however, was made in 1861, and services have since been conducted there.

An Old House in Soho.

The home of Sir James Thornhill, No. 75, Deanstreet, Soho, adjoining the Royalty Theatre, has fallen into a sorry state of decay, and fears are entertained for the safety of the structure. The principal rooms are panelled; the staircase, chimneypieces, and other fittings are of the Early Georgian style, and the wall paintings of the principal staircase are by Sir James Thornhill, who was reputedly assisted by his son-in-law, Hogarth.

Caerwent (Venta Silurum).

We read in the *Times* that a large part of the south or Port wall of the Roman city has collapsed, exposing the rubble or herring-bone masonry, which also is endangered. The north side of the wall, which is over 20 ft. high and is one of the finest after its kind in the kingdom, is filled with soil to within a few feet from the top, but the south side is quite free. The fall outwards of the southern and unprotected face of the wall is attributed to expansion of the soil inside by the recent change of temperature; thus far the core and the northern face are standing.

Parish Church of St. Edward the Confessor, Romford.

An appeal is made for contributions towards a sum of 500*l.*, the balance still outstanding of the Wykeham Hall and Church House Building Fund—the latter being the Chantry House, in the south-east corner of the churchyard, originally built by Avery Cornborough in the later half of the XVth century for the priest who served the chantry which Cornborough founded in the parish church. The Chantry House, which for more than three hundred years had been the Cock and Bell Tavern, was recently restored after plans by Sir Charles Nicholson, Bart., who designed also the adjoining Wykeham Hall as part of the parish institute. The church was built by New College, Oxford, a few years after the death of William of Wykeham, who gave the tithes to New College for a parish, a "peculiar" of the college, carved out of Hornchurch; the deed of consecration is dated March 29, 1410. In the church is the monument of Sir Anthony Cooke, *ob.* 1576, King Edward VI.'s tutor, and father-in-law of Lord Burleigh and Sir Nicholas Bacon.

Zimbabwe.

A survey is now being mad by the Rhodesia Railway with the object of extending the Blinkwater-Umvuma line to Victoria. The proximity of the Zimbabwe ruins to Victoria will make it possible to visit these wonderful relics of a lost civilisation in a more speedy and comfortable fashion than is at present the case. Much speculation and a certain amount of diversity of opinion amongst experts have prevailed with regard to the original builders of great Zimbabwe and the adjacent citadel, whilst the absolute lack of native tradition upon the subject only tends to accentuate the mystery.

Besides carefully clearing the ruins of creepers and brushwood, the Administration is proceeding with the excavation of the old walls lying to the northward of the temple. The passages, secret chambers, and citadel have already been cleared, the area of the ruins at present exposed being about 4 sq. miles, although these limits, in view of recent discoveries, are not to be looked upon as being by any means final.

The Ancient Art of Tempering Copper.

The copper cutting implements of the Tarascans found in the Balsas River ruins in Guerrero are so hard that they would turn the edge of a modern knife, and it has been claimed that these people, along with the Aztecs and Toltecs, possessed the secret of tempering copper. On the other hand, copper knives and axes found at Atcopotzalco are so soft that they can be cut with an ordinary pocket-knife, although analysis showed that these copper implements were of the same composition in all three localities as the copper ores found therein. The blades from Guerrero, which are hard and apparently tempered, were made from the natural ore alloyed with nickel and cobalt, thus making the smelted alloy approaching steel in hardness. Thus the natural product gave an alloy of great hardness when heated and sharpened, whilst the other ores of practically pure copper, when smelted, resulted in implements which were soft and inferior in cutting value.

Therefore, many archæologists of Mexico deny that these people possessed the secret of tempering copper, the sharp cutting copper implements being the result of Nature's handiwork.

The Romans in Britain.

In his paper, "The Discoveries of Roman Remains in Britain in 1912," which he read to the British Academy a few days ago, Professor F. J. Haverfield described the recent excavations at Corbridge with their rich yield of gold coins, of sculptured fragments, and of vestiges of storehouses and other buildings. Professor Haverfield referred also to the Romano-British village at Casterly, Wiltshire, and to the explorations conducted by Mr. Miller and Mr. Stevenson at Cappuck, near Jedburgh, on the road from Corbridge to Newstead, which, it appears, was originally erected by Agricola.

Edmonton.

The Edmonton District Council have drawn up a statement describing several buildings in the district which possess historical and literary associations, and will forward the statement to the Office of Works with a view to measures being taken for their protection. The category embraces Bay Cottage, the home in 1833-4 of Charles and Mary Lamb; Bury Hall, the seat of President Bradshaw, the regicide; Bush Hill, the house of Sir Hugh Myddelton, protector of the New River, where are the remains of ancient circular earthworks; Salisbury House, where lived Judge Jeffreys; the house, in Pymmes Park, lately acquired for public resort, which Lord Burleigh occupied *temp.* Elizabeth; and the cottage in which Keats lodged, and the house, in Church-street, in which he served as assistant to Hammond, the surgeon, during which interval he composed his first volume of poems.

THE BUILDING TRADE.

RECENT WORKMEN'S COMPENSATION CASES.

An unusually heavy list of workmen's compensation cases has recently had to be dealt with by the Court of Appeal, and the litigation under this Act shows no signs of diminishing.

Injury by Strikers.

Poulton *v.* Kelsall was a case which had its origin in the strike amongst the transport workers. A man employed as a storeman acted as a carter for several days for his employers, and it was alleged that as an inducement to make him undertake this class of work his employers had undertaken to be responsible for his safety. After his work one day was over and he was on his way home, at a place about seven minutes' walk from his employer's premises he was attacked by strikers and seriously injured, and he claimed compensation under the Act. The Court held that he was not injured in the course of his employment, as his work was ended and he was outside the sphere of his employment at the time of the accident. This, however, did not mean that he might not have a remedy against his employers under the special agreement, but only that under the Act he had no claim. Although the decision proceeded on the above grounds, it may be noted that the Scotch Court of Session, in the case Murray *v.* Dowell & Co., Ltd., held that a man injured in an attack on the works where he was employed by strikers was not "injured by accident."

Disease.

In Martin *v.* Mayor, etc., of Manchester the applicant was a porter employed at a scarlet fever hospital. In February, suffering from influenza, he had been absent from work for a short time until March 22; on April 5 he contracted scarlet fever. On April 1 he had cleaned out the mortuary, but there was no evidence that the body of any fever patient had lain there shortly before that date. The County Court Judge held that he had contracted the fever in the mortuary, but the Court of Appeal held that there was no evidence of this, and as the particular time, place, and circumstances in which the disease was contracted remained unproved that the claim failed. This decision is based on two former cases, Brodrick *v.* London County Council (the *Builder*, September 5, 1908) and Eke *v.* Hart Dyke (the *Builder*, August 13, 1910). This question of disease, apart from the industrial diseases which are specially provided for in the Act of 1906, has been one of extreme difficulty ever since the decision in the House of Lords of the anthrax case, Brintons, Ltd. *v.* Turvey (the *Builder*, April 29, 1905), but the above cases have laid down a rough working rule which has now been acted upon for some time that a disease to be deemed "an injury by accident" must have its exact origin proved. The rule is by no means logical, and the difficulty has arisen from the wide interpretation given by the Courts to the words "injury by accident." In the case of a statute such as was the Workmen's Compensation Act of 1897, which imposed a new liability upon employers, it might have been expected that it would have been strictly construed, and that the argument would have prevailed that if the Legislature intended to include any kind of disease it would certainly have said so in no uncertain terms; but this has not been the case, and the artificial line created by decisions has now become firmly established.

Even industrial diseases have been dealt with in very obscure terms in the Act of 1906, which first specifically rendered such diseases the subject of compensation. The compensation is recoverable from the employer who last employed the workman during the twelve months previous to the date of his disablement from a scheduled disease. Then by sect. 8 *c* II. it is provided that if that employer alleges that the disease was in fact contracted whilst the workman was in the employment of some other employer that other employer may be made party to the arbitration, or if the disease is of such a nature as to be contracted by a gradual process, by sect. 8 *c* III. the employer sued may claim from other employers who have employed the workman in that character of employment a contribution towards the compensation payable. In the case of Mallinder *v.* J. Morris & Son, Ltd., a workman claimed against the respondents, his last employers, in respect of mercurial poisoning. The respondents disputed their liability, but also claimed contribution from another firm who had employed the man. The County Court Judge dismissed the other firm from the arbitration on the ground that the respondents had failed to prove that the disease was contracted whilst the man was in the other firm's service. The Court of Appeal allowed the respondents' appeal on the ground that under sect. 8 *c* III. it was not necessary to prove that point, as it would have been had the application been under sect. 8 *c* II. It will be seen that where a contribution is being sought under sect. 8 *c* III. what has to be proved is that the disease was such as to be contracted by a gradual process, and that the man during the previous twelve months had been employed by other firms in employment of a nature which would contribute to the disease. These cases are of especial importance to builders, decorators, etc., and for an informing decision on the section we may refer our readers to Haylett *v.* Vigor & Co. (the *Builder*, May 15, 1908).

Drunkenness.

The case of Frith *v.* Owners of the s.s. *Louisianian* may be shortly noted because it has an indirect bearing on a question which has caused much litigation. When does a workman come within the sphere of his employment? A seaman absent without leave was assisted on board, being intoxicated, just as the ship was leaving the quay. He was so drunk that he fell over the side and was drowned. In a claim by his dependents the County Court Judge held the accident to have arisen in the course of his employment, but the Court of Appeal set this aside. The man had reached the scene of his employment, but was not in a condition to resume his duties, and the accident was due, not to his employment, but to his condition.

Workmen Employed Abroad.

Contractors employing workmen abroad may be glad to be reminded that the Workmen's Compensation Act only applies within the territorial limits of the United Kingdom. This was first decided in the case of Tomalin *v.* Pearson & Son, Ltd. (the *Builder*, April 17, 1909), but it has recently again been affirmed by the Court of Appeal in the case of Schwartz *v.* India Rubber, Gutta-Percha, and Telegraph Works Company, Ltd., where a man proceeding at his employers' expense by sea to do some cable work in Teneriffe was lost with the ship on the high seas.

Notice of Accident.

It will be remembered that under the Act of 1906, although notice of an accident must be given as soon as practicable after the accident, its absence will not be a bar to the proceedings if it is found that the employer has not been prejudiced in his defence or that the want of notice was occasioned by mistake or other reasonable cause, sect. 2 (*a*). In Egerton *v.* Moore a navvy employed in excavating a trench on July 21, 1910, slipped and struck his breast with his pick. With but a short interval of a few days he continued working for various employers, until May 25, 1911, at full wages. He had not suffered from his breast except a little swelling and intermittent pain until March, 1911, when swelling recommenced, and a tubercular abscess began to form, which compelled him to suspend work, May 25. In June the man informed the respondents that he had been ordered to the infirmary, but no claim for compensation was made until July, 1911. The Court of Appeal held that notice of claim was not given as soon as practicable, and that the failure to make a claim was not occasioned by mistake or other reasonable cause. Ignorance of the Act was held in Roles *v.* Pascall & Sons (the *Builder*, June 2, 1911) also not to constitute a mistake or reasonable cause.

Some other cases dealing with matters of practice will be noticed by us in a future article.

BUILDING NOTES FROM AUSTRALIA.

The building trade throughout Austral has had a very prosperous year. The c of labour and material has increased co siderably, but even this has not acted as detriment to building operations. Architec have a great many prospective jobs in han but the difficulty is in getting satisfacto tenders. A leading architect at Sydn informed the writer that it is the unu thing now when calling for tenders to recei no response from builders, owing to the fa that most builders have their hands full. a often contracts in advance awaiting co mencement. Naturally property owners a very cautious about building, owing to t high prices ruling, but even the most cautio see no prospect of a fall in prices. Indeed, the face of it, it looks as if prices are the rise. A leading authority expressed t opinion a few weeks ago that two ye hence will show a rise of 20 per cent. on t present cost of building.

The high cost of building has a legitima origin. It is the outcome of increas population and prosperity. As far Australia generally is concerned, the develo ment is healthy, and is really only litt more than has existed for many years pa Australia is mainly dependent upon t export of primary products. The high pric ruling in the world's markets for these a responsible for prosperity, and as long high prices continue good times mu continue. In the Metropolitan area the co of buildings erected at Sydney during t last three years represents a sum of 15,000,000

The State as Landlord.

The increased cost of building, due to t high wages ruling for labour and materi has resulted in a great scarcity of house particularly at Sydney. These conditions a reflected in increased rents. To meet t position the Treasurer of New South Wal announces that he purposes covering 400 acr in the neighbourhood of Sydney with wor men's cottages. Owing to the impossibili of obtaining bricklayers and a sufficie number of bricks, the cottages will be wood, machine made. A start will be ma immediately with the project. A sum 18,000*l.* is set aside for the first instalmen The cottages will be on land 40 ft. by 180 f and it is expected that on 400 acres 5,0 people will be housed.

This scheme, the Government hope, wi prevent private property owners from i creasing rent of workmen's cottages, whi is the natural outcome of existing condition under which the demand is greater than t supply. The State will act as landlord ar charge the lowest rental possible. It mig be mentioned that wood houses, though n new to Sydney, are rarely built. Almost a dwellings erected of late years are of bric Wood houses are common at Melbourn Brisbane, and principal New Zealand town

A Commission was appointed recently New South Wales to inquire into the alleg shortage of labour existing in the State. T Chairman has issued a report, covering t progress of the inquiry as far as it deals wi certain trades. This report goes to sho that there is a great scarcity of labour in a the building trades, with the exception painting. The evidence given at the inquir went to show that the building trade generally handicapped by the scarcity labour. Mechanics in connexion with ever branch except painting are needed.

When the commissioner pointed out th the supply of painters seemed equal to t requirements he said that the painting trad was a notable exception. One of the reason assigned for this fact is that on new building the value of painters' work bears only slight proportion to the total cost. Th painter's turn generally comes a few yea after the building has been erected, and whe the interiors are to be painted and decorate It is interesting, however, to note that number of painters have come to Sydne during the last year. The Secretary of t

y Painters' Union informed the ers' Wages Board a week or two ago during the three months ending October, eighty painters had applied to the for employment who were new arrivals England, America, or New Zealand. have evidently all been absorbed. are no complaints about chronic un- yment, and employers state that they find employment for many additional

night interest readers of the *Builder* to what Australian employers think of h tradesmen. In some trades the h tradesman is at a slight discount, to the methods of work in England somewhat different from methods of in Australia. In the building trade, er, this is not so, or, if it is so, to only ht extent. English mechanics in the ng trades very soon adapt themselves to alian conditions. Some of the leading rs in Sydney stated recently that they their employment a number of English cotch tradesmen. Fully 60 per cent. se were found to be quite satisfactory, he remainder were slightly below the e in efficiency as compared with alians. Some employers praise the h tradesmen highly.

Painting Trade in Australia.

erally speaking, painting calls for less than other branches of the building hence painters' wages are generally than carpenters', bricklayers', masons', ers', and plumbers'. This is accounted the fact that the greater proportion rk is plain, requiring only a small t of skill. Specialists, or men who several branches are, however, just as and well paid as other members building trade. Sign writers' wages 6d. per hour, which is a higher rate hat paid to carpenters or plumbers.

trade in Australia is interested in the sion which is now going on in England nexion with the proposal to restrict the white-lead. As a rule, the Australian r and painter has no sympathy with vocates of white-lead prohibition. Lead ing is very rare here, though white- s a basis for paint is universally used. . G. Chapman, Demonstrator in Physi- at the University of Sydney, made a inquiry into the matter of lead ing among painters in the Common- . He showed that in 1908 deaths in Commonwealth from lead poisoning ered ten, which covered all occupations danger from lead poisoning existed, ing workers in the Broken Hill lead

Dr. Chapman said that the death of painters was a very average one. poisoning was the outcome of the an swallowing particles of lead dust. as doubtful whether lead could be ed by the unbroken skin. Lead did aporise, except at an enormous heat. ould not be carried in the fumes of ntine.

onic lead poisoning was largely ntable. Out of the patients he had ned for lead poisoning he had discovered of lead poisoning in about one in four. were unable to find traces of lead poison n the supposed sufferer from painter's he would conclude that the painter's ation had nothing to do with his illness people, he said, suffered from indiges and so forth. If they happened to be rs or plumbers they concluded they ead colic. It will be seen from this tial inquiry, that the danger from lead ing is a bogy, as far as the average r in Australia in concerned.

greater proportion of the material used painting trade in Australia is imported England. English white-lead, linseed arnishes, dry colours, and wall papers most exclusively used. Owing to the wood houses in many localities, the ption of paint is very great in propor- to the population. The competition English manufacturers for the trade nas become slightly keener during the ew years. This applies particularly to lead, oils, and varnishes. Until lately nd lead were mainly in the hands of rms, Messrs. Champion, Druce, & Co., n, and Messrs. Blundell, Spence, & Hull. Painters and architects pinned faith to Champion's lead and Blundell & e's oils. The reason for this was that these firms were the first to realise the importance of this market and the value of consistency in the matter of quality. Of late years, however, there has been more enterprise put into the white-lead and linseed oil trade. Several leading English makers are now doing business here, and it is no longer assumed that in each case only one name stands for the genuine article. In Queensland zinc white is used to a greater extent than in any other State. But it is not used by itself, because under such conditions it usually behaves badly.

In varnishes there is much more competition, but here also one firm (Messrs. Wm. Harland & Son) have held, and still hold, the leading position. There are, of course, other firms doing a very large trade. In painters' stainers an English firm do the leading trade in first quality material.

In water paints the market may be said to be almost untouched. Messrs. Sisson Brcs., Hull, appear to do the principal trade. Their product is the most widely advertised. In mixed paint there is not a very large trade done, except in one instance, where a leading English firm are represented by a pushing firm which enjoys a good connexion with painters and decorators. A mistake appears to have been made by some agents of English mixed paints passing by the painting and decorating trades and trying to sell their materials direct to the public. They have thus practically entered into competition with local painters by encouraging outsiders to do their own painting. The more successful policy seems to have been that of inducing the painter to take up the material. It might be added that many English firms frequently fail to make headway in these markets, owing to their being represented by agents who are out of touch with the trade. An agent requires to be one who is familiar with the trade, and does not confine his attention to one centre only. It is customary in some cases for the manufacturer to stipulate when giving an exclusive agency that the agent shall order annually goods to a fixed minimum value. Cases are not unknown where firms have taken the agency for a particular line in order to block its sale, especially when it threatens to compete with a line which they already handle.

Great expansion has taken place in the wall-paper trade in Australia during the last five or six years. Formerly, outside a few firms, the materials handled were commonplace in quality and design. Now, owing to the English manufacturers giving more attention to these markets, there is a much higher grade of goods in demand In a few cases the handling of wall papers is made a special business, but in the majority of cases it is a department of the oil and colour trade. Outside English goods there is very little wall paper imported into Australia.

LABOUR IN THE BUILDING TRADE.

THERE has been no recent development in reference to the trouble in the building trade, and the next step will probably follow the reply made by the London Master Builders' Association to the demands formulated by the Amalgamated Society of Carpenters and Joiners. The workmen are asking for an increase in wages, consequent on the increase in the cost of living, a reduction of the summer hours of working, and double pay for overtime. Mr. Costigan, Secretary of the London Master Builders' Association, states that the Committee, to which the men's representations had been referred, would meet shortly.

A mass meeting of London woodworkers connected with the trade was held on Clapham Common on the 14th inst., in support of the movement for securing higher wages and shorter hours of labour. A resolution welcoming the joint trade movement which had brought the carpenters, joiners, and cabinet-makers together was proposed by Mr. C. H. Young, of the Associated Society of Carpenters and Joiners, seconded by Mr. A. W. Raynor, London District Secretary of the General Union of Carpenters and Joiners, and supported by Mr. Bramley, Organising Secretary of the National Amalgamated Furnishing Trades' Association, Mr. Stennett, London District Secretary of the Amalgamated Society of Carpenters and Joiners, and other speakers. It was contended on behalf of the men that they had not had an increase of wages for twelve years, although during that period the purchasing power of the sovereign had fallen from twenty shillings to fifteen. Mr. Bramley said that the latest development was that the masons, whose union was one of the most cautious in the country, had determined to throw in their lot with them, as had the four unions of labourers. The labourers were a powerful factor, for if they stopped work, building would have to cease. They also had the support of the smiths and fitters. If they asked for shorter hours, forty-seven hours a week instead of fifty during thirty-nine weeks of the year, it was that they aimed at diminishing the number of the unemployed, which was particularly large in the building trade. It was for the same reason that they wanted double pay for overtime, as employers would, if that point were carried, do away with overtime altogether. The resolution was carried.

The *Morning Post* states that the Provisional Committee formed for the purpose of consolidating the seventy-two trade unions in the building industries has issued a circular pointing out that at present no general movement in the building trades is possible, the arrangements of the various sections being in conflict. Each trade union has its own agreement with the employers; some unions, the Carpenters and Joiners, for instance, have to give six months' notice of their wish to terminate an agreement with the employers. This gives the employers an advantage in preparing to meet any action on the part of the men. The circular continues:—"Sectional unionism will not do. To win a strike we must stop production. Therefore we must act together. We must form one union for the building industry, and let the friendly society exist entirely separate from the fighting organisation. We all work together on the building, and all take our part in production. As the master compels us to work amicably together for his benefit, why should we not work together for our own? Let us organise on the sound lines of industrial unionism, and so better our conditions here and now, and win for ourselves more freedom, shorter hours, and higher wages. Let us organise upon the lines of industry instead of craft. What is more, upon class lines, recognising that the masters, as a class, are organised against us. The industrial unionism must come and will come," concludes the circular, "and with it a greater share of the wealth we produce, and realisation of the joy of living." The movement for amalgamation is being urged forward with a view to its success, if possible, for the middle of May, as early in May it is proposed to submit the new programme of improved conditions to the trade employers.

By the end of this month, says the *Manchester Guardian*, the Manchester and Salford area, besides other parts of the country, will be involved, unless present negotiations come to a favourable end. Since the establishment of Conciliation Boards in 1904 the relations which have subsisted between local employers and working carpenters and joiners have been of a friendly character. In accordance with their working agreement, six months' notice has been necessary to effect any new regulation; notice has been given, and it will expire on May 1. In November last the Amalgamated Society of Carpenters and Joiners, having within the Manchester area a membership of about 2,500, joined with the locally less numerous General Union of Carpenters and Joiners in an application to the Manchester Association of the Lancashire, Cheshire, and North Wales Building Trades Employers' Federation in a request for higher wages. It is some years since any advance has been made in the rate of pay for Manchester joiners, and it was felt that they should apply for a rearrangement of their working rules. Hitherto the rate of wages has been 9½d. an hour, and it is asked that this should be raised to 10½d. an hour. It may be noted that in London, where the higher cost of living has always been recognised, the rate is now 10½d., and the carpenters and joiners there are asking that the pay should be raised to 1s. an hour. Bricklayers and masons are parties also to the working agreement, and thus the greatest groups in the building trade are intimately concerned in the progress of the present negotiations. Should there be a failure to agree, the Conciliation scheme provides, of course, for submitting the matter in dispute to other means of settlement before the trouble can be said to have become acute, and May 1 may possibly see the first stage in an amicable settlement. Otherwise the building industry will be involved in a very serious dispute. The employers in Manchester (so far as this area is concerned) are generally regarded by the employed as reasonable and well disposed in dealing with the question of rates of pay, and on the part of the workers it appears to be held by a large body that a mutual agreement may be arrived at before the Conciliation

Board steps in at all. The development of the question will, however, be looked forward to with a degree of anxiety.

The trade unions in the building trade have, it is stated, agreed to meet this week in London to consider the formation of a body which shall include all unions admitting men employed in the building industry. Seventeen unions have signified their intention of being represented. The bricklayers will submit the following resolutions to the Conference:—

"That this Conference expresses its adherence to the resolutions passed by the last Trade Union Congresses embodying the principle of amalgamating the present trade unions in the various industries, and therefore we, the representatives of the building trade unions, consider the time now opportune to put the principle into operation in our industry"; and "That a Committee from this Conference to consist of one member from each society represented be appointed to draw up a scheme to give effect to the previous resolution, such scheme to be submitted to the next Conference."

IPSWICH BUILDING TRADES ASSOCIATION.

THE annual dinner of the Ipswich Building Trades Association was held recently at the Crown and Anchor Hotel, when the President (Mr. B. Bird) occupied the chair. The loyal and patriotic toasts having been honoured, and the toast of "The Mayor and Corporation of Ipswich" submitted (proposed by Mr. R. Smith and acknowledged by the Mayor and Mr. F. Brown), Mr. E. Catchpole proposed the toast of "The Town and Trade of Ipswich."

Mr. S. A. Kenney, in response, said that the time had come when business was going to be better, because the large firms were sending out feelers into all parts of the world, and the orders were coming home, which could only result in prosperity for the working classes, and thus, naturally, the builders would benefit. One of the worst factors they had to deal with was co-operation, which was worse than a worm at the root of a plant to the people of the country. Private businesses were being crushed, and he was sure that there were many of the smaller trades which would be killed. Still, they could not help it, because the working men were quite at liberty to buy their goods where they liked. In conclusion, he urged builders to take up another trade to tide them over the quiet times during the year. There was, he believed, a great future for Ipswich; but competition must not be so keen as it had been in the past.

Mr. C. E. Whitmarsh next proposed the toast of "Success to the Ipswich Building Trades Association," and said there was co-operation of several kinds, but in the building trades there were broad outlines in which agreement might be reached without interfering with the individuality of the man, because, however close they might draw rules in any Association, they would find that the individuality of the person must be allowed for. There was one way in which they could co-operate, and that was in the raising of prices to a living limit, because at present it was all work and no profit. The trade engaged the second largest body of men in the country, next to the cotton trade, but in no trade was the profit so little in comparison with the wages paid, and it was on lines similar to these that associations such as theirs could do a great deal of good. To use the language of the day, it was time the builders struck for a minimum profit.

Mr. A. Sadler, who was called upon to respond, said that the Association was a useful institution, and worthy of more support than it got. They had made some little change during the last year or two in introducing other subjects than purely business matters, educational subjects connected with the trade, very interesting and very instructive to all, and they were finding that they were of great assistance, helping them to take a keener interest in their work.

Mr. E. E. Saunders, who also responded, said that at one time it looked as though the Association would fall through, but the widening of its basis to bring in kindred trades had given it a new lease of life.

Mr. A. W. Warner proposed the toast of "The President and Officers."

Mr. Buckingham Bird, in response, said that in the course of another week he would have been closely connected with the trade for fifty years, and during the whole time the trade had never been properly recompensed. It required a great deal of hard work, time, experience, and tact, and those qualifications should be properly paid.

Mr. E. P. Tetsall, as ex-President, thanked the Association for the way they had supported him during his term of office. He appealed to the outside builder to come in and help the Association to carry on its good work.

Mr. C. Borrett, Hon. Secretary and Treasurer, said that financially the Association was in a good position.

Mr. F. Grimwood gave the toast of "The Visitors," which was responded to by Mr. Frank Mason, Mr. T. B. Read, and Mr. W. C. Clark.

GENERAL BUILDING NEWS.

NEW CHURCH AND SCHOOL, BRANKSOME.

The Branksome Primitive Methodists are to have a church and schoolroom erected at an estimated cost of 1,200*l*. Messrs. Corbin, Harris, & Son are the architects for the work, and the contract is being carried out by Messrs. Mills & Sons, of West Southbourne.

TOWN HALL, CHADDERTON.

This new building is to be erected at a cost of about 10,000*l*. from the designs of Messrs. Taylor & Simister, architects. The exterior of the building is designed to give a broad and strong treatment of the English Renaissance, and the public hall provides accommodation for 564 persons.

STATUE TO CAPTAIN COOK.

The memorial statue of Captain Cook, which was originally suggested by Sir Joseph Carruthers, ex-Premier of New South Wales, is to be erected shortly near the new Admiralty buildings in the Mall. The memorial is the work of Sir Thomas Brock, R.A., and will cost upwards of 3,000*l*.

TRADE NEWS.

The "Boyle" system of ventilation (natural), embracing Boyle's latest patent "air-pump" ventilators and air inlets, has been applied to Devizes Hospital, Devizes.

The hospital, Riverton, New Zealand, is being supplied with Shorland's double-fronted patent Manchester stoves with descending smoke flues, by Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester.

PROJECTED NEW BUILDINGS IN THE PROVINCES.*

ARBROATH.—Conversion of corn exchange and market buildings into entertainment hall (1,600*l*.); Mr. James Simpson, builder, Arbroath.

Barrow-in-Furness. — Additions to police buildings; Mr. A. Race, Surveyor, Town Hall, Barrow.

Braintree.—Baths (527*l*.); Messrs. A. Brown & Sons, builders, Braintree.

Bredbury.—Extensions to works, Redhouse-lane, for Messrs. Pollock & McNab.

Burnley.—Weaving shed, Burnley-lane, for Messrs. A. R. Stuttard, Ltd.

Caister.—Post-office, near Green Gate; H.M. Office of Works, Storey's-gate, Westminster, S.W.

Chapelton.—Additions and alterations to school (4,000*l*.); Port Glasgow School Board.

Conway.—Rebuilding Guildhall; Mr. F. A. Delemotte, Surveyor, Town Hall, Conway.

Cuckfield (Sussex).—Houses, London-lane; Mr. A. Croucher, Surveyor, Council Offices, Cuckfield.

Doncaster.—Business premises, High-street (2,335*l*.); Messrs. C. Sprakes & Sons, builders, 37, East Laithgate, Doncaster.

Grantham.—School (200 places), south end of town; Mr. A. H. Malin, Secretary, Education Committee, Town Hall, Grantham.

Grays. Proposed enlargement of school, Arthur street (2,290*l*.); Mr. J. H. Nichols, Secretary, Education Committee, Essex County Council, County Buildings, Chelmsford.

Hadley.—Buildings, Angel-street; Mr. A. Hunt, architect, Bury St. Edmunds.

Hanley.—School (425*l*.); Alnwick Foundry and Engineering Company, Ltd., builders, Alnwick

Hanwell.—Alterations to free library (650*l*.); Mr. W. J. Dickens, builder, 19, The Broadway, Ealing.

Haywards Heath.—Additions at Brighton Asylum (2,500*l*.); Mr. Henry Tillstone, Surveyor, Town Hall, Brighton.

Honley.—Additions to Grove Mills for Messrs. Littlewood, Ltd.

Horbury.—Ironfoundry, Horbury Junction, for Messrs. C. Roberts & Co., Ltd.

Hove.—A plan has been passed for four houses, Marine-avenue, for Mr. A. Horlock. Mr. F. Newman, on behalf of Mr. T. Barnard, has lodged plans for six houses in Langdale-road.

* See also our list of Competitions, Contracts, etc., on another page.

Ipswich.—Diesel engine works for the Co... solidated Diesel Engine Manufacturers, Ltd... 179, Queen Victoria-street, E.C.

Kilbowie. Workshop for Messrs. J. & ... Tullis, engineers, Kilbowie.

Lancaster.—Warehouse, Ashton-road, ... Messrs. T. Preston & Son.

Leeds. Alterations to Town Hall (1,650*l*.... Messrs. Perkin & Bulmer, architects, Centr... Bank-chambers, Toronto street, Leeds.

Leek.—Shop, Picton-street, for the Leek a... Moorlands Co-operative Society, Ltd.

Lewes.—School (5,415*l*.); Messrs. Fra... Sandell & Sons, builders, Worthing.

Linton.—Weaving shed for the Linton M... Company.

Lincoln.—Plans have been passed for ... houses in Sausthorpe and Henry streets ... Mr. R. W. Parkinson, and for six houses ... Smith-street for Mr. F. W. Horton.

Lowestoft.—Plans have been passed ... follows:—Seven houses, Denmark-road, ... Mr. W. Brown; rebuilding, store, Chri... church-square, for Messrs. E. Wills & So... thirteen houses, Worthing-road, for Messr... Mobbs Brothers; four houses, Sussex roa... for Mr. R. A. Burrett. A plan has be... lodged for four houses, Horn-hill, by M... H. J. Eastaugh.

Maghull.—Epileptic colony for the Sele... Vestry, Liverpool.

Newry.—Artisans' dwelling, Kiln-stre... (4,785*l*.); Mr. J. Graham, builder, Dromore.

Norfolk.—Proposed schools at Bacto... (1,380*l*.), Crostwick (700*l*.), Freethorpe (1,360*l*.... and Little Walsingham (2,615*l*.), also enlarg... ments at Cley School (340*l*.), Elsing Sche... (570*l*.), and Hingham School (700*l*.); M... W. V. Bushell, Secretary, Education Co... mittee, Norfolk County Council, County Buil... ings, Norwich.

Reed.—School (fifty places); Mr. U. ... Smith, Surveyor, Herts County Council, Ha... field.

Sheffield.—Extensions, sanatorium (665*l*.... Mr. A. E. Booker, Clerk, Guardians' Offic... Sheffield. Extensions, motor garage (515*l*.... also fifty-three houses and two houses a... shops, High Wincobank Estate (9,060*l*.); M... F. E. P. Edwards, City Architect, Town Ha... Sheffield. The following plans have be... passed:—Additions to rolling mills, Newha... road, for Messrs. Sanderson Brothers ... Newbould, Ltd.; offices, Meadow Hall-roa... for Messrs. A. Steel & Sons, Ltd.; elev... houses, Abbeydale-road, for Mr. G. Woma... ley; additions, premises, Hunsley-street, f... the Trustees, United Methodist Chapel; s... teen houses, Sykes lane, Findon-street a... Evandale-road, for Messrs. F. Dawson & So... cinematograph theatre, Westbar and Paradi... street, for the Don Picture Palace Compan... Ltd.; additions and alterations, Stafford Ho... Stafford-street, for Messrs. S. H. Ward ... Co., Ltd.; four houses, Babur-road, for Messr... Coupe Brothers; seven houses, Graham a... Hangingwater roads, for Mr. James Samue... additions and alterations to premises, Co... ridge and Stovin roads, for the Brightsi... and Carbrook Co-operative Society, Ltd... three houses, Walkley-terrace, for Mr. Smit... six houses, Staniforth-road, for Mr. Thom... Kershaw; additions, school, Stubbin-lane, ... the Trustees, Firth Park United Methodi... Church.

Shefford.—Chapel (1,815*l*.): Mr. C. Wrig... builder, Langford

Sheringham.—School, etc. (8,610*l*.); M... James Needs, builder, Fakenham.

Shettleston.—Building, Pettigrew-street, ... Shettleston Co-operative Society, Ltd.

Southampton.—Plans have been passed f... additions rear of Nos. 9, Manor Farm-ro... and 123 and 124, St. Mary's-road, store, M... brook road, and six houses, Ampthill-road, ... Messrs. Weston & Burnett; also for twel... houses, Newcombe-road, for Mr. F. J. Pau...

Stepps.—Church, corner of Blenheim a... Anniesland avenues, for the Trustees of ... United Free Church, Stepps.

Stoke-on-Trent.—School (17,100*l*.); Mr. ... Godwin, builder, Victoria-road, Hanley.

Stretford.—Plans have been passed ... twelve houses, Thomas-street, etc., for M... Thomas Hames, and for works, Trafford Par... for the Northen Counties Transport, Ltd.

Thorpe.—Twelve houses (1,935*l*.); Mr. W. ... Tarrant, builder, Byfleet.

Twickenham.—A plan has been passed f... additions to "Holly Lodge," Grosvenor-roa... for Mr. W. J. Reid.

Walsall.—Boiler house, etc. (650*l*.); M... John Taylor, Surveyor, Town Hall, Walsall.

Wanstead.—Enlargement of fire-station; M... C. H. Bressey, Surveyor, Council Offic... Wanstead.

Yeovil.—Plans have been passed for fi... houses, St. Michael's-avenue, for Messr... Pippard & Purchase; also for a warehouse ... Vicarage-street for Mr. Trask.

THE SURVEYORS' INSTITUTION:

THE COST OF LABOUR.

At the ordinary general meeting of the Surveyors' Institution, held on Monday, Mr. R. M. Kearns read a paper on "The Cost of Labour in Connexion with the Erection and Maintenance of Buildings," of which the following is an abstract :—

"Building contractors and their doughty foremen are splendid organisers and controllers of labour; consequently the cost of erecting a building is reduced as nearly as possible to the minimum in the case of the lump-sum contract.

A salient point is that the contractor, in the absence of any special arrangement to the contrary, stands to gain or lose on the amount of his estimate, no matter what fluctuations may take place in the wages rates of the workmen. In equity, however—putting aside the question as to what should happen in the case of a decrease—it would appear that some allowance should be made to the contractor when he is compelled to make a rise in wages under the force of circumstances which could not be foreseen before the date of his tender.

This allowance would have to be arrived at by ascertaining in the first place the value of the measured work executed after the rise in wages takes effect, and then adding a percentage on the proportion of the cost of labour, differentiating between mechanics and labourers. In this matter every contract should, of course, be dealt with on its own merits, as the proportionate value of labour to materials and plant varies in each trade according to the nature of the materials and the architect's designs. The following proportions might apply to ordinary public buildings or first-class residences :—

Trade.	Approximate Proportion of the Cost of Materials and Plant.	Approximate Proportion of the Cost of Labour.	
		Mechanics.	Labourers.
	Per Cent.	Per Cent.	Per Cent.
Bricklayer ...	67	24	9
Mason ...	40	55	5
Slater ...	80	15	5
Carpenter ...	70	27	3
Joiner ...	37	62	1
Smith ...	80	15	5
Plumber ...	75	16	9
Plasterer ...	45	41	14
Glazier ...	85	15	—
Painter ...	40	56	4

In reinforced concrete buildings the cost of labour is something between 50 and 60 per cent. of the total cost of the structural work, as compared with an approximate 30 per cent. in the case of ordinary brick and stone buildings. There is very little difference between the cost of the finished reinforced concrete and that of brickwork, bulk for bulk; and the great saving effected by building in reinforced concrete is, of course, due to the extraordinary thinness which is permissible in walls, piers, etc.

A brief reference may perhaps be made here, for the benefit of prospective building owners, to certain recognised rules governing the cost of both labour and materials—rules which, if followed, will place the uninitiated in a fair way to obtain an estimate approximating to the minimum cost of any proposed new building, and also enable him to have the works carried out for a sum within a reasonable margin of the estimated amount :—

1. Employ a properly-qualified architect who, while being a successful man, can yet give personal attention to his work.
2. Provide for compliance with the requirements of the Building Act or of the local authorities, and respect the legal rights of adjoining owners.
3. Specify, if possible, the use of local building materials, and thus save the cost of carriage and at the same time derive the utmost value from local labour.
4. See that bills of quantities are prepared by a properly-qualified surveyor.
5. The building owner's exact and final requirements should be embodied in the architect's drawings and specification before they are handed to the quantity surveyor.
6. Obtain tenders from builders of sound financial standing and of good reputation.
7. The builder should be called upon under the terms of the contract to make good all damage caused to the building or to adjoining property; to insure against loss by fire and provide for all risks and responsibilities enforced by the various Acts of Parliament; and to pay such wages as are generally accepted as current in each trade for competent workmen.
8. Employ a clerk of the works whose integrity and other qualifications are undoubted, and pay him a salary worthy of his position of trust.
9. Avoid variations; they are expensive, and usually prevent the works being completed within the period specified in the contract.

With reference to the responsibilities enforced by the different Acts of Parliament, I understand that the coming Insurance Act will in no way alter the law relating to accidents, and that therefore contractors will continue to insure against injuries to their workmen as before.

As to the responsibility for the payment of fair wages, I may refer here to a circular which was issued to various Councils in September last by the Local Government Board, setting forth the clauses recommended for general use in Government contracts by the Fair Wages Advisory Committee.

There is little that is new in the modern system by which the payment of fair wages is encouraged by the State. As you are aware, wages were at one time regulated in England by Acts of Parliament, and, according to Froude, with excellent results. It is recorded in his "Reign of Henry VIII." that the working classes of this country were "in a condition more than prosperous." The wages at that time were fixed "at a maximum," but it appears that this point of the law was not rigidly enforced, and at a later date a sliding scale was introduced. Froude refers to it as follows :—

"On the one side Parliament interfered to protect employers against their labourers; but it was equally determined that employers should not be allowed to abuse their opportunities; and this directly appears from the 4th of the 5th of Elizabeth, by which, on the most trifling appearance of a depreciation in the currency, it was declared that the labouring man could no longer live on the wages assigned to him by the Act of Henry, and a sliding scale was instituted by which for the future wages should be adjusted to the price of food."

I must now deal with my subject so far as it relates to the maintenance of buildings.

Whatever may be the defects which are discovered in the form of contract under which a building is erected, the costs and penalties of such defects are confined as a rule to that particular building; but in contracts for works connected with the maintenance and repairs of the numerous buildings under the control of Government Departments, County Councils, and other public bodies the matter becomes more serious on account of the recurrent nature of the work and the consequent necessity of meeting with equal recurrence during the period which each contract is in force the costs resulting from errors in the agreed terms or prices.

My mission is to point out that day work, although inevitable, should be restricted as much as possible, and in no instance should the cost be allowed to exceed 50 per cent. of the average annual expenditure. A case was recently brought to my notice in which various works of maintenance were carried out for a certain department under a schedule at a cost of about 4,400*l.*, and of this total the day work charges did not amount to 5 per cent. No doubt this is an unusually low percentage, but it shows what may be done under proper management.

Surveyors and clerks of the works have to be very wide-awake if they wish to hold their own in a maintenance contract, for builders seize every opportunity to do what may be termed "good business"; and they are not to be blamed, except when "good business" leads to "sharp practice" and "sharp practice" to actual dishonesty. Thus, in falling into the line of least resistance, it sometimes comes about that orders are given for work to be executed as day work instead of measured work.

Day work calls for no measuring on the part of the surveyor and ensures peace and quietness for both sides, the employers and employed. The only drawback is the extra cost. Experience proves, however, that this extra cost is a serious item; indeed, it may be taken as a well-attested fact that decorative works, repairs, and alterations connected with a maintenance account cost from 50 to 100 per cent. more if executed as day work instead of measured work.

I am told, however, that it is possible to get work executed as cheaply by day work as by measured work; and I admit that it is possible, but only if the day work were performed by a picked group of conscientious men, properly supervised, and that the prices for "materials" were in correct proportion to the prices for "materials and labour in fixing." The possibility is, however, somewhat remote, especially in connexion with large contracts carried out for public bodies; for it is well known that men do not work so strenuously for the latter as for private individuals.

The proper examination of the contractor's accounts is highly necessary if the expenditure on works of maintenance carried out for public bodies is to be controlled and kept within the required limits.

Efficient examination will reduce expenditure, while inefficient examination, which is always quickly recognised by the contractors, will increase it.

For the benefit of some of the junior members of the profession I venture to name the following rules which should be borne in mind when examining day work accounts :—

1. Watch the proportion of charges for labour and materials.
2. When examining the weekly vouchers note the names of the workmen and the total number of hours charged per day in respect of each man.
3. See that the materials charged for are not in excess of what was required for the work.
4. See that there are no items in the day work accounts which are also charged for in the measured work accounts.
5. See that ample descriptions of the work done by the different men employed in day work are given on the weekly vouchers.
6. Obtain separate vouchers and accounts in connexion with all special works, in order that the cost may be compared with the estimated amounts.
7. In checking the prices of items which are not in the schedule do not be influenced by "sporting charges."

Although in following such rules as the foregoing the total amount of any particular batch of accounts may not be reduced to any large extent, the moral force of the surveyor's queries and investigations would be very far-reaching and of inestimable value to his employers.

The cost of labour in connexion with maintenance frequently becomes abnormal owing to want of forethought and a "penny wise, pound foolish" policy adopted in the construction of buildings.

The want of forethought to which I have referred is frequently apparent from foundations to roof, and nearly always in the treatment and placing of water pipes and cisterns.

It has been stated in an article in an evening paper of February last, when the plumbers were greatly in demand, that "it is only in England that the young tendrils of lead piping twine in peril of the first frost." Poetical, but doubtless true!

Cisterns, too (the indispensable vitals of a building), are frequently exposed to frost and fixed in queer spaces under the roof, where they are inaccessible to any tenant who is not an accomplished gymnast or contortionist. Then, again, leading to the roof space there is the trap-door, which is frequently of mean dimensions, and when a new cistern is required it is found impossible to put one of sufficient size through the opening, rendering it necessary to cut away

ceiling joists and lath and plaster work, and afterwards make good at considerable cost.

Landlords, however, are not all deficient in forethought. Many years ago I met one who had certainly exercised the faculty for the benefit of his tenants. I was negotiating with the object of renting a small house in the country, and while on the spot I raised a question as to the cost of emptying the cesspool—one of those abominations which are still to be found in this XXth century—and the landlord informed me, in a sort of stage whisper, that the cost would be merely a trifling sum, as he had run "an overflow drain from the cesspool to the ditch on the other side of the hedge."

ENGINEERING SOCIETIES.

The Institution of Civil Engineers.

The following is an abstract of a paper read at a meeting of the Institution on "The Works for the Water Supply of Birmingham from Mid-Wales," by Messrs. E. L. Mansergh and W. L. Mansergh, MM.Inst.C.E. :

The Elan supply scheme was originated in 1890 by the late Mr. James Mansergh, F.R.S., M.Inst.C.E., in consequence of the inadequacy of the then existing sources. These, consisting of five local streams and six wells in the new red sandstone, had proved insufficient to meet the needs of the City and district, which then had a population of about 648,000. Investigation having shown that no extension of the local sources would be satisfactory, the Welsh scheme was laid before Parliament in the session of 1892, and the necessary powers were obtained. The watershed of the Elan and Claerwen, which is situated in Radnorshire and Breconshire, has a gross area of about 71 sq. miles, and a mean rainfall of 65 in. The collectable rainfall is estimated by the authors at 37 in., giving an average yield of 102 million gallons per diem. The first instalment only, that is, works for the supply of 25 million gallons per day at Birmingham, and the prescribed quantity of compensation water to the river, namely, 27 million gallons per day, has at present been constructed : but the powers granted cover the full utilisation of the yield of the watershed and works necessary for a total supply of 75 million gallons per day to the City and district.

Three reservoirs have been constructed –the Caban Cöch, which is a combined supply and compensation reservoir, containing 7,815 million gallons, with a dam 122 ft. high ; Pen-y-gareg, for supply only, containing 1,330 million gallons, with a dam 123 ft. high ; and Craig Göch, also for supply only, of 2,000 million gallons, with a dam 120 ft. high. These reservoirs are all on the River Elan, and three more on the Claerwen are contemplated when the demand for water justifies their construction. For one of the latter—the Dol-y-mynach reservoir—the foundations and lower part of the dam have been already built in order to get the work above flood-level of the Caban Cöch reservoir. A submerged dam has also been constructed in Caban Cöch reservoir to maintain such a water level as will charge the aqueduct to Birmingham. From the Claerwen Valley a tunnel has been driven connecting it with the latter reservoir above this submerged dam, in order to bring into supply the dry-weather flow of that river.

The compensation water which has to be discharged into the river day by day in a regular flow has been utilised to produce water under pressure to work a large number of valves in connexion with the Caban Cöch dam and the valve-tower at the head of the aqueduct, and also electricity for lighting and power purposes. The latter is required at the head of the aqueduct in connexion with an installation of roughing-filters, which had to be made in order to free the water from germs which elsewhere had been found to cause deposit in cast-iron pipes. A short permanent line of railway was constructed from the Mid-Wales Railway near Rhayader to the lowest dam, and while the works were in progress some 36 miles of main line and sidings were constantly in use. In addition, a number of ancillary works, such as roads, bridges, culverts, etc., were constructed on the watershed.

The aqueduct, which is nearly 74 miles in length, consists of two main classes of work—conduit in tunnel or cut and cover, and steel or cast-iron pipes under pressure crossing valleys. There are fifteen tunnels with an aggregate length of 12¾ miles, and the cut-and-cover conduit is about 23¾ miles in length. The inverted siphons, of which there are eleven in all, have an aggregate length of nearly 36¾ miles, and the pressures to which they are subject range between about 25 lb. and 250 lb. per square inch. The pipes in the siphons are for the most part of cast-iron, but for pressures over 400 ft. of head welded steel pipes were used. Out of an ultimate total of six lines in each siphon two only have been laid for the first instalment. The ruling gradient for the conduits, which are haystack-shaped, approximately 8 ft. by 8 ft., is 1 in 4,000, and that for the pipe siphons is 1 in 1,760.

At the heads of all the siphons rather elaborate automatic arrangements are made to cut off the water in case of a pipe bursting, and also at the outlet ends to prevent water flowing back under similar circumstances. Sluice-valves, air-valves, and washouts of the usual description are provided on the lines of pipes. With a few exceptions the pipes are carried over all streams and rivers crossed, and this has involved the construction of several large bridges, the chief of which is at the crossing of the River Severn between Bewdley and Arley, where the river itself is spanned by a handsome steel arch of 150 ft. span.

The aqueduct terminates at the Frankley service-reservoir, about 6 miles to the south-west of the centre of the city. This reservoir, which holds a little over 200 million gallons, is semicircular in plan, divided into two segments, it is about 30 ft. deep, and is constructed of concrete lined with asphalt and blue brickwork. Eighteen ordinary slow sand filters, having an aggregate area of about 14 acres, have also been installed, as all the water is filtered before use. Although the top water level of the reservoir, 603 ft. above ordnance datum, is high enough to supply water to the greater part of the city and district by gravitation, for certain parts pumping had to be resorted to. A pumping station is, therefore, provided to raise water to two high-level service reservoirs, the one about ¾ mile to the south and the other about 3½ miles to the north of Frankley reservoir, each of about 1½ million gallons capacity.

The works in the valleys were carried out by direct administration, and the remainder by contract, and the total cost of the whole of the works, including land, was, in round figures, 5,750,000*l*.

The Concrete Institute.

A meeting of the Concrete Institute took place at Denison House, 296, Vauxhall Bridge-road, Westminster, S.W., on April 11, Sir Henry Tanner, C.B., I.S.O., F.R.I.B.A., President, in the chair.

There were elected as members, Messrs. : – H. C. Forder, Westminster; P. L. Francis, Westminster, S.W. : H. Haughton, Westminster, S.W. ; C. B. Ife, Westminster, S.W. ; R. G. Lovell, A.R.I.B.A., Eastbourne ; T. de Courcy Meade, City Engineer, Manchester; E. Meredith, architect and surveyor, Llandrindod Wells ; J. E. Mundell, A.R.I.B.A., London, E.C. ; A. von Osenbruggen, Westminster, S.W. ; A. O. Pitt, Westminster, S.W. ; F. Radcliffe, Little Royd, Huddersfield ; W. C. Thorneley Westminster, S.W. ; B. C. Wheatcroft, Westminster, S.W.

A paper by Mr. Maurice Behar, Civil Engineer (Ecole des Ponts et Chaussees), M.C.I., entitled "The True Bending Moments of Beams with Various Degrees of Fixity," was submitted, of which the following is a synopsis : The object of this paper was to draw the attention of all those concerned with reinforced concrete to the disadvantages which would result from the application of certain theories and formulæ. Special attention was devoted to consideration of the various degrees of fixity of the beams, and examples were set forth in order to establish a comparison from an economical point of view and also from the point of view of safety between the various cases mentioned. Calculations concerning the verification of the strength and stability of beams, slabs, and pillars were given by the author, and special attention was given also to the question of ascertaining the position of the neutral axis in various cases. The paper was mostly of a mathematical character, and had for its principal object the eliciting of views of all those concerned in the design of reinforced concrete in a discussion upon all the subjects dealt with in the paper.

A discussion followed, in which the following took part :—Professor Henry Adams, M.Inst.C.E., M.C.I., R. W. Vawdrey, B.A., Assoc.M.Inst.C.E., M.C.I., Ewart S. Andrews, B.Sc. (Eng.), M.C.I., Morgan E. Yeatman, M.A., M.Am.Soc.C.E., M.C.I., D. Webster Robertson, M.C.I., Herbert E. Steinberg, Assoc.M.Inst.C.E., M.C.I., E. Fiande Etchells, F.Phys.Soc.M.Math.A., A.M.I.Mech.E., M.C.I., and the President.

THE ARCHITECTS' BENEVOLENT SOCIETY.

THE sixty-second annual general meeting of the Architects' Benevolent Society was held on the 11th inst. at the Royal Institute of British Architects. Sir Ernest George, A.R.A., occupied the chair, and among those present were Mr. Guy Dawber, Mr. W. L. Spiers, Mr. Lewis Solomon, Mr. W. Hilton Nash, Mr. A. Saxon Snell, Mr. Edwin T. Hall, and Mr. R. Dircks. In the absence of the Hon. Secretary (Mr. Percivall Currey), through illness, the Treasurer read the annual Report of the Council, as follows :—

"In submitting their sixty-second annual report the Council regret that they have again to record a diminution in the amount of the Society's subscriptions. The difference is small as compared with last year, but it is significant in view of the fact that a special letter of appeal was issued by the President in October to over five thousand architects practising in the United Kingdom. The result of the appeal, although scarcely realising anticipations, increased by new or additional subscriptions the total amount received by 41*l*. 18s. 6d., while the sum of 124*l*. 8s. 6d. was added to the Society's capital from donations received in response to the appeal. The Council feel that the number of contributors on the Society's books (the total number of subscribers is 512) is inadequately representative of so large a profession; they are also assured that the result of advertising, while extending knowledge of the Society, leads to an insufficient return for the expense incurred. It is felt, therefore, that the subscription list must mainly rely for its support upon the efforts of individual members and upon the corporate action of the metropolitan and provincial architectural societies. In this connexion the thanks of the Society are due to Mr. Watson Fothergill, the Local Honorary Secretary of the Nottingham Society of Architects, who secured numerous fresh contributions.

During the year the sum of 1,031*l*. was distributed in relief; 245*l*. being paid to pensioners, while 786*l*. was disbursed in grants among seventy-four applicants. A pension having become vacant, various applications were considered and the annuity was finally granted to the widow of an architect.

The total amount received in subscriptions was 707*l*. 5s. 6d. (as compared with 716*l*. 14s. received in 1910); while the amount received in donations was 295*l*. 14s. (as compared with 109*l*. 15s. received in 1910), including Professor Aitchison's bequest of 90*l*. Donations were also received as follows :—Sir Ernest George 20*l*. and 4*l*. ; Mr. Edgar Wood, 21*l*. ; Mr. Edward B. T'Anson, 15*l*. 15s. ; Mr. Arthur Ashbridge, 10*l*. 10s. ; Mr. Thomas Dinwiddy 10*l*. 10s. ; Mr. Archibald M. Dunn, 10*l*. ; Mr. John Belcher, 5*l*. 5s. ; Mr. John Borrowman 5*l*. 5s. ; Mr. F. W Foster, 5*l*. 5s. ; Mr. Banister Fletcher, 5*l*. 5s. ; Mr. Henry Lovegrove, 5*l*. 5s. ; Mr. W. Hilton Nash, 5*l*. 5s. ; as well as various smaller sums. With the amount carried forward from last account, together with the donations received during the year, the Council were enabled to increase the Society's investments by the purchase of 500*l*. Queensland 3 per cent. inscribed stock at a cost of 424*l*. 14s. 6d.

At the beginning of the present year the family of the late Mr. John T. Christopher presented, through Mr. Freville Christopher, 105*l*. New South Wales 3½ per cent. inscribed stock in memory of their father, who was himself a liberal benefactor of the Society.

It is with great regret that the Council have to record the death of Mr. William Glover and Mr. T. M. Rickman, the two Vice-Presidents of the Society. Mr. Rickman had been a subscriber since 1872; he served on the Council on many occasions, and always took an unfailing interest in its work. The association of Mr. Glover was more recent, but since he came to live in the South of England he took an active part in the progress of the Society, generously contributing himself and influencing the contributions of others, greatly to the advantage of both income and capital.

The following, being the five senior members, retire by rotation from the Council :—Mr. Charles Blomfield, Mr. John Borrowman, Mr. C. R. Baker King, Sir Charles Nicholson, and Mr. G. E. Bond. To fill the vacancies caused by these retirements the Council have the

re to nominate Mr. Henry Lovegrove, . Arden Minty, Mr. Rowland Plumbe, William Woodward, and the President of ciety of Architects.

Council have the pleasure to nominate Henry L. Florence for election as Vice-lent.

thanks of the Society are due to the Institute of British Architects for office modation and to the staff of the Institute sistance, always cordially rendered, in atter connected with the Society."

e Chairman, in moving the adoption of eport, announced numerous recent dona- including a legacy of 200*l.*, free of from the late Mr. T. M. Rickman, and rom the Society of Architects.

e Council for the ensuing year of office elected as follows :

ne President—the President of the .A.: Vice-President—Mr. Henry L. nce. Sir A. Brumwell Thomas, Mr. r Cave, Mr F. W. Hunt, Mr. Reginald Roumieu, Mr. Lewis Solomon, Mr. T. E. att, Mr. George Hubbard, Mr. E. B. on. Mr. A. Saxon Snell, Mr. W. L. s, Mr. Henry Lovegrove, Mr. E. Arden r, Mr. Rowland Plumbe, Mr. William ward, and the President of the Society chitects."

the motion of Mr. Lewis Solomon, ded by Mr. Henry Lovegrove, Mr. W. n Nash was thanked for his past ces, and re-elected as Hon. Treasurer.

. Nash, in acknowledging his re-elec- said that he would like to see a larger ription list. The response to the t letter of appeal of the Presi- (Mr. Leonard Stokes) had scarcely ered expectations. The number of s on the Society did not diminish year ar, and he hoped that all architects who afford to do so would contribute to a ty which sought to alleviate the necessi- f their poorer brethren.

. Percivall Currey was re-elected Hon. tary, and a resolution expressing sym- with him in his illness was unanimously ed.

. C. H. Brodie and Mr. Henry Love- were thanked for their services as ors.

ilar compliments having been paid to rnest George for presiding, and to Mr. s for his work on behalf of the Society, eeting terminated.

BOOKS.

Legislation, 1909 *to* 1911. Being a Col- ion of Provisions contained in Private ts of Parliament obtained by Provincial rporations and Urban District Councils England and Wales after Consideration the Local Legislation Committee of the use of Commons. Compiled and arranged Frank Noel Keen, LL.B., Barrister-at- w, with an Introduction by Sir Charles cholson, Bart., M.P. (London : Walter uthwood & Co. 1912. Pp. 340. 5s.)

n interesting Introduction to this work, harles Nicholson points out the import- art which the local legislation passed rivate Bill procedure takes in the forma- of the general law of the country. A private measure, he says, which proves ssful in some provincial centre may be ded to other areas, and finally the iples it embodies may obtain universal ion in the form of a Public Statute. his evolution of the law Sir Charles ins the important functions performed hat is now known as the Local Legisla- Committee of the House of Commons. ever this may be, the drawback attend- ll Private Bill procedure is the lack of city given to legislation of this character the difficulty of obtaining Private Acts eference and of appreciating the trend of enactments, and the author of this work lone something to obviate this objection. reats of the Private Acts obtained in Sessions 1909-11 inclusive, showing the of the legislation as procured by the us local authorities. He points out in Preface that, of course, he has only ded Acts or sections of Acts which are me general interest, or which partake e nature of Government regulations, but xcluded those relating to purely local ers or temporary in their application.

The work is divided into fifteen parts, with paragraphs in each part. Each part indicates the general subject-matter treated of, whilst the paragraphs show the effect of the Acts upon various branches of the subject-matter, and there is an index—so reference is made easy. The terms of the sections of the Acts are set out, but the reference to the Acts are given thus : "Chiswick, 1911, sect. 81." For general purposes the form of reference may prove sufficient, but for future editions we may suggest that possibly a reference to the chapters of the Acts referred to might be useful. We make this suggestion because we imagine that this work will prove especially acceptable to the clerks of the various local authorities, and an exact reference to the Acts which they may wish to procure would even enhance its value.

The publication of this volume may assist in a codification of local laws, which is an end to be desired, besides providing information which at present it is difficult to obtain, and possibly it may prove the first of an annual or triennial compilation of local private legislation.

The Workmen's Compensation Act, 1906, *with Notes, Rules, Orders, and Regulations.* By W. Addington Willis, LL.B. (London), Barrister-at-Law. Twelfth Edition. (London : Butterworth & Co.; Shaw & Sons. 1912. Pp. 358. 5s. net.)

We are not surprised to see that Mr. Willis has found it necessary to issue a further edition of his work upon workmen's compensation—the third edition which has appeared since the Act of 1906 first came into force. This is one of the most condensed treatises on the subject which we know of, but efficiency has in no way been sacrificed to brevity, and the author offers the legal profession and the general public a thoroughly practical handbook on this complicated branch of law in a most handy form and at an extraordinarily low price. In this edition the English and Irish decisions are brought into line down to January 6 of this year, and the Scottish decisions to December 20, 1911. We remember that in former editions the author expressed the opinion that the Act of 1906 would sweep away many of the incongruities created by the former statutes, but it has certainly not done away with the necessity of litigation, and in his Preface the author states that 153 new decisions have had to be noted since the appearance of his last edition in November, 1910. In this edition the index has been revised, and there is a note on the National Insurance Act. One of the provisions of the Insurance Act relieves the Insurance Fund from paying insurance to persons who are incapacitated by accident or sickness when they are in receipt of, or could take proceedings to recover, compensation under the Workmen's Compensation Act of an amount equal to, or greater than, the insurance benefit in repsect of such incapacity or sickness.

There is every reason to believe that this twelfth edition of this work will prove as popular and useful as its predecessors.

Butterworth's Workmen's Compensation Cases. Vol. V. Quarterly Advance Sheets, Part I. 1912. Edited by Douglas Knocker, Barrister-at-Law. London : Butterworth & Co. 1912. 195 pp. 7s. 6d.)

This volume of advance sheets forms the commencement of Volume V. of "Butterworth's Workmen's Compensation Cases," New Series, and it is a comment on this branch of the law that this first part contains some seventy-four decisions of the House of Lords and the Court of Appeal, all of which were delivered between October and November, 1911. The litigation under the new Act of 1906 shows no signs of diminishing, and the general public owe the textbook writers a debt of gratitude for the means they provide of unravelling the intricacies of an Act of Parliament. These advance sheets at the earliest possible date provide an authoritative report of the latest decisions, and their usefulness has been abundantly demonstrated.

Practical Sewerage and Sewage Disposal. By H. C. H. Shenton, F.S.E., etc. (London : Edgecumbe Rogers. Pp 148, Illustrations 12. 3s. 6d. net.)

Into a very small space Mr. Shenton has contrived to compress a large amount of information and practical advice, and his book will prove itself valuable both as an excellent introduction to the problems of sewage conveyance and disposal and, not infrequently, as a book of reference for the practising engineer. The author's aim throughout has been to eliminate all purely theoretical matter having no directly practical bearing on his subject, and to confine himself to a thoroughly practical consideration of the problems ordinarily encountered in designing sewerage works. Commencing with a careful summary of the factors governing the laying out of a new system, several chapters are devoted to the geological character of the ground, the sites available for outfalls, and the methods of crossing rivers and valleys, etc., and useful notes are included as to the data required by the engineer and the legal method of procedure. The design, construction, and maintenance of the ordinary types of sewers are considered, and the various accessories, such as access chambers, syphons, and lifting apparatus are fully described. The question of disposal is dealt with in the later part of the book, and the alternative systems and appliances are dealt with from an eminently practical standpoint.

Pocket Notes and Remembrancer for Sanitary Inspectors, etc. By J. T. Cowderoy. (London : The Sanitary Publishing Company, Ltd. Pp. 135. 2s. net.)

The fourth edition of this book has recently been published, and the author has subjected it to considerable revision in order to bring it into line with recent legislation and litigation, and to add sundry notes and helps which will doubtless often prove serviceable. The greatest difficulty in compiling a handbook of this kind is to so classify and index the contents that the information desired can be quickly traced; the arrangement of the matter is in this case all that could be wished for, and we are not surprised that previous editions have proved popular.

The subjects dealt with are extremely varied, ranging from the allotment of burial-ground to a list of slang terms used in the cattle trade, and including notes on the inspector's duty in regard to unhealthy dwellings, public nuisances, powers of entry of premises, the provisions of the Town Planning and the Childrens Acts, cattle diseases, and so on. We can warmly commend the book to those who are entrusted with the duty of safeguarding the public health.

The Precise Calculation of Pipe, Drain, and Sewer Dimensions. By C. E. Houseden. (London : Longmans, Green, & Co. Pp. 53, Illustrations 4. 2s. 6d. net.)

The purpose of the book is to provide engineers and sanitary contractors with the necesary formulæ and tables arranged in a convenient form for making precise calculations as to the flow of liquids in pipes and sewers, thus enabling them to make use of the smallest and therefore the most economical sections. A number of examples are given typical of various classes of work to illustrate the use of the formulæ and tables, and some useful additional technical information is given in appendix form.

Infectious Diseases and their Preventive Treatment. By E. C. Seaton, M.D. (University of London Press. 1911. 7s. 6d. net. Pp. 210.)

This is a work for the use of county, borough, and district councils, joint hospital boards, other public bodies, and their officials, and it deals with phthisis, scarlet fever, diphtheria, typhoid fever, and smallpox. The procedure for notification and isolation is considered in detail, and the influence of the legislation of recent years is indicated by numerous statistical diagrams. It does not deal in detail with questions of hospital design, but points out, in the chapter on public health organisation, some of the main essentials in the way of water supply and sewage disposal, housing, and other social demands.

Building Construction and Architectural Drawing. By JOHN A. REID. (London and Glasgow: Blackie & Son. 4s. net.)

THIS is a portfolio containing some eighteen plates, showing the details of customary sound building construction, reproduced for the most part to ¼-in. scale. The drawing is careful, thorough, and clear, and the notes are in printing of unexceptionable quality—a point of much importance, since those who use the portfolio will tend to adopt its style. The notes accompanying the portfolio and explaining the plates are concentrated but adequate, and avoid the dulness and prolixity and the tendency to make a long story of a very simple business, which is so often found in books on construction. The pamphlet of works is prefaced by Mr. F. H. Newbery, the Director of the Glasgow School of Art, warmly commending Mr. Reid, an old pupil, and now an instructor in the School. Though the production is intended, we gather, primarily for the apprentices of the various trades, we can confidently recommend it to architectural students and to the professors and demonstrators of architectural schools as an exceedingly handy (and moderately-priced) elbow manual.

LEGAL COLUMN.

The London Building Act: Government Buildings.

The case of Dellar Brothers *v.* Drury, reported at length in our columns last week, raised an important question under the London Building Act, 1894. The Territorial Forces Association employed Messrs. Dellar to erect an iron shed on a piece of land according to plans approved by an officer of the Association. It was admitted that the building infringed the provisions of the London Building Act. On March 28 Messrs. Dellar served a building notice on the respondent, the District Surveyor for Westminster. On March 31 the respondent served a notice of irregularity on Messrs. Dellar, under sect. 151. As this notice was not complied with, a summons under sect. 153 was applied for on April 5. This summons did not come on for hearing until July 20, when the magistrate made an order that Messrs. Dellar should comply with the notice, but stated a special case for decision by the Divisional Court. The magistrate found that the building was vested in the Territorial Association on April 5, and occupied by them a few weeks later. The question to be decided was whether the building came under the exemption contained in sect. 202. by a misprint quoted in our report as sect. 22. This exemption is as follows:—"Every building structure or work vested in and in the occupation of her Majesty, her heirs and successors, either beneficially or as part of the hereditary revenues of the Crown, or in trust for the public service, or for public services," shall be exempted from so much of the Act as relates to buildings and structures.

It does not seem to have been contended that the Territorial Association did not come within this exemption, the contention being that at the time the summons was issued the building was not vested in and in the occupation of the Association, and at that time Messrs. Dellar were not servants of the Crown. The Court held that what had to be regarded was not the date of the summons, but the date of the order, and as at the date of the order, July 20, the Crown was in occupation of the building, the magistrate had no power then to issue an order under sect. 153 for demolishing the building.

The decision appears not free from difficulty, as ordinarily the date of an offence is that which is regarded, not the date of an order dealing with that offence; but the circumstances of the case are unusual.

LONDON COUNCILS.

Finchley.—Application is to be made to the Local Government Board for sanction to borrow 1,650*l.* for the erection of a convenience at Tally-Ho, and tenders are to be invited for the work. The following plans have been passed:—Alliance Estates and Development Company, eighteen houses, Woodhouse-road; Metropolitan Tramways Company, additions, tramway depôt, Woodberry-grove; Mr. W. Peachy, seven houses, Etchingham Park-road.

Friern Barnet.—The Local Government Board are to be asked to sanction a loan for the making-up of Hollyfield-avenue.

Heston and Isleworth.—The Education Committee have approved sketch plans prepared by the Borough Surveyor for the erection of a school to accommodate 800 children.

Richmond.—At the last meeting of the Council plans were approved for the construction of a surface water sewer in Kew-road at an estimated cost of 960*l.*

Southwark.—Plans have been lodged with the London County Council for the erection of a building in Orange-street by Messrs. F. J. Eedle & Myers, 3, Railway-approach, London Bridge, S.E.

TRADE CATALOGUES.

Among the cleverest adaptations of reinforced concrete is the Keppler patent system for pavement, roof, floor, and stallboard lights. "Ferro-Glass," as it is named, is described and illustrated in a leaflet which Messrs. J. A. King & Co., of 181, Queen Victoria-street, have recently sent us. In place of glass prisms fixed in cast or wrought iron frames, the expansion and contraction of which causes internal stresses in the glass, the prisms under the new system are supported by concrete beams, reinforced by a single steel rod. By the old method a certain proportion of the light was intercepted by the iron parts projecting at the side and below each rib; each tile in the "Ferro-Glass" system is so shaped as to overlap and cover the lower portion of the rib. The lower side of the light can thus be cleaned with great facility, offering, as it does, one continuous surface, and, of course, no painting is required as in the case of iron-framed lights of the ordinary description, there being no exposed metal to rust. Roof lights constructed on this system have the great advantage that they lie in the same plane on the roof, and do not form any angles, in which snow and rain water can collect and cause leakage. "Ferro-Glass" has great bearing capacity, and is offered at very favourable prices. It has been adopted at the Houses of Parliament, Somerset House, Messrs. Whiteley's new premises in Queen's-road, W., the Hotel Cecil, and many other important buildings in London and the provinces.

"Ronuk," Ltd., of 16, South Molton-street, London, W., Portslade, and Manchester, send us a leaflet dealing with the well-known sanitary polish manufactured by them. "Ronuk" has been used for some years as a floor polish by many of the large hospitals and public institutions, and has received the approbation and patronage of leading and medical authorities. It is also regularly used in the Royal Palace, and in a large number of private houses and mansions in town and country. By its use scrubbing and the resulting dampness are dispensed with, and the pores of the wood are filled up, a hard, bright, durable surface being formed, in which germs can find no harbouring, and which can be cleansed and kept in order with little labour and cost. The company contract for the maintenance of the polished flooring at the National Gallery, the National Portrait Gallery, Hertford House, the Tate Gallery, St. Bartholomew's Hospital, King's College Hospital, St. Mary's Hospital, St. George's Hospital, etc. Similar contracts may be entered into in the case of private houses.

PATENTS.

APPLICATIONS PUBLISHED *

21,937 of 1910.—William Alexander Harrison: Roller blinds or awnings.

7,062 of 1911.—Ralph John Seager Smith: Fastening or holder for doors, casements, and other hinged or pivoted lights and ventilators.

9,356 of 1911.—L. G. Mouchel & Partners, Ltd., and Harry William Towse: Pile foundations.

9,835 of 1911.—George Mahlik: Cowl for chimneys and ventilating flues.

11,157 of 1911.—James Keith: Method and system of ventilation.

11,870 of 1911.—Giuseppe Andina and John William Bottomley: Continuous kilns for burning or firing bricks, tiles, or other earthenware, fireclay, or like goods.

* All these applications are in the stage in which opposition to the grant of Patents upon them can be made.

14,252 of 1911.—Hermann Jost: Ma marble-like patterns on smooth transpa plates.

15,403 of 1911.—Tom Davies: Rever sash-window.

16,356 of 1911.—George Looms: Cord rope grips or holding devices.

22,191 of 1911.—Emil Norbert Kupfe Burglar alarms for doors and the lik

22,448 of 1911.—Franz Scherrer: Fire esc

25,789 of 1911.—Ferdinand Burchartz: Fl and ceilings.

26,444 of 1911.—Jean Marius Renau Hinged seats for closets and the like.

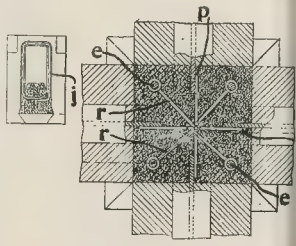
897 of 1912.—Frank Wallis Chicker Ladder hooks.

1,080 of 1912.—Dronard Freres: Device the automatic separation, cleansing, and l ing of the sand raised in dredging grave

SELECTED PATENTS.

25,083 of 1910.—Frederick Dan Hunting Beams.

This relates to building construction, wh in the junction, over a column, of be formed of concrete saddle-shaped blocks str on a metal joist is effected by bars *p* bo to the webs and rods *r* hooked over bars *p* and provided with eyes to engage

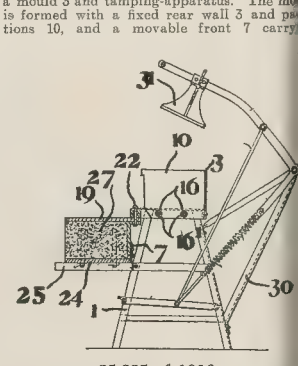


25,083 of 1910.

column bars *e*; the space over the colum then filled in with cement. The beam bl have sloping joints, which are grooved provided with shear members *j*, engag the metal joists; the interior of the block filled with grouting, through holes provi for this purpose.

25,625 of 1910.—Cyrus Sylvester We Moulding bricks.

This relates to a brick-moulding machi which comprises a framework 1 suppor a mould 3 and tamping-apparatus. The mo is formed with a fixed rear wall 3 and pa tions 10, and a movable front 7 carry



25,625 of 1910.

facing-plates 19, adapted to fit between t partitions. The partitions 10 are adjusta fixed by means of tongues engaging slots the rear wall 3, and by collars 16[1] on rods Material having been fed into the mou compartments and pressed, a pallet 24 placed over the mould beneath hooks 27 carri by the front 7, and the movable part of t mould is turned completely over about shaft 22 until the pallet rests upon arms The tamping mechanism comprises plung 31 carried by arms pivoted to a framewo 30, and connected by links to a tread Springs normally retain the plungers in inoperative position.

List of Competitions, Contracts, etc.

For some Contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) are advertised in this number:** Competitions, —; Contracts, iv. vi. viii. x.; Public Appointment, xvi.; Auction Sales, xxii.

Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Competitions.

PRIL 20.—**Birmingham.**—BLUE COAT SCHOOL. imited to local architects. Assessors, Mr. H. Hunt, F.R.I.B.A., and Mr. C. E. Bateman, F.R.I.B.A. Particulars from the Secre-y, the Blue Coat School, Birmingham.

AY 1.—**Rhos Ruabon.**—PAIR OF WORKMEN'S TTAGES.—Premiums of 10*l.* and 5*l.* Assessor, Raymond Unwin, F.R.I.B.A. Particulars n Mr. G. Meirion Griffiths, Rhos Ruabon.

AY 1. — **Wombwell.**—SWIMMING BATHS.— Wombwell U.D.C. invite designs in competition for public swimming baths, to be cted in Hough-lane, Wombwell, Yorkshire. ree prizes of the value of 40*l.*, 30*l.*, and 20*l.* pectively are offered for the designs placed t, second and third respectively by the ssor. See advertisement in issue of ruary 16 for further particulars.

AY 11.—**Hastings.**—SUNK ARENA AND BANDND. —Cost not to exceed 4,500*l.* Premiums, and 10 guineas. Particulars from the Town rk, Hastings. (See page 445.)

AY 15.—**Portland.**—COUNCIL OFFICES.—The tland U.D.C invite competitive designs and as for Council Offices. See advertisement in e of March 8 for further particulars.

AY 22.—**Southend-on-Sea.**—HAMSTEL COUNCIL TOOL.—Architects practising in the borough y. Premiums, 25*l.*, 15*l.*, and 10*l.* Particulars n the Education Office, Municipal Buildings, thend-on-Sea.

NE 1.—**Dunfermline.**—INSTITUTE AT NETHERN.—Cost not to exceed 7,000*l.* Premiums of 15*l.*, and 10*l.* Assessor, Mr. E. A. Jamieson. ticulars from the Secretary, Carnegie Trust, ot-street, Dunfermline.

NE 3.—**Sheffield.**—CRIPPLES' HOME.— ited to local architects. Mr. E. M. Gibbs, .I.B.A., and Mr. F. E. P. Edwards, .I.B.A., assessors.

NE 14.—**Regent's Quadrant.**—DESIGN FOR ATMENT.—Premiums, 25 guineas and 25 guineas ded. Adjudicators, Mr. E. A. Rickards and Alen E. Munby. See "Competition News" ge 453).

NE 28.—**Hale, Cheshire.**—TOWN PLANNING EME.—Premiums 50*l.* and 25*l.* Particulars n the Council Offices, Hale.

NE 30.—**Padiham.**—TOWN HALL, BATHS, ETC. remiums 40*l.* and 20*l.* Particulars from Mr. Gregson, A.M.Inst.C.E., Surveyor's Office, iham.

LY 1. — **Dusseldorf.** — A plan for the nsion of the City of Dusseldorf. Premiums ,000*l.* to 375*l.* Conditions on application to Chief Burgomaster, Dusseldorf. A translaappeared on page 365, September 29.

LY 1.—**Port of London.**—NEW OFFICES.— ited to those mentioned in "Competition s," issue of April 12 (page 424).

UGUST 30. — SAXON SNELL PRIZE. — Fifty neas; with medal, is offered for essay on a pital subject. Particulars from the Sanitary itute, 90, Buckingham Palace-road, S.W.

) DATE.—**Birmingham.**—BATHS.—Twenty and uineas for second and third designs. Applions for conditions to be sent to the Superndent Engineer, Kent-street, Birmingham.

) DATE. — **Cardiff.** — FOOTBALL STANDS.—Preums 30*l.*, 20*l.*, and 10*l.* Particulars from C. S. Arthur, 53, Queen-street, Cardiff.

) DATE.—**Jordanhill, Glasgow.**—PROPOSED NING COLLEGE.—Limited to six firms, named ompetition News, December 1, page 635.

) DATE. — **Warrington.** — SCHOOL. — The rington Education Committee invite competive plans for the erection of a public entary school. See advertisement in issue ebruary 16 for further particulars.

Contracts.

BUILDING.

The date given at the commencement of each paragraph is the latest date when the tender, or names of those willing to submit tenders, to be sent in.

PRIL 20.—**Cilfowyr.**—REPAIRS.—For repairs to wyr Chapel. Specifications and particulars Mr. J. Teifion J. Williams, architect, ver-street, Cardigan.

PRIL 20.—**Dewsbury.**—ADDITIONS.—For additi to Spring Foundry, for Messrs. William es & Sons, Ltd. Drawings and specifications and quantities from Messrs. Joseph Firth ne, architects, 67, Vulcan-road, Dewsbury.

PRIL 20. **Wolvercote.** ADDITIONS. For erecof additions to school. Plans and specificaseen, and quantities, on deposit of 1*l.* 1s., from Mr. S. Stallard, County Surveyor, 9, Newroad, Oxford.

APRIL 21.—**Ballinasloe.** REPAIRS.—For repairs to St. Michael's Church, Ballinasloe. Specification with Messrs. William H. Byrne & Son, architects, 20, Suffolk-street, Dublin

APRIL 22. **Belfast.** OFFICES.—Erection of offices, for Messrs. Thos. Dixon & Sons, Ltd., at Milewater-road, Belfast. Plans and specification from Mr. A. B. Wilson, Maryville, Malone, Belfast.

APRIL 22. **Bristol.**—SHELTER.—For erection of a shelter at Dame Emily playground, Dean-lane, Bedminster. Drawings, general conditions, and specification at 63, Queen-square, and quantities, on deposit of 2*l.* 2s., from Mr. L. S. McKenzie, A.M.Inst.C.E., City Engineer and Surveyor.

APRIL 22. **Chatham.** STATION.—Erection of a stamping station for weighs and measures. Plan, specification, and quantities from the County Architect, 86, Week-street, Maidstone.

APRIL 22. **Edinburgh.**—HOUSE, ETC.—Erection of a small house and steading on Muriestion Estate. Plans seen, and quantities and form of tender from Mr. Arch. Campbell, S.S.C., Clerk to the Committee, 18, Duke-street, Edinburgh.

APRIL 22. **Tonypandy.**—PREMISES.—For rebuilding of business premises, Dunraven-street. Plans and specification seen, and quantities, on deposit of 1*l.* 1s., from Messrs. Gibson, Parry Williams, & Co., architects and surveyors, Capital and Counties Bank-chambers, Pontypridd.

APRIL 23. **Banbury.**—COTTAGE.—The Great Western Railway invite tenders for the erection of a cottage at Fritwell and Somerton Station, near Banbury. Plans and specification seen, and forms of tender, at the office of the Engineer at Wolverhampton Station.

APRIL 23.—**Birmingham.**—HOUSE, ETC.—For the rebuilding of the engine-house and shopping, at the Guardians' Institution, Western-road. Quantities, on deposit of 5*l.* 5s., to Messrs. W. H. Ward, architects, Paradise-street.

APRIL 23.—**Chudleigh.**—FARMHOUSE. Erection of a farmhouse at Northwood, Chudleigh. Plans and specifications with Mr. Saml. Segar, F.I.A.S., architect, Nos. 24 and 26, Union-street, Newton Abbot.

APRIL 23.—**Leeds.**—ALTERATIONS.—For structural alterations to the Town Hall. Plans and specifications seen, and quantities, with form of tender, from the architects, Messrs. Perkin & Bulmer, City-chambers, Infirmary-street, Leeds. Deposit of 2*l.* 2s.

APRIL 23.—**Leeds.**—CONVENIENCES.—For construction of public conveniences in the Corn Exchange. Drawing and specification seen, and form of tender with quantities, from Mr. W. T. Lancashire, City Engineer, Municipal-buildings, Leeds.

APRIL 24.—**Cargo Fleet.**—SCHOOL.—Erection of new school, and alterations to the existing Cargo Fleet Lawson Schools. Quantities with Mr. W. E. Haslock, architect, 143, Albert-road, Middlesbrough.

APRIL 24.—**Elgin.**—ROOM.—For erection of new manual instruction-room at the West End school. Plans and specification with Mr. J. Wittet, architect, Elgin.

APRIL 24. **Harwich.** — ALTERATIONS. — For alterations to the central and other schools in the borough. Mr. G. D. Hugh-Jones, Secretary to the Education Committee.

APRIL 24.—**Loddiswell.**—ADDITIONS, ETC.—For alterations and additions to Wrinkley Farmhouse, close to Loddiswell Railway Station. Plan and specification at Wrinkley Farm. Messrs. William Pearse & Son, land agents, auctioneers, and surveyors, Modbury.

APRIL 24.—**London, etc.**—REPAIRS, ETC. The Metropolitan Asylums Board invite separate tenders for works at the following institutions:—(1) Northern Convalescent Fever Hospital, Winchmore Hill, N., repairs to roads and tarpaving; (2) South-Western Fever Hospital, Landor-road, Stockwell, S.W., road and paving repairs, etc.; (3) East Cliff House, Clifton-vlle, Margate, cleaning and painting works; (4) Darenth Asylum, near Dartford, Kent, taking down and rebuilding chimneystacks. Drawings and specifications by Mr. W. T. Hatch, M.Inst.C.E., M.Inst.Mech.E., Engineer-in-Chief, at the Office of the Board, Embankment, E.C. Deposit of 1*l.* in each case.

APRIL 24.—**Penkhall.**—ADDITIONS.—For alterations and additions at the Cottage Homes laundry. Plans seen, and quantities from the architect, Mr. A. Raymond Piercy, Union Offices, Stoke-on-Trent.

* APRIL 24.—**Southminster.**—DRILL-HALL, ETC.—The Essex County Territorial Force Association invite tenders for erection of drill-hall, instructor's quarters, stores, etc. See advertisement in this issue for further particulars.

APRIL 25.—**Blackshaw.**—ALTERATIONS.—For alterations at the Blackshawhead Wesleyan Sunday school. Plans and specifications at Mr. J. W. Tidswell's, Highgate Farm, Blackshaw.

APRIL 25. **Cardiff.**—WALL, ETC.—For construction of a masonry retaining wall and road widening at Fairoak-road. Drawings and specification seen, and forms of tender, with quantities, at the City Engineer's Office, City Hall.

APRIL 25.—**Climping.**—GROYNES, ETC.—For erection of three groynes and repairs to existing groynes on the foreshore at Climping, Sussex. Specification and plan with Mr. A. Holmes, Clerk, Arundel.

APRIL 25.—**Doncaster.**—CLUB.—For erection of a working-men's club, Adwick-le-Street. Plans seen, and quantities from Mr. P. A. Hinchcliffe, A.R.I.B.A., architect, 14, Regent-street, Barnsley.

APRIL 25.—**Kingston-upon-Hull.**—HOSPITAL.—Erection of a hospital at the Workhouse, Anlaby-road, Hull. Plans and specifications seen, and particulars obtained from the architect, Mr. T. Beecroft Atkinson, 11, Trinity Houselane, Hull. Deposit of 1*l.* 1s. for quantities.

APRIL 25. **Laskiraguc.**—HOUSE.—For erection of dwelling house at Laskiraguc, Ovens, Co. Cork. Plans and specifications with the architect, Mr. Samuel F. Hynes, F.R.I.B.A., 5, Southmall, Cork.

APRIL 26.—**Egham.**—ADDITIONS, ETC.—For building new discharge block and additions to the present receiving wards at the Isolation hospital, Englefield Green, Egham. Plans and specifications with the architects, Messrs. W. & Geo. Gray, High-street, Egham.

APRIL 26.—**Glossop.**—SCHOOL.—Erection of proposed new Council school, off Pikee-lane. Drawings and conditions with the architect, Mr. H. Cooper Anderson, A.R.I.B.A., 3, Longford-street, Heywood. Quantities on deposit of 3*l.* 3s.

APRIL 26. **Lichfield.**—INSTALLATION.—For a tar-macadam installation, to be worked in conjunction with a refuse destructor. Particulars from Mr. W. B. Chancellor, City Engineer, the Guildhall, Lichfield.

APRIL 26.—**Rothwell Stourton.**—SCHOOL.—For erection of a new school. Plans seen, and specifications, with quantities, from the Education Architect, County Hall, Wakefield. Deposit of 1*l.*

APRIL 26. **Southgate.** DWELLINGS.—Erection of sixteen workmen's dwellings at Chelmsford-road, and twenty workmen's dwellings at Chaseroad, The Chase, Southgate. Plans at the Council Offices, Palmer's Green, and forms of tender and specification from the Council's Surveyor, Mr. C. G. Lawson, on depositing 2*l.*

APRIL 27. **Bridestowe.**—COTTAGE.—Erection of a keeper's cottage, Leawood, Bridestowe, Devon. Plans and specifications with Mr. John Hobbs, Bridhayes, Bridestowe.

APRIL 27.—**Coventry.**—LIBRARIES.—Erection of three Branch Public Libraries, situate at Earlsdon, Foleshill, and Stoke. Drawings, conditions of contract, and specification seen, and forms of tender and quantities from Mr. J. E. Swindlehurst, City Engineer and Surveyor, St. Mary's Hall, Coventry. Deposit of 2*l.* 2s.

APRIL 27.—**Crediton.**—ADDITIONS, ETC.—For erection of a dressing-room, lavatory, and covered playground at the school. Plans and specification with Mr. S. Dobell, architect, of Exeter.

APRIL 29. — **Bradford.** — CONVENIENCES.—For reconstruction of conveniences, etc., at the Tyersal School. Drawings and general conditions of contract seen, and quantities and form of tender from the City Architect, Town Hall, Bradford.

APRIL 29.—**Ipswich, etc.**—SCHOOL, ETC.—Erection of new public elementary school at Otley, near Ipswich; a new classroom at Kettleburgh Council School, near Framlingham. Plans, specifications, and forms of tender with Mr. J. Webb, the Committee's Surveyor, Education Office, County Hall, Ipswich. Deposit of 1*l.* 1s.

APRIL 29.—**Widnes.**—REBUILDING, ETC.—For alterations and rebuilding of a portion of the present Farnworth Grammar School. Particulars and quantities on deposit of 1*l.*, from the Architect to the Committee, Mr. F. U. Holme, 11, Westminster-chambers, 1, Crosshall-street, Liverpool.

APRIL 30. — **Eltham.** — HOSTELS, ETC. — The London C.C. invites tenders for the erection of hostels and kitchen block, the adaption of Southwood House as a permanent hostel, etc., on the Avery-hill College site, Eltham, Kent. Drawings, specifications, quantities, form of tender, etc., at the Superintending Architect's Department, 19, Charing Cross-road, W.C. Deposit of 3*l.*

APRIL 30.—**Taunton.**—HOUSES, ETC.—Erection of seven houses, etc., in Greenway-road. Plans and specifications from Messrs. Sprankling & Price, Lics.R.I.B.A., architects, 16, Hammetstreet, Taunton.

APRIL 30.—**Thetford.**—DWELLINGS.—Erection of fifty workmen's dwellings, new roads, and

BUILDING—*continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

sewers, etc., on Bury-road, Thetford. Drawings and conditions of contract seen, and quantities from the architect, Mr. Stanley J. Wearing, A.R.I.B.A., 15, Upper King-street, Norwich, on deposit of 1*l.* 1s.

APRIL 30.—**Whitecroft.** HOUSE.—For erection of a house at the Isle of Wight County Asylum, Whitecroft. Plans and specifications with Mr. S. Cocks, County Surveyor, Ryde.

✱ MAY 2.—**London, E.**—BUILDING TRENCHES.—The Guardians of Mile End Old Town invite tenders for excavating and building trenches for a hot-water and heating system at Workhouse, Bancroft-road, Mile End, E. See advertisement in this issue for further particulars.

✱ MAY 2. **London, S.E.**—FLOORING.—The Guardians of the Southwark Union invite tenders for renewing an existing floor, etc., at St. George's Workhouse, Mint-street, S.E. See advertisement in this issue for further particulars.

MAY 4.—**Chirk.**—HALL, ETC.—For the construction of a drill-hall, caretaker's house, miniature rifle range, and buildings at Chirk, Denbighshire, for the 4th Battalion Royal Welsh Fusiliers. Drawings, specifications, and form of contract with the Association's Architect, Mr. C. D. Rutter, M.S.A., Parr's Bank-chambers, Wrexham. Quantities and form of tender on deposit of 1*l.* 1s.

✱ MAY 4.—**Denbighshire.**—DRILL-HALL, ETC.—The Denbighshire Territorial Force Association invite tenders for drill-hall, etc., at Chirk. See advertisement in this issue for further particulars.

MAY 6. — **Farnborough.** — ADDITIONS ETC. — Erection of new buildings at Workhouse, Farnborough, including new receiving wards, new able-bodied test-house, etc., and alterations and adaptations of the existing Workhouse buildings. Plans and specifications with the architect, Mr. Francis J. Smith, F.R.I.B.A., Parliament-mansions, Victoria-street, London, S.W. Deposit of 5*l.*

MAY 7.—**Bristol.**—PAVILION, ETC. For erection of a new pavilion and other buildings at the Bristol General Hospital. Drawings and specifications seen, and quantities from Messrs. Oatley & Lawrence, architects, 25, Orchard-street, Bristol. Deposit of 10*l.*

MAY 7.—**Heptonstall.**—ADDITIONS, ETC.—For erection of additions and alterations to Jack Bridge Mill, Heptonstall. Plans and specifications seen, and quantities from Messrs. Sutcliffe & Sutcliffe, F.S.I., architects, New-road, Hebden Bridge.

✱ MAY 9. — **Southend-on-Sea.** — DESTRUCTOR CHIMNEY.—The Southend-on-Sea Corporation invite tenders for a furnace chimney at the sewage-disposal works. See advertisement in this issue for further particulars.

NO DATE.—**Apperley Bridge.**—ROOMS, ETC For erection of dining-rooms, recreation-rooms, lavatories, kitchens, etc., at Dyehouse Mills, Apperley Bridge, near Bradford. Mr. J. H. Bakes, M.S.A., architect and surveyor, Calverley-chambers, Victoria-square, Leeds.

NO DATE.—**Chaples.**—HOUSES.—For rebuilding seven houses at Chaples, Kirkby-in Furness. Plans and quantities with Messrs. J. W. Grundy & Son, Lic.R.I.B.A., architects and surveyors, Central-buildings, Ulverston.

NO DATE.—**Diss.**—TOWER, ETC.—Restoration of the tower and other work at Winfarthing Church, Diss, Norfolk. Particulars from Messrs. Lacy & Upcher, architects, Norwich.

NO DATE.—**Doncaster.**—ARCADE.—Erection of a Royal Arcade. Quantities, on deposit of 1*l.* 1s., from Mr. Percy Robinson, F.R.I.B.A., architect and surveyor, 15, Priory-place, Doncaster

NO DATE.—**Eastgate.**—STABLES, ETC.—Erection of proposed slaughtery premises and stables at Eastgate, Worksop. Quantities from the architect, Mr. F. E. L. Harris, A.R.I.B.A., the Co-operative Wholesale Society, Ltd., Balloon-street, Manchester. Deposit of 1*l.* 1s.

NO DATE. — **Grange-over-Sands.**—HALL.—For erection of the parish hall, Kents Bank-road. Mr. H. T. Fowler, A.R.I.B.A., architect and surveyor, 6, Cornwallis-street, Barrow-in-Furness.

NO DATE. — **Irlam.** — HOUSES. — Erection of houses at Irlam. Apply Mr. Kay, architect, 20, Cooper-street, Manchester.

NO DATE.—**Kirkgate.**—PREMISES.—For pulling down and rebuilding Mr. T. C. Whaley's premises. Messrs. Simpson & Firth, architects.

NO DATE.—**Kirkgate.**—PREMISES.—For pulling down and rebuilding premises, Stephenson's, Ltd., Kirkgate. Messrs. Simpson & Firth, architects.

NO DATE.—**Southend.**—SCHOOL.—For erection of a new secondary school for girls. Deposit of 2*l.* 2s. to Mr. Herbert Bell, Clerk to the Sub-Committee, Council-chambers, Southend-on-Sea.

NO DATE.—**Wakefield.**—FACTORY.—Erection of a biscuit factory, New Brunswick-street. Messrs. Simpson & Firth, architects and surveyors, Southgate-chambers, Wakefield.

NO DATE.—**Wolstanton.**—SCHOOL.—For erection of infants' new school, Wallands, Wolstanton. Deposit of 3*l.* 3s. to Mr. W. F. Slater, architect, Burslem.

ENGINEERING, IRON, AND STEEL.

APRIL 20.—**Aberdeen.**—ALTERNATOR.—For erection at electricity works, Milburn-street, Aberdeen, of one 1,000-kw. turbo-alternator, with surface condenser and air-pump for same. Specification, general conditions, and form of tender from Mr. J. A. Bell, City Electrical Engineer, Milburn-street, Aberdeen. Deposit of 2*l.* 2s.

APRIL 23. — **Ashton-under-Lyne.** — WIRING.—For electric wiring of the Workhouse. Specifications and particulars, on deposit of 2*l.* 2s., from Mr. G. H. Partington, Clerk, Poor-Law Offices, Ashton-under-Lyne.

APRIL 24.—**Rochdale.**—ENGINE-ROOM, ETC.—Construction of an engine-room, economiser-house, chimney, and flues at Dane-street Electricity Works. Plans and general conditions at the Electrical Engineer's Department, Dane-street, Rochdale; Mr. C. C. Atchison, M.I.E.E., Engineer and Manager. Quantities on deposit of 1*l.* 1s.

APRIL 27.—**Derby.** BOILER.—Construction of a new Cornish boiler, for Union Workhouse, Derby. Mr. N. Twigge, Clerk to the Guardians, Poor Law Offices, Becket-street, Derby.

APRIL 30.—**Ayr.**—BREAKWATER.—For repairing and strengthening of the north breakwater. Plans with the engineers, Messrs. Crouch, Hogg, & Easton, C.E., 14, Blythswood-square, Glasgow. Specification and form of tender on deposit of 2*l.* 2s.

✱ APRIL 30.—**Fordhambridge.** STEEL AND CONCRETE BRIDGE.—Tenders are invited for the erection of a steel girder and concrete bridge. See advertisement in this issue for further particulars.

APRIL 30.—**Uxbridge.**—BORING.—Construction of a boring in the neighbourhood of Rockingham Bridge, Uxbridge. Specifications from Mr. F. S. Courtney, M.Inst.C.E., 25, Victoria-street, Westminster.

MAY 1. — **Abergavenny.** — WATERWORKS.—For the construction of spring and stream intakes, collecting, balancing, and dividing chambers, providing and laying cast-iron pipes, also formation of an open concrete service reservoir of 7½ million gallons capacity, and other works. Drawings, specification, and quantities with the engineer, Mr. E. Wilson Dixon, M.Inst.C.E., 3, East-parade, Leeds. Deposit of 3*l.*

FURNITURE, PAINTING, MATERIALS, etc.

APRIL 19.—**Barnstaple.**—COLOURING, ETC.—For limewashing and colouring exterior of the Union Workhouse. Particulars from the Master of the Workhouse.

APRIL 19.—**Darlington.**—PAINTING.—For painting the interior and exterior of the gas department showrooms, Tubwell-row, for the Corporation. Particulars and quantities from Mr. F. P. Tarratt, Gasworks Engineer and Manager.

APRIL 22.—**Frome.**—PAINTING.—For painting the exterior wood and iron work at the Public Offices. Mr. Wm. R. Kent, Clerk, Public Offices, Frome.

APRIL 22.—**London.** PAINTING, ETC. -For painting, colouring, cleansing, repairs, and alterations at Infirmary, Rackham-street, Notting Hill, W. Specification and form of tender from the Steward of the Infirmary.

APRIL 22. **Macclesfield.** — PAINTING — For painting north and south fronts of the Parkside Asylum. Specifications and forms of tender from Mr. H. Beswick, County Architect, Chester.

✱ APRIL 23. **Brighton.**—GLAZED DRAIN PIPES. The Brighton B.C. invite tenders for supply of glazed drain pipes during a period ending June 30, 1913. See advertisement in this issue for further particulars.

✱ APRIL 23 **Streatham Hill.**—PAINTING.—The St. Pancras Guardians invite tenders for external painting of main building, master's house, and porter's lodge at St. Anne's Home. See advertisement in this issue for further particulars.

APRIL 24.—**Bristol.**—PAINTING, ETC.—The Great Western and Midland Railways Joint Committee invite tenders for the cleaning and repainting of ironwork, fencing, etc., at Bristol Joint Station. Plans and specification seen, and forms of tender and quantities at the office of the Engineer at Bristol Station.

✱ APRIL 24.—**Fulham.**—WOOD-BLOCK FLOORING.—The Guardians of St. George's Union invite tenders for supply and fixing wood-block flooring at the Union Infirmary. See advertisement in this issue for further particulars.

APRIL 24. — **Hove.** — PAINTING. — For painting external wood and iron work of the cemetery lodge and chapels, also greenhouse. Particulars from the Borough Surveyor, Town Hall, Hove.

APRIL 24. — **London.** — PAINTING, ETC.—The Metropolitan Asylums Board invite tenders for cleaning and painting works and repairs at Tooting Bec Asylum, Tooting, S.W. Specification, by Mr. W. T. Hatch, M.Inst.C.E., M.Inst.Mech.E., Engineer-in-Chief, at the Office of the Board, Embankment, E.C. Deposit of 1*l.* for quantities.

APRIL 27.—**King's Lynn.**—PAINTING. -For painting exterior of King's Lynn King Edward VII. Grammar School. Specifications and particulars from Mr. A. J. Smith, Borough Surveyor, Town Hall, King's Lynn.

APRIL 27.—**Suffolk.**—PAINTING, ETC.—For painting and repairs at the following police-stations:—Clare, Melford, and Newmarket. Plans, specification, and form of tender from Mr. A. A. Hunt, M.S.A., County Architect, 51, Abbeygate-street, Bury St. Edmund's.

APRIL 29. — **Chatham.** -PAINTING, ETC.—For painting, whitewashing, etc., the Cottage Homes, and staff quarters. Specification from Mr. A. Reynolds Norman, Clerk, 22, High-street, Chatham.

APRIL 29.—**Ramsgate.**—PAINTING, ETC.—For painting and redecorations at the school. Specifications by the Committee's Architect, Mr. Wilfrid H. Robineon, of Caxton House, Westminster.

APRIL 30.—**Hunslet.**—PAINTING.—For painting schoolrooms, vestries, etc., United Methodist Church, Hunslet, Carr. Specifications at 25, Royal-avenue.

✱ APRIL 30. — **Leytonstone.**—PAINTING.—The Leyton U.D.C. invite tenders for painting work to outside of public baths. See advertisement in this issue for further particulars.

✱ APRIL 30.—**West Norwood.**—PAINTING, ETC. — The Guardians of Lambeth invite tenders for external painting and repairs at Lambeth Par... School, Elder-road. See advertisement in t... issue for further particulars.

MAY 1.—**Salisbury.**—PAINTING.—For painti... work at the isolation hospital, Three-mile H... London-road. Specifications, with form of t... der, from Mr. W. J. Goodwin, A.M.Inst.C.... City Engineer and Surveyor, Municipal Offic... Salisbury.

MAY 2.—**Hastings.**—PAINTING.—For painti... etc., inside of the superintendent's lodge at ... borough cemetery, Hastings. Specification a... form of tender from the Borough Engineer, ... P. H. Palmer, M.Inst.C.E., Town Ha... Hastings.

MAY 6. — **Dartford.** — TIMBER.—For supply ... about 150 fathoms of best Baltic yellow deal s... batten ends for splitting for firewood. ... Eustace J. Hobbs, Clerk, Union Offices, Dartfo...

✱ MAY 6.—**Plymouth.**—DECORATION.—The P... mouth B.C. invite tenders for decoration of ... great hall of the Guildhall. See advertisem... in this issue for further particulars.

ROADS, SANITARY AND WATER WORKS.

APRIL 20.—**Erpingham.**—ROADS.—For sewer... two streets in West Runton, known as Rosebe... road and The Boulevard. Plans, specificati... and conditions with Mr. H. J. Limmer, arc... tect, auctioneer, and house agent, Church-aqua... Cromer.

APRIL 20.—**Kettering.**—SLABS, ETC. -For sup... of about 800 yds. super. of concrete paving sla... with concrete kerb and channel. Particul... from Mr. R. Smith, surveyor, Market-pla... Kettering.

APRIL 20.—**Wigan.** -MATERIALS.—For supply... paving materials. Forms of tender from ... Borough Engineer, King-street West, Wigan.

APRIL 22.—**Burgess Hill.**—GRANITE, ETC.—... the supply of broken granite and fine gran... Tender forms from Mr. A. F Hardwick, Cler...

APRIL 22. — **Rushden.** — GRANITE, ETC. — ... supply of granite and slag. Specification ... forms of tender from Mr. W. B. Madin, C... Engineer and Surveyor, Council Buildin... Rushden.

APRIL 23.—**Brighton.**—PIPES.—For supply ... glazed drain pipes. Specification and form ... tender from the Borough Surveyor, Town H... Brighton.

✱ APRIL 23. — **Bromley.** — ROAD-MAKING.—... Bromley B.C. invite tenders for sewering, le... ling, paving, metalling, flagging, channelli... and making good Shawfield Park. See advert... ment in this issue for further particulars.

APRIL 23. — **Gateshead.** — MACADAM. — ... macadamising East Park-road (between Aven... road and Joicey-road). Plans and specificat... seen, and quantities from Mr. N. P. Pattin... Borough Engineer, Town Hall, Gateshead.

APRIL 23.—STREET.—For making ... a portion of the back street on the north sid... Station-road Particulars from Mr. G. Nels... A.M.Inst.C.E., Engineer and Surveyor, Cou... Chambers, High-street, Gosforth.

APRIL 24.—**Brighton.**—FLINTS.—For the sup... of hand-picked land flints for highways. Spe... cation and form of tender from Mr. H. Tal... Town Clerk, Town Hall, Brighton.

APRIL 24.—**Brighton.** GRANITE.—For ... supply of broken granite. Specification and fo... of tender from the Borough Surveyor, Town H... Brighton.

APRIL 24. — **Edenbridge.** — SEWERAGE.—... struction works of about 1,288 yds. of 9-in. st... ware pipe sewers, with manholes, etc. Drawi... and specifications seen, and form of tender, f... the Surveyor, Mr. John N. Prior, Woodgra... Marlpit-hill, Edenbridge, on deposit of 1*l.* 1s.

APRIL 24.—**Ely.**—GRAVEL, ETC.—For 688 ton... coarse clunch and 520 tons of coarse scree... gravel. Forms of tender from Mr. F. W. Fi... District Surveyor, Sutton, Isle of Ely.

APRIL 25.—**Cardiff.**—STREETS.—For making ... streets. Drawings, specification seen, and fo... of tender from the City Engineer, City Hall.

APRIL 25.—**Fareham.**—GRANITE, ETC.—For ... supply of granite, basalt, or other hard st... Form of tender from Mr. W. Butler, Surve... Quay-street, Fareham.

APRIL 26.—**Barrow-in-Furness.**—ALTERATI... —For alterations to sanitary conveniences on ... first floor of the Town Hall. Form of tender ... quantities from the Borough Engineer.

APRIL 29.—**Milton Regis.**—SEWER.—For la... a new sewer. Specifications and forms of te... from Mr. W. R. Warlow, Surveyor, Town H... Milton Regis, Kent.

APRIL 29.—**Nuneaton.**—MATERIALS.—For su... of materials. Conditions of contract and fo... of tender from Mr. F. C. Cook, Borough ... veyor, Municipal Offices, Nuneaton.

APRIL 29. — **Worcester.** — TANKS, ETC. — ... alteration to the disintegrating tanks and c... works at the sewage-disposal works, Bromw... Drawings with Mr. T. Caink, A.M.Inst.C... City Engineer, Guildhall, Worcester. Speci... tion, quantities, and form of tender from ... Engineer.

APRIL 30. — **Daventry.** — SEWAGE.—For ... structing sewers and sewage-disposal wo... Drawings seen, and specifications, quanti... and form of tender, and particulars from ... Engineer to the Council, Mr. J. B. Willia... the Moot Hall, Daventry. Deposit of 5*l.*

APRIL 30. — **Frodingham.** — PIPES, ETC. — ... supply of cast-iron spigot and socket pipes ... specials, vertically cast and of British m... facture. Specification, quantities, and form ... tender from the Engineer, Mr. Herbert Wal... M.Inst.C.E., King-street, Nottingham, on dep... of 5*l.*

APRIL 30. — **Scunthorpe.** — SEWAGE.—Const... tion of cast-iron and stoneware pipe sew... Plans and specification with Engineer, ... Herbert Walker, M.Inst.C.E., King-street, ... tingham. Quantities and form of tender ... deposit of 5*l.*

ROADS, etc.—*continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

MAY 1.—**Goole.**—STREETS.—For the making-up of Newport-street. Plans seen, specification, forms of tender, and quantities from Mr. C. G. Bradley, C.E., Council Offices, Goole. Deposit of 1*l.* 1s.

MAY 3.—**Sidmouth.**—ROAD.—For the widening of Station-road. Drawings seen, and specification, on deposit of 1*l.* 1s., from Mr. Richard Lake, Surveyor, Council Offices, Sidmouth.

MAY 6.—**Horsham.**—ROAD.—For the making-up of Victoria-road, Albany-road, and Princess-road, Crawley. Specification, quantities, and form of tender from Mr. W. Dengate, 55, Park-street, Horsham, the Surveyor to the Council. Deposit of 1*l.*

MAY 6.—**Plomesgate.**—GRANITE, ETC.—For supply of about 3,000 tons of broken granite, and 2,000 tons of flint, broken or unbroken. Mr. David R. Read, Clerk, Board-room, Wickham Market.

MAY 6.—**Wickham Market.**—GRANITE.—For supply of broken granite and flint, broken or unbroken. Apply to Mr. D. R. Read, Clerk, Board Room, Wickham Market.

MAY 10.—**Baildon.**—GRANITE, ETC.—For supply of broken granite and broken limestone. Apply to Mr. J. Bentley, Clerk.

Public Appointment.

Nature of Appointment.	By whom Advertised.	Salary.	Application to be in
ASSISTANT ENGINEER	Ceylon Government	See advertisement in this issue	No date.

Auction Sales.

Nature and Place of Sale.	By whom Offered.	Date of Sale.
FREEHOLD BUILDING SITES, KINGSLAND-RD., N.E., AND CROYDON—At the Mart	Furbers	April 22
BUILDING MATERIALS, CLAPHAM—73, High-street, Clapham	E. Hugh Henry	April 23
DEALS, BATTENS, BOARDS, TIMBER, ETC.—Great Hall, Winchester House, E.C.	Churchill & Sim	April 24
BUILDING ESTATE—At the Mart	Ferris & Puckridge	April 26
BUILDER'S, IRONMONGER'S ETC., STOCK—At Banner-street, Golden-lane, E.C.	Fryett. White, & Co.	April 30
BUILDER AND CONTRACTOR'S PLANT, ETC.—On the Premises	J. T. Skelding & Holland	April 30
BUILDING SITE (TO BE LET FOR 99 YEARS), LEWISHAM—At the Mart	Wiltshire & Co.	May 3
FREEHOLD BUILDING LAND, SURREY—At the Mart	Daniel Watney & Sons	May 16
FREEHOLD PROPERTY, MILE END—At the Mart	Daniel Watney & Sons	May 16
FREEHOLD BUILDING LAND, NORBURY—At the Mart	Daniel Watney & Sons	May 16
FREEHOLD GROUND RENT—At the Mart	Daniel Watney & Sons	May 16
FREEHOLD BUILDING LAND, SUDBURY, MIDDLESEX	Millar, Son, & Co.	May

FOREIGN AND COLONIAL.

Building Material, Argentine Republic.

The *Boletin Oficial* of March 4 contains a decree awarding to Sres. Bonneu, Ibero, Parodi y Figini, a contract for the construction of two warehouses in the port of Buenos Aires. The cost of the work is put at 478,000 pesos (about 42,000*l.*).

Building Material, Laboratory Equipment, etc., Morocco.

H.M. Consul-General at Tangier (Mr. H. E. White, C.M.G.) reports that the French Government have now granted a sum of 50,000 francs (10,000*l.*) for completing the construction and fitting-up of a Pasteur Institute at Tangier which was commenced some time ago, but was left unfinished through lack of funds. The building is to be fitted up with laboratories for carrying on experiments and making analyses in all branches of agriculture, mineralogy, etc., as well as in purely medical work, preparation of serums, etc.

TO CORRESPONDENTS.

NOTE.—All communications with respect to literary and artistic matters should be addressed to "THE EDITOR" (and not to any person by name); those relating to advertisements and other exclusively business matters should be addressed to "THE PUBLISHER," and *not* to the Editor.

All communications must be authenticated by the name and address of the sender, whether for publication or not. No notice can be taken of anonymous communications.

The responsibility of signed articles, letters, and papers read at meetings rests, of course, with the authors.

We cannot undertake to return rejected communications; and the Editor cannot be responsible for drawings, photographs, manuscripts, or other documents, or for models or samples, sent to or left at this office, unless he has specially asked for them.

All drawings sent to or left at this office for consideration should bear the owner's name and address in either the face or back of the drawing. Delay and inconvenience may result from inattention to this.

Any commission to a contributor to write an article, or to execute or lend a drawing for publication, is given subject to the approval of the article or drawing, when received, by the Editor, who retains the right to reject it if unsatisfactory. The receipt by the author of a proof of an article in type does not necessarily imply its acceptance.

N.B.—Illustrations of the First Premiated Design in any important architectural competition will always be accepted for publication by the Editor, whether they have been formally asked for or not

SOME RECENT SALES OF PROPERTY:

ESTATE EXCHANGE REPORT.

March 28.—By FLOOD & SONS.

Kensington.—4 to 15, Denbigh-mews, f., y. and q.r. 200*l.*	£1,700
Bayswater.—Artesian-rd., f.g. rents 12*l.*, reversion in 31 yrs.	320
Notting Hill.—Wheatstone-rd., f.g. rents 15*l.*, reversion in 63 yrs.	310
Paddington.—Harrow-rd., Devonshire Castle p.h., u.t. 48 yrs., g.r. 42*l.*, y.r. 150*l.*	£3,000
Chippenham-rd., Skiddaw Hotel, u.t. 51 yrs., g.r. 7*l.*, y.r. 150*l.*	3,500
72, Hereford-rd, u.t. 38 yrs., g.r. 8*l.*, y.r. 65*l.*	400
24, Alexander st., u.t. 37 yrs., g.r. 12*l.*, y.r. 70*l.*	420
139, 141, and 147, Praed-st. (s.), u.t. 44 yrs., g.r. 57*l.*, y.r. 295*l.*	2,115
Canonbury.—6, Canonbury-rd., and stabling, also l.g.r. 6*l.* 10s., u.t. 6 yrs., g.r. nil, y.r. 84*l.*	165

By RAWLINS, CULVER, & CO.

Twickenham.—Cross Deep, River Deep, and Castle Ryan, f., y.r. 100*l.*, and p.	1,695
Bayswater.—Hereford rd., Hereford-mansions, u.t. 71 yrs., g.r. 550*l.*, gross rental 1,535*l.*	775
Bowes Park.—York-rd., f.g. rents 13*l.*, reversion in 92 yrs.	292
Plaistow.—Barking-rd., f.g.r. 5*l.*, reversion in 72 yrs.	115
Dongola-rd., f.g. rents 99*l.* 5s., reversion in 72 yrs.	2,755
Khartoum-rd., f.g. rents 60*l.* 17s. 6d., reversion in 72 yrs.	1,259
Wimbledon.—Delamere-rd., f.g. rents 18*l.*, reversion in 77 yrs.	340

By STIMSON & SONS.

New Cross.—139 and 141, New Cross-rd. (s.), u.t. 44 yrs., g.r. 2*l.* 10s., y. and e.r. 129*l.*	1,100
Blackfriars.—35, Webber-st., f., w.r. 52*l.*	405
Plumstead.—38, Parkdale-rd., and plot adjoining, f., w.r. 20*l.* 16s.	245
Sidcup.—5, Day's-la. Cottages, f., y.r. 16*l.*	200
Peckham. 30 to 38 (even), 42, 44, and 46, Lisford-st.; 1 to 7, Adelaide-pl., f., w.r. 361*l.* 8s.	2,480
Surbiton.—38, St. Mark's-hill, f., y.r. 24*l.*	375

By GRIMLEY & SON.

Studley, Warwick.—Laugher's-la., four cottages, f., w.r. 39*l.*	390
Handsworth, Staffs.—34 to 44 (even), Mary-rd., u.t. 94 yrs., g.r. 13*l.* 10s., w.r. 109*l.* 4s.	650

March 29.—By BERTRAM A. BOYTON.

Tottenham.—Argyle-rd., f.g. rents 124*l.*, reversion in 67 yrs.	2,540

By DAVID J. CHATTELL & SONS.

Chislehurst, Kent. -1, Mount-villas, u.t. 74 yrs., g.r. 3*l.*, y.r. 50*l.*	325

By DUNCAN & KIMPTON.

Tooting.—1 and 3, Hereward-rd., f., w.r. 54*l.* 12s.	480

By FURBER.

Crouch End.—Bryanston-rd., f.g. rents 126*l.*, reversion in 75 yrs.	2,890

By JAMESON & MESSENGER.

Battersea 67, Altenburg gdns., u.t. 84 yrs., g.r. 8*l.* 10s., y.r. 45*l.*	380

By WINTERTON & SONS.

Lichfield, Stafford.—121, Birmingham-rd., f., w.r. 11*l.* 13s.	195
5, 6, and 7, Dean's Croft, f., w.r. 37*l.* 6s.	250
6 and 10, Lombard-st., f.	365

April 1.—By MAWERS.

Putney. 28, Hotham-rd., u.t. 84 yrs., g.r. 6*l.*, e.r. 50*l.*	470

By TUCKETT & SON.

Battersea.—7, Meyrick-rd., f., w.r. 35*l.* 16s.	275

April 2.—By RUTLEY, SON, & VINE.

Hampstead-rd.—4, Harrington st., u.t. 12 yrs., g.r. 21*l.*, y.r. 58*l.*	100
Stratford. 35 to 45 (odd), Leyton-rd., 1, 3, and 5, Alma-st., u.t. 44 and 48 yrs., g.r. 27*l.*	170

By STANLEY PARKES & BROWN.

Edmonton.—26, 28, 30, and 32, Fairfield-rd., f., w.r. 122*l.* 16s.	£1,655

April 3.—By DANIEL SMITH, SON, & OAKLEY.

Brockley.—Darfield-rd., etc., f.g. rents 549*l.* 15s., reversion in 65¼ yrs.	12,625

By LETHABY & LETHABY.

Shoeburyness, Essex.—1 to 7 (odd), Grove-rd., f., w.r. 44*l.* 4s.	420

Contractions used in these lists.—F.g.r. for freehold ground-rent; l.g.r. for leasehold ground-rent; i.g.r. for improved ground-rent; g.r. for ground-rent; r. for rent; f. for freehold; c. for copyhold; l. for leasehold; p. for possession; e.r. for estimated rental; w.r. for weekly rental; q.r. for quarterly rental; y.r. for yearly rental; u.t. for unexpired term; p.a. for per annum; yrs. for years; la. for lane; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; cres. for crescent; av. for avenue; gdns. for gardens; yd. for yard; gr. for grove; b.h. for beerhouse; p.h. for public-house; o. for office; s. for shops; ct. for court.

PRICES CURRENT OF MATERIALS.

*** Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

BRICKS, &c.

Per 1000 Alongside, in River.	£ s. d.
Best Stocks	1 14 0
Picked Stocks for Facings	2 10 0

Per 1000, Delivered at Railway Depôt.	£ s. d.		£ s. d.
Flettons	1 13 0	Best Blue Pressed	
Best Fareham Red	3 12 0	Staffordshire	3 15 0
Best Red Pressed Ruabon Facing	5 0 0	Do. Bullnose	4 0 0
		Best Stourbridge Fire Bricks	4 0 0

Glazed Bricks—			
Best White, Ivory, and Salt Glzd. Str'tch'rs	11 7 6	Double Headers	13 17 6
		One Side and two Ends	17 17 6
Headers	10 17 6	Two Sides and one End	18 17 6
Quoins, Bullnose, and 4½ in. Flats	14 17 6	Splays & Squints	16 7 6
D'ble Stretchers	16 17 6		

Second Quality 41 10s. per 1000 less than best.

	s. d.	
Thames and Pit Sand	6 9	per yard, delivered.
Thames Ballast	5 6	" "
Best Portland Cement	31 0	per ton, "
Best Ground Blue Lias Lime	19 0	" "

NOTE—The cement or lime is exclusive of the ordinary charge for sacks.

Grey Stone Lime	13s. 0d. per yard delivered.
Stourbridge Fireclay in sacks 27s. 0d. per ton at rly dpt.	

STONE.

Per Ft. Cube.

	s. d.
Bath Stone—delivered on road waggons, Paddington Depôt	1 6½
Do. do. delivered on road waggons, Nine Elms Depôt	1 8½

Portland Stone (20 ft. average)—	
Brown Whitbed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2 3
White Basebed, delivered on road waggons Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2 4½

STONE (*Continued*).

Per Ft. Cube, delivered at Railway Depôt.

	s. d.		s. d.
Ancaster in blocks..	1 10	Closeburn Red Freestone	2 0
Beer in blocks	1 6	Red Mansfield Freestone	2 4
Greenshill in blocks	1 10	Talacre & Gwespyr Stone	2 4
Darley Dale in blocks	2 4		
Red Corsehill in blocks	2 3		

YORK STONE—*Robin Hood Quality.*

Per Ft. Cube, Delivered at Railway Depôt. s. d.

Scappled random blocks 2 10

Per Ft. Super., Delivered at Railway Depôt.

6 in. sawn two sides landings to sizes (under 40 ft. super.) 2 3
6 in. rubbed two sides ditto, ditto 2 6
3 in. sawn two sides slabs (random sizes) 0 11½
2 in. to 2½ in. sawn one side slabs (random sizes) 0 7
1½ in. to 2 in. ditto, ditto 0 6

HARD YORK—

Per Ft. Cube, Delivered at Railway Depôt.

Scappled random blocks 3 0

Per Ft. Super., Delivered at Railway Depôt.

6 in. sawn two sides landing to sizes (under 40 ft. super.) 2 8
6 in. rubbed two sides ditto 3 0
3 in. sawn two sides slabs (random sizes) 1 2
2 in. self-faced random flags 0 5

SLATES.

Per 1000 of 1200 at Railway Depôt.

In. In.	£ s. d.	In. In.	£ s. d.
20×10 best blue Bangor	13 2 6	20×10 best Eur'ka unfading green	15 17 6
20×12 ditto	13 17 6	20×12 ditto	18 7 6
20×10 1st quality ditto	13 0 0	18×10 ditto	13 5 0
20×12 ditto	13 15 0	16×8 ditto	10 5 0
16×8 ditto	7 5 0	20×10 permanent green	11 12 6
22×10 best blue Portmadoc	12 12 6	18×10 ditto	9 12 6
16×8 ditto	6 12 6	16×8 ditto	6 12 6

TILES.

At Railway Depôt.

	s. d.		s. d.
Best plain red roofing (per 1000)	42 0	Best "Hartshill" brand, plain sand-faced (per 1000)	45 0
Hip and Valley (per doz.)	3 7	Do. pressed (per 1000)	42 6
Best Broseley (per 1000)	50 0	Do. Ornamental (per 1000)	47 6
Do. Ornamental (per 1000)	52 6	Staffordshire "Marked Bars" Hip (per doz.)	4 0
Hip and Valley (per doz.)	4 0	Valley (per doz.)	3 6
Best Ruabon red, brown, or brindled (Edw'ds) (per 1000)	57 6	Staffords. (Hanley) Reds or Brindled (per 1000)	42 6
Do. Ornamental (per 1000)	60 0	Hand-made sand-faced (per 1000)	45 0
Hip (per doz.)	4 0	Hip (per doz.)	4 0
Valley (per doz.)	3 0	Valley (per doz.)	3 6

WOOD.

BUILDING WOOD.	At per standard. £ s. d.	£ s. d.
Deals: best 3 in. by 11 in. and 4 in. by 9 in. and 11 in.	14 0 0 ...	15 10 0
Deals: best 3 by 9	13 10 0 ...	14 10 0
Battens: best 2½ in. by 7 in. and 8 in., and 3 in. by 7 in. and 8 in.	11 10 0 ...	12 10 0
Battens: best 2½ by 6 and 3 by 6...	0 10 0	less than 7 in. and 8 in.
Deals: seconds	1 0 0	less thn best.
Battens: seconds	0 10 0 "	"
2 in. by in. and 2 in. by 6 in. ...	9 10 0 ...	10 10 0
2 in. by 4½ in. and 2 in. by 5 in.	9 0 0 ...	10 0 0
Foreign Sawn Boards— 1 in. and 1¼ in. by 7 in.	0 10 0	more than battens.
¾ in.	1 0 0	"
Fir timber: best middling Danzig or Memel (average specification)	At per load of 50 ft. 5 0 0 ...	5 10 0
Seconds	4 10 0 ...	5 0 0
Small timber (5 in. to 10 in.)	3 17 6 ...	4 0 0
Small timber (6 in. to 8 in.)	3 5 0 ...	3 10 0
Swedish balks	2 12 6 ...	3 0 0
Pitch-pine timber (30 ft. average)	5 5 0 ...	6 0 0

JOINERS' WOOD.	At per standard.	
White Sea: first yellow deals, 3 in. by 11 in.	24 10 0 ...	25 10 0
3 in. by 9 in.	22 10 0 ...	23 10 0
Battens, 2½ in. and 3 in. by 7 in.	17 0 0 ...	18 0 0
Second yellow deals, 3in. by 11in.	19 0 0 ...	20 0 0
" " 3 in. by 9 in.	18 0 0 ...	19 10 0
Battens, 2½ in. and 3in. by 7 in.	14 0 0 ...	15 0 0
Third yellow deals, 3 in. by 11 in. and 9 in.	14 0 0 ...	15 0 0
Battens, 2½ in. and 3 in. by 7 in.	11 10 0 ...	12 10 0
Petersburg: first yellow deals, 3 in. by 11 in.	21 10 0 ...	22 10 0
Do. 3 in. by 9 in.	18 10 0 ...	19 10 0
Battens	14 0 0 ...	15 0 0
Second yellow deals, 3 in. by 11 in	16 10 0 ...	17 10 0
Do. 3 in. by 9 in.	15 0 0 ...	16 0 0
Battens	11 10 0 ...	12 10 0
Third yellow deals, 3in. by 11 in.	13 10 0 ...	14 10 0
Do. 3 in. by 9 in.	13 0 0 ...	14 0 0
Battens	10 10 0 ...	11 0 0
White Sea and Petersburg— First white deals, 3 in. by 11 in.	15 0 0 ...	16 0 0
" " 3 in. by 9 in.	14 0 0 ...	14 10 0
Battens	11 10 0 ...	12 10 0
Second white deals, 3in. by 11in.	14 0 0 ...	15 0 0
" " 3 in. by 9 in.	13 0 0 ...	14 0 0
Battens	10 10 0 ...	11 0 0
Pitch-pine: deals	19 0 0 ...	21 0 0
Under 2 in. thick extra	0 10 0 ...	1 0 0
Yellow Pine—First, regular sizes	48 0 0	upwards.
Oddments	32 0 0	"
Seconds, regular sizes	33 0 0	"
Oddments	28 0 0	"
Kauri Pine—Planks per ft. cube.	0 4 6 ...	0 6 0

WOOD (*Continued*).

JOINERS' WOOD (*Continued*)	£ s. d.	£ s. d.
Danzig and Stettan Oak Logs— Large, per ft. cube	0 3 0 ...	0 3 9
Small " "	0 2 6 ...	0 2 6
Wainscot Oak Logs, per ft. cube	0 6 6 ...	0 8 0
Dry Wainscot Oak, per ft. sup. as inch	0 0 10 ...	0 1 0
¾ in. do. do.	0 0 8½ ...	—
Dry Mahogany—Houndras, Tabasco, per ft. super. as inch..	0 0 10 ...	0 1 1
Selected, Figury, per ft. super. as inch	0 1 6 ...	0 2
Dry Walnut, American, per ft. super. as inch	0 0 10 ...	0 1 0
Teak, per load	18 0 0 ...	22 0 0
American Whitewood planks, per ft. cube	0 5 0 ...	0 6 0
Prepared Flooring, etc.—	Per square.	
1 in. by 7 in. yellow, planed and shot	0 13 6 ...	0 17 0
1 in. by 7 in. yellow, planed and matched	0 14 0 ...	0 18 0
1¼ in. by 7 in. yellow, planed and matched	0 16 0 ...	1 0 0
1 in. by 7 in. white, planed and shot	0 12 0 ...	0 14 6
1 in. by 7 in. white, planed and matched	0 12 6 ...	0 15 0
1¼ in. by 7 in. white, planed and matched	0 15 0 ...	0 16 6
¾ in. by 7 in. yellow, matched and beaded or V-jointed brds.	0 11 0 ...	0 13 6
1 in. by 7 in. " "	0 14 0 ...	0 18 6
¾ in. by 7 in. white " "	0 10 0 ...	0 11 0
1 in. by 7 in. " "	0 12 9 ...	0 15 0

6 in. at 6d. to 9d. per square less than 7 in.

JOISTS, GIRDERS, &c.

	In London, or delivered Railway Vans, per ton. £ s. d.	£ s. d.
Rolled Steel Joists, ordinary sections	7 10 0 ...	8 0 0
Compound Girders, ordinary sections	9 10 0 ...	10 0 0
Steel Compound Stanchions	11 0 0 ...	12 0 0
Angles, Tees, and Channels, ordinary sections	9 10 0 ...	10 0 0
Flitch Plates	9 10 0 ...	9 10 0
Cast Iron Columns & Stanchions, including ordinary patterns	7 10 0 ...	8 10 0

METALS.

IRON—	Per ton, in London. £ s. d.	£ s. d.
Common Bars	9 0 0 ...	9 10 0
Staffordshire Crown Bars, good merchant quality	9 5 0 ...	9 15 0
Staffordshire "Marked Bars"	11 0 0 ...	—
Mild Steel Bars	9 5 0 ...	9 15 0
Hoop Iron, basis price	10 0 0 ...	—
" " Galvanised	17 10 0 ...	—

(*And upwards, according to size and gauge.*)

Sheet Iron Black— Ordinary sizes to 20 g.	10 5 0 ...	—
" " 24 g.	11 5 0 ...	—
" " 26 g.	12 15 0 ...	—
Sheet Iron, Galvanised, flat, ordinary quality— Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15 10 0 ...	—
Ordinary sizes to 22 g. and 24 g.	16 0 0 ...	—
" " 26 g.	17 0 0 ...	—
Sheet Iron, Galvanised, flat, best quality— Ordinary sizes to 20 g.	18 10 0 ...	—
" " 22 g. and 24 g.	19 0 0 ...	—
" " 26 g.	20 10 0 ...	—
Galvanised Corrugated Sheets— Ordinary sizes, 6ft. to 8ft. 20 g.	15 0 0 ...	—
" " 22 g. and 24 g.	15 5 0 ...	—
" " 26 g.	16 15 0 ...	—
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	12 10 0 ...	—
Best Soft Steel Sheets, 2 g. & 24 g.	13 10 0 ...	—
" " " 26 g.	15 10 0 ...	—
Cut Nails, 3 in. to 6 in.	11 0 0 ...	11 10 0

(Under 3 in., usual trade extras.)

LEAD, &c.	£ s. d.	
LEAD—Sheet, English, 4lb. and up	20 5 0 ...	—
Pipe in coils	20 15 0 ...	—
Soil pipe	23 15 0 ...	—
Compo pipe	23 15 0 ...	—
ZINC—Sheet—	In casks of 10 cwt.	
Vielle Montagne	33 10 0 ...	—
Silesian	33 5 0 ...	—
Zinc, in bundles, 1s. per cwt. extra.		
COPPER—		
Strong Sheet per lb.	0 1 0 ...	—
Thin "	0 1 1 ...	—
Copper nails "	0 0 10 ...	—
Copper wire "	0 0 10 ...	—
BRASS—		
Strong Sheet "	0 0 11 ...	—
Thin "	0 1 0 ...	—
TIN—English Ingots "	0 2 0 ...	—
SOLDER—Plumbers' "	0 0 9 ...	—
Tinmen's "	0 1 0 ...	—
Blowpipe "	0 1 2 ...	—

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.	
15 oz. thirds ..... 2¼d.	26 oz. fourths ..... 3¼d.
" fourths ..... 1¾d.	32 oz. thirds..... 5d.
21 oz. thirds..... 3¼d.	" fourths ..... 4¼d.
" fourths ... . 2¾d.	Fluted Sheet, 15 oz. 3¼d.
26 oz. thirds..... 4d.	" 21 oz. 4¼d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.	
⅛ Rolled plate..... 2¼d.	Figured Rolled, Oxford Rolled, Oceanic, Arena, Muffled, and Rolled Cathedral, white..... 3¼d.
1/16 Rough rolled and rough cast plate.. 2¼d.	Ditto, tinted..... 5d.
¼ Rough rolled and rough cast plate.. 3d.	

* Not less than two crates.

OILS, &c.

		£ s. d.
Raw Linseed Oil in pipes	per gallon	0 3 4
" " in barrels	"	0 3 5
" " in drums	"	0 3 7
Boiled " in barrels	"	0 3 7
" " in drums	"	0 3 10
Turpentine in barrels	"	0 2 10
" in drums	"	0 3 0
Genuine Ground English White Lead, per ton		27 10 0
Red Lead, Dry	"	24 0 0
Best Linseed Oil Putty	per cwt.	0 10 6
Stockholm Tar	per barrel	1 12 0

VARNISHES, &c.

	Per gallon. £ s. d.
Fine Pale Oak Varnish	0 8 0
Pale Copal Oak	0 10 6
Superfine Pale Elastic Oak	0 12 6
Fine Extra Hard Church Oak	0 10 0
Superfine Hard-drying Oak, seats of Churches	0 14
Fine Elastic Carriage	0 12 0
Superfine Pale Elastic Carriage	0 16 0
Fine Pale Maple	0 10 0
Finest Pale Durable Copal	0 18 0
Extra Pale French Oil	1 1 0
Eggshell Flating Varnish	0 18 0
White Pale Enamel	1 4 0
Extra Pale Paper	0 12 0
Best Japan Gold Size	0 10 6
Best Black Japan	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Knotting	0 10 9
French and Brush Polish	0 10 6

PUBLISHER'S NOTICES.

Tel., 6112 Gerrard. Telegrams, "The Builder, London."

THE INDEX (with TITLE-PAGE) for VOLUME CI. (July to December, 1911) was given as a supplement with January 12.

CLOTH CASES for Binding the Numbers are now ready, price 2s. 6d. each; also

READING CASES (Cloth), with Strings, price 2d. each.

THE HUNDRED AND FIRST VOLUME of "The Builder" (bound), price Twelve Shillings and Sixpence, is now ready.

SUBSCRIBERS' VOLUMES, on being sent to the Office, will be bound at a cost of 3s. 6d. each.

CHANGES FOR ADVERTISEMENTS.

COMPETITIONS, CONTRACTS, ALL NOTICES ISSUED BY CORPORATE BODIES, COUNTY AND OTHER COUNCILS, PROSPECTUSES OF PUBLIC COMPANIES, SALES BY TENDER, LEGAL ANNOUNCEMENTS, etc., etc.

Six lines or under ..... 6s. 0d.
Each additional line ..... 1s. 0d.

SITUATIONS VACANT, PARTNERSHIPS, APPRENTICESHIPS, TRADE AND GENERAL ADVERTISEMENTS.

Six lines (about fifty words) or under ..... 4s. 6d.
Each additional line (about ten words) ..... 0s. 6d.

Terms for series of advertisements, and for front page and other special positions, on application to the Publisher.

SITUATIONS WANTED (single-handed—Labour only).

Four lines (about thirty words) or under ..... 2s. 6d.
Each additional line (about ten words) ..... 0s. 6d.

PREPAYMENT IS ABSOLUTELY NECESSARY.

*** Stamps must not be sent; but all sums should be remitted by Postal Orders, payable to J. MORGAN, and addressed to the Publisher of "THE BUILDER," 4, Catherine Street, W.C.

Advertisements for the current week's issue are received up to ONE p.m. on THURSDAY, but "Classification" is impossible in the case of any which may reach the Office after TWELVE NOON on that day. Those intended for the Outside Wrapper should be in by TWELVE NOON on WEDNESDAY.

ALTERATIONS IN STANDING ADVERTISEMENTS or ORDERS TO DISCONTINUE same must reach the Office before TEN o'clock on WEDNESDAY MORNING.

The Publisher cannot be responsible for DRAWINGS, TESTIMONIALS, etc., left at the Office in reply to advertisements, and strongly recommends that of the latter COPIES ONLY should be sent.

ADVERTISERS in "THE BUILDER" may have *Replies addressed to the Office*, 4, Catherine Street, Strand, W.C., *free of charge*. Letters will be forwarded if addressed envelopes are sent, together with sufficient stamps to cover the postage. Unused stamps are returned to advertisers the week after publication.

N.B.—The Reply Boxes are not intended for trade lists, circulars, and the like; should these be received, they cannot (if noticed) be forwarded.

AN EDITION Printed on THIN PAPER, for FOREIGN and COLONIAL CIRCULATION, is issued every week.

READING CASES { NINEPENCE EACH. By post (carefully packed), 1s.

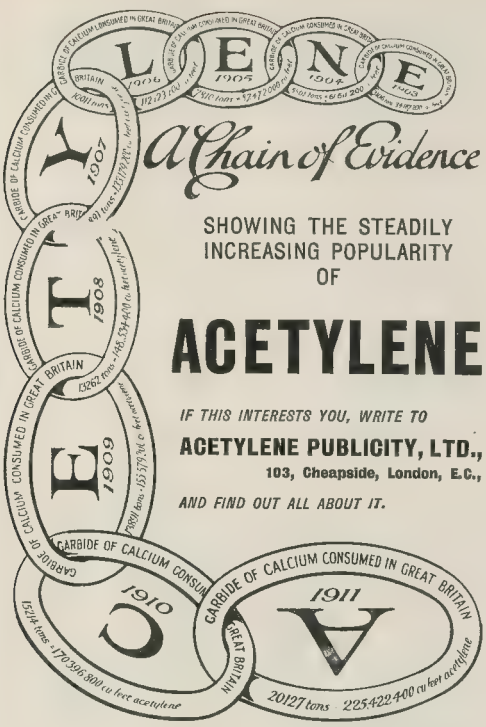
TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than 6 p.m. on Wednesday*. [N.B.—We cannot publish Tenders unless authenticated either by the architect or the building owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is stated, nor any list in which the lowest Tender is under 100*l.* unless in some exceptional cases and for special reasons.]

* Denotes *accepted*. † Denotes *provisionally accepted*.

BURNLEY.—For erection of registrar's lodge, offices, and conveniences, for Corporation of the County Borough of Burnley. Mr. G. H. Pickles, M.Inst.C.E. Quantities by Engineer :—

Excavator, Drainer, Bricklayer, and Mason: M. & J. W. Heap, Clifton-street, Burnley*	£775 0 0
Joiner: H. Hanson, Calder-vale, Burnley*...	221 15 0
Plumber: F. W. Shoesmith, Manchester-road, Burnley*	142 0 0
Slater: W. Schofield, Bank Hall, Burnley* ..	37 18 6
Plasterer E. Guest, Halifax road, Briercfield*	50 0 0
Painter W. Brierley, Padiham-road, Burnley*	37 11 10



A Chain of Evidence

SHOWING THE STEADILY INCREASING POPULARITY OF

ACETYLENE

IF THIS INTERESTS YOU, WRITE TO

ACETYLENE PUBLICITY, LTD.,
103, Cheapside, London, E.C.,

AND FIND OUT ALL ABOUT IT.

EALING.—For new County school for boys and technical institute, for Middlesex County Council. Mr. H. G. Crothall, Architect to the Education Committee :—

Fitch & Cox	£16,585	W. Lawrance & Son	£15,342
J. Carmichael	16,358	J. Dorey & Co., Ltd.	15,290
Muttock Bros.	15,93‹	W. J. Dickens	14,957
G. Hull	15,8'0	Knight & Son	14,955
Brand, Petnit, & Co.	15,790	Fairhead & Son‡	14,975
A. Monk	15,600		
W. Lacey	15,459		

‡ Recommended for acceptance.

EASTBOURNE.—For erection of public conveniences in Gildredge Park. Mr. A. E. Prescott, Borough Surveyor, Eastbourne :—

F. W. Allcock	£530	J. Martin	£417
G. Bainbridge & Son	495	A. J. Bessant*	398
T. Dunlop	455		

[All of Eastbourne.]

GATESHEAD.—For alterations and additions to the High West-street Girls' and Infants' Schools. Mr. F. W. Purser, architect, West-street, Gateshead. Quantities by architect :—

S. Fenwick & Co.	£2,571 0 0
Oeke & Co.	2,567 1 7
Jackson & Sons	2,460 0 0
J. Milne	2,413 0 2
Raven & Hitcham, Gateshead*	2,384 0 11
R. Gracey & Co.	2,273 14 0

GOSPORT (Hants).—For the erection of new schools, Stone-lane, to accommodate 618 children, for the Gosport and Alverstoke Urban District Council. Mr. H. A. F. Smith, architect, Star-chambers, Gosport :—

W. E. Blake, Ltd.	£7,500	J. Tanner	£6,982
E. & A. Sprigings	7,333	F. G. Privett	6,879
Wort & Way	7,100	S. Salter	6,688
A. Jones	6,990	Wakeham Bros.	6,560
J. Crockerill	6,997	J. Hunt	6,109
J. Croad	6,996	Lear & Son, Alverstoke*	5,944
Jenkins & Sons	6,990		

GRIMSBY.—For taking down and refixing old iron railing and providing and fixing new iron railing 8 ft. high at the new cemetery. Mr H. Gilbert Whyatt, A.M.Inst.C.E., Borough Engineer and Surveyor :—

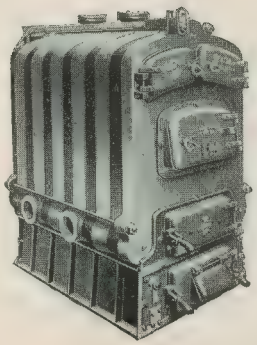
J. R. Mitchell & Co.	£839 14 0	J. Ellwell, Ltd.	£633 5 0
Hill & Smith	657 10 8	C. & C. Wright	563 3 8
J. Couper & Co.	635 17 0	M. Marshall, Grimsby*	483 17 5

GRIMSBY. For construction of 12 in. sewer in Carrlane. Mr. H. Gilbert Whyatt, A.M.Inst.C.E., Borough Engineer & Surveyor :—

Hewins & Goodhand	£630 3 6	Borrill & Chapman	£572 1 10½
Thompson Bros.	624 18 0	H. Marrows	568 11 4
W. Gilbert	593 10 0	Wilkinson & Houghton, Cleethorpes*	554 2 4
Swaby & Walsham	573 7 6		

Fuel Cost and Heating Efficiency.

The large increase in the price of fuel greatly accentuates the importance of tracting the full calorific value from the coal or coke used for heating purposes a matter closely affecting the owners and occupiers of all classes of office ildings, factories, shop premises, and private houses.



IDEAL RADIATORS & IDEAL BOILERS

For warming houses, flats hotels shops, public buildings, etc. by hot water or steam.

The economy of central heating is now generally admitted, but the selection of suitable appliances for the generation and distribution of the heat requires careful consideration if the best results are to be obtained.

The specification by Architects and Engineers of Ideal Boilers and Ideal Radiators for Low Pressure Hot Water and Steam Systems ensures the use of a product which is based on scientific knowledge and more than 30 years' experience—a product made from the best materials, enjoying a world-wide reputation for reliability, efficiency, adaptability, and simplicity of design, construction, and operation.

If you have not our current catalogue we shall be pleased to send a copy gratis and post free.

NATIONAL RADIATOR COMPANY LIMITED. 439 & 441, Oxford Street, London, W.

WORKS: HULL, Yorks.

Agents carrying Stocks { BAXENDALE & CO., Ltd., Miller Street Works, MANCHESTER. WILLIAM MACLEOD & CO., 60, 62, & 64, Robertson Street, GLASGOW.

LONDON. For International Stores, 68, Walm-lane, Willesden Green. Messrs. George Baines & Son, architects, 5, Clement's Inn, Strand, London, W.C.: –

—	A.	B.	C.	D.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Mason & Son	440 0 0	100 0 0	15 0 0	10 0 0	565 0 0
Clark Bros.	430 10 0	74 10 0	18 10 0	11 0 0	534 10 0
Brightman & Son	425 0 0	71 0 0	21 0 0	12 0 0	529 0 0
J. W. Jerram	413 0 0	85 10 0	9 0 0	11 5 0	518 15 0
Bartley, Sons, & Holmes	402 0 0	91 0 0	11 0 0	13 0 0	517 0 0
King & Sons	419 0 0	68 0 0	19 10 0	11 0 0	517 0 0
Lewis & Bro.	483 0 0		12 0 0	11 0 0	506 0 0
Willmott & Sons‡	370 0 0	79 0 0	13 10 0	18 10 0	481 0 0

‡ Accepted, with modifications.

ISLE OF WIGHT.—For erection of cottage and outbuildings at Bleakdown, for the Isle of Wight County Council. Mr. S. E. Tomkins, architect, Newport, I.W.:

H. Taylor £329 10
E. J. Hayles, Godshill, I.W.* 327 0

LONDON.—For alterations to factory premises at Lime-grove, Shepherd's Bush, for the Gaumont Film Company, Ltd. Messrs. Moscrop-Young & Glanfield, Lic. & A.R.I.B.A., architects:—

Kininmont & Sons	£1,200	Holliday & Greenwood	£1,046
H. J. Edgar	1,141	Hutchings & Keasley*	1,029
J. R. Cuthbertson	1,139		
W. E. Wallis & Sons	1,097		

Electric Lighting.

Duncan, Watson, & Co* £308 10

LONDON.—For sundry repairs at Relief Stations, for the Guardians of Greenwich Union. Specifications by Mr. Louis Jacob, F.S.I., quantity surveyor, 32, Theobalds-road, W.C.:—

—	Roval-hill.	Calvert-road.	Simla-street.	Watson-street.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
F. W. Loasby, 276, Hither Green-lane, S.E.	40 15 6	28 15 6	62 13 0	33 15 0*
J. Mitchell, 52, Friendly-street, St. Johns, S.E.	38 0 0	28 10 0*	—	—
E. Mills	41 10 0	29 10 0	58 10 0	44 10 0
W. Mills & Son, St. Georges'-road, Blackheath	34 10 0*	66 0 0	49 0 0*	45 10 0
J. Shorter & Co.	60 10 0	40 10 0	67 10 0	50 10 0
A. Townsend	41 0 0	36 5 0	68 15 0	42 15 0

METTINGHAM (Suffolk). - For additions to Valley House, for Mr. James A. Bezant. Mr. R. G. Norman, architect, Ditchingham, Norfolk. Mr. C. Searle, builder, Mettingham.

[The contract has been awarded on the basis of a commission on accounts rendered for labour and materials. Architect's estimate, £2,500.]

NEWCASTLE-ON-TYNE. — For two additional stories to the Tyne Improvement Commissioner's premises. Mr. W. H. Wood, F.R.I.B.A., architect, Newcastle-on-Tyne:—

Middlemiss Bros.	£15,410 0 0	J. & W. Lowry	£13,759 0 0
T. Lumsden	14,888 0 0	J. Milne	13,709 0 0
W. Hall	14,234 0 0	A. Pringle	13,589 0 0
G. Douglas	14,192 0 0	S. Easten, Newcastle*	13,575 0 0
W. T. Weir	14,167 12 6	G. H. Mauchlen	13,540 0 0
W. Moss & Son	14,120 0 0	S. Bery	13,385 3 7
J. C. Ferguson	14,102 0 0		
J. W. White	13,950 0 0		
Davidson & Miller	13,917 0 0		

OFFHAM (Kent).—For the erection of a gamekeeper's cottage on the Quintin House Estate. Messrs Moscrop-Young & Glanfield, architects, Lic. & A.R.I.B.A.:—

J. A. Davison, West Malling £300

PONTYPRIDD.—For erection of an additional story and other alterations to the Clarence Hotel, for the Rhondda Valley Breweries Company, Ltd. Messrs. A. O. Evans, Williams, & Evans, architects, Pontypridd. Quantities by architects:

E. R. Evans & Bros.	£1,771 11 7	Waterman & Slade	£1,549 6 8
Jones Bros.	1,674 0 0	S. Shail	1,520 0 0
T. P. Howells	1,644 0 0	E. Jones & Sons	1,425 0 0
A. Seaton	1,629 14 0	Knox & Wells, Cardiff*	1,327 0 0
D. Griffiths & Son	1,600 6 6		
Gough Bros.	1,579 0 0		

PORTHCAWL. For erection of a church. Mr. G. E. Halliday, F.S.A., F.R.I.B.A., architect, Cardiff:—

H. Smith	£7,430 0 0
S. Shenton & Sons	7,380 2 0
W. Thomas & Co	7,253 14 3
R. Rackin	7,155 17 9
Waring, Cole, & Waring	7,092 18 1
D. W. Davies	7,071 0 0
T. F. Howells	6,980 1 9
Knox & Wells	6,941 2 8
D. Davies & Sons	6,921 0 0
R. Cox & Burdo	6,889 12 10
H. Pittard & Sons	6,621 16 5
W. A. Jones	6,501 7 2
Ebbw Valley Building Co	6,498 0 0
W. T. Lewis	6,443 6 0
Vickery Bros., Barry Dock*	6,135 15 4

READING.—For alterations, additions, repairs, painting to the swimming-bath, Tilehurst-road. J. Bowen, Borough Engineer and Surveyor, Reading

G. S. Lewis & Bro., Castle-street, Reading £225

TORQUAY.—For completion of 1, 2, 3, 4, 5, 6, and 9, Sefton-gardens, Torquay. Mr. F. G. Mo A.M.I.M.E., architect, 9, Fleet-street, Torquay:—

G. H. Northcote, Torquay £193 10

WESTBOURNE. -For erection of a new Cou school. Mr. Haydn P. Robert, A.R.I.B.A., Cou Architect. Quantities by Mr. H. A. Grover, 32, N Bridge-street, London, E.C.

Sendgett & Son	£3,249 10	Wakeham Bros	£2,797
A. Peskett & Co.	3,035 0	W. R. Smith	2,789
G. Potter	2,999 0	J. Tanner	2,720
R. Cook & Sons	2,995 0	F. Sandell & Sons, Worthing*	2,624
J. Linfield & Sons, Ltd	2,935 0	H Baker & Son	2,622
S. Salter	2,873 0		
J. Longley & Co.	2,835 0		

WIMBLEDON.—For additions to Quicks-r Primitive Methodist Church and Schools. Mes George Baines & Son, architects, 5, Clement's-i Strand, London, W.C.:—

H. Hann	£897	F. W. Fletcher	£
H. H. Hollingsworth	847	J. Burges & Sons*	
J. Welford & Sons	845		

Ham Hill Stone.
Doulting Stone.
Portland Stone.
The Ham Hill and Doulting Stone Co., Limit
(Incorporating the Ham Hill Stone Co. and C. Trask & Son The Doulting Stone Co.).
Norton, Stoke-under-Ham, Somerset.
London Agent:—Mr. E. A. Williams, 16, Craven-street, Strand.

Asphalte.—The Seyssel and Metallic La Asphalte Co. (Mr. H. Glenn), Office, 42, Poult E.C.—The best and cheapest materials for da courses, railway arches, warehouse floors, f roofs, stables, cow-sheds and milk-rooms, gr aries, tun-rooms, and terraces. Asphalte Co tractors to Forth Bridge Co. T.N. 3644 Central

SPRAGUE & CO., Ltd.,
LITHOGRAPHERS,
Employ a large and efficient Staff especially Bills of Quantities, &c.
69 & 70, Dean-street, Soho, W.

J. J. ETRIDGE, Jr.
SLATE MERCHANTS. LTD.

EXPERTS IN
SLATING, TILING.
BEST WORK ONLY.
Telephone 2685 Wall, or write—
BETHNAL GREEN SLATE WORKS,
BETHNAL GREEN, LONDON, E.

PILKINGTON & CO
(ESTABLISHED 1838),
DEPTFORD WHARF,
190 & 192, CREEK ROAD, DEPTFORD, S.E.
Telephone No.: New Cross 1102 (two lines).
Registered Trade Mark.
Polonceau Asphalte.
PATENT ASPHALTE AND FELT ROOFING
ACID-RESISTING ASPHALTE.
WHITE SILICA PAVI
SEYSSEL ASPHALTE (*Direct from the Mines*)

"Drop Dry" Glazing
ECONOMICAL, EFFECTIVE. THE PERFECT SELF-SUSTAINING BAR.
Copper & Zinc Roofing
The most Efficient and Economical System in the Kingdom.
Designs and Estimates Free on Application.
Telegraphic Address: "COURTEOUS, LONDON."
F. BRABY & CO., LTD.
Telephone: North 3032 (4 lines).
Chief Offices: 352-364, EUSTON ROAD, LONDON, N.W
Works: LONDON, LIVERPOOL, BRISTOL, GLASGOW, FALKIRK.

THE BUILDER

VOL. CII.—No. 3612. APRIL 26, 1912.

CONTENTS.

	PAGE
British School at Rome	475
ptal Criticism	476
es	476
Exhibition of the International Society	477
Royal Institute of British Architects	
ith Illustrations)	478
Society of Architects	480
nt Workmen's Compensation Cases II.	481
itectural Societies	482
eral News	482
petition News	482
s	483
espondence	484
mmunication Column	484
orial Summary	485
tings	485
s to Illustrations	485
azines and Reviews	484
y Years Ago	485

	PAGE
Monthly Review of Engineering:—	
Lighting by Air-Gas (with Illustrations)	487
Foundation Loads.—IV.	488
The Colloidal Nature of Cement	489
Pure Cement Concrete as a Lining for Kilns	489
Reinforced Concrete	489
Notes	490
The Building Trade:—	
The Modern Bricklayer and His Work	491
The Mediæval Carpenter	491
London Master Builders' Association	491
Building Plans and Building Prospects	491
Government Contracts	492
Labour in the Building Trade	492
General Building News	492
Projected New Buildings in the Provinces	493
Metropolitan Asylums Board	493
Foreign and Colonial	494
The Ideal Home Exhibition (with Illustrations)	494

	PAGE
The Sculptor's Assistance to Architecture	496
Legal Column	496
Law Reports	498
London Councils	498
Obituary	499
Patents	499
List of Competitions, Contracts, etc., Open	500
Some Recent Sales	502
Prices Current	502
Tenders	504

Illustrations.

The Cathedral at Senlis, Oise, France. Drawn by Mr. P. D. Hepworth.

The Abbey Gateway, Bury St. Edmunds. Drawn by Mr. P. D. Hepworth.

Baptist Church and Schools, Nottingham. Messrs. Sutton & Gregory, Architects.

The Church of St. Luke, West Hartlepool: Second Premiated Design, by Mr. J. H. Morton, F.R.I.B.A.



Design for Assize Courts, Liverpool, by Elmes. (*See page* 479.)

THE BRITISH SCHOOL AT ROME.

ALL those who have so worthily striven towards the formation of the British School at Rome may heartily congratulated on the success their efforts. The announcement that Royal Charter has been granted for the omotion of the study of archæology, tory, and letters, architecture, paint-, sculpture, and the allied arts, rks a definite step forward in the vancement of architecture in this untry.

While continuing the archæological d other researches hitherto carried on the Old British School at Rome, the arter provides also for the establish-nt of a hostel, general library, and idios, and for the awarding of scholar-ips and other forms of assistance to idents in connexion therewith. Pro-ion is also made for four Faculties—., Archæology, History, and Letters; chitecture; Painting; and Sculpture; and for such others as the Council shall from time to time determine.

This Council, as provided by Article II., is to consist principally of members nominated by various public bodies, and appears to be so constituted as to ensure a minimum of three architects, one to be appointed by the Royal Academy and two by the Royal Institute of British Architects. With the exception of the Royal Society of British Sculptors, however, there is evidently no reason why any of the other bodies concerned should not appoint architects to represent them or why architects should not be co-opted under the terms of Clause 6. Indeed, the Royal Scottish Academy and the Royal Hibernian Academy by the appointment of Mr. J. J. Burnet and Sir Thomas Deane create a precedent which may possibly be followed by other authorities in the future. The first Council thus comes into existence with five architect members, including, in addition to those already mentioned, Sir Aston Webb, appointed by the Royal Academy, and Mr. Reginald Blomfield and Mr. J. W. Simpson, appointed by the Institute. This selection is, we think, fairly representative, and will no doubt be considered generally satisfactory. The inclusion of two architects to serve on the Executive Committee with two painters and two sculptors, giving six artists out of a total of fifteen, may be considered reasonable so long as the present proportion remains, but should it be deemed necessary to increase this number we hope the representation of the various arts will be increased in proportion.

Everyone interested in the future of architecture, while seeing in this announcement much cause for gratification, must realise that the future usefulness of the School will largely depend on the wisdom and foresight of those

entrusted with the preliminary organisation. So much will depend on approaching the subject from the right point of view, so that the School may be established on the right lines. Considering the present unsatisfactory and even chaotic condition of our educational methods, it appears evident that it will be wiser to organise this School once and for all on ideal lines to which our educational methods will by degrees adjust themselves rather than to attempt to adjust the School to meet present-day conditions. These, we hope and believe, are but temporary, and even now in process of an improvement which will bring them more into line with continental and international opinion.

This, we imagine, is, for the students of this country, one of the great advantages of this School. Situated as we are, on an island on the Western fringe of the continent, it has been our fate all through the centuries that witnessed the growth of Western civilisation to be far removed from the great centres of European thought and culture. Whatever success we may have achieved has been rather the success of individuals than of schools; and through it all it has been only the men of the rarest mental equipment who have succeeded in freeing themselves from the taint of provincialism and in lifting themselves up to that height from which alone an international outlook is possible.

Although in our old university towns we possess centres of thought and of culture, whose value we would not for one moment wish to belittle, yet we have nothing comparable to the great international centres of Europe for the exercise of just the influence which is so necessary to widen the mental and spiritual horizon, and to quicken the sympathy and insight of the young artist; nothing that brings him into touch in quite the same way with the keenest minds and most forceful personalities of other countries, so enabling him to realise the limitations of his national outlook, and to find his own level from an international standpoint.

Whatever advantages Paris may possess in helping the student to find his own level, her chief value is in the acquisition of the technique of art. In this respect she is universally recognised as the leading school; but for the acquisition of culture Rome is supreme.

It is, we imagine, for this latter purpose that the British School at Rome is intended. Not as a school of technique, but of general culture. Not a classroom in which to study the principles of architecture, but a cloister in which to meditate on their application. To ensure to the student just leaving the schools a period of quiet and a breathing-time in which he may assimilate his knowledge and under the gracious influence of such an incomparable environment and in sympathetic communion with the most gifted minds of all nationalities may gradually find himself and the place of his art in the scheme of existence.

In order to reap the full advantage of such an opportunity and to hold his own with the picked men of the Beaux-Arts and other foreign schools, it is evidently necessary that the English student should take with him a very complete technical equipment. At the first start, no doubt, this will prove a difficulty, as it is idle to pretend that our Gold Medallists from the Academy or other picked students from any other of our schools can be for one moment compared in this respect to the winners of the Grand Prix de Rome or to the selected students of Germany or America.

Although there may at first be a danger that inferiority of technical knowledge and an insular outlook may tend towards isolation and to the maintenance of those provincial characteristics which it should be one of the principal objects of such a school to soften or eradicate, yet it may, we think, be confidently anticipated that as the School gradually gets into touch with the Villa Medici and the Villa Aurelia the natural desire to be on equal terms with their occupants will lead to a demand for a higher standard of education, and so exercise an uplifting influence on our schools at home and bring them more into touch with the best that is known and thought in the world.

It is this friendly intercourse with students of other nationalities which we are inclined to think even more important and more advantageous to the English student than all the art treasures or the historic associations of Rome.

In the cultivation and maintenance of a sympathetic understanding with the representatives of foreign countries much will naturally depend on the personnel of those selected as heads of the various Faculties. We are confident that every effort will be made to secure a wise selection, and that under competent guidance a brilliant future is assured for the British School at Rome.

HOSPITAL CRITICISM.

THE severe and outspoken criticisms on the buildings of the Sheffield Royal Hospital contained in an article contributed by Sir Henry Burdett to a recent number of the *Hospital* were dealt with at the last quarterly meeting of the Royal Hospital Board. A Special Committee, which was appointed to investigate the matter, satisfied itself as to the unwarranted character of many of the allegations, just one-half of the statements being found to be absolutely contrary to fact. As to the others, which were true to a greater or less extent, some were said to be of little importance and others a matter of opinion.

Everyone will freely admit the value, even the necessity, of criticism, however severe and outspoken, and we are quite sure no architect would resent it provided it is well-informed and true in substance and in fact. Judging from the report of the Special Committee, this criticism is neither, and is therefore to be deprecated.

Sir Henry Burdett's interest in hospitals is well known, and no one would question his *bona fides*. We can only imagine therefore that, as far as the matters of fact are concerned, the suggestion of the Committee that his inspection of the Royal Hospital "was very imperfectly performed, or that amidst the number of institutions visited his memory of details has failed him, or his notes have been accidentally misplaced," accounts for so many misstatements.

As to the matters of opinion, with all respect to Sir Henry Burdett's knowledge of the subject, a layman's opinion can hardly be accepted as the last word on hospital construction, as distinct from its administration, nor as to the best way to lay-out a hospital on a given site to avoid waste of space and subsequent cost of upkeep. As the Committee considers that a better plan for utilising the available space would be difficult to suggest, the two lay opinions on this point may be left to cancel one another.

Whatever value there may be in the point of view Sir Henry Burdett puts forward on matters of construction, it must be remembered that medical science is rapidly advancing and that opinions based upon it change from year to year and that it would, we think, be rather difficult to obtain a general consensus of opinion from medical men and hospital administration on more than the general outlines of the lay-out or construction of hospitals.

But in any event it hardly seems fair to make remarks which might be taken to infer that those employed to design any particular hospital are not competent unless the statement can be substantiated by facts which do not meet with instant contradiction.

It is generally recognised that the best results in hospital construction can only be obtained by intelligent and cordial co-operation between those who administer them and those who design them. Such regrettable incidents as this will hardly tend to promote it, unless mistakes honestly made are candidly admitted.

NOTES.

The Institute Drawings. THE paper read at the Institute on Monday evening was illustrated by original drawings dating from the early XVIth century down to those by Wm. Eden Nesfield. In the subsequent discussion the question arose as to whether the Institute or the Victoria and Albert Museum were the more fitting permanent home for architectural drawings. Mr. Strange, of South Kensington, manfully supported the case for the Institution which he serves: but the general feeling of the meeting was, so far as we could gather, in favour of housing them at Conduit-street. Architectural drawings are a thing apart, and rarely interest the larger public who visit museums. The Institute collection, already considerable, is steadily growing, and if the Council cannot enter into a purchasing competition with South Kensington, it can at any rate welcome gifts with equal pleasure. It is true that at present the accommodation at Conduit-street for collections of the sort is not wholly adequate; but the Institute is now in possession of large premises, and in the course of time this difficulty should not prove insurmountable. The Institute possesses one of the most complete architectural libraries in the world. It is a sort of Mecca for the travelling European scholar. The trusteeship of the Burlington-Devonshire collection of drawings has added to its renown. It is therefore valuable not only as a pecuniary asset, but also as a possession which increases the prestige of British architects abroad.

The Aftermath of the Strike. When the history of the coal strike comes to be written those capable of serious thought may well ask themselves two questions. (1) Was it worth it? (2) Is striking the best means of airing grievances and obtaining redress? It is impossible to gauge the loss of wages incurred by reason of the strike. Workpeople all over the country were affected, a period of improving trade was squandered, and work was driven out of the country. This much, however, can already be proved: the number of working days lost by the miners in March alone was 23,900,000. Take an extreme minimum wage of four shillings a day, and this represents a loss in wages in this trade alone of 4,780,000*l.*, and the sickness, provident, and other funds are depleted. During the whole of last year 931,000 workpeople were involved in disputes, and 10,247,100 working days were lost. This was bad enough, and compared with 908,538 workpeople and 9,722,800 working days in 1910; but the first three months of this year already exceed the figures for those bad years, as 1,094,855 workpeople have been involved in disputes and 27,867,400 working days have been lost. The trade of no country can long bear such a strain, and the workpeople themselves are the first as well as the last to suffer. They suffer months after a strike is terminated. When all is said and done everybody must now see that the miners' grievances were capable of being adjusted by peaceful measures; that minimum wages in abnormal places would have been secured without a capital expenditure of nearly five million in wages.

The London Society. While no signs have been given of the corporate existence of the London Society, we have reason to believe that the enthusiastic meeting held in February last will be followed in due course by other indications of life. On such a question as the site for the London University the Society might express an opinion, while preparing itself for more general activity concerning the beauty and well-being of the metropolis. The sooner the executive show vigilance in the affairs of the moment the quicker will support be given by those who are hovering now on the brink of membership.

And the Cockburn Association. We may turn to Scotland for an object-lesson in the cause of conservation, architectural propriety, and city development. While various societies have been formed in London and have apparently become defunct, the Cockburn Association of Edinburgh has steadily maintained its influence. Lord Cockburn, who advocated in 1817 the "respectable and organised resistance of municipal power," wrote as follows:—"I do not mean to recommend perpetual agitation. What I want is to encourage the formation of correct opinions and of a right spirit over the community, so as to secure the existence of a general and intelligent attachment to what is essential to the City. If devotion to the beauty of their town was known to be a part of the nature of the inhabitants, it would operate preventively and would very rarely need to be called into action." To achieve such objects the Cockburn Association was instituted in 1875, the year following the publication of Lord Cockburn's "Memorials and Journals." The subscription for life is one guinea and for a year half-a-crown, the amounts being small in order to attract a large membership and so that public opinion may be fully represented. (The minimum subscription to the London Society—for Londoners—is one guinea per annum.) A list has been published showing the occasions on which the Cockburn Association has taken action in Edinburgh and the neighbourhood. The last recorded action is dated 1910, when Mowbray House in the High-street was purchased by public subscription organised by the Association.

Indian Native Craftsmen. Among the many problems which will arise during the development of Delhi as the Indian Capital none is of more interest than the question of tradition. It will be a great pity if those who have the subject to consider do not contrive to effect a happy combination between Eastern and Western ideas. We understand that Lord Hardinge is in favour of an Oriental style of architecture for the new Government Buildings, and, while it will doubtless be possible to evolve designs in sympathy with the local necessities, the native population must be prepared to concede much to the European advisers who have been called in to give the results of their knowledge of advanced methods of construction and of the principles of planning. But, whatever proposals may be made as regards design and planning, the enterprise will not be successfully carried out unless the native craftsmen of India are employed extensively in the execution of the buildings. That these craftsmen exist, possessed of insight into the past and equipped with individual resources uncommon among workmen in more "civilised" countries, is an established fact, and it will be to the credit of all concerned if they are given the opportunity to prove their skill.

The York House Water Gate. We must cordially endorse Miss Sophia Beale's suggestion that some of the original effect should be restored to the York House Water Gate by excavating the ground in front of it and forming a pond with aquatic plants and waterfowl. Ever since the construction of the Embankment this architectural gem has been shorn of its dignity by the raising of the surrounding levels, and we think the present suggestion for disengaging it so admirable that it only requires to be placed before the London County Council, whose sympathy with bygone London has been indicated in many instances, to secure its prompt adoption.

THE UNIVERSITY OF LONDON, GOLDSMITHS' COLLEGE.

At the Goldsmiths' College, New Cross, S.E., a number of short courses in engineering and building subjects are to be given during May and June. As these classes are not connected with any definite course, except as to surveying, any student may join any class. Further particulars will be found advertised in this issue.

THE EXHIBITION OF THE INTERNATIONAL SOCIETY.

The International Society would seem largely to restrict its exhibitions to the display of the work of French and English artists. The present show is a little inconsequential, but it is none the less interesting. We do not find, as other critics have found, any fault with the hanging. If the juxtaposition of one picture with another does not always appear quite logical, yet the walls are so little crowded that the relation of one picture to another is never obviously harmful. The exhibition is in its way rather an affair of threads and patches; it covers a large area of artistic effort, and it leaves the impression of a medley of patterns. But each pattern is individual, so individual indeed, so established by tradition and reputation, that the hanging, after all, matters little. A Millet, a Courtet, a Pissarro, a Manet, or a Monet cannot very well be crowded out, however multitudinous the other pictures. We cannot blame the International Society because they have not provided us with the highest masterpieces of these artists; that would probably be beyond the effort of any Society. In view of the reception of recent artistic manifestations it is a little difficult to understand the antagonism which Manet and the men of his day had to withstand or sink under. In Paris the most untamed *fauve* of to-day looks upon a Futurist picture and proclaims himself a classic. He proclaims it regretfully, be it said, and with an air of chastened regret. The contemporary reception of these older men, its wrong-headedness, would seem to have put fear into the hearts of later critics; to-day at least so far from condemning work which does not fall within a certain official category there is a tendency to rush to the other extreme, a desire even to welcome rubbish so long as it has a theory tacked on to it. However this may be, one of the outstanding features of the present exhibition is the work of Mr. Walter Greaves, two full-length portraits, for which places of honour have been found in the Octagon and Large Galleries. These portraits stand the test of their prominent placing they are dignified, sincere, and vital works. Neither trade booming nor critical depreciation (for we regret to observe that the merit of Mr. Greaves is only reluctantly conceded in certain quarters) can affect their direct and honest appeal to all unprejudiced persons. Mr. Greaves's art is wholesome in its sincerity and as remote as possible from the quick adaptiveness, the felicitous eclecticism, which has brought so much modern work into transitory prominence and fame. The two examples of Millet are certainly much below his best work, and do not suggest either in painting or feeling the joy which was his own in depicting the soil and the peasant of the soil. The two Ribots are more characteristic of the artist, and the Place du Théâtre Français of Pissarro is one of his most familiar works. What are we to say about Mr. Strang's portrait of Mr. Festing Jones? We like his processional picture, "Laughter," much better; it suggests that this artist's talent for precision and unvarnished statement might be usefully employed in a scheme which aims more particularly at decoration. Maurice Denis in "La Plage" occasions pretty much the same opposition in the mind of the spectator as Mr. Strang's "Laughter," although for quite opposite reasons. Both artists work under the spell of a more or less personal convention, and the insistence on the convention, in either case, becomes a little irritating. "The Mother's Kiss" of Carrière is a typical work in which we feel that the manner of the artist (the Carrière convention is sufficiently well known) assists the interpretation of the subject which could not be expressed so subtly in any other way. Mr. Alexander Jamieson shows in "La Pavillon Français, Trianon," one of

his finely vigorous compositions, which brings building, trees, and water into harmonious effect. The work of Gauguin, Alfred Stevens (the Belgian artist), Mr. Lavery, Mr. Charles Shannon, Mr. Ricketts, Mrs. Betty Fagan, and many other notable artists is represented at the exhibition.

THE ROYAL INSTITUTE LIBRARY AND SOME OF ITS CONTENTS.

THE usual fortnightly meeting of the Royal Institute of British Architects was held on Monday, at No. 9, Conduit-street, Mr. E. Guy Dawber, Vice-President, in the chair.

Deceased Members.

Mr. H. T. Hare, Hon. Secretary, said it was with regret he had to announce the decease of the following members:—Mr. Richard John Macbeth, elected a Fellow in 1906; Mr. John Bevan Phillips, Associate, elected in 1884; Mr. Henry Shackleton, Associate, elected 1906; and Mr. Edward Ashby Smith, Licentiate. Another matter which ought to be mentioned was the death of a distinguished architect, who, although not a member of that Institute, was known to many of them—he referred to Mr. E. A. Kent, of Buffalo, New York, who was lost on the *Titanic*. Mr. Kent was a frequent visitor to Europe, and was present at the last Congress, also at the Town Planning Congress, and at the Congress in Vienna. He was sure they would all feel that some expression of regret at his death ought to be transmitted to his sister, who was his only relative.

The Chairman said he would like to add just a word in regard to the sad death of Mr. Kent. There were a great many members of the Institute who knew him quite well. The deceased was the very best type of the American gentleman; he was very keen about his work, a great traveller, and deeply interested in English architecture, and he was sure they all felt the deepest sympathy with his sister.

The resolution was carried in silence.

The Chairman then formally welcomed Mr. Harold E. Moss and Mr. Richard B. Ling as Associates.

Mr. C. Harrison Townsend then read a paper on "The Royal Institute Library and Some of Its Contents," the following being an abstract:—

"We are happy in possessing a considerable number of original architectural drawings, either designs, or sketched or measured drawings of existing buildings, in many cases executed by men of note, and ranging from, say, Scamozzi, in the XVIth century, to Burges and Nesfield of our own time. Thinking that the very existence of much of this material must be unknown to most of us, it occurred to me that it might be useful to lay some of it before you to-night.

Belonging to the Salvin collection are five valuable sheets of drawings which, there is every reason to believe, are from the hand of Inigo Jones. Two of these represent a proscenium designed, in the one case, for the masque of "Juno's Court, 1633," and, in the other, for the "Queen's Masque of Indianos, 1634."* The latter of these was, however, I find, actually used for the performance of Davenant's Masque of the "Temple of Love," in 1635.

In the Crace Collection of "Views of Old London," in the British Museum, is a series of four prints engraved by Loggan, representing four triumphal arches thus described:—"Arches erected for the entry of King Charles into London on his Restoration, April 22, 1661." Of these we have in the Library the original drawings,* about the same size as the engravings, and executed in light ink, with an Indian ink wash, though the engravings vary somewhat from the originals.

We now come to a remarkable volume consisting of 120 drawings by some of those draughtsmen of the late XVIIth and early XVIIIth century, who, I am afraid, come within the category of those lately described by Professor Blomfield as "industrious builders of 'Châteaux d'Espagne,' indefatigable and unprofitable designers in the air."

In this we find some good drawings of a scenic and baroque design by Panini, known as a painter of the Campagna and of Roman ruins, by whom the Institute possesses an oil painting of the Colosseum on its walls in the Council Room. By Pierre Puget, who was not only an architect and a "great sculptor" (as he is termed by Mr. W. H. Ward), but a painter also, and was, on these three qualifications, called by his flattering admirers, in his own day, the "Michel-angelo of France," there are also some examples.

John Talman, son of the elder Talman, who designed Chatsworth for the first Duke of Devonshire, was an architect of considerable note in the early part of the XVIIIth century. Before practising he travelled to Rome with W. Kent, and in the present volume the outline views of the Rhine, the Danube, and the Wael bear his initials. It also contains some drawings in brown ink of stained glass in the church at Upton, the draughtsmanship of which shows a curiously good feeling for such work, considering the period (1708) of its execution.

In a folio volume of drawings of Whitehall Palace, an early owner, the Rev. George Mortimer, has inserted the following note:—"We have always been given to understand that these are the original drawings of Whitehall Palace." The book, however, contains manifestly the drawings made for Kent's edition of the works of Inigo Jones (1727) by Flitcroft, who was not only an accomplished and delicate draughtsman, as these pencil drawings show, but an architect of note in his day. It was he (and not Hawksmoor to whom it is usually assigned) who was the designer of St. Giles-in-the-Fields. The original drawings of R. Wood's "Ruins of Palmyra" and "Ruins of Balbec or Heliopolis" are contained in two large volumes of very laboriously careful sketches. The drawings, elaborated from Dawkins' roughe sketches, by J. P. Borra, are as we know them in Wood's volumes. The latter refers in the Balbec volume to Dawkins as having "made the sketches and measures" for the work.

In 1784 George Hadfield received the first gold medal for the travelling studentship at the Royal Academy. He made use of his tour abroad to make measurements and collect data for the restoration of the Temple of Fortune at Palestrina, or Prænestе, near Rome. He associated with himself in the work Sig. Colonna. The restoration scheme is shown in six beautifully-tinted drawings, one of which, full of minute detail, is no less than 8 ft. long. It is interesting to know, by-the-bye, that Hadfield may be further remembered as the architect of a considerable portion of the Capitol of Washington.

The Library possesses the original water-colour drawings by James Stuart from which the engravings were made for Stuart and Revitt's "Antiquities of Athens," and also a small volume of his sketches and MS. notes. The latter probably covers some of the ground of Stuart's visit, *viâ* Holland, to Rome in 1742, and contains fifty-five pages of sketches, in many cases landscapes, drawn, with some breadth and appreciation, in pen-and-ink.

There are in the Library nine large drawings by Hardwick—plans, elevations, and sections of the Pantheon from his own measurements. Another large volume by him is a scrapbook in which have been mounted sketches and measured drawings, most of which he made in 1778. These include several sheets of the west end of St. Peter's, the Colosseum, and the Villa Madama. This conscientious, but not very inspired, book is the work of the father of the better-known Philip Hardwick. He was a pupil of Chambers, and obtained, in 1768, the first silver medal offered at the Royal Academy for the class of architecture.

To those who are interested in the work of the late XVIIIth century, when the influence of the Adam brothers was supreme, the book of sketches of ornamental friezes from original models in the possession of Joseph Rose will appeal.

By Sir Robert Smirke (of whom, as you know, we possess a bust, which is in the Common Room) we have eleven large water-colour drawings, executed during his travels in Naples, Sicily, and Greece, between 1801 and 1805. These include a good drawing of the Temple at Ægina, labelled as the Temple of Zeus, but now identified as the Temple of Athene.

There is a volume by Henry Parke, an architect of the early XIXth century, whose name should be known to members of the Institute as the designer of the medal which was given by his brother-architects, in 1835, to Sir John Soane, and the use of which is allowed us annually for the Soane Medallion. Parke's widow presented these 500 and 600 drawings, which are the result of his tour through Italy, Sicily, Greece, and Egypt, in 1824. Many of his measured drawings were done in conjunction with his fellow-architect, Scoles, of whom there is a framed portrait on our walls.

One of the original founders of the Institute was John Goldicutt, who was born in 1793 and died in 1842. By him we possess about 300 sketches and 100 designs and projects of his own. Many of the sketches are of Pompeian decorative work, probably done for his "Specimens of Ancient Decorations from Pompeii," published in 1825. We have on the walls of the Institute one of his drawings of unusual interest. It is the very elaborate transverse section of St. Peter's, showing, with much careful expression, the decorations and

* See the *Builder* for June 18, 1910.



View of Court. By Panini.

paintings, and was submitted by Goldicutt to Pius VII. The Pope, in recognition of its merit, presented the artist with a special gold medal.

There is a volume of strongly-coloured drawings by George Wightwick (1802-1872), an extraordinarily voluminous author on things architectural. They are the originals of his "Select Views of the Roman Antiquities," lithographed by T. N. Baynes, and published in 1827, and are useful in showing us the unexcavated state of the Colosseum and the Forum. Another volume of his is a scrapbook of sketches, many of which are measured work done in Italy. We have a further volume to which Wightwick gives the somewhat imposing title of "My Liber Veritatis." It contains drawings of vases, and sketches in France and Venice, and also the rough sketches for the above work, and, finally, this most prolific of architectural draughtsmen has left behind him a huge collection of large and very vigorously-coloured drawings which had served to illustrate his many lectures.

A volume presented by Professor Donaldson, in 1864, contains some water-colour sketches, done between the years 1816 and 1819, by Joseph Woods, who, it is interesting to note, was a founder, in 1846, of the London Architectural Society, of which our Institute is the lineal descendant. The drawings are not very good, but those of the Treasury of Atreus and the Lion Gate at Mycenæ are interesting as showing us the buildings before their exhumation.

A curious series of sketch and note books—no less than sixteen volumes of closely-written and minutely-drawn notes—are the result of John Wolfe's three or four years of travel in Italy, Greece, and France in 1820. It was during this tour that he and Charles Barry became fellow-travellers, and began the intimate friendship which lasted through their life and is perpetuated in the name borne by Sir Charles Barry's son—our distinguished Honorary Associate, Sir John Wolfe Barry.

Of Elmes' work we have a large collection of drawings and designs and full-size and other details. There are, mostly drawn by his own hand, several interesting alternative treatments of St. George's Hall, both interior and exterior. Amongst his drawings are three large tinted perspectives (submitted in two cases in competition), but two of these, I think, evidently show the hand of Thomas Allom, whose vogue as a "perspective colourist" was so great in the middle of the last century. I take it that this is Elmes' competition design submitted for the Liverpool Assize Courts (p. 475).

The name of T. L. Donaldson seems to carry us very far back, for, though he only died three years before Nesfield, we have two volumes of sketches done in Greece and Rome as early as 1819 and 1821. Curiously enough, one of these is a large volume of sketches of Gothic work, to which one would not have imagined he had much leaning.

A donation to the Library by Mr. C. E. Sayer, made some three or four years ago, was a volume by Alexander Rocs. It contains many beautifully-executed little drawings of coloured decoration. Some forty or fifty of these are of Pompeian walls and ceilings, but, unfortunately, a large proportion of the remainder are without any indication as to their source.

Decimus Burton, the architect of the Wellington Arch, and a former Vice-President of the Institute, presented to the Library the year before he died (which was as recently as 1881) forty-two drawings of classic relief ornament, in one or marble, carved decoration of architraves, friezes, etc. They are drawn, and well drawn, on tinted paper in black crayon touched with white.

By William Burges we have three scrapbooks in which have been inserted drawings of original designs of stonework and of silver and goldsmith's work, domestic and ecclesiastic. The books dealing with goldsmiths' work contain designs of book-clasps and metal bindings, one mounted glass bottle, and a drawing of the equally well-known cup with the twenty-four grotesque animals on the rim. A later acquisition, through the generosity of Sir W. Emerson, is the pocket-book lately presented by him to the Institute. It consists of thirty-six vellum pages with sketches in brown ink, annotated in Burges' usual almost black-letter script, and still contains, interestingly enough, its own crowquill. The contents are most miscellaneous—animals, landscape notes in Italy, sketches at the theatre, and studies for portions of his own designs. There is an alternative design for the upper part of the tower for his proposed Law Courts, introducing, as features of the carved decoration, in his characteristic manner, the seasons, months, and planets.

There are four volumes of a modern architect whose influence on the architecture of our own time has, in the opinion of many, not yet been fully recognised. Some of the evidences of the amazing fertility known to many who, like myself, were brought into close contact with William Eden Nesfield are to be found in the four volumes of his sketches which the Institute possesses. One of these volumes—a scrap-book—gives an opportunity of tracing the development of his talent by sketches dating from 1846, when he was only eleven years old. It contains boyish drawings, eventually improving in merit as he profited by the teaching of J. D. Harding, many of whose characteristic strokes are to be noticed as corrections of his pupil's work. The third volume contains many English subjects, dating apparently from 1855 to 1858. But the fourth is a book of great interest, being mainly the material eventually utilised for the well-known book, "Specimens of Mediæval Architecture in France and Italy," published in 1862. The illustrations were drawn on the stone by Newman, and, though occasionally just a little hard in draughtsmanship, show the lithographs to be particularly faithful and accurate to the original.

In 1867 there were presented, through Professor Donaldson, by Texier himself (a Gold Medallist of the Institute in 1866), five volumes of sketches and details, in gold and colour, of mosques in Constantinople, one volume dealing specially with St. Sophia. To the latter Professor Lethaby refers in his "Sancta Sophia."

The volumes of Devey's sketches are somewhat disappointing. Not indeed that they are otherwise than beautifully drawn and touched with colour in quite a charming way, but that they happen to deal principally with one branch of his sketch material only. The majority of the drawings are of chimney-tops, and, though they cover a great deal of ground and comprise notes made of these throughout England and in Germany and Holland, the volumes are not of very great interest. There are, however, a few sketches of French towns, such as Harfleur, Rouen, etc.

A collection of very beautiful drawings is contained in two volumes, one of twelve sheets and the other of thirty-three, of the coloured decorations of Norfolk and Suffolk churches. The larger volume deals with the well-known series of screens, and the smaller containing principally roof decoration. These drawings, which were executed by G. Y. Wardle, with very charming feeling for his subjects, show a delicate and an accurate appreciation of the work of that great school of English art of the early XVIth century which has not yet received its meed of recognition."

Mr. R. Phené Spiers,

in proposing a vote of thanks to the author, said they were greatly indebted to Mr. Townsend, who had brought to their notice a very large number of drawings, only a few of which he (Mr. Spiers) was previously aware of. Some three or four years ago Mr. Townsend pressed him to undertake the same task, but he was pleased it had been left to that gentleman, because it had evidently been a great delight to him to get at the facts, and he had approached the subject in a slightly different form to what he (the speaker) would have done. The author commenced with John Shute's book, which was published in 1563. He (Mr. Spiers) remembered when the book was first brought into the Library, and he had consulted it very often since, and he had no doubt many other members had. He was very glad to hear that a facsimile of the book was going to be published so that it could be in the hands of every student. There was a great deal more information to be obtained from that work than could be obtained simply by looking at it in the Library. A few years later, in 1577, another book which became very famous was brought out by Jean De Vries, of Antwerp. He believed there was a copy of the work in South Kensington, and there was also one at the British Museum. Unfortunately, the Institute did not possess a copy. The author had referred to the South Kensington collection of architectural drawings, and had expressed the hope that the Victoria and Albert collection and their own might exist side by side without antagonism. The fact was, it was very difficult for the Institute to find places for specimens, and for that reason he had sent 1,400 sheets to South Kensington. If the Library was to be of the value it might be to students they must make some arrangement by which the collection could be separated and catalogued and be made easily accessible.

Mr. E. F. Strange

seconded the vote. He remarked that the Institute's collection was, to some extent, the same as that at South Kensington, which was under his (the speaker's) charge. Nothing had interested him more than the way in which the author had touched on all sorts of points in connection with the collection at South Kensington, which he hoped was now rapidly becoming of even much more than national importance. Reference was made to John Yenn, who worked with Chambers, and Mr. Townsend said he was unable to ascribe the drawings which were in the Institute to either of the two artists. If the author were to pay a visit to South Kensington he could clear that difficulty up. Last year they were fortunate enough to obtain a large number of drawings by John Yenn. Yenn, who towards the end of his life was the Treasurer of the Royal Academy, designed quite a large amount of furniture among other things. As far as he could ascertain, he never built a building of any importance, although he designed a great many villas; but he designed a great deal of furniture and a great deal of decoration. Mr. Townsend had referred to a very beautiful collection of drawings of East Anglian rood-screens by Wardle. He (Mr. Strange) did not know where the Institute obtained them from. It was an interesting point that at South Kensington they also had a very considerable number of those delightful drawings which he was commissioned to make by the old Museum in 1865, 1866, and 1867. Whether they did not go on employing him he did not know, but apparently he went on for his own pleasure, and made some more, which were now in the possession of the Institute. If the Institute felt inclined to be



Temple of Jupiter, Athens. From a Water-Colour Drawing by Sir Robert Smirke, in the Institute Collection.

D

generous and transfer them to his charge at South Kensington he would be extremely grateful. That question of early XVIth-century English decoration was an important one. He had tried to draw attention to it from time to time, and systematically at South Kensington during the last few years he had encouraged people to make very careful drawings of painted rood-screens which they had not got in the collection, and they had also bought what they could, by which means the collection was being steadily increased. There need be no question of any rivalry between the Institute and South Kensington. They did not desire to rival or to compete with anybody, but it was their plain duty to carefully inspect everything that was offered them and to go into the market and buy what they considered worth purchasing. They had the space to accommodate the drawings, which were catalogued and every one was topographically indexed, which was much more important to the student. Their topographical index at the present moment contained something over 40,000 references, and they could do for the Institute in the matter of architectural drawings far more than they could do for themselves, even if they spent as much money on their collection as did the authorities at South Kensington. It was creditable to the highest degree that the Institute should possess such an important and valuable Library as it did, but it would be much more valuable if its importance had been realised earlier. The opportunity of collecting old drawings and ornament and architecture was very quickly passing, and within a few years it would be almost impossible to go into the market and buy them. The Institute must not grudge the public those drawings that some of their kind friends took the trouble to collect and give to South Kensington. They were their drawings all the time, and the only thing that resulted from their being sent to South Kensington instead of to the Institute Library was that they had to share the use of them with other people.

Mr. Rudolf Dircks

said there was no reason to fear that the department of the Library with which the author had dealt would stand still, notwithstanding the energy of South Kensington, although he thought there was a fear that the collection would outgrow the present space. With regard to their collection of books, he ventured to say that the bibliophile who was also an architect would find very few shelves in the Library which did not contain something of interest and note. He could only hope that in the course of time some liberal benefactor might endow the Library with a sufficient sum to enable the Committee responsible for the book collection to deal more adequately with it.

Mr. W. H. Ward

said that Mr. Townsend had only touched upon the drawings in the Library, but there were a great many other treasures in the way of illustrated books, engravings, etc. The paper would have done great service if it gave those who were responsible for the finance of the Library some idea of its needs. The Institution of Civil Engineers spent something like 600*l.* per annum on books, nearly half of which went towards binding, and the Surveyors' Institution spent about 300*l.* The Institute spent the magnificent sum of 150*l.* a year, out of which about 40*l.* went for binding, and out of the remainder they had to purchase duplicate books for their loan library. If they could get 150*l.* allocated to spend on books for the reference library only it would be a great boon to the students and would add very much to the value of the collection.

Mr. Herbert Batsford

suggested that a more appropriate title for the paper would have been "Some Drawings in the Institute Library." Mr. Townsend dismissed the books with a few paragraphs, although he was sure it was not his intention to belittle the Library as a collection of books. He would like to see a paper by the librarian dealing with the splendid collection of books which the Institute possessed, which included the greatest folios that had ever been published on the subject of architecture.

The Chairman

said that on behalf of the Institute he wished to express his thanks to Mr. Spiers for his gift of drawings by the late Sir Henry Layard. With regard to the remarks of Mr. Ward, he could assure them that the Council of the Institute were fully alive to the importance of the Library, and they hoped shortly to be able to do more in that direction than they had done in the past. He had been greatly impressed by the marvellous beauty of the draughtsmanship shown in the drawings and the wonderful accuracy of the perspective, and if their students were to study those drawings they would see that some of the present-day draughtsmanship was not to be compared with that of the men of the former centuries.

Mr. Townsend

briefly replied, and acknowledged the help he had received from Mr. Dircks, the librarian, Mr. Keith, the assistant librarian, and Mr. Spiers. With regard to the drawings of Norfolk screens, probably the explanation of Mr. Strange possessing what he thought to be an absolutely unique set might be explained by the fact that the drawings in the Institute Library were manifestly tracings. Mr. Batsford had criticised him for belittling the books, but those who knew the Library as well as he (Mr. Townsend) did would know that to be far from his intention. The books in the Library were a huge subject, and he had preferred to take the lesser in his paper.

It was announced that the next meeting would be held on Monday, May 6, being the annual general meeting.

THE SOCIETY OF ARCHITECTS.

The sixth ordinary meeting of the Society of Architects for the Session 1911-12 was held at No. 28, Bedford-square, W.C., on April 11. Mr. Percy B. Tubbs, F.R.I.B.A., Vice-President, took the chair, in the unavoidable absence of the President.

The following candidates were elected as members:—Mr. F. A. Browne, Springfield, Chelmsford; Mr. T. Foley, Beverley, Yorks; and Mr. G. S. Valentin, London.

Mr. C. McArthur Butler, F.C.I.S., Secretary of the Society, then opened a discussion on "Some Principles of Professional Practice and a Code of Ethics."*

Mr. R. G. Lovell,

in moving a vote of thanks to the Secretary, congratulated him on the result of his efforts in calling attention to the matter before them. The idea of forming a Board of Professional Control was a very excellent one, provided an assurance was forthcoming that it could be got together promptly. If, with the object of gaining greater unity, they were to wait for the co-operation of all the allied societies, the Royal Institute, and the other institutions mentioned, he could easily foresee that the matter would drag on for as long as their previous negotiations with regard to Registration. The Society prided itself upon the fact that it was the forerunner of Registration, and he saw no reason why they should not adopt the same attitude with regard to the suggested code of ethics, and he thought the Council would be acting in the best interests of the profession by pushing the matter forward immediately.

Mr. A. O. Collard,

in seconding the vote of thanks, said he had listened with keen enjoyment to Mr. Butler's paper, and thought it would come as a surprise—possibly a painful surprise—to many architects that any such suggestion as a body to control professional practice and to institute a code of ethics was necessary or desirable. Many of them, he assumed, managed to get along in the profession without treading on other people's corns, and without committing any professional enormity, possibly for want of courage, but more likely by reason of a high moral rectitude. There were two broad divisions of misdemeanour—that against a brother professional, and even worse conduct against the public. Regarding the latter, there was the Common Law to deal with such matters, and he did not know whether Mr. Butler suggested that the Common Law should be set in action against offenders by the proposed Board or whether the latter was merely to control the action of members of the profession in connexion with their own brethren. He wondered whether the architectural profession was on all fours with those other great professions of law and medicine. He agreed that public attention was sometimes drawn to cases in which members of those professions were seriously dealt with, but he thought that in nearly every case it was for offences against the public, so that he did not know whether they could base their reason for wishing for such a controlling body, on the professions of law and medicine. Mention had been made of a schedule of the principles of practice and a code of ethics. Was it suggested that there should be two distinct schedules? Was not a schedule of the principles of practice the same thing as a code of ethics? He thought with Mr. Butler that it was a very doubtful advantage to have any fixed charge whatever, and that it would be better to leave it open so that a man could charge whatever he thought himself worth. There should be nothing to prevent a man charging 10 per cent. if he thought he could get it, as they were well aware that in certain special work a man might have trained himself thoroughly and the value of his work be worth two or three times as much as the ordinary scale gave him. It was rather severe on young architects to suggest that they must not compete with regard to fees or undercut to secure work. He knew that some of the public thought they had a perfect right to offer a young architect less than they would an older man, although he might be the more skilful designer, and he did not see how that could be met. It seemed a little hard that young architects should not be allowed to work at a lower figure, bearing in mind the fact that many of them were able to work at home, and so avoid the heavy charges which some of them had to bear before they made a penny. Some hard-and-fast line should be drawn to define what were and what were not honorary services. It had often happened that an architect gave his services gratuitously, but after his expenses had been paid there was really very little difference. A man should not be able to obtain work on apparently honorary terms, doing some other man out of the work, and yet reap some benefit from it. He noticed that expert services should command payment proportionate to the responsibility and difficulty involved, but who was to be the judge of that value and responsibility? Naturally, they themselves knew what it was worth, but was it suggested that architects should be the judges of their own value? That was the point upon which the Courts came into conflict with them, and was also the reason why the Courts sometimes ignored the Institute's scale of charges.

Mr. W. H. Seth Smith

said they had met to consider their moral obligation not only as individuals, but in their corporate capacity as a class of public servants; and this not merely from the point of view of expediency or custom, but as he understood the author of the paper to imply, from the loftier standpoint of character as formed on the universally acknowledged but little obeyed axiom of doing to other men as we would they should do to us. This principle might be interpreted thus:—We do not desire to benefit ourselves at the expense of the interests and rights of others, whether clients or builders, *e.g.*, we will not use our corporate powers (statutory or otherwise) to restrict the freedom of any man to employ any amateur instead of one of our profession if they prefer to do so. He did not know of any greater want in the architectural profession than a well-written manly book on this subject, approved by the Councils of the various societies, which could be put into the hands of every student as a text-book on this vital question. He claimed for the British professional unions (as distinguished from trade unions) that the vastly-improved public esteem and confidence or status they enjoyed is due to their having in the past laid down and pursued a policy based, broadly speaking, on the following lines:—

(1) They have endeavoured not to limit the freedom of individual members beyond the necessary protection of the equal rights of his fellow-members.

(2) They have never attempted to force employers to remunerate their services at a fixed or unreasonable rate. The cynic might reply that they have not been strong and united enough, but the fact that fair payment has been forthcoming in spite of this corporate disability is proof of their sweet reasonableness!

* See our issue for April 12, p. 421, for an abstract of the paper.

(3) No one was granted membership whose training and skill was below the standard the Society set up, and this educational policy was diligently organised and improved.

(4) A standard of moral etiquette was demanded. No commission was to be accepted from third parties. Members were expected never to depreciate the qualification of their colleagues or to tout for employment where others of their calling were retained, etc.

(5) No limitation of the numbers of members or of their hours or output of their work was ever attempted. It was realised that the man of exceptional talent and endurance was entitled to translate his superior powers into proportional wealth; or that the man with heavy domestic responsibility to burn the midnight oil.

(6) No inducement to join the Society was offered other than the advantage that knowledge gives and the fact that corporate action in resisting injustice was more powerful than individual effort.

(7) The question of remuneration was the last point dealt with, for the reason that to insure the confidence of employers, and the consequent increase and permanence of employment, freedom of contract was necessary, and the public must be convinced that it served their interests best to employ those who had strenuously fitted themselves to be experts, and whose claim to the profession was acknowledged by their own class—their rivals.

It was assumed, and he thought justly, that clients were willing to pay reasonable fees if the advantages were clearly commensurate. The policy was, in short:—

(*a*) To benefit the public by giving the very best of services.

(*b*) To benefit their members by fellowship and by due preparation for professional duty, and thus enable them to reap the confidence, work, and pay which invariably result from such policy.

(*c*) By organised resistance to frustrate attempts on the part of individuals, corporations, or of the Legislature to impose unfair or unjust conditions on their members. Should such moral or legal resistance be abortive, the obvious and final resort was the corporate withdrawal of service. This weapon the medical profession had been obliged for the first time (this winter) to threaten to use, and architects, though not so immediately affected by democratic employment and democratic legislation, have had to adopt in a more limited degree by their recent agreement not to enter competitions under conditions unfair to their members.

Mr. Butler's suggestion that the R.I.B.A. code, as presented in the *Kalendar*, was very meagre and insufficient, might, he thought, be admitted. Convinced and confirmed Registrationist as he was, he was not so sure that any Registration Act which they might, and he believed should, obtain before long, would enable them to make more public or to enforce such a code of morals as was suggested. The great value of statutory Registration would be, as Mr. McArthur Butler premises, the bringing of the at present detached architect under a commonly accepted code of architectural etiquette, but legislation directly or indirectly compelling any man to join a professional body would be a gross breach of the liberty of the subject, and should never be suggested in applying for a Registration Act. As Benjamin Kidd says, "Every party in the State, nobles, middle classes, and middlemen has endeavoured in its time to identify the State with its own interests. The quarrel of society with each of them in turn in the struggles of history has been that they have all endeavoured, when they held the State in their power, to exact from the community more than they were entitled to for services rendered in terms of social utility. To hold the community up for the most they can extract from it." Let them see to it that no picture of this class selfishness laid them open to future censure.

Mr. Arthur J. Martin

(President of the Institute of Sanitary Engineers) said he was sufficiently in touch with the architectural profession to be interested in the matter. He thought he could take it that the interests of their two professions were identical. His opinion was the somewhat unconventional one that they should not lay too much stress upon the interests of their respective professions. After all, they both existed for the service of the public, and a code of ethics could only be justified so far as it protected the interests of the public. The great question appeared to him to be that no person should be at liberty to represent himself as an architect or engineer without possessing the necessary qualifications for the title. Personally, he could not see any reason whatever why an incompetent man should be at liberty to practise in either of these professions any more than he was able to as a solicitor, medical man, or dentist. In their professions, just as much as those he had mentioned, the incompetent man was a danger to the life and health of a large number of people. It was not a matter for the professions to determine, but one which the general public had a right to demand. What that qualification should be was another matter, whether it should be limited to those who had undergone a recognised term of pupilage, or what not, the guiding principle should be, not that the principal work should be restricted to a limited number of hands, but that it should enforce that minimum of professional qualification which was absolutely necessary in the interests of the public.

Mr. A. S. E. Ackermann

said he thought more attention might have been drawn to the professions of law and medicine, from which they might learn a very great deal from their experience. Some years ago he had had occasion to make inquiries of the British Medical Association in regard to the question before them, and he was astonished to find how deeply they had gone into what was more or less an unwritten law. The vast amount of work done by the British Medical Association had nothing to do with Registration, but was purely and simply moral persuasion, and, although their membership was but two-thirds of the whole medical profession, yet they were in such a strong position that if two practitioners who were not members of the Association had a difference which in the ordinary course of events would lead to the Law Courts, they would involuntarily go to the Association for the settlement of their dispute. Solicitors were tied down to certain maximum charges, and their interests were otherwise properly looked after, but they were not bound to charge the maximum fees.

Mr. A. Alban H. Scott

said that most of the discussion had turned on the question of architects' fees, which he thought a great pity, because architects usually looked upon their fees as a secondary consideration, and did their work for the work's sake. With regard to the remarks which had been made as to the principle of payment by commission being an immoral arrangement, no doubt it was an unhappy one, but the young architect, he thought, fully realised that his career would be made not by his financial income or by piling up the cost of the work, but by getting economical buildings for his client and making, and afterwards maintaining, a proper reputation. In the course of their work architects had to deal with specialists and structural engineers, and there was an undoubted tendency at the present day for everyone to more or less specialise, which meant professional unions. The aim of the paper seemed to be exactly the same as that of the labour market, namely, to get national federation. The legal and medical professions had it to a certain extent, and there was no doubt that professional combination had resulted in nothing but good both to the public and to the respective professions. Similarly architects would benefit by a greater professional unity.

After some remarks by Mr. A. Lawrence Cox, F.S.I.,

The Chairman

summed up the discussion, and said he personally hoped that a code of ethics would be adopted, and that the Council of the Society would appoint a Committee to inquire into the matter. The discussion that evening would be of the greatest possible assistance to them. With regard to illicit commissions being no longer necessary owing to the recent Act of Parliament, he, the speaker, thought it had made matters worse if anything, for as matters were originally only one man was considered to be in the wrong, and he was the receiver of the commission, but under the Act both giver and receiver were condemned, and so, as the lips of both were hermetically sealed, there was less likelihood than ever of such things becoming known.

A vote of thanks to Mr. Butler was then put to the meeting and carried with acclamation.

Mr. C. McArthur Butler said he would reserve his reply for the *Proceedings*.

RECENT WORKMEN'S COMPENSATION CASES.—II.

In continuation of our recent review of decisions under the Workmen's Compensation Act we have now to refer to a few cases which relate mainly to practice.

Termination of Incapacity.

In the case of Hargreave *v.* Haughhead Coal Company, Ltd., the House of Lords had to consider the case of a miner who, on February 18, 1910, met with an accident to his right eye which necessitated its removal. Compensation was paid to September 15, when the employers applied for a review. At the hearing, on November 12, it was proved that the man's incapacity had ceased and he was fit to resume his occupation as a miner, but that he had incipient cataract in the left eye which would subsequently incapacitate him from work; this cataract, however, was in no way due to the accident. It was also proved that his condition on September 15, when the payments were stopped, was the same as at the date of hearing. It was a Scotch case, and on these facts the Sheriff Substitute terminated the compensation as from September 15. The House of Lords held that the mere fact that the workman had lost one eye, increasing the risk of blindness, did not entitle the man to have the award kept open, and that the order had been rightly made. This case illustrates the inequalities of the Act, as it shows that, as applied, the test of capacity is hardly satisfactory. This becomes apparent if the above decision be compared with that of the Court of Appeal in Cory Brothers, Ltd. *v.* Hughes, noted the *Builder*, September 15 last. A man had sustained an injury to his left hand, which however did not eventually prevent him from using it in certain forms of light work. He was given light work, but some time afterwards was prevented from continuing it by reason of heart disease wholly unconnected with the accident, yet he was awarded compensation. The Master of the Rolls said: "I cannot bring myself to doubt that the man is disabled in the labour market by reason of the accident from earning wages which even with his bad heart he might otherwise have been earning at the present moment." The distinction between the two cases is that in the latter case the man had never recovered his earning powers, whereas in the former case the man was held to have done so; but having regard to the position of a one-eyed man in the labour market since the passing of this Act, when all employers are afraid to engage him because if an accident happens to his remaining eye he will be entitled to compensation as incapacitated for life, the case is a hard one, besides being somewhat illogical, for if an accident occurs to the man's remaining eye his total incapacity will not be due to that accident, but to that accident plus the former accident, yet in such an event the original accident would not be regarded (see Noden *v.* Galloways, Ltd., the *Builder*, November 24, 1911). In such cases to a layman it would appear that a nominal award of 1d. to keep the claim alive would be the proper order, but, as the law stands, in certain circumstances it favours one-armed men more than one-eyed men. On this subject the case of Ball *v.* William Hunt & Sons, Ltd. (the *Builder*, April 7, 1911), may also be consulted. In that case a second accident rendered obvious a loss of sight which had occurred from a previous accident. The man's earning capacity remained the same, and the majority of the Court of Appeal held appearance in his class of employment, an edge tool moulder, not to be essential to employment. From the cases, however, it is quite clear that if the loss of an eye can be shown to affect earning capacity then the compensation should not be terminated.

Form of Award.

In Higgins *v.* Poulson a man was suffering total incapacity from an accident. His employers were willing to pay full compensation during total incapacity, and the County Court judge made an order for the weekly payments "to continue during total or partial incapacity, or until the same shall be diminished, increased, or redeemed in accordance with the provisions of the Act." This is the form of award provided by the Workmen's Compensation Rules, Appendix I., Form 24; but the employers objected to it on the ground that they were only willing to pay full compensation during total incapacity. The Court of Appeal held the award to be correctly drawn up, as this form

enabled it to be enforced as a County Court judgment. Should any change in the circumstances take place the course for employers to adopt is to apply for a review under Schedule I., par. 16.

Registering Memorandum of Agreement.

In Popple *v.* Frodingham Iron and Steel Company a man, on August 16, 1911, met with an accident, and on August 30 his employers agreed to pay him 16s. 9d. as compensation from the date of the accident, and to continue during total incapacity. On December 9, 1911, the workman applied to have a memorandum of this agreement recorded, but the County Court judge found that at that date the man was not totally incapacited, and he refused to record the memorandum. The Court of Appeal held that the agreement ceased to be operative when total incapacity ceased, just as much as if it had been an agreement to pay to a definite date, and the memorandum ought not to be recorded. The law under the Act of 1897 was different, and this case denotes the alteration made by the Act of 1906.

Varying Apportionments.

The Act of 1906 introduced an important reform in respect of awards made to dependents. Formerly these could not be varied, and often the money in consequence was not expended to the best advantage; but now by Schedule I., par. 9, where children are neglected or circumstances have altered, power is conferred upon the Court to vary the apportionment. This power has been exercised in Ivey *v.* Ivey, in which case the Court of Appeal held that where a widow died leaving an unexpended portion of compensation which was claimed by her next-of-kin, the Court had power to reapportion the sum amongst her children dependents of the deceased.

Correction of Award.

As regards slips or mistakes made in an award, in John Mowlem & Co. *v.* Dunne the Court of Appeal held that the judge has power to alter the award until it is signed and sealed under Rule 28.

Evidence.

In a claim by dependents of a deceased blacksmith who had died from sceptic poisoning, caused, as it was alleged, by an accident, statements made by the deceased to the employer's manager to the effect that he had a whitlow on his thumb were held by the Court of Appeal, in Tucker *v.* Oldbury Urban District Council, to have been rightly excluded, because dependents have a statutory right to compensation and do not derive their rights through the deceased; the deceased was no party to the action, and it was not shown that the statements were to the knowledge of the deceased, or, in fact, contrary to his interest.

ARCHITECTURAL SOCIETIES.

Birmingham Architectural Association.

At a meeting of the Birmingham Architectural Association on the 12th inst. the Vice-President (Mr. G. Salway Nicol) read a paper on the Association's visit to Holland. The great charm of Dutch buildings, he said, is due to the fact that they are such a complete expression of the character and ideals of the people. Their domestic work particularly has much to teach us in the simple and direct way they obtain their effects. For their more important buildings, such as the "Studhuis" at Middelburg, they generally employed a phase of the Gothic style directly inspired by similar buildings in Belgium, but at the same time the detail is full of native feeling. The Abbey buildings at Middelburg and the Town Hall and Church at Veere were shown by many sketches made by the members, and the great influence of Dutch work in England in the XVIIth century pointed out. The great attraction which Holland has for architects at the present time is largely due to its beautiful architecture.

Leeds and Yorkshire Architectural Society.

A general business meeting of this Society was held on Thursday, April 18, Mr. Sydney D. Kitson, M.A., F.R.I.B.A., in the chair. The Hon. Secretary, Mr. Wm. Whitehead, A.R.I.B.A., read the Report of the Council for the past year. The total membership of the Society on March 31, was 182, comprised of thirty-two hon. members, seventy-four members, and seventy-six Associate members.

The Hon. Treasurer, Mr. R. Fielding Farrar, presented a financial statement for the year, showing a balance of 57*l.* 19s. 1d. The report and balance-sheet were adopted on the motion of Mr. J. E. Braithwaite, A.R.I.B.A., seconded by Mr. Moreton.

The following officers were elected to serve on the Council for next session:—

President—Mr. A. E. Kirk, A.R.I.B.A.; Vice-Presidents—Mr. G. F. Bowman and Mr. J. F. Walsh; Hon. Treasurer—Mr. R. Fielding Farrar, A.R.I.B.A.; Hon. Librarian—Mr. W. Peel Schofield, A.R.I.B.A.; Hon. Secretary—Mr. Wm. Whitehead, A.R.I.B.A.; Members of Council—Messrs. W. J. Morley, F.R.I.B.A., C. B. Howdill, A.R.I.B.A., G. W. Smithson, A.R.I.B.A., J. C. Procter, A.R.I.B.A., G. J. Combs, A.R.C.A., Douglas Bowman (Associate member).

A vote of thanks was accorded Mr. Sydney D. Kitson on his retirement from the President's chair. It was remarked that he had worked hard during his term of office, and with a spirit of comradeship that had been pleasant for everybody.

GENERAL NEWS.

Royal Institute of British Architects.

An exhibition of original drawings in the possession of the Institute is being held in the Institute Galleries during the present week from 10 a.m. till 8 p.m. (Saturday 10 a.m. till 6 p.m.). The exhibition will close on Saturday, the 27th inst.

Knebworth Garden Village.

The first sod of the Knebworth Garden Village on the estate of Lord Lytton was cut on Saturday last. About 1,000 acres at Knebworth have been set aside and a comprehensive scheme of development has been prepared by Mr. Edwin L. Lutyens, acting in conjunction with Mr. Thomas Adams, now Town Planning Adviser to the Local Government Board. The working out of the plan and the detailed plotting is being carried out by Messrs. Pepler & Allen. The development of the garden village is being undertaken by Garden Villages, Ltd., of which Lord Lytton is President. A feature of the scheme is the formation of a Co-partnership Tenants' Society, named Knebworth Tenants, Ltd., which is arranging to build cottages with good gardens round the village green. These cottages are to be let at 5s. 6d. and 6s. 6d. a week, and each has three bedrooms and a bathroom.—The ceremony was performed by Mrs. Cecil Harmsworth, Sir T. Sydney Lea, Bt., Chairman of Garden Villages, Ltd., presiding. He said that what was necessary in such schemes was the co-operation of the landlord and his tenants. A notable feature of the scheme was the co-partnership tenants system, under which the profits went to the reduction of rent.—Mr. Cecil Harmsworth, M.P., said that the garden city movement was one of the romances of the time.—Lord Robert Cecil said that at Letchworth they had what was so far the only complete example of a garden city, and they hoped to see something of the same kind established at Knebworth. It was on those lines that they were destined to find—he would not say the whole solution—but some part of the solution of the greatest social problem of modern times—the housing problem. The great difficulty was to provide good houses at a price which those who lived in them could afford to pay. The problem was quite as urgent in rural districts as in urban. It was on the lines of co-partnership that we had the best chance of looking for the solution of most of the great social problems. He had the greatest reverence for the old economists with their suggestion of the division of labour. Division of labour was, no doubt, an economic principle of great importance. But, carried to the extent to which it had been carried in this country, it had destroyed all human interest in the methods of labour. Unless we could find some means of reuniting humanity with labour the outlook in this country was very black. The principle of co-partnership was the most hopeful means of dealing with the problem.

Cambridge University: New Buildings.

The Lords of the Treasury have provided for the formal transference, in April of next year, of the Solar Physics Observatory to Cambridge University, and have allocated sums of money for the purchase of additional land, the cost of new buildings and equipment, and the provision of instruments and apparatus. The Development Commissioners have established a Research Institute for the Cambridge Board of Agriculture, and propose to make a grant of 18,000*l.* on behalf of an extensive addition to the School of Agriculture buildings. Other schemes in progress comprise a new Forestry Laboratory, to be erected on the Downing College land, concurrently with a new code of regulations affecting the probationers, and their courses of study, of the Indian Forestry Department, which will now be brought into closer relation with timber merchants, builders, and others, and so establish more active co-operation between contractors and merchants, and the work of that department.

St. Olave's Church, Mile End New Town.

The vestry of St. Olave's, Hart-street, E.C., are about to close the Church of St. Olave in Hanbury-street, E., in view of the fact that the population having become mostly Jewish the services are very sparsely attended, and it is proposed to transfer to other needy parishes the annual subsidy of 600*l.* derived from the income of St. Olave's, Hart-street. St. Olave's, Mile End New Town, was built by the rector of the City parish, for 500 sittings, after the designs of Sir A. W. Blomfield, and consecrated in 1875, the endowment being provided out of the funds of the parish of St. Olave, Hart-street.

The National Nautical School, Somersetshire.

The King has expressed his regret that he cannot visit Portishead next month when the Chapel of the National Nautical School is to be dedicated by the Bishop of Bath and Wells. He will be represented by H.S.H. Prince Louis of Battenberg, who will inspect the school and give away the prizes to the boys. The school was built from the designs of Mr. Edward Gabriel (Messrs. Edmeston & Gabriel), who also designed the chapel, which is now nearing completion. Messrs. Cowlin & Sons, of Bristol, were the contractors for the school buildings, and Messrs. Saml. Martin & Sons for the chapel. H.S.H. Prince Louis of Battenberg has fixed the date for his visit on May 14.

Royal Scottish Museum, Edinburgh.

Steps are being taken to make extensive enlargements and improvements of the Museum. It is intended to expend 6,000*l.* upon a new administrative block, and about 48,000*l.* upon an enlargement, to double the capacity of the Natural History galleries by the erection of three upper floors. Other galleries are also to be enlarged, embracing the Machinery Hall. A south-eastern lecture hall is to be erected, and the principal hall will also be extended.

Crystal Palace Engineering School.

The "Wilson Premium" for the best paper read before the Crystal Palace Engineering Society (affiliated to the Society of Engineers, Incorporated) during the present session has been awarded by the Council to Mr. E. C. Coke, for his paper on "The Electrification of the L.B. and S.C. Railway." Other papers read during the session were "Railway Signalling," by Mr. S. A. Hall; "Macadam and other Roads," by Mr. J. D. Deane; "Town Water Supply," by Mr. A. H. Talbook; and "Internal Combustion Engines," by Mr. E. C. Whelon. The premium was presented to Mr. Coke by Rear-Admiral Gordon Wilson Moore, C.V.O., Director of Naval Ordnance, on the occasion of the 118th distribution of certificates to the above School on Wednesday, April 17, at which he presided.

COMPETITION NEWS.

Designs for Monument, Canada.

H.M. Trade Commissioner reports that the Public Works Department invite designs for a monument to be erected at Ottawa to his late Majesty King Edward VII. The monument, including pedestal, is to cost about 35,000 dollars (about 7,200*l.*). Designs must be in the form of sketch models in plaster, made at a uniform scale of 1½ in. to the foot; they should be sent to Mr. Eric Brown, Director of the National Art Gallery, Ottawa.

Canada, and must be delivered by October 1. Communications regarding the competition should be addressed to the Secretary, Public Works Department, Ottawa, Canada.

Regent's Quadrant.

In connexion with the competition instituted by the proprietors of the *Builder* for a new façade to the Regent's Quadrant, we would remind competitors that any inquiries should reach the Editor by the 29th inst. Replies will be published in our next issue.

Sunk Arena and Bandstand, Hastings.

With reference to the "Note" on this competition in our last issue (p. 445), we are informed officially that the Hastings Corporation have withdrawn the offending stipulation, and will return deposited cheques on receipt of competitive drawings. The date for sending in designs has been extended to May 18.

Middlesex Hospital, Berners-street.

Mr. Edmund Davis, a Governor of the Middlesex Hospital, has generously arranged for the rebuilding of the entrance with a view to mural decoration. The plans, by Mr. Keith D. Young, F.R.I.B.A., provide for four wall-spaces, lit from the roof, each measuring 5 ft. 8 in. high by 10 ft. 11 in. broad. The architect proposes a dark wooden dado, preferably of teak, and a moulding for the paintings either of the same material or of some other, at the discretion of the painters, and that outside the moulding should be a plain surface of white or light-coloured plaster. Plans are on view at Crosby Hall, Chelsea, showing the arrangement and lighting.

The subjects, it is suggested, should be symbolical, such as "The Good Samaritan," or might be cheerful scenes of convalescence, in the country or by the sea, or scenes of ordinary life at different times of the year.

Each competitor is limited to one design, which must be sent to Crosby Hall by May 21. Co-operation between several designers is permitted.

Mr. Davis, who is a well-known connoisseur, offers 100*l.* for the execution of each painting from a design approved by him. In the event of a design being accepted and not approved of by the Middlesex Hospital, the sum of 50*l.* will be given in lieu of the execution of the work.

Public Elementary School, York.

The first premiated design for the Knavesmire Council School is by Mr. John T. Proffitt, M.Inst.C.E., Central-buildings, Memorial-road, Walkden, near Manchester. The second design is by Mr. E. R. Barrow, F.R.I.B.A., Lennox House, Norfolk-street, Strand. The third design is by Mr. J. A. O. Allan, 25, Union-terrace, Aberdeen. The assessors were Messrs. T. Mellard Reade & Son, of Liverpool.

Cardiff Football Stands.

The result of the open competition for new grand stand, etc., for the Cardiff Rugby Football Club is as follows:—First premium (30*l.*) to Mr. Leitch, of Liverpool. Second premium (20*l.*) to Messrs. R. & S. Williams, of Cardiff. Third premium (10*l.*) to Messrs. Ivor Jones & Percy Thomas, of Cardiff.

BOOKS.

Architecture: An Introduction to the History and Theory of the Art of Building. By W. R. Lethaby. (Home University Library.)

When it was announced that the promoters of the Home University Series had confided the subject "Architecture" to an author, and assigned him the space comprised within the green covers of one of their handy little pocket volumes in which to develop the theme, imagination boggled at the pictures called up, of Fergusson brought up to date, carefully desiccated, pounded, pressed, and seasoned to taste —the whole history of the Mistress Art from the cave-dwellers' lair to the sky scraper—neatly packed into 250 duodecimo pages! One knew not whom the more to commiserate, the author doomed to carry out the process or the reader who should attempt to get his teeth into the indigestible viand. Happily neither are in need of our pity, and both rather claim our congratulations. The works issued in this admirable series have nothing in common with the cram-book. The plan is that each volume shall be a "new work inspired by knowledge of the latest research and critical thought" and one in which "the best voices of contemporary scholarship" shall be heard. "Each . . . [is] to constitute a vivid introduction to its subject, throwing into relief its fundamental principles and ideas, to be an incentive to further study rather than a dry text-book." With this last end in view a compact bibliography is appended to each volume.

In the selection of Professor Lethaby the editors have been peculiarly happy, for he is incapable of producing pemmican, and no architectural writer more fully merits the adjective "vivid." While none knows better than he how to pass in review a vast range of topics, he never allows the trees to conceal the wood, and while eliminating the unessential and marshalling the serried ranks of the selected facts he ever avoids the least danger of aridity by providing green oases of enthusiastic description—delightful because delighted—or interspersing humorous and penetrating *obiter dicta*. Here is an example:—"A self-conscious appeal is likely to become a disease of art, the true appeal is a fact. Barns, waggons, and lighthouses do not appeal, they *are*, or I should say *were*, for I saw a lighthouse some months since on which no expense had been spared to make it æsthetic, and it illuminated the whole problem."

There was a time when, as it is rumoured, the burden of Professor Lethaby's teaching to architectural students was "Burn your books." He has slightly altered his position nowadays, and we are allowed to read our books, provided that we do not attempt to do again anything we see in them. Archæology indeed looms large in these pages, and no more competent guide than our author could be found to conduct us rapidly, while missing nothing that we should see, through the history of ancient and mediæval architecture. The chapters are unequal in length and diverse both in scope and method of treatment, but all have valuable lessons or at least provide food for thought. Professor Lethaby is perhaps at his happiest when he explores the dawn of history in the Eastern Mediterranean or traces the achievements of Greece and of the Early Christian and Byzantine Schools, or when he points out the debt owed by European architecture to those varied and fascinating phenomena of Oriental Art which he groups together under the apt title of "The Eastern Cycle." The relatively ample space which he has assigned to Egyptian "Monuments, Methods, and Ideas" may appear, as he himself admits, excessive, while, on the other hand, his dismissal of all Gothic architecture in two short chapters occupying between them less than thirty pages is a little tantalising. In so brief a work the less vital branches of this as of other subjects are necessarily rejected, and we are restricted to France and England, but how differently we fare in the two countries! The English chapter is not only fuller, as indeed is right in a work intended for English readers, but also more systematic and more closely packed with well-digested information, resolving itself to a large extent into a valuable essay at a more reasoned system of chronological classification. In the preceding chapter on France, on the other hand, it would be hard to find a concrete statement of facts, a date, or even a name. It is a dithyramb on the "Art of energy," a lyrical outburst glowing with the glory and the triumph of that wondrous Middle Age and its craftfulness. If it does not inform greatly, it cannot fail to inspire.

As might be expected, the Renaissance comes off but ill at our author's hands, and, on the whole, we are glad he restricted himself to seven pages! It is "a style of boredom . . . it tends to be blind, puffy, and big wiggy." "As a whole it seems to be the art of an age of indigestion." But Professor Lethaby is always entertaining, and we readily forgive him these quips in view of the charming way he has of making them. Nor must we overlook the essential fairness which enables him to allow some merits even to the "pestilent art." "The first enthusiasm of the Renaissance must have been a wonderful experience when men like Donatello ["Donatello" observe, not "Brunelleschi"!] awakening to the idea 'We are Romans,' explored the Forum and broke into the Great Baths." "The great gift of the Renaissance would seem to be the scientific spirit, and we probably owe to it larger ideas of civic order and hygiene." "Its arts to some degree reconsidered first principles." Certain individual works of the Renaissance are even "beautiful" in his eyes.

In the last chapter, on "The Modern Position," we have him at his most characteristic. It must be read to be appreciated, and, whatever we may think of the views set forth, it will prove as delightful and stimulating reading as any other part of a book which is alive from title to *Finis*, and suggest two thoughts for each one it expresses. It is an astonishingly able performance, showing a rare combination of encyclopædic knowledge and critical insight with the difficult arts of selection and of expressing results in limpid and flexible English. None surely can read this delightful essay—and none should omit doing so—without a feeling of personal indebtedness to the author.

In regard to the series as a whole, we venture the hope that it may be possible to supplement this necessarily rapid survey by the issue of volumes dealing more fully with each of the main great periods. There is surely a demand among the wide public to which this series is addressed for volumes on the Byzantine, the Gothic, and the Renaissance Schools, to say nothing of more ancient history.

Pompeian Decorations. By R. A. Briggs, F.R.I.B.A. (London: Batsford. 1912. 25s. net.)

The very first sentence of the Preface of this book contains a statement which anyone acquainted with some of the more monumental works on Pompeii must examine with critical hostility:—"Owing to the absence of any process that could faithfully reproduce the drawings, no book has hitherto been published which shows with fidelity the beautiful and gorgeous colouring of the mural decorations of Pompeii." He goes on:—"Two works on the subject were produced by lithography some years ago at a high price, and before the three-colour process was invented or brought to its present state of perfection; but they show very inadequately the beauty of the decorations and the delicacy of their form and colouring." Well, these remarks with their implications are substantially untrue. To those who know and marvel at the wonderful publications of Signor Niccolini and Herr Zahn, but especially that of the first named, the inevitable reflection, on turning over the leaves of Mr. Briggs's book, will be: "If the former men and methods were inadequate, how much more so this later one! Where is the advantage of a perfect three-colour process if it be used but to put more faithfully before us the pink prettiness we have here; what the compensation for the velvet depth and atmosphere of a view done under the direction of Niccolini, or the verisimilitude with subtle opalescence and effects of light of one of his plates of details, in these most young-ladylike sketches by Mr. Briggs?" And, turning to reproductions of some of the "principal decorations, which *in many cases* are drawn to scale" (!), of what avail these scraps and patches? On Plate I. six shreds of mosaic, being part of the decorations of a column, feebly indicated at the side; on another (at random) part of a ceiling, pretty enough as far as it goes, but what of the whole? And so on, interspersed with meagre details poorly drawn in pencil—details which have been ever so much better done fairly recently by Mr. S. C. Watt. But supposing the colours are accurate reproductions (they look faded)? We will go so far as to say that they are probably accurate enough as far as Mr. Briggs's drawings are concerned, since we have some confidence in Mr. Batsford and those who work for him. But are Mr. Briggs's colours more reliable than his drawing, which is always feeble and in some cases definitely wrong? No. Let those who tackle big subjects do so seriously and thoroughly, or leave them alone. And let those who can do neither refrain from introducing their casual labours with slighting references to the directors of works which put their own to shame.

CORRESPONDENCE.

The R.I.B.A. and Registration.

SIR,—In reference to the letter from the Institute Members' Club, which appeared in the *Journal* of the R.I.B.A. of the 15th inst., we should like to point out that the question of Registration with which it deals is one so profoundly affecting the welfare of the profession that it should not be allowed to die through the apathy or indifference of the responsible guardians of the trust and obligations imposed upon them by the general body of the Institute. Nobody regrets more than ourselves the futile efforts made by the R.I.B.A. to deal successfully with a great problem which is of vital interest to every practising architect. These futile efforts were the result of an adoption of a foolish compromise which satisfied neither side, and subsequent events have shown that the compact made five years ago was an unworkable one. In these circumstances we now feel free to take an independent course and to definitely and finally throw over our allegiance to the policy of compromise then forced upon us, with which we have never pretended to be really in sympathy.

We consider that the R.I.B.A. scheme, even with any considerable modification of its details, could never become law, for it is ludicrous to suppose that any Government would permit the Institute to become the sole examining body for granting diplomas, or allow it to have sole jurisdiction over the profession of which it forms so small a part. For instance, the University of Cambridge has inaugurated a School of Architecture and instituted examinations on a higher and more comprehensive scale than those of the Institute. Is it likely that this ancient seat of learning, one of the two oldest educational centres in the kingdom, with its two Parliamentary representatives, would submit for one moment to the proposed dictatorship of the Institute?

Again, is it reasonable to assume that the University of Oxford, which will probably follow the sister University in founding a course of study in architecture, with its prestige, power, and influence behind it, will stultify a more than probable future educational extension by passively submitting to the philandering scheme of the Institute?

Surely, having regard to the fact that the policy of the R.I.B.A. is bound to bring about the active opposition of the distinguished Parliamentary representatives of these Universities, whose views on educational questions would be likely to be accepted by Parliament almost without question, there would be no chance of the Institute's Bill becoming law unless the equitable recognition of these and other educational bodies were freely accorded.

As a melancholy example of the short-sighted policy of the Board of Architectural Education, whose action was subsequently confirmed by the Council, we may quote the case of Cambridge University :—

Certain Universities of recent formation and without Parliamentary representatives which have adopted the R.I.B.A. regulations in regard to architectural study were regarded as "recognised schools," and, as such, obtained certain privileges—*i.e.*, exemption from the Intermediate Examination, etc. —whereas Cambridge, with a higher standard of education and powerful influence in both Houses, was not accorded a similar exemption. The absurdity of this exclusion is more apparent when certain other facts are taken into consideration, such as the privileges accorded to Liverpool and Manchester, which were granted because these Universities taught "Design," whereas Cambridge does not pretend to do so.

The reason for excluding Cambridge is not quite clear, inasmuch as "Design" is only an optional subject in the Intermediate Examination, and the confusion of ideas becomes absolutely chaotic when it is remembered that the leading opponents to Registration have declared over and over again that "Design" cannot be taught, and therefore, we should have thought, could not become a subject for examination.

However, the question of education is one of far too serious a nature to be allowed to be treated thus lightly and illogically, consequently, as a preliminary proceeding, we think the Institute would be well advised to approach the older Universities on the subject of architectural education in a far more friendly and conciliatory spirit than it has yet shown, with a view to enlisting their guidance and support. Further, it is folly for the Institute to imagine that it has the remotest chance of securing Parliamentary recognition for its members without due assurance that its proposals will not encounter active opposition of the Surveyors' and Engineers' Institutions, to say nothing of the many Borough and County Councils, all of which bodies will assuredly have to be placated.

In short, the Institute must remember that it is acting for the welfare of a large profession, of which it forms only a part, and not for the individual glorification of its members.

There is much spade work to be done by the Institute before any Bill can be drafted, and if the R.I.B.A. would condescend to set about this preliminary work instead of forming itself into committees to draft Bills which have no earthly chance of ever becoming the law of the land, the Council would be embarking on a course of profitable work. The continuance of its policy of spending its time and irritating its more serious members in futile efforts to obtain Parliamentary recognition without first preparing the ground seems to us to be nothing more or less than trifling with a stupendous problem which has yet to be solved.

A. W. S. CROSS.
GEORGE HUBBARD.

How Many Houses to the Acre?

SIR,—Referring to the "Note" upon my letter to the *Times* in your issue of April 19, it seems to me that the contributor of your "Note" is mistaken in assuming that the limitation of the number of houses to the acre is merely a question of maintaining a certain fixed relation between the cubic contents of building and the area of ground around that building. This, indeed, is one of the elements, but only one. The other, and perhaps on the whole more important matter, is to limit the number of families living upon the acre in order to secure to each family sufficient ground to give opportunities for the cultivation of a garden and for suitable recreation for the children of the family. From this point of view the size of the dwelling in which each family lives is, comparatively speaking, unimportant in determining the area of ground desirable for the family. In practice, therefore, I think that a simple limitation of the number of cubic feet of building to be erected on each acre would be found to be almost as crude in relation to some aspects of the problem as the simple limitation by means of a flat rate of the number of houses, irrespective of their size, is undoubtedly crude in relation to other aspects of the problem.

On the whole, therefore, I think it will be found that the system, which is now fairly generally being adopted by enlightened owners of land when trying to fix suitable limits, to put in the lease of such land to a society wishing to develop it upon right lines, is much the simplest and most satisfactory, and that is by means of a scale fixing a maximum number for houses of different sizes.

Moreover, it has this advantage, that it complies with the form of the present Housing and Town Planning Act, which gives power to limit the number and character, but does not give power irrespective of the number and character to fix the maximum number of cubic feet of building which may be erected.

RAYMOND UNWIN.

The Newer Responsibilities of Architects.

SIR,—In your report in the issue of April 19 upon the proceedings at the Royal Institute of British Architects on the 15th inst. it might be assumed, from the omission of any report of my reply at the conclusion of the discussion, that I accepted the numerous criticisms, both legal and lay, which were passed upon my paper. Will you, therefore, allow me space to repeat what I stated at the meeting, namely, that I found myself very considerably at variance with those critics, and much regretted that time did not permit of my replying properly to them?

I do not propose to encroach on your space by any attempt to repair the omission here, but may perhaps mention that anyone sufficiently interested may find a report of my observations in the next number of the R.I.B.A. *Journal*.

EDWARD GREENOP.

Hastings Bandstand Competition.

SIR,—Your readers have occasion to thank you for your frank remarks upon this competition in your issue of the 19th inst.

I am satisfied that the general public will not view with approval the attitude of the promoters, who not only adopt a most wasteful system of competition, but seek to make an actual profit from the overburdened professional by charging each of those competing an entrance fee of a guinea, which is not to be returned.*

Anything more unworthy on the part of a public body I can scarcely conceive, and one wishes they could more intimately know the circumstances of those who will compete.

The Corporation invite numbers of struggling men at a cost to each of them in money and labour of from 20*l.* to 40*l.* to compete for two prizes of the value of 15*l.* and 10*l.*; no promise is made that the work shall be given to the man whose design is accepted, nor any pledge that it shall not be handed over to be carried out by a Corporation official without any skill or knowledge of architecture whatever.

Experience teaches us that these invitations tempt from fifty to a hundred men to embark upon a lottery where the money and labour expended by them cannot be estimated at less than a thousand pounds, which for the most part must be thrown away.

Is it possible that the inhabitants of this beautiful town will permit such things to be done in their name? The terms practically exclude any architect of means or repute from offering his services to add to the beauty of the place.

There is another aspect of the matter, and that is that Hastings has already lost too many of its attractions through ill-advised action in matters of this sort.

The East-hill—the hill that has been painted by so many great painters, some of whom lived beneath its shadow—has been entirely destroyed as a picture by a lift running up its front; a lift surrounded by a sham Gothic castle, and the skyline of the hill is broken by the brick shaft of the sewer outfall works. The hand of the Road Surveyor and Engineer has had too free a play. The magnificent sea-front is disfigured by some of the most gigantic advertisement displays to be seen in the country. Truly the beauty of the place can only be preserved "at the price of eternal vigilance."

It is scarcely possible to believe that this can have occurred in a Borough where a few years ago the fine public spirit of the place sent abroad a student from the Paris School of Fine Art to study and design for them one of the best Town Halls of the time.

I trust, Sir, that before it is too late the Corporation will see that they have everything to gain by entrusting their work to the man whose design is accepted, and in dealing even in a generous manner with a profession whose members cannot be charged as a rule with being wealthy.

CHRISTOPHER M. SHINER.

INTERCOMMUNICATION COLUMN.

Treatment of Brickwork.

SIR,—Can you give us any information about the best treatment of brickwork from which salt is drying out? The brickwork has been done very carefully with cement. The bricks are pressed facings, and in this dry weather what should show as dark red bricks is almost as though it had been whitewashed. We fear if this salt which has dried out is allowed to sink in again there will be a repetition of the disfigurement in succeeding years. What do you suggest as the best treatment? Washing is not entirely effective with plain water, though we are trying this. Can you suggest a treatment that would be effective in one operation without injuring the work in any way?

B. P.

Insect Nuisances.

SIR,—In a new house many small insects, of the kind sometimes found in old books, have made their appearance. Can you give me the cause and any cure for this? There is a considerable amount of wood panelling in the house; could they have come in this?

O. P. M.

* See p. 483.

EDITORIAL SUMMARY.

"The British School at Rome" is the title of our leading article, which deals with the Royal Charter which it is proposed to grant to the School.

A second article appears on p. 476, entitled "Hospital Criticism."

In "Notes" columns (p. 476) will be found observations on: "The London Society"; "The Cockburn Society"; "The Aftermath of the Strike"; "The Institute Drawings"; "Indian Native Craftsmen"; "The York House Water Gate."

An article on "The Exhibition of the International Society" appears on p. 477.

A meeting of the R.I.B.A. was held on Monday, when a paper was read by Mr. C. Harrison Townsend on "The R.I.B.A. Library and some of Its Contents." An abstract appears p. 478.

A report of a recent meeting of the Society of Architects, when a discussion on "Principles of Professional Practice and a Code of Ethics" took place, is given on p. 480.

An article on "Recent Workmen's Compensation Cases" will be found on p. 481.

In "Architectural Societies" (p. 482) will be found short reports of: "Leeds and Yorkshire Architectural Society"; "Birmingham Architectural Association."

Book notices (p. 483) include: "Architecture: An Introduction to the History and Theory of the Art of Building"; "Pompeian Decoration."

In Correspondence Column (p. 484) will be found letters on: "The Newer Responsibilities of Architects"; "How Many Houses to the Acre?"; "The R.I.B.A. and Registration"; "Hastings Bandstand Competition."

Notes on some Magazines of the Month appear on p. 4 6.

The Monthly Illustrated Engineering Review (p. 487) contains: "Lighting by Air-Gas"; "Pure Cement Concrete as a Lining for Kilns"; "Colloidal Nature of Cement"; "Foundation Beads"; and Notes.

The Building Trade Section (p. 491) contains: "The Modern Bricklayer and His Work"; "The Mediæval Carpenter"; "Government Contracts"; "Projected New Buildings in the Provinces," etc.

Some notes on the Ideal Home Exhibition at Olympia are given on p. 494.

"The Sculptor's Assistance to Architecture" is the title of a paper read before the Leicester and Leicestershire Society of Architects, an abstract of which appears on p. 496.

Legal Column (p. 498) includes notes on: "The Finance Act: Site Values"; "Trade Union Law."

MEETINGS.

FRIDAY, APRIL 26.

The Society of Architects.—Twenty-eighth annual dinner, Holborn Restaurant. 6.30 p.m.

The Institution of Civil Engineers.—Lecture on "The Principles and Practice of Accountancy in relation to Engineering Design and Work," by T. Frame Thomson, Assoc.Inst.C.E. 8 p.m.

Royal Society of British Artists (Suffolk-street, Pall Mall, S.W.).—Mr. A. Wallace Rimington, R.B.A., R.E., on "Some Little-Known Sketching Grounds." The chair will be taken at half-past eight o'clock by Mr. Alfred East, P.R.B.A. The lecture will be illustrated by lantern slides.

SATURDAY, APRIL 27.

The Royal Institution.—Lectures on "The Architecture of the Renaissance in France, 1494-1661," by Professor Reginald Blomfield, A.R.A., M.A., F.S.A.: I.—"1547-1574: Architecture and the Court." 3 p.m.

Junior Institution of Engineers.—Visit to the Engineering Workshops and Laboratory and Electrical Laboratory of "The Polytechnic," 307-311, Regent-street, London. 3 p.m.

MONDAY, APRIL 29.

Royal Society of Arts (Howard Lecture).—Capt. H. R. Sankey on "Heavy Oil Engines."—I. 8 p.m.

The Surveyors' Institution.—Mr. G. T. Loben, F.S.I., on "Some Principles in the Valuation of Land and Buildings." 8 p.m.

TUESDAY, APRIL 30.

Institution of Civil Engineers.—Annual general meeting of Corporate Members only, to receive the Report of the Council, and to elect the Council and Visitors for the ensuing year. 8 p.m.

WEDNESDAY, MAY 1.

Royal Archæological Institute.—Mr. Alfred C. Foyer, M.A., F.S.A., on "The Monumental Effigies by Nicholas Stone." With lantern illustrations. 4.30 p.m.

Royal Society of Arts.—Mr. W. Burton, M.A., on "Ancient Egyptian Ceramics." 8 p.m.

Guild of Architects' Assistants.—Annual general meeting, Prince Henry's Room, 17, Fleet-street, E.C. 7.30 p.m.

THURSDAY, MAY 2.

Society of Antiquaries.—8.30 p.m.

The Institution of Electrical Engineers.—Discussion on "The Causes Preventing the More General Use of Electricity for Domestic Purposes." 8 p.m.

SATURDAY, MAY 4.

The Royal Institution.—Professor Reginald Blomfield, A.R.A., M.A., F.S.A., on "The Architecture of the Renaissance in France, 1494-1661." III.—"1594-1661: Architecture and France." 3 p.m.

Edinburgh Architectural Association.—Visit to Glasgow: (1) The Cathedral; (2) Mitchell Library.

ILLUSTRATIONS.

The R.I.B.A. Pugin Studentship.

THESE are two of the drawings submitted for the Pugin Studentship, 1911, the author, Mr. Philip Dalton Hepworth, being awarded a prize of five guineas by the Council of the Royal Institute of British Architects.

The Cathedral at Senlis.

The first Cathedral of Senlis was slowly built from 1115 onwards; the disposition of it can still be made out. The original vaulting is sexpartite. The picturesque Romanesque shafts and carved caps in the interior much resemble those in Auvergne Church. The church was largely remodelled in the Flamboyant period, to which this transept belongs. Here and there is Renaissance feeling. The south-west spire is one of the most perfect in France, and there is exquisite carving in the north façade.

Bury St. Edmunds: The Abbey Gateway.

The Abbey gateway, Bury St. Edmunds, was commenced in 1347 to replace an earlier Norman gate, destroyed in 1327 in riots with the townspeople, apparently sadly frequent in the town of Bury.

There are three fine bays internally, and fine carving is noticeable everywhere. A most interesting account of the Abbey and the great Abbot Sampson is to be found in the chronicles of Jocelyn of Brakeland, in the end of the XIIth century. Of the great Abbey, once the second in England, only a few fragments remain. The well-known Norman tower was one of the other gates. Interesting Georgian domestic work is to be seen everywhere in Bury, especially charming little shop-fronts, ironwork, etc.

Baptist Church and Schools, Nottingham.

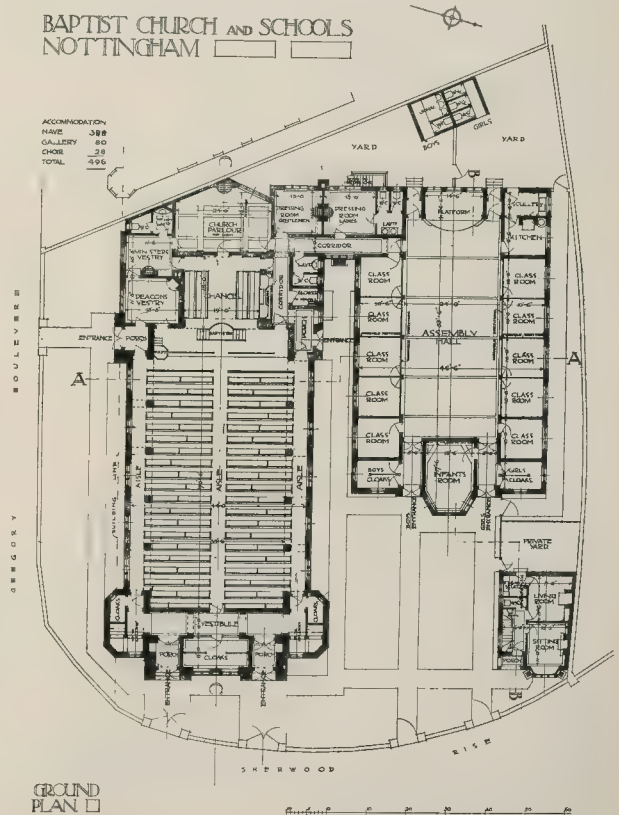
THE design for these buildings was selected by the assessor, Mr. Herbert W. Wills, in a recent competition, and are to be erected on a site at the junction of the Boulevard and Sherwood Rise, Nottingham. The external walling will be in square rubble Bulwell stone in courses averaging 4 in. deep; the stonework to doors, windows, plinths, etc., will be in Ancaster stone.

The internal face of walls are to be finished stucco. The arcade and internal stone dressings are in Bath stone.

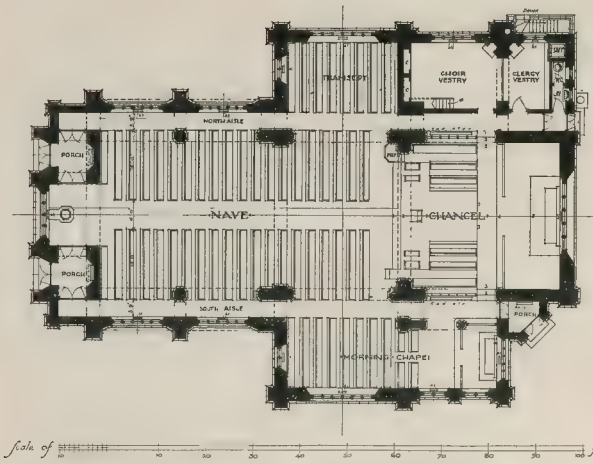
The roofs of the church and schools are in pitch-pine, the boarding Carolina pine and covered with hand-made sand-faced tiles.

The doors, seats, and other fittings are to be in Austrian oak. The chancel will be paved with black and white marble. The glazing throughout will be leaded lights.

The heating will be by low-pressure hot water; the ventilation by fresh-air inlet panels placed in the outer walls, and concealed extract ventilators in the apex of the roofs.



By Messrs. Sutton & Cressey.



Second Premiated Design, Church of St. Luke, West Hartlepool.

The church provides a total accommodation for 524 as follows:—Nave, 388; gallery, 96; choir, 40. Accommodation for 400 children is provided in the schools.

The architects are Messrs. Ernest R. Sutton and F. W. C. Gregory, of Bromley House, Nottingham.

Church of St. Luke, West Hartlepool.

In our issue of March 16 we illustrated the first premiated design, that of Messrs. Lofting & Cooper, and now we illustrate the second premiated design by Mr. J. H. Morton, F.R.I.B.A., in the recent limited competition, of which the assessor was Mr. W. D. Caröe. The site of the church is at the junction of Tunstall-avenue and Hart-lane, and the church is to have 500 sittings, with morning chapel. A central tower is to be incorporated in the design, but is only to be carried out as far as the eaves of the nave at present. The building is to be erected in stone.

MAGAZINES AND REVIEWS.

The article by Sig. G. T. Rivoira in the *Burlington Magazine* is mainly devoted to an attempt to establish the date of the church and tower of St. Regulus at St. Andrews as the XIIth century. This has long been a matter of doubt to the antiquaries, and even now we doubt if Sig. Rivoira's conclusions will pass unchallenged, though supported by the following cogent considerations:—

"(*a*) At no time between the VIIIth and the XIth centuries were English, Scotch, or Irish builders in a position to execute such perfect masonry as appears in St. Rule's. My long acquaintance with the ancient remains in these countries justifies me in making this statement. The reverse can only be maintained by arbitrarily giving them earlier dates. In this way a hypothetical date has been ascribed to buildings such as the Round Towers of Ireland, which have been placed at any time between the Vth and XIIth centuries, but, in my opinion, are not older than the Xth or XIth, the oldest (*e.g.*: those of Glendalough, Monasterboice, Antrim) being built of roughly-hewn stones and rubble set in mortar, and provided with very rude openings. Nor is this all, for even in the time of Queen Margaret, the saintly wife of the warlike Malcolm III. (1057-1093), any masons that the Scots could have called in from the North of England would have been incapable of executing the work in St. Rule's. The church towers of Billingham, Jarrow, and Ovingham prove this.

(*b*) In England church towers with multiple windows of artistic form in the bell chamber made their first appearance, to judge from the existing specimens, in the first half of the XIth century, and then only in a rude form like that at Earl's Barton. It is only after the Norman Conquest that they assume a more finished appearance.

(*c*) Engaged angle-shafts at the sides of openings did not appear in these countries before the XIth century. One of the earliest instances is in St. George's Church, Kirkdale (1055-1065)."

The illustrations of decorative sculpture at St. Andrews accompanying this article are of exceptional interest. The series on principles and evolution of furniture-making by Mr. A. Romney Green, of which the first instalment appears in this issue, opens with the consideration of the basic principles of design in regard to materials, and the examples illustrated are given with the intention of enforcing the author's views on the question.

The *Studio* has an article by Mr. Selwyn Brinton on the American sculptor, Daniel Chester French, who is responsible for the large groups decorating the New York Customs House. Recent designs in domestic architecture, a feature in this magazine, include "The Moorings," by Mr. T. E. Collcutt, some work by Mr. T. H. Mawson and Messrs. Parker and Unwin, with illustrations of an architect's house and studio, near Vienna, by Franz Krásny. The other illustrations include several architectural subjects by various artists, ably rendered.

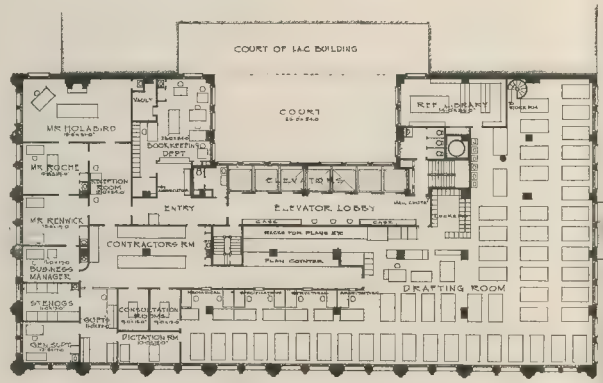
The *Connoisseur* for April starts a series of articles by Ethel M. M. McKenna on the contents of the London Museum. In this first instalment china, domestic utensils, and embroidered clothing are dealt with. Among the notes some interesting examples of old furniture are illustrated.

Mr. Henry Vivian's summary of recent literature on "Garden Cities, Housing, and Town Planning" is a feature of the *Quarterly Review*. Mr. Vivian urges that there should be more co-operation between local authorities, landlords, and builders, so that the best use may be made of land under development. For instance:

"The organisation of London and the urban areas around it is on this matter as unscientific as it could well be. Large sums of money, it is true, have been spent in preparing schemes for main roads, but there is no adequate authority to see them carried out. We have scores of authorities with conflicting aims and interests, each unconsciously—indeed, in some cases, it is suggested, consciously—frustrating whatever effort at improvement the other is making. Take almost any main artery leading out of London. Look at the jumble of property which is being run up on each side of it. In twenty years from now these roads will be in many parts too narrow by from 25 ft. to 50 ft. for the traffic they will have to bear. For the most part they will be shabby and undignified. Widenings will cost more per 100 yds. than they would have cost per mile ten years ago. The part which should have been dealt with, and ought at once to be dealt with, runs through districts which are being administered by perhaps half a dozen different urban public bodies. These have no plan to work to, and there is no central authority to impose any plan on them. Thus the efficiency, the comfort, and the health of a city which in a few years will have a population of ten millions is being sacrificed. Give home rule to localities by all means, but let it be on matters which do not frustrate the good of the whole. For certain large questions which affect Greater London as a whole, including the planning of main and secondary roads, the securing of open spaces, and the general disposition of the area over which the population of London will spread in the next fifty years, there should be a central responsible body, and whatever the local authorities do should conform to its general scheme."

Mr. Vivian's essay is worth reading throughout for its facts and suggestions.

The *Architectural Record* is largely devoted to a long illustrated article on the work, mainly of a commercial character, of Messrs. Holabird & Roche, of Chicago. As being of special interest to the architect we reproduce herewith the plan of this firm's own office, which occupies one entire floor of the Monroe Building. This indicates the scale and organisation of the busy architect's practice in the U.S.A.



Lay-out of Messrs. Holabird & Roche's Offices, Chicago.

(From the *Architectural Record*.)

FIFTY YEARS AGO.

From the *Builder* of April 26, 1862.

The Albert Memorial.

It will have been seen that our intimation of the abandonment of a monolithic obelisk was correct. The Queen's Committee, in their first Report, say of the block of granite which they have been considering:

"The length, which in the excavated portion already exceeds 115 ft., would, we consider, suffice for the intended obelisk. There appears, however, to be reason to apprehend that the width of the stone near the centre would be insufficient, according to the proportions of the most approved ancient examples, to be consistent with that height.

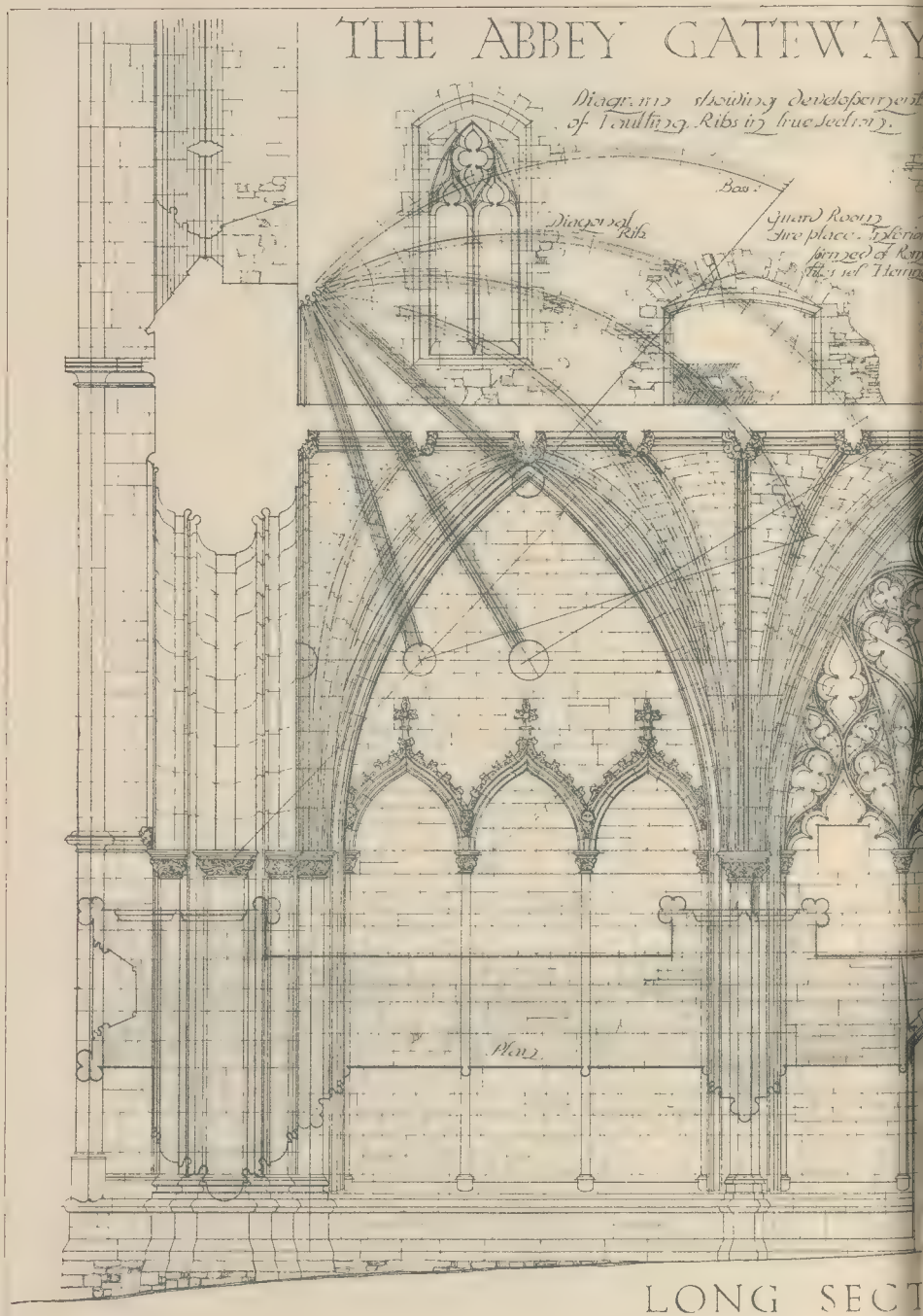
It is also by no means certain that the block referred to has the necessary thickness in those portions which are not yet cleared. An experienced contractor who has examined it has stated that nothing can be affirmed respecting the fitness of the stone 'until it be raised and turned out from its present bed.' For such operations a large outlay would be required; and we cannot but hesitate to recommend such outlay while we have not absolute certainty of a satisfactory result."

Afterwards they say:—

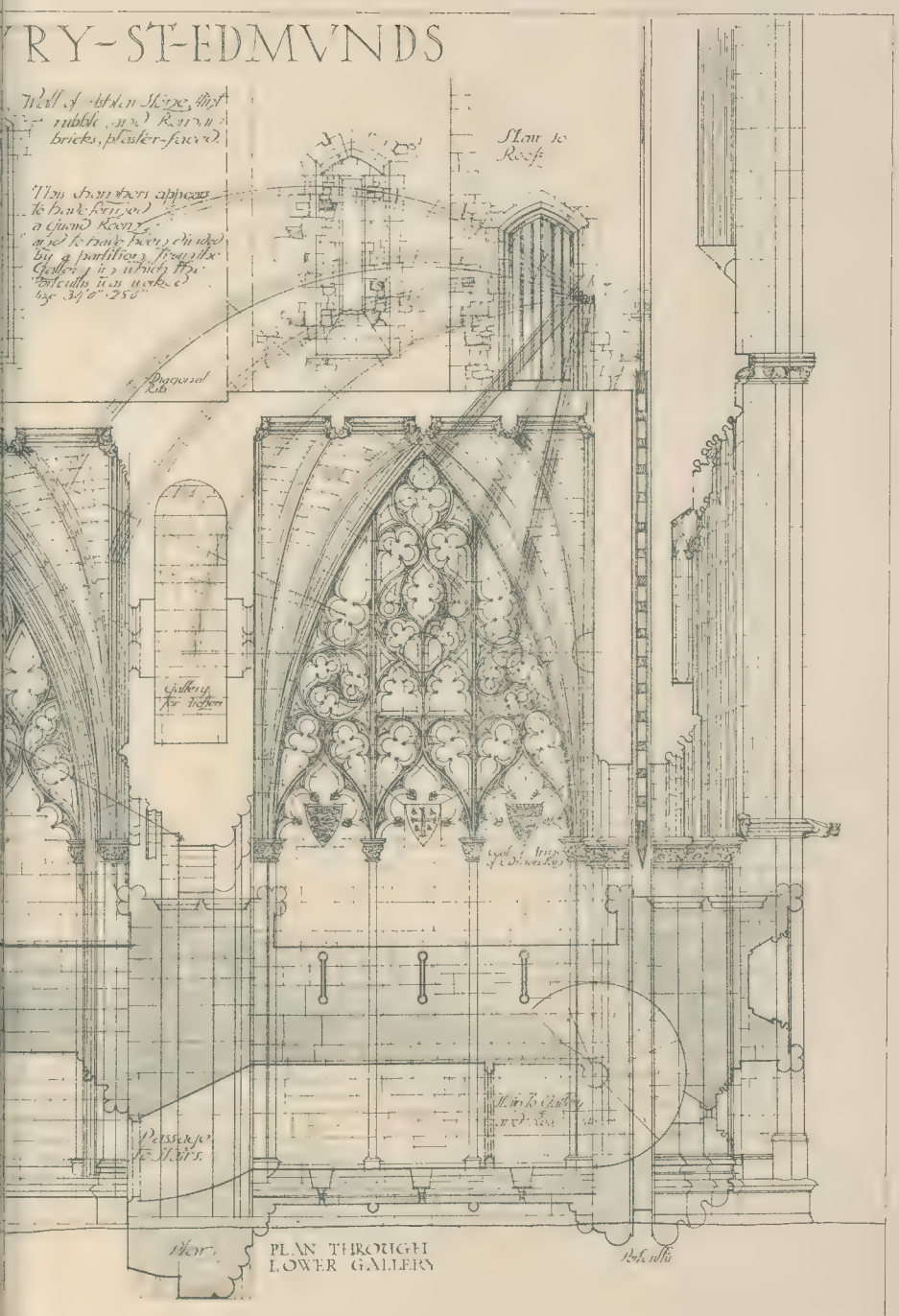
"While, therefore, we see no reason to conclude that success is absolutely unattainable, we believe that it would be accompanied by difficulties and by expenditure at present wholly incalculable. Nor can we refrain from expressing our serious doubts whether, even if the mere enterprise were successful, the ultimate effect would be such as to realise your Majesty's just and natural expectations."



BAPTIST CHURCH AND SCHOOLS, NOTTINGHAM. Messrs. Sutton & Gregory, Architects


THE ABBEY GATEWAY
Diagram shewing development
of Vaulting Ribs in true section.
Boss
Diagonal Rib
Guard Room
Fire place
LONG SECT

RY-ST-EDMVNDS



PLAN THROUGH LOWER GALLERY

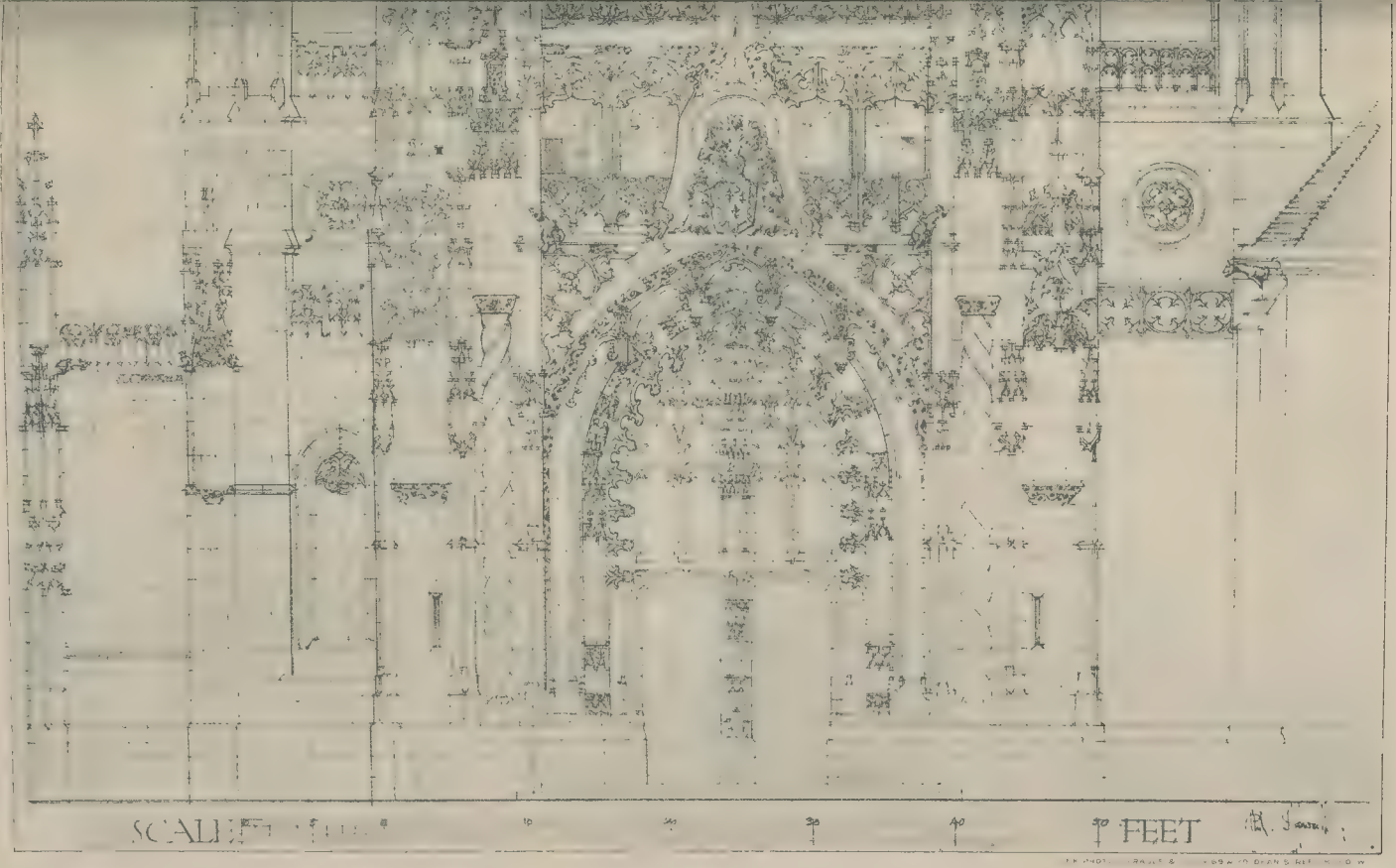
DRAWN BY MR. P. D. HEPWORTH

THE CATHEDRAL AT SENLIS, OISE FRANCE

ELEVATION OF SOUTH TRANSEPT



NOTE: Much of the measurement work of this, especially in the higher parts, had to be obtained by comparison and observation, owing to difficulty of access.



SENLIS CATHEDRAL. - Drawn by Mr. P. D. Hepworth



NORTH ELEVATION

To Hart. Lane



WEST ELEVATION

To Tunstall Avenue

Scale of 0 10 20 30 40 50 60 feet

SECOND PREMIATED DESIGN FOR CHURCH OF ST LUKE, WEST HARTLEPOOL

By Mr J H Morton FRIBA

MONTHLY REVIEW · *of* · ENGINEERING.

LIGHTING BY AIR-GAS.

ONE of the difficulties that had to be met, not so much now, however, as a few years ago, was the ifficulty of providing suitable lighting for emote country houses. Where expense was o object and a gas plant could be installed he remedy was simple, or where there was stream or waterfall a water-wheel could e employed to drive an electric dynamo; ut in a great many cases where economy ad to be studied, or water was not provided undantly by nature, the tenants had to e content with oil lamps and paraffin stoves r lighting and cooking.

Although paraffin lamps have of late years een very much improved in design, their se is always attended with grave risks from

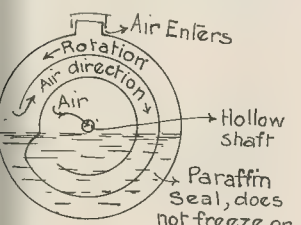


Fig I.

es, many lives, especially children's, having be debited to their employment.

Acetylene was the first attempt at a self-ntained system of gas production, but it ssessed many objectionable features, and st cost and upkeep rendered its general doption impracticable.

For half a century it has been known that trol vapour is highly inflammable, and when nfined and mixed with air was capable of ving a good light, but it has not been until cent years harnessed in such a fashion that can be employed with safety and the nger of explosion overcome.

The idea underlying the production is to intimately mix petrol vapour with air in such proportions that an inflammable mixture is produced and the proportions are 98½ per cent. of air to 1½ per cent. of petrol gas. This is delivered at the gas jets in the ordinary way and will not ignite in the ordinary way, but special burners have to be employed of the incandescent type. This mixture is practically odourless and is non-explosive. If it escapes into the room it is quite harmless, and further, as the air necessary for the light to exist is supplied in the mixture itself, the air in the room is not vitiated, a parallel to the ordinary electric light, and there are no products of combustion which are in any way injurious to furniture or pictures. As the machines producing the gas are small, a constant supply of air has to be provided, and the mechanical parts of the machine have to be carefully adjusted so that this is constant and bears the proper ratio to the volume of petrol vapour employed. For efficient working there are several factors necessary to a reliable machine, and in any machine the fewer the working parts the less the risk from breakdown. The machine being unattended, it must be capable of adjusting itself to the amount of gas required for the number of lights that may be in use. The machine should also be constructed that all the petrol used is properly vaporised with no waste resulting.

The machine should therefore be automatic in action and self-adjusting, and the working parts so simple that little attention is required and no skilled labour necessary once the machine is fixed. The apparatus being self-contained, the motive power should, once the machine has been started, be provided by the apparatus itself.

For this purpose the motive power is usually provided by means of a hot air engine heated by petrol vapour from the apparatus itself, or by means of a falling weight. The tank containing the petrol should be sealed and preferably should be filled by means of a pipe running outside the building containing the apparatus. The petrol is pumped from the tank into a chamber called the carburetting chamber into which it is admitted in the form of a spray, and ultimately mixed with air from an air-propeller. It then passes into a small gas-holder, from which it is delivered to the gas pipes, which may be of the usual type, and used in the ordinary way. The principal idea of all the machines is to pass a sufficient quantity of air into a chamber wherein it becomes properly petrolised to make it combustible.

One maker suggests the following as a standard test to be applied to any air-gas machine, the object being to see whether under varying conditions the supply of air-gas is equal to the demand and of uniform quality.

Run the machine with no burners lighted for five minutes and watch the blue test flame, then with one light burning for five minutes, and observe if the test flame remains uniform, then turn on one more burner and run the machine with two burners on for five minutes, and see if the test flame remains uniform in colour. Continue this up to twelve lights. Then turn on an additional ten at one time and watch the flame and see if it remains constant throughout. Then turn off the lights by tens until twelve remain, and turn off each of these one at a time, allowing five minutes' interval.

If the flame is constant throughout the machine may be considered satisfactory and sufficiently automatic to maintain a uniform quality of gas.

A more severe test is to turn on all the burners for five minutes with the main supply stock cock open, then turn off the main stock cock and see if the machine, after balancing, produces gas of uniform quality under both conditions.

The air is admitted in regulated quantities by means of a Root's blower, or as in the case of the Praed's patent air-gas machine, by a modification of the Wirtz pump. Fig. 1 will help to explain the working of this pump. There are four coils (one shown in section), which dip into a liquid seal. The air enters the outer casing freely, and as the coil revolves and its edge dips into a seal a certain quantity of air is cut off and can only escape through the hollow spindle of the coil, from whence it passes into the lower end of the carburetting chamber. The four coils are arranged so that these openings are at different points on the coil's circumference, so that in a sense there are no dead centres, air is constantly being supplied, the fresh-air trap forcing the air from the previous coil

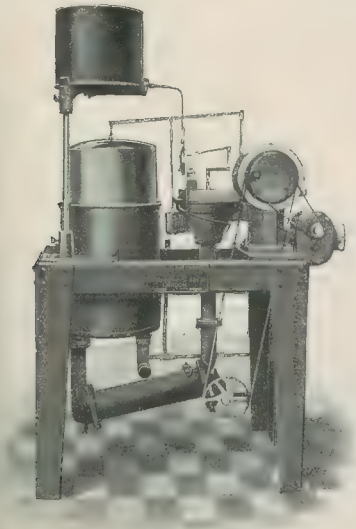


Fig. 2. 30-light Plant (The Machine Gas Company, Ltd.).

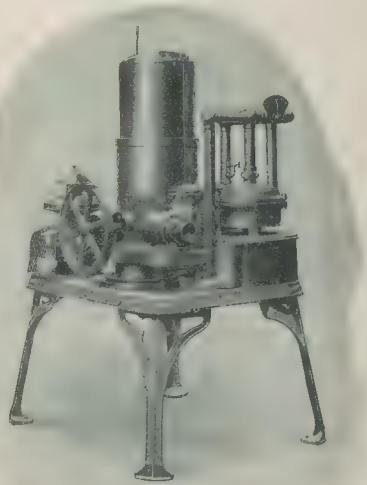


Fig. 3. The "Loco" Gas Machine (The "Loco" Vapour-Gas Light Company, Ltd.).

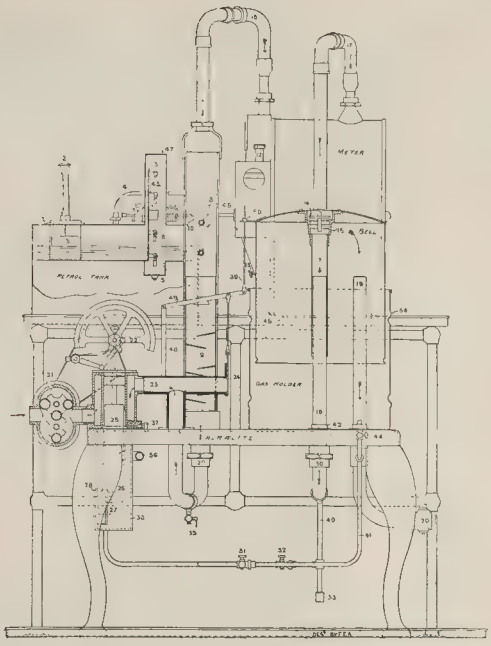


Fig. 4. Machine, by Messrs. Young & Co.

forward through the hollow shaft to the inner drum.

These machines take up very little room, about 3 ft. by 4 ft., and stand some 5 ft. high.

The cost of lighting by air-gas is shown by the following figures given by the "Loco" Vapour-Gas Light Company, Ltd. The prices are for maintaining a 100-candle-power light for ten hours, coal-gas being taken at 3s. per 1,000 cubic feet, electricity 3½d. per unit, petrol of specific gravity 695 at 1s. 3d. per gallon (present price 1s.).

	s.	d.
Acetylene	1	3
Electric incandescent..... .	1	2
Flat flame coal-gas	1	0
Duplex oil lamp		7½
Incandescent coal-gas		2½
Loco air-gas.....		1½

The prices of the machines vary according to the number of lights they are required to supply; a 20-light machine of 2,000-candle-power capacity or 200 cubic ft. per hour costing 31*l*. 10s. up to a 200-light plant giving 2,000 cubic ft. of gas for 200*l*. Cooking can be done by means of this gas by the employment of special stoves, boiling rings, and grillers, oven and stand costing about 5*l*., and rings 6s. each. There is no extra charge made on insurance by the insurance companies for houses in which this gas is used.

The three illustrations, Figs. 2, 3, and 4, show three makes of these machines, of which there are several on the market, and which will give some idea of the arrangements of their parts. Fig. 2 shows Cox's patent, made by the Machine Gas Company, Ltd., of 180, Arlington-road, London, N.W.; Fig. 3, that made by the "Loco" Vapour-Gas Light Company, Ltd., of Newman-street, Oxford-street, London; and Fig. 4 shows Messrs. Young & Co.'s machine, of 161, Victoria-street, Westminster, S.W.

FOUNDATION LOADS.—IV.

A CONSIDERATION frequently arising in regard to foundations is the desirability or necessity of increasing the normal bearing capacity of the soil by one or other of various expedients available.

The most obvious means of attaining the desired result is to increase the depth of the foundation level, for, as a general rule, the compactness of soil increases with distance below the surface in consequence of the superimposed weight. In the course of a discussion on bridge foundations Sir Bradford Leslie referred to the heavy unit loads imposed on the soil by several structures of that class, saying that while loads of from 8 to 11 tons were sometimes objected to as excessive it was simply a matter of depth. Taking the 4¾ tons per square foot on the foundations of Blackfriars Bridge as an example, the speaker said that if the foundations had been carried 100 ft. deeper the weight could have been increased to 9¾ tons per square foot.

While increased depth is often advisable, especially in clay, it must not be forgotten that by penetrating through a hard and dry crust a soft and moist layer may be encountered. In such cases some other alternative should be adopted.

In isolated situations it may be permissible to improve the value of the soil in the direction of load-bearing qualities by drainage, an earthenware drain around the site of the building somewhat below foundation level being usually sufficient for the purpose. But the designer must take care not to do anything that may affect the stability of adjacent structures.

The serious trouble that may be caused by the abstraction of water is illustrated by the well-known case of St. Paul's Cathedral. Many other mishaps which illustrate the sensitive nature of the soil could be cited, but we will only mention two in passing. One is that of a wall in the East India Docks, which, for a length of some 700 ft., moved both laterally and vertically in consequence of an underlying bed of sand having been affected by excavations about ¼ mile distant. Another is furnished by the settlement of a large building in New York owing to the pumping of water on the site to provide water for boiler supplies. It may be pointed out also that the foundations of several heavy American buildings have been affected by excavations at some distance away, but near enough to cause the flow of soft clay from under the footings.

In many parts of the United Kingdom there are places where unstable soil, sometimes of considerable depth, extends up to the surface, or up to the level at which foundation loads are to be carried. The architect then has to decide whether it will be best to adopt a suitable method of consolidation or to employ widespread foundations with the object of reducing the unit load to safe proportions.

Dealing first with methods of consolidation we will mention at the outset an interesting system described by M. Lefebre, and which has been applied with great success on the railway-line between Abbeville and Eu, and notably for treatment of the soil on which were erected various buildings for the new railway-station of Saint Omer, where the ground was of alluvial character with very low and variable resistance. The system consisted in the use of a series of concrete aprons built directly on the ground and loaded with any convenient materials, causing pressure greater than that to be transmitted by the proposed building. As settlement occurred additional loading was added as found necessary. When movement ceased the loading material was removed and the superstructure erected. Simplicity and economy are stated as the advantages of the system, the chief disadvantage being the time lost in waiting for completion of the settlement, which, however, is far more convenient to be dealt with before than after the construction of any building.

Another method of consolidation is to cover the surface of the soil with sand or gravel preferably deposited in a shallow excavation somewhat larger in area than the site of the structure to be built. The chief recommendation of material applied in this manner is that its internal friction and distributing power serve a purpose akin to that fulfilled by spread foundations, and one particularly useful characteristic is the capacity of the layer to obviate the effects of local weakness in the underlying soil. As Sir Benjamin Baker pointed out a few years ago, the bricks, rubbish and other made ground which have formed on the surface of bad ground in old countries itself acts in a manner very similar to that of an artificial sand or gravel bed. Colonel Espitallier, a French military engineer, states the cost of preparing foundations for fortifications on soft mud by spreading a layer of sand at 18s. 6d. per square yard, as against eight times the same rate for piles and six times for caisson work. No rules can be given for computing the requisite thickness of the sand or gravel layer, this being a dimension which should be determined in accordance with individual circumstances.

Sand piles have been used with benefit in many places for consolidating unstable ground. They are readily formed by driving a tube, immediately withdrawing timber piles and filling up the holes with clean, sharp sand, the effect of which is to maintain the compression caused by the process of pile-driving.

Plain concrete moulded in holes formed by driving has also been successfully adopted as an alternative to sand for compacting poor soils, the most recent development of this kind being that known as the Compressed system. That method, which has been employed largely by Continental engineers, requires expensive apparatus, consisting of a movable tower for hoisting and dropping pointed weights upon the site where the soil is to be consolidated. The perforating weight measures about 30 in. across the base, and falling from any desired height of to 70 ft. to 80 ft., not only penetrates the ground, but exerts a powerful compressive effect. When the hole has been carried down to a sufficient depth concrete is rammed into the lower portion by another weight, the effect of which is to force the material laterally into the soil and to form an extended base for the concrete pier. The latter is built up by a similar process of ramming, and varies in diameter at different points according to the resistance of the soil. Therefore, in addition to its consolidation of the soil, the system has the further advantage of providing a series of piers supported in part by a wide base and in part by friction and the mechanical bond afforded by the corrugated sides of the concrete.

Timber and reinforced concrete piles afford means of effecting consolidation in accordance with principles which have been applied in building construction from very early times. In clay and kindred soil short piles are effective for the purpose of increasing the bearing power, but in soft and sandy soil it is sometimes necessary to employ long

driven through the upper strata to a bed arder material. Frequently, however, kin friction of piles driven to refusal ied upon for the support of very heavy

cords concerning the frictional resist- of soils are particularly variable and not ich practical use to those who propose ploy piles for the purpose of consolida- Nevertheless, they are of considerable st as showing the important addition e bearing power which can readily be ed by driving piles into poor ground. m the data collected by Dr. Corthell d that in ten cases of cylinder piers the ge frictional resistance was 540 lb. per e foot, gravel having the maximum of lb., and mud the minimum of 300 lb. twenty-three masonry piers, the fric- resistance ranged from 300 lb. per e foot in sand and gravel to 1,000 lb. per e foot in sand and clay.

king the average value of, say, 560 lb. quare foot of pile surface, we get for in square pile the effective resistance of per foot length. Consequently, it will en that a few piles from 20 ft. to 30 ft. are capable of affording support for very derable loads, which could not be im- on treacherous soil without such aid.

ally, we may appropriately mention er method of consolidation resembling and-layer system in principle, although a form of foundation construction. We particularly to the raft or foundation f reinforced concrete moulded to cover ntire site, transferring the load uni- y to all parts of the soil and constitut- platform upon which the building may id to float. Resting on a raft of this the structure is free from the risk of subsidence, and its entire weight is d in compressing and consolidating the eneath. A certain amount of subsidence ays anticipated and provided for in the s, so no ill consequences follow a small nt of vertical movement.

e design of foundations for different s of buildings to be erected upon soil rying nature is a subject too large for sion in the present review. It is one, ver, deserving special study in the at day, when new methods of building ruction are being developed in all parts e world for structures of almost every The intimate relation between founda- and foundation loads is too obvious for l comment, and we need only add the k that in dealing practically with each t experience and sound judgment are ess important aids than reliable data heoretical knowledge.

COLLOIDAL NATURE OF CEMENT.

MILIAR as cement is to architects and ers, and much as its properties have investigated by engineers and chemists, not yet be said that the nature of this ial is fully understood, or that the tions taking place during its setting and ning are clearly recognised.

ong recent investigators Professor Roh- of Stuttgart, has thrown useful light ese subjects. He shows that in the g of cement two phenomena are evi- d in the initial stage : (i.) The formation lloidal matter which presently coagu- (ii.) the hydrolytic separation of m hydrate, which under the influence bon dioxide becomes calcium carbonate. rst phenomenon is the base upon which he plasticity, expansibility, water-tight- and fire resistance of reinforced con- and the second phenomenon, Professor nd states, is the cause of the non- sion of steel embedded in concrete, and protection against, and absorption of, fforded by concrete.

adaptability of concrete for being ed into varied forms is attributed to lasticity resulting from the presence of lal matter. In order that the plastic rties of cement may be fully developed ecessary in preparing concrete to use an proportion of water, as colloidal sub- are only separate from the cement the addition of water. But it should ted that if all the colloidal matter is lated and all water retained by the results of chemical reactions the concrete loses all plasticity.

Moreover, the presence of colloidal matter is regarded by Professor Rohland as essential to the adhesion bond between concrete and embedded steel. Some authorities attribute this bond to the direct adherence of concrete hardened upon the surface of the metal, others to the grip resulting from contraction of the concrete, and others again to the formation of calcium ferrite.

Professor Rohland considers the cause of adhesion to be rather that colloidal matter disengaged in the presence of steel coagulates instantly with intensity, enveloping the metal and clinging to it energetically. Neither crystalline nor amorphous substances are capable of the same effect and it is the property possessed by cement of assuming the colloidal form, that Professor Rohland believes to be the true cause of the adhesion between concrete and steel.

The impermeability of concrete is likewise attributed to the present of colloidal matter filling up the pores that would otherwise afford facilities for the passage of water. Nevertheless, all mixtures of concrete are not satisfactory from the standpoint of impermeability, a property that can only be attained by proportions which reduce voids to a minimum, and by thorough tamping. Experience shows that concrete need not contain more than 50 per cent. of mortar for properly graded aggregate. The proportion of cement should fill the voids in the sand and be sufficient to form an adequate quantity of colloidal matter at the time of mixing in presence of water. The matter coagulated by the reactions taking place during the setting of the cement acts similarly to glue or size in filling up interstices in the concrete.

Professor Rohland also attributes the low heat conductivity of concrete partly to coagulated colloidal matter, but points out that resistance to fire is not fully developed until water has been completely assimilated and the material has hardened thoroughly. The views to which attention is directed in this article may not have been generally adopted in this country, yet it is worthy of notice that the colloidal aspect of cement has received considerable study on the Continent for years past.

PURE CEMENT CONCRETE AS A LINING FOR KILNS.

MR. VALEUR has found that pure cement concrete possesses many advantages over other materials which have been used as linings for cement kilns. It is only called upon to resist the mechanical wear and tear of the sintered cement mass, which exerts no chemical effect upon it. The concrete is composed of two to three parts by weight of hard burnt cement clinker (the size of grain being from 2 mm. to 2 mm.=0·08 to 0·8 in.) and one or two parts by weight of ground, slow-setting cement, and is mixed with just enough water to cause the mass to cohere when pressed together. When such freshly-prepared concrete is heated to a temperature corresponding to a red or white heat it hardens quickly, remains hard at high temperatures, and retains its form and hardness, whether it be heated slowly or rapidly, in the sintering zone of a Dietzsch kiln in full work. The concrete begins to set in about an hour, and only about as much as can be used in that time is prepared at one time.

By using an iron ring about 40 cm. = 16 in. smaller diameter than that of the kiln as a mould, a concrete lining 20 cm.=8 in. thick can be conveniently rammed into the whole length of a rotary kiln. Such a rim of concrete 2·5 metres=10 ft. wide can be formed in a day and left to set overnight; the next morning the moulding ring is moved and a second concrete rim rammed against the first. Experience shows that no special care is needed in heating the kiln to its full working temperature and condition. A layer of cement concrete only 10 cm. = 4 in. thick, which was tried in the sintering zone of a rotary kiln for a period of fourteen days and then cooled, showed that a thin layer of cement had formed on the concrete and split away again on cooling, and the mechanical wear and tear amounted to 3 cm. = 1·2 in.; otherwise the concrete was intact.

As the molten basic cement does not act chemically on the concrete, it does not adhere to the latter as it does to a fireclay lining, except as to the cohesive effect of the ash contained in the coal used for firing.

A cement-concrete lining will last from three to six months in the sintering zone of a kiln, and is also suitable for the end shoot, which can be relined with concrete in an hour without interrupting the work, whereas relining with fireclay necessitates stopping and cooling the kiln. The concrete answers well not only with rotary kilns, but also with other types, such as the Dietzsch and Schneider. The lining can also be composed of blocks of concrete, kept ready for use, and mortared in with cement. The cost of repairing the concrete lining is much less than that of a fireclay, being only about 3s. 6d to 4s. 2d. per foot, against 68s. 3d. for fireclay lining, and the former is more durable. In actual practice the cost of repairing by the two methods compared as follows, per barrel of cement produced weighing 374 lb. :—

Lining employed in Kiln.	Dietzsch Kiln.	Schneider Kiln.
Fireclay lining...	0·60	0·3
Cement concrete lining	0·08	0·09
Saving per ton of cement =6 barrels, in pence...	3·12	1·26

The process has been adopted in twenty-six works, and is patented in Germany and other countries.

REINFORCED CONCRETE.

A LECTURE on the subject of reinforced concrete was delivered by Mr. E. P. Wells, J.P., Concrete Institute, on March 18, at the London County Council School of Building, Ferndale-road, Brixton, S.W. The following is a summary of the lecture :— The practical side of reinforced concrete, Mr. Wells contended, was of the utmost importance in view of the poor quality of workmanship ordinarily employed. The increase in the use of reinforced concrete since 1900 has been greatly due to the fact that architects, engineers, and others had become convinced of the possibilities of the material. It had been proved to be more economical than steel-frame construction used in buildings, in some cases a saving of from 15 to 20 per cent. being effected. The design of reinforced concrete opened out a great field for efficient instruction therein, which the London County Council School of Building was giving.

In reference to drawings, the lecturer advised the use of single lines, varying in thickness, for showing the reinforcement, the advantages being in preventing confusion, in being more quickly seen, in not tiring the eyes so readily as two lines, and in saving time.

Referring to materials, he stated that cement should be kept free from dampness, cold, or damp air, and stored in airtight bins, and that it should be tested directly it was delivered on the site of the works, and then, if quick use was required, three-day tests should be made. For soundness the Chatelier tests were sufficient.

An instance was referred to of some church foundations where, the cement having been hydrated before use, the concrete showed dampness throughout its entire length, and was easier to excavate after being down twenty years than the clay underneath it. The present-day cement was more liable to hydration than that of twelve to fifteen years ago, owing to its greater fineness. The sand used in concrete should be absolutely clean and free from dirt, and the grains should not be the same size; this would result in the concrete being more homogeneous, impervious to moisture, and stronger. Great care should be exercised in the selection of the water, which should be thoroughly clean and free from vegetable matter and salts that were deleterious to concrete; salt water itself did no harm, but it was advisable not to use it, owing to its hygroscopic nature. The steel employed should conform to the British Engineering Standards Committee's specification, and tests should always be made periodically to ensure that the quality did not fall off. It was advisable to have cubes

of concrete made on a job, and to test them, whatever the time of the year, keeping one set under laboratory conditions, and another under the same conditions as those under which the work was carried out. That would form a gauge as to when the concrete on the works reached the strength required to take up the stresses for which it was designed, so that it should be known when it was safe to remove the centering. The centering should not be made of light material, otherwise on removal it might be found that the sides would have bulged out and settlement taken place throughout the work. This was not only ugly, but required extra expense in plastering. Centering should be so constructed that it could be removed easily without having to cut out the timber. In some cases it was more costly to pull down than to put up. The area of the base plates under struts should be sufficient to carry all the loads on them, or else settlement would occur, which probably result in large sheer cracks in the beams over the supports and destruction of the adhesion between the steel and concrete. Once concrete was put into place it should on no account be disturbed. The centering should be left up for a minimum period of three weeks, except for floor slabs and the sides of beams, which might be removed within seven days, but should the compression tests disclose a low crushing, then the centering should be left in place from four to six weeks, or even longer. Efficient superintendents were essential if the work was to be carried out in the manner designed; lack of attention in this direction often resulted in serious accidents.

Referring to the placing of steel, the lecturer had sometimes employed small concrete blocks, slightly dovetailed in section and lightly reinforced, which were laid at the bottom of the beam casing, thus ensuring that the rods were the proper distance from the bottom and sides of the boxes, and preventing any displacement from the calculated positions required.

The concrete should be of a wet nature to enable it to flow readily round the reinforcement, and to do away with excessive ramming and liability of damage to the reinforcement. An advantage of using dry concrete was that it attained its maximum strength at a much earlier period than that of a wet nature, but at the same time oxidation of the steel might set in, due to the concrete being too porous, and also the adhesion in most cases would be weakened.

If, on removing centering, large aggregate were found on the surface with an insufficient amount of sand, then such portions should be covered with a wash of cement grout, and a one-to-one sand and cement mortar forced into the interstices and finished off with a wooden float. A mistake as regards floor finishing with granite or granolithic was to adopt too high a finish for the work, the consequence being that the initial set was broken up before the surface was completely finished. The remedy was to once trowel the floor and then leave it. But if a smooth surface were required it should be rubbed over with holystone and sand.

After the whole works were completed final testing by loading over at least two bays to an excess of 50 per cent. beyond that for which it was designed was often done. If the work had been carried out efficiently then the deflection of the floor noticed should, after the load had been taken off, be entirely recovered and return to its normal state.

ENGINEERING NOTES.

Reinforced Concrete Chimney at Short's-gardens, Drury-lane.

A CHIMNEY-STACK recently constructed by Messrs G. Trollope & Sons and Colls & Sons, Ltd., to distribute the exhaust from several internal-combustion engines, demonstrates the convenience of reinforced concrete in the design of tall chimneys. The shaft in question is 144 ft. 9 in. high by 5 ft. diameter outside, the flue having the diameter of 2 ft. 6 in. If built of brick and designed in accordance with sect. 65 of the London Building Act of 1894, the chimney would have been at least 12 ft. in diameter, a dimension which was impracticable in this case owing to the small space available. Consequently only two alternatives were open—(1) a self-supporting steel shaft and (2) a reinforced concrete chimney. As the former could not be approved as a permanent structure by the County Council, the latter was necessarily adopted. The following particulars are taken from an article in *Engineering* by Mr. Oscar Faber, A.M.Inst.C.E., engineer to Messrs. Trollope & Colls.

The lower portion of the chimney up to the flue entrance is 1 ft. 3 in. thick, and above that 6 in. thick, with a 5-in. firebrick lining and an air space 4 in. thick between it and the outside shell. Vent-holes near the flue entrance provide for an induced current of air in the space between the lining and the shell.

With the object of counteracting the stresses due to expansion, timber rings are embedded at intervals on the inside face of the concrete shell—a method patented by Mr. Faber and first adopted at the Burham Works of the Associated Portland Cement Manufacturers, where it appears to have been quite satisfactory.

The foundation was taken down 15 ft. below basement level, which itself is 14 ft. 9 in. below ground level, and, as it was necessary to underpin existing walls, it is in the form of a solid concrete block measuring 16 ft. 6 in. by 14 ft. by 15 ft. The firebrick lining consists of special bricks with a raised rib, 2 in. by ⅜ in., fitting into a corresponding recess in the next course; other special bricks with side projections having been used at intervals of 10 ft. apart to keep the lining concentric with the outer shell. About ⅜-in. clearance was left between the projections and the shell to allow for expansion.

Adhesion between Concrete and Steel.

IN the paper on "Reinforced Concrete Columns" read by Mr. W. C. Popplewell, M.Sc., A.M.Inst.C.E., to the Institution of Civil Engineers, a feature is the section relating to the bond between concrete and embedded steel. Tests conducted by the author were made by pulling the end of rods embedded to depths of from 10 in. to 40 in., and the results obtained showed frictional resistances ranging from 243 lb. to 614 lb. per square inch of the surfaces in contact. In the case of the more deeply embedded rods the steel outside the concrete gave signs of failure, while the embedded metal was unaffected and showed no sign of movement. The experiments indicate that the grip of concrete cannot be maintained for long after the steel has begun to yield in tension. As steel is never stressed in practice up to more than about half the yield point there is no reason for fearing slipping of the reinforcement in beams, and it should be noted that in the case of compression bars the effect of stress is to increase the diameter of the steel and so to increase the frictional resistance to slipping.

Arica to La Paz Railway, South America.

THROUGH traffic for the distance of 280 miles is now opened across the Andes by the joining of the rail-ends near the frontier between Bolivia and Chili. The construction of the line was begun by the Chilian Government seven years ago; in 1909 Messrs. Sir John Jackson, Ltd., contracted to complete the works within three years, and to supply rolling stock, for 2,950,000*l*. The railway will be formally inaugurated on August 6. It has the metre gauge and passes through a waterless barren tract by steep gradients, rising to an altitude of 14,000 ft. About 25 miles of the line has a rack-rail.

Yield Point and Elastic Limit.

REPORT No. 56 of the Engineering Standards Committee is a leaflet containing definitions of the terms "yield point" and "elastic limit." It may not unreasonably be thought that such definitions are unnecessary as they are to be found in most text-books on applied mechanics and the strength of materials. But as requests had been made to the Committee for standard definitions they very properly decided upon the issue of the present report. The definition adopted for elastic limit is as follows: "The elastic limit is the point at which the extensions cease to be proportional to the loads. In a stress-strain diagram plotted to a large scale it is the point where the diagram ceases to be a straight line and becomes curved." This definition is not free from objection, for the reason the law of proportionality between stress and strain does not apply perfectly to all materials fulfilling the conditions of elasticity as generally understood, and it would be ferable to define the elastic limit as the poi which a marked permanent set occurs in course of testing. For practical purp however, the standard definition may allowed to pass, because, as the report st it is impossible to determine the limit in ordi commercial testing. The definition adopte yield point is: "The yield point is the p where the extension of the bar increases wit increase of load." It should be noted that point is beyond the elastic limit and is re ascertained by the rapid augmentation of pl deformation that occurs. As the pl yielding of a material destroys its prac value for structural work the yield poi important as fixing a stress limit quite pendent of that determined by applying a f of safety to the ultimate resistance of the material. The definitions may serve the u purpose of emphasising the difference bet the two limits, which are sometimes wro thought to be synonymous.

Tests of "Dentile" System Flooring.

ON March 7 last some f recently constructed on "Dentile" system for Midland Carriage and Wa Works, Birmingham, Messrs. H. Arnold & builders and contractors, Doncaster. subjected to load tests with very satisfac results.

The system in question, which is contr by the Indented Bar and Concrete Engine Company, Ltd., was described and illust in our issue of April 12, where readers find all necessary details.

The first test was conducted upon an app mately square floor, measuring 17 ft. 10 i 16 ft. 7½ in., reinforced in two directions calculated for the working load of 10 per square foot. The test load specified 150 lb. per square foot, or 50 per cent. in e of the normal loading. The material empl consisted of cement in bags, amountin weight to 20 tons, and representing 15 per square foot.

Deflection was carefully measured by a sh vernier placed below the centre of the floor, it was observed that the deflection incre very gradually during the progress of the up to 0·07 in.

While the full test load was still in pos the centre of the floor was exposed by removal of a bag of cement, and five h blows were delivered upon it with a pie timber 18 ft. long by 9 in. by 12 in. in section. This was lifted to a height of 2 f 3 ft. and banged upon the floor by the u efforts of five men. The severe impact had no apparent effect on the floor, in the fo cracks or other signs of damage.

The second test took place on a floor ar 16 ft. 7½ in. by 13 ft. 10 in., reinforced in direction of the shorter dimension only. full test load of 150 lb. per square foot, equ 50 per cent. in excess of the normal caused deflection to the extent of no more 0·01 in.

The successful nature of both the tes sufficient to indicate the reliability of "Dentile" flooring, a convenient featur which is the absence of projecting beams long spans, thus facilitating ceiling treatmen plastering or any other suitable method.

Electrical Wood Seasoning.

A NEW process of wood se ing, which is said to be wo in France, is given in American Consular Re The process is given as foll A large tank is filled with a solution conta 5 per cent. of resin, 10 per cent. of borax, just a trace of carbonate of soda. At bottom of the tank is a large lead-plate nected to the positive pole of a dynamo. this plate the timber is stacked until the ta full. Then another plate is superimposed the timber and connected with the other p the dynamo—the negative one.

The result is that when the current is tu on it passes through the stack of wood, plate to plate, and in its passage it is said the sap is driven out and the resin and takes its place, being deposited in the cell interstices. After this operation is comp the timber is taken out and dried. It is ready for use. The result, it is claime highly satisfactory, for no matter how the timber is before treatment, after treat it is said to be completely seasoned.

THE BUILDING TRADE.

E MODERN BRICKLAYER AND HIS WORK.

LONG-STANDING complaint against trade unions is that they induce the workman to retard progress of his work instead of his employer the full benefit of his . This complaint is so widely made ome explanation of it should be forth- g. The question has recently been dis- with especial reference to the brick- industry, and some persons have had mpression that the unions had pre d rules restricting the number of bricks laid in a day. It does not appear that of this kind have been officially sanc- by any of the unions; but the im- on prevails that trade-union influence sponsible for the alleged tardy per- nce of bricklayers' work.

Cwilt's "Encyclopædia of Architecture" we read that "A bricklayer, with the ance of one labourer, can, if he be so d, lay in one day about 1,000 bricks in on walling, but the trade unions now nt him from laying more than about ird that number." Present-day in- s among builders have elicited the nation given below. It may be re- d that the best results, both in speed uality of work, are obtainable when the er of men employed is small. Careful on of men, personal knowledge of them, ose supervision of their work are more lt when large contracts are under-

lying to inquiries, one builder says he men will not lay more than 300 in a day "unless you watch them." l others concur in stating that 500 is the usual daily average in plain g. An experienced foreman assures us o man can lay 1,000 bricks in an eight- day; the utmost is 500. "You may 0 if you pick your man." An old ayer tells us that he has laid 700 in walls, where the facing forms only a proportion of the work. With another r the average was 500 in forming chim- which, we all know, is "tricky" work; e has known 700 laid quite easily in walls. Another says that he has a l man, paid 1s. 2d. per hour, who can 500 bricks in a day; but the crowning of information comes from a general an, who declares that he has seen two ayers dispose of 7,500 bricks in eight while building a party wall. It is le that some of our readers may en- n us further upon this subject.

t be true that the modern bricklayer ot build at the same speed as his fore- s did, we should be led to expect that re leisurely work would be better done. far does experience confirm this ex- ion? Upon this point we quote the ing observations by a correspondent, pparently speaks from experience:— can judge the brickwork of sixty years hen we see it demolished to-day, and re it with the work that is being ed before our eyes. It cannot, of , be maintained that there was no ' work in 1850 or thereabouts; but yone watch the destruction of walls in l-class building of that date, and he e that the perpends are almost invariably with mortar, while in modern work this her the exception than the rule. Ob- the modern bricklayer building a wall. his last course of bricks he spreads a bed of mortar ready for the next . Each facing brick then receives a of mortar about an inch wide next to ont. All the other bricks are placed the bed without any mortar being l upon them. For filling his perpends ricklayer depends upon grout, which he over the bricks from a tin can. The unless frequently stirred up, is of un- consistency; but at the best, when it is t can only partly fill the perpends, leaving hollow spaces between the bricks, and a certain quantity of superfluous water, which dries out of the wall in time."

The alleged dilatory execution of work, apart from any official action of trade unions, might be expected to result from the existence of an organised combination, which necessarily assumes that all its members are, as workmen, equally competent. Where all are paid alike, the tendency for all is to give equal value for money received, and the doctrine that "every man has a right to an equal share of work" may induce men to leave some work undone for others to do. But a common complaint against the unions is that, while insisting upon an equal rate of wages for all members in any given trade, they afford no guarantee as to the efficiency of the labour to be supplied. Upon this point we may seek enlightenment from the rules of the Operative Bricklayers' Society. Here it is provided that a person desirous to enter the trade must do so before the age of seventeen, and must be legally bound apprentice. A candidate for membership of the Society, if between the ages of eighteen and twenty-one, must be able to prove that he has worked at the trade for three years, if of the age of twenty-two, for four years, and so on in like proportion. Members proposing and seconding a candidate for admission are required to "give such information as to his antecedents as will enable the branch officers to make such inquiries as may be necessary."

Although the last-named rule is open to a somewhat elastic interpretation, it may be fairly presumed that the Society, as at present constituted, does all in its power to ensure that none but competent bricklayers shall obtain membership. But something more than this appears to be needed. Two bricklayers can propose a third for election to the Society, but if all three believe, *e.g.*, that perpends can be properly filled with grout instead of mortar, there is scope for radical reform. We ought to feel that when union bricklayers are employed the highest class of workmanship is obtained, higher than is obtainable from the best of non-union men; and the unions should take a pride in making us feel this. Also, as regards celerity in work, if there is to be an unwritten rule governing the number of bricks to be laid in a day, it should prescribe the minimum rather than the maximum number.

THE MEDIÆVAL CARPENTER.

THE carpenter in the Middle Ages was a well-known member of city and village life. His position was apparently in those days far higher in the social scale than is the case to-day. An instance of a carpenter holding the position of churchwarden of a London parish is to be found in the records of the Church of St. Mary-at-Hill, published by the Early English Text Society. The main details of the will of another London carpenter, Thomas Warham by name, may be seen in Sharpe's "Calendar of Wills." Warham's will was made before 1482, and in it we see that he possessed sufficient property to bequeath a house and four gardens near Cornhill, in addition to other property.

With respect to the work of a mediæval carpenter many remaining records show us that it was, as it is to-day, of a very varied character. We find the following description of some work done by carpenters on a house at Hanworth, near Hounslow, in the time of Henry VIII. The original document is in the Public Record Office (Exch. Acc. 464-19):—

"Carpentares at viid. the day, Workyng as well to fell, hew & square xxii loodes of Elme tymber there felled, also in the workyng of vi loodes of ocken (oaken) tymber of store there lying, the which tymber mad Jyestes, bordes & planckes for stables & loftes to ley hey on; also to make a payre of stayres at the looge & xiiii bedstedes . . . gates, postes, with many other nessessaryes."

The bedsteads would be of the common four-poster and half-tester type.

In a manuscript at the Record Office (Exch. Acc. 474-12) we find set down details of work done in the Tower of London. Here we see that the carpenters employed made "ladders," "cradulles," "handebarrows," and "gynnes."

In MS. 488 22 we see that carpenters worked on windows and carts.

With regard to wages, the carpenter was very comfortably situated, if we bear in mind the fact of the far greater purchasing power of money then than in the present day.

In the erection or repair of a large building a considerable number of carpenters would be employed. Of these the chief warden would be paid at a rate of about 5s. a week and the warden 9d. a day, the ordinary carpenters getting 5d., 6d., 7d., and 8d. Apprentices were paid, according to their abilities or experience, at the rate of 5d., 6d., and 7d. a day. Richard Dee, working near Ewell, in the time of Henry VIII. got only 4d.

In MS. 479-11 is an entry describing the selecting and marking by the master carpenter of certain trees to be cut down. In this work on these trees subsequently the master carpenter received 12d. a day and the rest 6d.

An interesting entry in MS. 488 26 refers to the tools of carpenters:—

"To William Alawe, Watyrman (waterman), for bryngyng the said carpenters and their tulles and instruments."

In 1517 a number of carpenters crossed a ferry every day to get to their work, the fees to the ferryman being paid by the employer. the carpenters crossing every day from May to Michaelmas (MS. 488-16).

An outline of the life of a mediæval carpenter taken from mediæval records was printed in the *Builder* of July 21, 1911.

LONDON MASTER BUILDERS' ASSOCIATION.

A COUNCIL meeting of the London Master Builders' Association was held in the Council-chamber, Koh-i-Noor House, Kingsway, W.C., on Thursday, April 18, when the President (Mr. James S. Holliday) presided.

The President reported that the Special Committee and the Law and Parliamentary Committee had met, and would in due course submit their reports to the Council.

Correspondence relating to priced schedules with tenders, provisional sums in quantities, etc., was read and instructions given.

Various other trade matters of interest were considered.

Messrs. Messers. Ltd.. were elected an Associate member of the Association, and the following firms were nominated for membership:—

1. Messrs. H. J. Carter, Ltd., as ordinary member.
2. Messrs. Bovis, Ltd., as ordinary member.
3. Mr. J. B. Smith, as Associate member.

BUILDING PLANS AND BUILDING PROSPECTS.

SO FAR as the returns of the plans deposited with the local authorities afford any indication of the condition of the building trade and its prospects, the outlook is not promising, and it is to be hoped that labour unrest will not make matters worse. The sum total of all plans deposited in the first quarter of 1912 is 3,487,425*l.*, as compared with 4,093,467*l.* in the corresponding quarter of last year. This is a decrease of 606,042*l.*, or 14·8 per cent. Decreases are shown in every class of building except workshops and factories, and in these the increase is 25·7 per cent. All districts show a decrease with the exception of Lancashire and Cheshire and Yorkshire. The decrease in dwelling-houses is very marked—463,486*l.*, or 23·5 per cent.—and it appears to occur in all districts.

GOVERNMENT CONTRACTS.

THE following tenders have been accepted during the past month by the Government Departments named:—*Admiralty, Works, Department:* Steelwork for reinforced concrete piles, Devonport—Britannia Reinforced Concrete Engineering Company, Ltd., 196, Deansgate, Manchester; works services; caissons for lock, docks, and basin, Rosyth—Sir William Arrol & Co., Ltd., Dalmarnock Ironworks, Glasgow; foundations for steel oil tanks —Mr. G. Hall, Back Hilton-road, Aberdeen; reinforced concrete pier, R.N.O. Depôt, Crombie—Messrs. R. Bruce & Sons, 25, Greenside-place, Edinburgh; sluices and their roller paths—Sir William Arrol & Co., Ltd. Dalmarnock Ironworks, Glasgow; steel oil tanks—Messrs. Clayton, Sons, & Co., Ltd., Moore End Works, Hunslet, Leeds; three pairs of aeroplane sheds—Mr. W. Harbrow, South Bermondsey, S.E. *Admiralty, Contract Department:* Water-closets and gear—Messrs. Shanks & Co., Ltd., Tubal Works, Barrhead, Glasgow; Messrs. Doulton & Co., Ltd., Albert-embankment, Lambeth, S.E.; Leeds Fireclay Company, Ltd., Wortley, Leeds; Messrs. G. Howson & Sons, Ltd., Eastwood Sanitary Works, Hanley, Stoke-on-Trent; Messrs. Wallace & Connell, 65, McAlpine-street, Glasgow; Messrs. J. Stone & Co., Ltd., Deptford, S.E. *War Office:* Works services: additional story, R.A.M.C. Barrack Block, Shorncliffe—Mr. T. T. Denne, Walmer; aeroplane repair shop, South Farnborough—Mr. W. Harbrow, South Bermondsey, S.E.; airship shed, Army Aircraft Factory, South Farnborough—Messrs. Hill & Smith, Ltd., Brierley Hill, Staffs; alterations to married soldiers' quarters, Winchester—Mr. J. Hunt, Gosport; alterations to recreation establishment, etc., Town Barracks, Exeter—Messrs. Woodman & Son, Bartholomew-street, Exeter; annexes, etc., Abbey Field married soldiers' quarters, Colchester—Messrs. Parkington & Son, 61, Crown-street, Ipswich; annexes, married soldiers' quarters, Oxford—Messrs. G. S. Lewis & Sons, Castle-street, Reading; artificer's work at Cahir—Mr. Thomas O'Farrel, Barrack-street, Cahir; artificer's work, Chester—Mr. Robert Gregg, 78, Lower Bridge-street, Chester; artificer's work, Finner—Mr. James McBride, East Port, Ballyshannon; artificer's work, Hounslow and London — General Building Company, 45, Chandos-street, W.C.; artificer's work, Mullingar—Mr. Charles Doyle, Austin Friars, Mullingar; artificer's work, Shrewsbury—Messrs. J. C. Vaughan & Son, 27, Commercial-street, Hereford; artificer's work, Templemore—Mr. Thomas Dwan, Main-street, Templemore; artificer's work, Tipperary—Mr. John Cavanagh, James-street, Tipperary; artificer's work, Wrexham—Mr. W. E. Samuel, Market-street, Wrexham; aviation school buildings (huts, aeroplane sheds, etc.), Salisbury Plain—Mr. W. Harbrow, South Bermondsey, S.E.; building materials, etc., for artificer's work at Trawsfynydd—Messrs. J. C. Vaughan & Son, 27, Commercial-street, Hereford; concrete foundations for stop butts, Rainham—Messrs. Ashby & Horner, 8, Aldgate, E.; waggon sheds and porch for Duke of York's Headquarters, Chelsea—Messrs. C. W. Bovis & Co., Ltd., 1, New-street, Upper Baker-street, N.W. *Prison Commission:* Building materials for masons', bricklayers', plasterers', and slaterers' work—Messrs. Avery Brothers, 15, Staple gardens, Winchester; Mr. J. W. Baird, Higher Town, Knutsford; Messrs. Borden & Head, 12, Union-street, Maidstone; Messrs. William Ball & Sons, 2, Downing-street, Cambridge; Mr. F. Bennett, New-street Works, Ipswich; Executors of Mr. R. Bowen, Leamington; Messrs. J. T. C. Brown & Sons, 70, Fore-street, Bodmin; Mr. S. Buy, 224, Westgate-road, Newcastle-on-Tyne; Messrs. J. Byard & Sons, Stroud-road, Gloucester; Messrs. Carter Brothers, 150, Castleton-road, Preston; Messrs. W. E. Chivers & Sons, Devizes: Mr. C. Cooke, St. Owen-street, Hereford; Messrs. J. Corby & Sons, 27, Tavistock-street, Bedford; Mr. G. Crook, 65, Henry-street, Wakefield; Messrs. T Cross & Sons, 36, King-street, Lancaster; Mr. R. Dine, 18, Shelley-terrace, Lewes; Messrs. G. Duxbury & Co., 73, Churchgate, Leicester; Mr. H. A. Evans, Goldsmith-avenue, Portsmouth; Mr. F. T. Gentry, Broad-street, Canterbury; Messrs. Gradon & Son, North-road, Durham; Messrs. J. A. Hesford, Ltd., 36, Cannon-street, Birmingham; Messrs. James Brothers & Co., Ltd., Tamar Wharf, Devonport; Messrs. Johnson & Hawkes, Phœnix Works, New-street, Chelmsford; Messrs T. H Kingerley & Sons, Oxford; Messrs. J. Knowles & Co. (London), Ltd., 38, King's-road, St. Pancras, N.W.; Messrs. Lacey & Lincoln, Ltd., Norwich; Messrs. J. Laing & Son, Milbourne-street, Carlisle; Messrs. Lansdown & Son, Melville-street, Lincoln; Mr. J. T. Levitt, 84, Holderness-road, Hull; Mr. L. R. Lucas, Maryport street, Usk; Messrs. W. Maule & Co., Huntingdon-road, Nottingham; Messrs. C. Miskin & Sons, Ltd., Romeland, St. Albans; Messrs. C. M. Moxham & Co., Oystermouth-road, Swansea; Mr. T. Pace, Eaton-hill, Shrewsbury; Mr. E. Parry, Ty Gwyn, Carnarvon; Mr. J. J. Patten, 1, Greenhill-terrace, Portland; Mr. W. C. Pemberton, Wolverhampton-road, Stafford; Messrs. J. H. Prelle, Ltd., 67, Dale-street, Liverpool; Messrs. W. Radcliffe & Son, Birch-lane, Manchester; Mr. S. Roach, 87, Union-street, Plymouth; Mr. E. A. Rogers, 15, Queen-street, Carmarthen; Messrs. Smith & Marchant, Market-place, Shepton Mallet; Mr. T. Stennard, 185a, Gloucester-road, Horfield, Bristol; Messrs. J. Stockdale & Son, Northallerton; Messrs. Slocombe, Williams, & Co., East-yard, Bute-terrace, Cardiff; Mr. W. G. Stovey, 19, Durngate street, Dorchester; Mr. J. Walker, Wesley-road, Armley, Leeds; Messrs. Walker & Slater, Uttoxeter Old-road, Derby; Messrs. Warmsley & Co., Ltd., Bangor Wharf, 90, King's-road, Reading; Messrs. W. Webb & Co., Railway-street, Chatham; Messrs. Webster & Cannon, Cambridge-street, Aylesbury; Messrs. Westcott, Austin, & White, Exeter; Mr. E. Whittaker, 76, Wellingborough road, Northampton; Messrs. Wiggins & Co., Chancellor's Wharf, Hammersmith, W.; Messrs. Williams Brothers, Borthyn, Ruthin; Messrs. J. Wood & Sons (Worcester), Ltd., Worcester; building material for carpenters' and joiners' work—Messrs. Ashbee, Sons, & Co., Bristol-road, Gloucester; Messrs. Bartlett Brothers, Castle House, Carmarthen; Messrs. R. & R. Bayly, Plymouth; Mr. J. Elgy, Gilesgate, Durham; Messrs. Fox, Shott, & Co., Ltd., Great Western Docks, Plymouth; Mr. J. Hayes, Abbey Foregate, Shrewsbury; Messrs. William Marshall & Son, 256, Old-street, E.C.; Mr. J. Moore, 341, Holderness-road, Hull; Mr. F. Newbury, 292, King's-road, Reading; Messrs. H. Newsum, Sons, & Co., Ltd., City Saw Mills, Lincoln; Messrs. J. C. Richards & Co., Hall-place, Paddington Green, W.; Messrs. Webb, Major, & Co., Weymouth; Messrs. R. S. Wright & Sons, Queen square, Lancaster; building materials for painters', plumbers', and glaziers' work—Messrs. T. & W. Farmiloe, Ltd., Rochester-row, Westminster, S.W.; Messrs. Middleton Brothers, St. George, E.; building materials for ironmongers', smiths', founders', bell-hangers', and gasfitters' works Messrs. R. Atwill & Son, 33, Russell street, Plymouth; Messrs. J. B. Hallmark & Son, Ltd., 114, Fishergate, Preston; Messrs. E. Hughes & Son, 30, Bridge-street, Carnarvon; Messrs. Pryke & Palmer, 40, Upper Thames-street, E.C. *India Office, Store Department:* Bridgework—Tees Side Bridge, etc., Company, Middlesbrough; spans—Messrs. P. & W. Maclellan, Glasgow; Motherwell Bridge Company, Motherwell. *Crown Agents for the Colonies:* Cement—The Associated Portland Cement Manufacturers (1900), Ltd., 8, Lloyd's-avenue, E.C.; British Portland Cement Manufacturers, Ltd. (Barrow's Branch), 6, Lloyd's-avenue, E.C.; Messrs. Peter Brothers, 72, Victoria street, S.W.; lavatory fittings Messrs. J. Beresford & Son, Cato-street Works, Vauxhall, Birmingham. *Office of Works.* Builder's work, alterations, and extensions, Edinburgh Central Telephone Exchange—Messrs. J. Angus & Sons, 6, West End-place, Edinburgh; reconstruction of North Octagon Temperate House, Kew Gardens—Mr. W. J. Wilkinson, Swan-road, West Drayton; enlargement, Nuneaton Post-office—Messrs. W. Bowers & Co., Bath-street, Hereford; erection Purley Oaks new sorting office—Messrs. J. Smith & Sons, Ltd., Junction Works, South Norwood; erection new telephone exchange, Attercliffe, Sheffield—Mr. J. W. Wildgoose, Rutland-street, Matlock; extension (third contract), South Western District Post-office—Messrs. Galbraith Brothers, Ltd., Camberwell-green Works, S.E.; adaptation, West Bromwich Labour Exchange—Mr. J. E. Harper, 76-8, Lombard-street, Birmingham; erection of water-tower, Windsor Castle Waterworks—Messrs. Holloway Brothers (London), Ltd., Belvedere-road, Lambeth, S.E.; drainage, Mount Pleasant Parcel Office—Messrs. Sheffield Brothers, Downs Park-road, Dalston, N.E.; steel casements and lantern lights, Birmingham Telegraph Stores—Messrs. C. Wragge, Ltd., 209, Shaftesbury-avenue, W.C. *General Post Office:* Laying lines of pipes at Margate—Messrs. J. Mowlem & Co., Ltd., Grosvenor Wharf, Westminster, S.W.; laying lines of pipes, Croydon to Wallington—Messrs. Clough, Smith, & Co., Ltd., Spencer House, South-place, E.C.

ROMAN CATHOLIC CHURCH, SOUTHPORT.

This new church has been designed in the early Gothic style, and will provide accommodation for 450 people. Mr. Alfred Gilbertson, of Liverpool, is the architect for the work.

LABOUR IN THE BUILDI TRADE.

A CONFERENCE of a preliminary characte held at Essex Hall, London, W.C., o 18th inst., to consider whether it was p to arrange an amalgamation of the uni the building trade. Mr. W. Thorne, Chairman of the Parliamentary Commit the Trades Union Congress, presided, twenty-one trade unions were represente

The following resolution was agreed "That this Conference expresses its adh to the resolutions passed by the last Union Congresses, embodying the princi amalgamating the present trade unions various industries, and, therefore, we representatives of the Building Trade U consider the time is now opportune the principle into effect in our industry that a Committee be appointed, to cons one member from each society represent draw up a scheme to give effect to the pr resolution, such scheme to be submitted next Conference."

The Committee will meet in Manches May 23.

A mass meeting of workers employed building and woodworking industry wa on the 14th inst. in the Grand Theatre, chester.

The following resolution was adopt "That this meeting of workers employ the building and woodworking industry pledges itself to render support to the p efforts being made to strengthen the me ship and unite into a solid organisatio whole of the workers in this industr further records its determination to help and assist by every means in its powe branches of the industry in the present st for improved wages and shorter hours refrain from any act which is likely to the employers in the present dispute."

As already announced, employers in the chester and Salford district have been by the carpenters and joiners—with bricklayers and others are in sympathy— advance of wages, and failing the conc of this request the workmen are to lay their tools on May 1 next.

A deputation representative of the layers, plumbers, painters, working mach and general labourers met members Cardiff Master Builders' Association re and submitted their request in support o application for an alteration in the ex code of working rules. At the close masters intimated that they would give f consideration to the application and give reply at a very early date.

GENERAL BUILDING NEW

COLLEGE OF ART, EDINBURGH.

The Edinburgh College of Art, Lau has been erected from the designs of Dick Peddie, at a cost of 80,000*l.* The ing has a frontage of 350 ft., the façade classic design, the walls are of red sand and the roof is covered with soft green The is a large sculpture hall, 100 ft and 60 ft. broad, and other rooms building include an antique-room, architc halls, museum, dining-hall, etc. The is heated on a hot-water system with ra and lighted by electricity.

PROPOSED NEW SCHOOLS IN GLASGOW.

The School Board of Glasgow have d to proceed with four new building sc Of these, some are for entirely new ings, while others are additions to e structures. The following four firms of tects have received the commissions f various works:—Messrs. MacWhannell, son, & Reid, Messrs. Hutton & Messrs. Bryden & Robertson, and Mr. Skirving, all of Glasgow. We understa the school with which Messrs. Mac nell, Rogerson, & Reid are entrusted i a new one, costing about 20,000*l.*, wh one which Messrs. Hutton & Tayl designing is a special building for d children, the cost of which will be from to 10,000*l.*

SCHOOL, BROXBURN.

This school has been erected at a about 7,500*l.*, and provides accommodat 700 pupils. The building contains staff cloakrooms, fourteen classrooms, and a hall 43 ft. by 39 ft., the whole being throughout by hot water on the low-p system. The architect for the work w W. Constable, of Edinburgh.

TECHNICAL INSTITUTE, NEWMARKET.

The designs for this institute were p by the Urban Council's Surveyor, Mr Warthorn, and the contract is being

by Mr. H. J. Lingell, builder, of New-rket. The foundation-stone of the building s laid last Friday.

THEATRE ROYAL, YORK.

Additions are being carried out at this atre at a cost of about 400*l.* from the plans spared by the City Surveyor. The new rk includes a side entrance and scene dock, h emergency exits from the pit stalls and . The contractors for the work are Messrs. Fairweather & Son.

NEW COTTAGE HOSPITAL, WIMBLEDON.

The Wimbledon Cottage Hospital erected at pse-hill has been designed by Mr. T. G. kson, R.A., and has cost about 8,600*l.* ere are six public wards, besides private l children's wards, operating theatre, gery, kitchens, etc. The contract was ried out by Messrs. Holloway Brothers.

THE PALACE PIER, BRIGHTON.

Messrs. Clayton & Black, of Brighton, are architects for the new winter gardens ich have been erected and for other im-vements carried out at the Palace Pier. e work has been executed at a cost of about 000*l.*, and the various contractors were:—rpentering and the woodwork, Bostel others, of Brighton; constructional iron-rk, the British Steam Metal Company; iron l steel work, Messrs. Braithwaite & Kirk; saic floor, Messrs. Diespeker & Co.; heat-, Messrs. Phillips & Son, Ltd.; electric ating, Messrs. Page & Miles; zincwork, ssrs Gooding & Taylor; sanitary work, ssrs. Prior & Co.

MUNICIPAL BUILDINGS, PAISLEY.

The extensions to these buildings are being ried out from plans prepared by Mr. James , C.E., and comprise an extension of the vn Chamberlain's department, an inquiry artment, committee-room, waiting-room, a smoking-room. The estimated cost of work is 2,300*l.*

IMPROVEMENTS AT CHESTERFIELD.

ew offices are being erected in the Derby-l, Chesterfield, for the engineering firm Messrs. Bryan, Donkin, & Co., at a cost of 0*l.* The building has been designed by T. S. Wilcockson, architect, of Chester-l, and the contract was secured by Mr. Randall, builder, of Hasland.

NEW BUILDINGS IN LONDON.

hurch (first portion, 6,500*l.*), Finchley, N.; J. S. Alder, architect, 1, Arundel-street, nd. W.C. Church (7,000*l.*), Acton Green, Mr. W. A. Pite, architect, Jermyn-street, James's. S.W. Gymnasium (2,000*l.*), ad-ing Great Eastern Railway-station, Forest , E.: Secretary, Y.M.C.A., Forest Gate. Buildings, St. Andrew's-hill, E.C.; Messrs. ell J. Williams, builders, 11-7, Bermondsey-t, S.E. Congregational Sunday-schools, rnon-road, Lewisham, S.E. (1,500*l.*); Mr. ter Box, Building Treasurer, "Braeside," quil-vale, Blackheath, S.E.

TRADE NEWS.

nder the direction of Mr. W. J. Fennell. itect, Belfast, the "Boyle" system of ilation (natural), embracing Boyle's latest nt "air-pump" ventilators and air inlets, been applied to Hildon Schools, Belfast. e new schools, Wakefield, are being lied with Shorland's patent exhaust roof ilators, by Messrs. E. H. Shorland & her, Ltd., of Failsworth, Manchester.

OJECTED NEW BUILDINGS IN THE PROVINCES.*

ERDEEN.—Training centre (47,000*l.*); Mr. A. O. Allen, architect, Union-street, rdeen.

rdrie.—Municipal buildings; Mr. Hugh s, Surveyor, Burgh-buildings, Airdrie.

mondsbury.—School; Mr. R. S. Phillips, itect, The Cross, Gloucester.

hbourne.—Picture-house, King Edward-t; Mr. G. Wilson, Ashbourne.

rnsley.—Extensions to baths (6,300*l.*); Mr. Burgess, architect, Westminster.

lper.—Mission hall (1,000*l.*); Rev. S. H. s, Vicar, St. Peter's Church, Belper.

kenhead.—Mills for Messrs. J. Bank, ; Mr. W. H. Brocklesby, builder, Hull.

rmingham. — School, Ellen-street; Mr. . Turton, builder, Wheeley-road, Birming-Cottage baths, Dartmouth-street; Mr Stilgoe, City Engineer, Town Hall, Bir-ham.

dmin.—Isolation hospital; Mr. W. A. rd, Surveyor, Urban District Council es, Wadebridge.

rne.—Isolation hospital; Mr. A. R.

See also our list of Competitions, Contracts, on another page.

Agnew, Surveyor, Urban District Council Offices, Bourne.

Bournemouth.—Additions to ice factory, Palmerston-road, for the Bournemouth Ice and Cold Storage Company. Additions to Victoria Hotel, Commercial-road, for Messrs. Eldridge, Pope, & Co.

Briston.—Six houses (905*l.*); Mr. Thomas H. Blythe, builder, Foulsham.

Bucknall (Stoke-on-Trent).—Relief-station; Mr. C. Daniel, Clerk, Stoke Board of Guardians, Shelton, Stoke.

Burslem.—White Swan Inn; Messrs. Grants, builders, Moorland-road, Burslem.

Carrickmacross.—Convent chapel; Mr. J. J. McDonnell, architect, Chichester-street, Belfast.

Chirk (Denbighshire).—Drill hall, etc., for the 4th Territorial Battalion Royal Welsh Fusiliers.

Clarkston.—Police-station; Messrs. G. Arthur & Sons, architects, 4, Graham-street, Airdrie.

Coleshill (Birmingham).—Additions, hospital; Mr. H. T. Sandy, architect, 22, Greengate, Stafford.

Copnor.—School, Tangier-road (3,135*l.*); Messrs. J. J. Bascombe and H. E. Curtis, Joint Secretaries, Education Committee, Town Hall, Portsmouth.

Dartford.—Alterations to infirmary (440*l.*); Messrs. Tait & Hobbs, architects, 2, Lowfield-street, Dartford.

Deeping St. James.—Houses; Mr. D. Gray, builder, 130, Lincoln-road, Peterborough.

Dinnington and Rossington.—Schools; Mr. J. Stuart, architect, Shire Hall, Wakefield.

Dudley.—Church, parish hall, etc.; Messrs. Chatwin & Son, architects, 128, Colmore-row, Birmingham. Additions, parish church (7,000*l.*); Rev. A. Maitland, Vicar.

East Ardsley.—Mill for Messrs. T. Ambler & Sons.

Edinburgh.—Picture-house, Dalry-road, for the Haymarket Picture-House Company.

Epsom (Surrey).—Court-house; Mr. A. Dryland, Surveyor, Surrey County Hall, Kingston-on-Thames.

Errol.—School: Mr. J. Marshall, architect, 28, Scott-street, Perth, N.B.

Farnworth.—Extensions to mill, New Bury, for the Century Spinning Company.

Foleshill.—Additions to factory for Messrs. R. White & Sons.

Great Harwood.—School, Rushton-street: Rev. Father Hill, B.A., Great Harwood.

Greet (Birmingham).—Electric light station; Messrs. W. & J. Webb, builders, Great King-street, Birmingham.

Hawick.—Municipal lodging-house (1,000*l.*); Mr. W. B. Gilroy, Surveyor, Burgh-buildings, Hawick.

Hawkser.—Alterations to Wesleyan Chapel: Messrs. R. A. Wilson & Sons, architects, Whitby.

Haworth. Public abbatoirs (1,000*l.*), Mr. James Redman, Surveyor, Urban District Council Offices, Haworth.

Heckmondwike.—Premises (7,000*l.*); Secretary, Co-operative Society, Heckmondwike

Helensburgh.—Two houses; Messrs Mitchell & Whitelaw, architect, St Vincent-street, Glasgow.

Hindpool.—School; Mr. A. Race, Surveyor, Town Hall, Barrow-in-Furness.

Horncastle.—Court-house (1,072*l.*); Messrs. Sutton & Horton, builders, Horncastle.

Hove.—Theatre, Holland street; Messrs. Gilbert & Constanduros, architects, 43, Finsbury square, E.C.

Hyde.—Extensions to brewery, Cheapside, for Messrs. C. Crease & Co.

Larne.—Extensions to buildings for the Larne Weaving Company.

Littleborough.—Extensions to Rock Nook Mill for the Sladen Wood Mill Company, Ltd.

Limavady.—Court-house; Mr. C. L. Boddie, architect, Limavady.

Low Fell. Presbyterian church: Messrs. Harrison & Ash, architects, Newcastle-on Tyne.

Middlesbrough.—Reconstruction of cycle works and garage, Grange-road, for Messrs. Carling & Sons.

Monmouth.—Extension, Grammar School (2,200*l.*); Messrs. Willcock & Co., builders, Darlington-street, Wolverhampton.

Oakham.—Enlargement of school; Messrs. Nichols Brothers, builders, Oakham.

Paisley.—Municipal buildings (2,300*l.*); Mr. James Lee, Master of Works, Burgh Hall, Paisley. Threadmill for Messrs. J. & P. Coates, Paisley.

Pallion.—Additions at shipbuilding yard for Messrs. William Doxford & Sons.

Port Erroll (Cruden).—School; Mr. A. H. L. Mackinnon, architect, Aberdeen.

Porthcawl (Glam).—Church (5,000*l.*); Mr. G. Halliday, architect, Castle-street, Cardiff.

Preston.—Spinning shed (800 looms), Boldstreet, for Messrs. J. & A. Leigh.

Purston.—One hundred and fifty nine houses (33,000*l.*); Mr. S. Chesney, Surveyor, Urban District Council Offices, Featherstone, Yorks.

Rawtenstall.—Extension, market hall; Mr. J. Johnson, Surveyor, Town Hall, Rawtenstall.

Romiley.—Extensions to works, Dye-lane, for Messrs. J. Scholfield & Sons.

Rotherham.—The following plans have been passed:—Six houses and house and shop, Tenter street, for Messrs. Armston & Wortley; alterations, "Green Dragon," Kimberworth, for Mappin's Masborough Old Brewery, Ltd.; five houses and house and shop, Hatherley-road and Selwyn-street, for Mr. J. H. James.

Rugby.—Proposed laundry at workhouse (1,350*l.*); Mr. J. W. Pendred, Clerk, Guardians' Offices, Rugby.

Selby.—Fifteen houses (3,000*l.*); Mr. R. B. McGray, Surveyor, Urban District Council Offices, Selby.

Sheffield.—Enlargements to Morley-street School, Eccleshall (450 extra places); Mr. G. S. Baxter, Secretary, Education Committee, Town Hall, Sheffield.

Spring Vale.—Weaving shed for the Albert Cotton Spinning Company.

Stoke-on-Trent.—Factory, Wolfe-street; Mr. T. Godwin, builder, Victoria-road, Hanley.

Swansea.—Alterations to Oxford-street Market (1,300*l.*); Mr. Glendenning Moxham, architect, of Messrs. Wilson & Moxham, 39, Castle-street, Swansea. Plans have been passed as follows:—Additions, "Grasmere," Eversley-road, for Mr. C. F. Walters; three houses, Spencer-street, and two houses, Sylvia-terrace, for Messrs. Hughes & Morgan; seven houses, Manselton-road, for Mrs. Ann Evans; warehouse, Dunvant-place, for the Crown Composition Company; additions, "Compass Inn," Caebricks, Cwmbwrla, for Messrs. Hancock & Co.

Taunton.—Twelve houses (2,040*l.*); Mr. D. Edwards, Surveyor, Town Hall, Taunton.

Thame.—Parochial hall, Nelson-road (550 places); Mr. James T. Robinson, architect, Thame.

Troon.—Church; Mr. H. E. Clifford, architect, 225, St. Vincent-street, Glasgow.

Watford.—Proposed baths; Mr. D. Waterhouse, Surveyor, Urban District Council Offices, Watford.

Westbourne.—School (2,625*l.*); Messrs. F. Sandell & Sons, builders, Railway-approach, Worthing.

Wolstanton.—Extensions to workhouse (2,675*l.*); Mr. W. Rogers, builder, Tunstall.

Worksop.—Alterations to Wheat-Sheaf Inn for the Worksop and Retford Brewery Company, Ltd.

Wrotham (Kent).—School: Mr. W. Robinson, architect, Caxton Houe, Westminster, S.W.

METROPOLITAN ASYLUMS BOARD.

At the sitting of the Metropolitan Asylums Board on Saturday the following matters were dealt with:—

Long Reach Hospital.—The Finance Committee reported having received from the Works Committee an estimate of 1,500*l.* of the cost of works in connexion with the adaptation of the shore buildings at Long Reach Hospital for smallpox purposes, and certain fire-resisting works in connexion therewith. It was decided to apply to the Local Government Board for authority to incur the expenditure.

Millfield.—The Works Committee reported having instructed Mr. H. Howard, surveyor, of Littlehampton, to prepare a plan with draft, specification, and estimate of cost for the construction of a substantial concrete sea wall for the protection of the Board's sea front at Rustington.

Works.—Subject to the approval of the Local Government Board the following tenders were accepted:—Messrs. Bristowe & Co., 11, Tothill-street, Westminster, 697*l.* 19*s.* 2*d.*, for road and paving repairs at North-Western Hospital; Mr. S. Lane, Wimbledon, 219*l.*, surface drainage works at Park Hospital; Messrs. J. Linfield & Sons, Ltd., Littlehampton, 205*l.* 10*s.*, for painting works at Millfield; Messrs. J. M. Jackson & Sons, Ltd., Blackwall, E., 2,400*l.*, for relaying the upper deck of the training-ship *Exmouth* with teak; Mr. L. Kazak, Belvedere, 2,161*l.*, for works at Long Reach Hospital.

FOREIGN AND COLONIAL.

Building Material, Drainage, etc., Works, Roumania.

The British Acting-Consul at Bucharest (Mr. L. Schondorf) reports that a Bill was presented on March 26 to the Legislative Assembly for the raising of a loan of 30,000,000 francs (about 1,200,000*l.*) for the construction of a new municipal palace and the carrying out of drainage, road, and other public works at Bucharest.



"The Ideal House," Olympia.

THE IDEAL HOME EXHIBITION.

NATURALLY the dominating feature of the Ideal Home Exhibition at Olympia is the "Ideal House" placed in the centre. This house, built from the prize design by Mr. Reginald C. Fry, in conjunction with Mr. H. Clarke, jun., is really a remarkable achievement in construction, having been erected by the builders, Messrs. H. & G. Taylor, in exactly ten days. As regards design, the general proportions are pleasant and satisfactory, though here and there a somewhat fussy bit of detail catches the eye. These, however, seemed to enhance its popularity rather than otherwise. Internally, the same criticism applies. While the general arrangement is good, it would be better suited to a house of somewhat larger size, and the cramped effect is accentuated by the amount of detail employed. A house on this scale should be simpler; flat plaster ceilings give more sense of space than the beam ceilings adopted in this case, and in other respects the detail is too ambitious for the scale of the work.

It must be admitted that the rooms would have looked far better if even ordinary care had been exercised in the selection of the furniture, particularly that on the first floor, where the difficulties of height have been ignored, and wardrobes shot in, too high to stand against the wall, dressing-tables blocking out half the light, and bedsteads leaving only just room to squeeze round them. This unsatisfactory impression it gives cannot in fairness be laid at the architect's door, as the rooms are not a bad size, and could in most cases be comfortably arranged.

Leaving this central feature, we notice a little way beyond a massive and dignified block from the hand of Mr. Robert Atkinson which houses the various types of heating apparatus exhibited by Messrs. J. F. Phillips & Son. The warming systems are two in number: (*a*) The "Economiser" system of central heating by moist warm air, illustrating the method of warming, cleansing, and humidifying the air supplied to a building for combined warming and ventilation; (*b*) the "Aero" system of central heating by hot water, showing the very small pipes required.

Methods of automatic control are also shown:—(*a*) Automatic control of the air admitted to the building by the "Economiser" apparatus; the temperature being controlled by a liquid thermometer placed in a room, opening or closing ventilators, when the temperature reaches predetermined points. (*b*) The temperature of the water in the "Aero" system controlled by a similar thermometer fixed in the same position.

Near this is Messrs. Cornes & Haighton's well-known "Model Cottages" combination. It is fitted between the kitchen and scullery, economising space, coal, and labour. The copper is heated by the kitchen fire, providing a supply of hot water to a porcelain enamel cast-iron bath in the scullery bathroom. The heat from the kitchen fire passes round the radiating front and back of the copper, and the copper is accessible from the scullery. Hot water, which is on the low-pressure system, can be drawn in the scullery for domestic purposes.

Not far away, in the south-west corner, is the exhibit of the Interoven Stove Company, whose neat little range secured the highest award for improvements in house fittings at Gidea Park. This register grate can be converted in a few seconds into a complete cooking range with oven, boiler, and hot plate.

The Coalbrookdale Company and the Eagle Range Company show selected types of ranges, and Messrs. Bratt, Colbran, & Co. patent "Heaped" fire, with various design interiors and mantels.

Examples of the Falkirk Iron Company's m factures specially applicable to domestic coo and heating include the "George" ra Barker's Generator, in two sizes, the pate A. H. Barker, B.Sc., B.A. (Lond.), an exce system of heating small houses—one fire thoroughly heat a villa at absolutely mini cost; the "Era" anthracite stove in sizes; the "Pelham" fire grate; and a ho controlled-combustion stove burning ordinary coal, anthracite, or coke.



"The Ideal House," Olympia.

. Thomas Potterton shows cooking and
r-heating apparatus, using gas and coal
An exhibit showing the "Queen"
ined kitchener and separate gas-heated
ater apparatus working, demonstrating
tility of gas in supplying hot water for
al uses. The "Queen" kitchener can
ce be converted from a coal-burning fire
gas-heated cooking appliance. A working
ple of kitchen installation is on view,
ing the "Queen" cooking range with
ater service for domestic supply. The
it also includes the "Victor" gas boilers
accessories, together with the "Victor"
lete automatic gas-heated hot-water supply
atus in various forms. Heating installa-
with radiators for town and country
s, and the new "Seal"ed oven gas-cooker.
ssrs. Strode & Co. exhibit electric and
-air safety gas-lighting systems, with
ng plants shown in operation, at their
and in the special Plant House outside
pia. Also accessories for domestic
ering, such as hot-water supplies, heating
cooking. A feature of this exhibit is the
y of electric and gas lighting fixtures and
ectural metalwork.

e specimens of Devon fireplaces shown by
s. Candy & Co., Ltd., are supplemented
imneypieces of various woods and some
tic Ware." The Devon fires were placed
n official tests carried out at the New
nment Offices, jointly by H.M. Office of
s and the Smoke Abatement Society, and
lso selected by the public as the best fire
e Ideal House in open competitions held in
ction with previous Ideal Home Exhibitions
e rooms out of seven in 1909, and seven
out of nine in 1910.

Carron Company have various examples
ir well-known productions in the Heating
Lighting Section, where, too, Messrs.
iger & Co., Ltd., show cast-iron boilers
ating dwelling-houses, glasshouses, etc.
srs. Ewart & Son's exhibit of gas geysers
utomatic hot-water service should also be
i.

he Construction and Decoration Section
Thomas Lawrence & Sons have a stand,
d by Mr. Reginald C. Fry, on which are
ed specimens of their various bricks and
These may also be seen in the house
g the central feature of the exhibition.

e panelled walls and ceilings shown by the
Company, Ltd., represent this system of
ion. The "Beaver" board is a pure
ibre product, taking the place of lath,
, and wallpaper. In the Construction



Model of Mr. Cherry's "Ideal House."
Made by Mr. John B. Thorp.

and Decoration Section will be noticed also the exhibit of the Silicate Paint Company.

Messrs. Sissons Brothers & Co. show rooms, decorated in Hall's distemper, as follows:—

In the dining-room the beams supporting the ceiling are stained dark oak, and the panels between the beams are covered with a stencilled design based on the vine, with a Scottish heraldic shield placed so as to form a diaper over the whole ceiling. The design was first stencilled on a ground of neutral brown of medium depth, in light shades of purple pink for grapes, yellow-green leaves, and bright brown stems; the background was afterwards stencilled in soft greenish-blue, leaving an outline of the original neutral brown running along each side of the design, and close to the beams is a narrow border showing at intervals a chequer of black and brown. Over the mantelpiece, in the centre of the room, is shown "Autumn," a seated figure. Around the frieze pass figures of young women and young men beneath trees laden with fruit, some dancing, others carrying baskets of gifts and fruits to "Autumn." The *motif* in the boudoir has been taken from the peacock. On a wide frieze is a free design of peacocks and blossom, painted after the Japanese manner on a cream-coloured ground. The walls are panelled with wood, stained grey. The panels are heliotrope. The ceiling is geometrically panelled. A simple stencil is on the big circle close to the edge.

The effect aimed at is one of delicacy of colouring, freedom of treatment, and airiness.

Messrs. Arthur Sanderson & Sons show a room decorated in a simple manner, as a background for pictures or rich materials. The samples displayed consist of the choicest silk flocks, chintz patterns, leathers, and imitation silks. All the doors are of Gilmour construction.

Messrs. Thos. Parsons & Sons exhibit includes "Endelline" and "Endelflat" enamels, varnishes, and other materals for use in artistic decoration; their stand has been designed primarily to show off to the best advantage a selection of the new "Trans-ol" friezes. Within the stand is a large apartment in which a complete scheme of decoration—including a "Trans-ol" frieze—is carried out in detail.

These friezes are really transfers executed in oil-colours. They can be applied to any washable surface; and after the paper backing has been moistened and stripped off they have the effect of hand-painted friezes. Architects will, we think, welcome "Trans-ols," as their own designs for ornamentation can be transferred and the whole scheme of decoration thus kept absolutely under their own control.

The materials employed in the decoration of the "Ideal House"—"Endelline" enamel, "Opako" lead-free undercoating, varnishes, stains, and colours—were supplied by this firm.

The panelling and parquet flooring shown by Venesta, Ltd., give an indication of the possibilities of this useful material; and next to this, close to the main entrance, are some interesting models of houses to ½-in. scale by the following architects:—Mr. G. J. Hagger, Mr. H. G. Cherry, Mr. De Lacy-Aherne, Mr. A. C. Morris-Edwards, Messrs. R. C. Fry and H. Clarke, jun., Mr. B. Berkeley Wills, Mr. H. W. Pye, Mr. G. E. Clare. The five first named have been executed by Mr. John B. Thorp.

Messrs. D. Anderson & Son, Ltd., with their "Marosa" wall lining, like marble, have an attractive exhibit in the Sanitation and Ventilation Section. Here also are to be seen bath-rooms and fittings from the Farringdon Works (Messrs. Pontifex & Sons); the Lion Range (with improved raising fire and new design of boiler fine), by Messrs. McDowall, Steven, & Co.; porcelain-enamelled baths, etc., by Messrs. O'Brien, Thomas, & Co.; grates, a new slow-consumption range, mantel registers, and cognate fittings by Messrs. Wilmer & Sons.

In the Hygiene and Cleaning Section demonstrations may be seen on the stall of the British Vacuum Cleaner Company, Ltd., who show how efficiently their labour-saving contrivances can be worked.

Not the least interesting section of the exhibition is that devoted to furniture by such well-known craftsmen as Mr. Charles Spooner, Mr. A. Romney Green, Mr. C. F. A. Voysey, Mr. George Walton, Mr. G. Ll. Morris, and others.



Dining-room with Decorated Frieze.

Mr. C. H. B. Quennell, in a brief introduction to this work, makes the following remarks :—

"The craftsmen probably wish that they could have had longer time for preparation; they have been invited to exhibit their work and they have done so. It is not put forward as being at all extraordinary, but it may be taken as voicing the ideals of a group of men who are striving earnestly to maintain craft traditions and do interesting human work. For this reason, apart from æsthetic considerations, it is extremely valuable. That there is any work at all of this sort to be found is wonderful, because it has been produced in direct antagonism to all the economic doctrines of the moment. In certain cases there have been concessions; inasmuch as machinery has been employed in part. Just so much has been done by its aid as would tend to reduce the cost, without too much loss of interest. On the other hand, there are exhibits which are as purely pieces of craft work made by hand on the bench, as those produced by Chippendale and his men, and with the same sort of tools."

A word should be said for the Dutch village annexe which, under the care of the artist, Mr. W. L. Bruckman, is a picturesque and suggestive feature of the exhibition.

THE SCULPTOR'S ASSISTANCE TO ARCHITECTURE.

A MEETING of the Leicester and Leicestershire Society of Architects was held on the 8th ult., in the Room, No. 5, St. Martin's East, Leicester, when Mr. W. Gilbert, of the Bromsgrove Guild, read a paper on "The Sculptor's Assistance to Architecture." In the course of his remarks, which were illustrated by lantern slides, he said :—

"It is not my intention to attempt to express to you more than one thought, or more than one phase of thought, in the development of this vast subject; the argument I shall endeavour to present is that while the architect must be paramount a responsibility as overwhelming in its turn rests with him towards the sculptor. It has been truly said that the country which produced great architects produces great sculptors. History has time and again proved the truth of this assertion. And if our decorative work does not fit our buildings the responsibility rests not with the sculptors, who can only deal with the opportunities given them by the architects, but with the architect who has failed to grasp the immensity of his task, to produce his building in such a manner as to obtain the best from colleagues who are not merely experts in production, but erudite in judgment. I think it is Ruskin who says a great architect must be a great sculptor and a great sculptor a great architect. I do not think this axiom was ever intended to be taken literally, but was intended to convey the absolute necessity for the closest working together of these two in the development of a scheme in minds equally proved in the fine ethics of fitness and taste. I believe that this phrase was intended to convey that there should be the broad basis of learning which would encourage the architect —as at Nancy—to analyse the power of the men at his disposal, seeking those who could most readily enter into the expression of his scheme. Studying the work of Jean Lamour, not only in the screens of Nancy but in the beautiful staircase in the Palace—now the Hôtel de Ville—in the cathedral church, or, again, in the little balconies "ouvrages en araignées," exquisite in beauty of detail and graceful curve, one sees dotted about the town (his own house, Rue de Notre Dame; balconies, Place Royale). I could not help feeling that this triumph of an artist, while obeying the architect in the main lines of the scheme, was yet the result of a man allowed to enter freely into his work with real delight in the expression of the confidence of Emmanuel Heré towards him.

While realising that Heré was the pupil of that great master of elegance, Boffrand, I should be unable to believe that the executed screens could ever be the slavishly copied detail of the architect, even if Lamour did not himself say, "Il faut être de l'art pour comprendre combien il faut de justesse pour profiler et contourner ces pièces"; even if, in addition, the evidence and assertion of Lamour himself or the portrait of the smith—a present from Stanislas—which has come down to us showing the grilles as a background, were wanting as to the part he took in this great scheme. The wisdom of the architect for his own great name was the choice of the artist to assist him, and while Heré planned his Place with great constructive lines—mapping out his scheme to suit to the greatest advantage the powers of the men at his disposal—he sought only to guide with gentlest persuasion his highly-strung and nervous team.

He allowed Lamour to enrich it with the triumphs of the forge; he allowed Barthelemy Guibal and his pupil, Cyffié the Flemand, to charm us with the beauty and originality of their groups of Neptune and Amphitrite paying their court to Stanislas the King; and Joseph Sontgen the Westphalian to adorn with children the Place de la Carrière.

The freedom of his men spontaneously brought happiness and joyousness of expression. This personal accent was obtained not by the delivery of drawings, but by instilling into the men working that peculiar and imperceptible adjustment of their capabilities and knowledge to his guiding hand; and the architect, great in himself, commanded the loyalty of the artists who responded to the architectural conditions awaiting them.

Again, I cannot believe François Gamain, treacherous or weak-minded man as he was, to be merely a transcriber of Gabriel's drawings, and this staircase of the Petit Trianon, most opposite in its characteristic of monotony and formality to the exuberance of Lamour's work, must have been, to a large extent, the work of Gamain's brain though working under the quiet scholarly influence of Gabriel.

He seems to have impressed Louis XVI. to such an extent by his ability as to obtain the friendship that monarch fully bestowed on the smith. A great proof of the smith's competence, for it must be remembered that this friendship was gained at a time when not only Louis XVI., but Marie Antoinette, Mme. de Barry, and, in fact, the members of the whole Court, adopted art as the fashion, and interested themselves in matters of taste, this, too, at the end of a period of 200 years in the cultivation of taste in these same circles. It is hardly likely that such personal friendship would have been bestowed where the man was merely a skilful tool—a mere servant of the architect.

I most emphatically do not wish to be misunderstood. I do not foolishly depreciate the architect's part of the work, for in all periods of large coherent art the influence of the architect has been extraordinarily powerful—I have just shown you it was as great at Versailles as at Nancy. It was as great in the building of the Escorial at Madrid as at Versailles. No one will dispute the importance of the strong personal character of Herrera, but due credit must be given to the Italian Flecha and his Spanish carvers, and Leoni the Milanese, who developed the train of thought originated by this master.

The architect has his province—how great a one it is the sculptor knows. The man who is successful, though, is he who trims his work to the intellect of the men he is working with, seeking their advice and peculiar knowledge, not fettering them by hard and fast suggestions, but sympathetically explaining to them the scheme he desires to work out, the expression he wishes to convey, enthusing them with the same ideas, seeking their knowledge, their experience, their skill in carrying forward the art they, equally with him, love and care for, realising that they, as well as he, did not entirely labour for the love of the wealth it may bring.

I have spoken of the artist at the discrimination of the architect, but am I appealing for too ideal conditions? I think of another instance when in the past assistance was sought of sculptors, and they were not found wanting in their work.

You all know the Landhuis van der Vryen, or, rather, the remnant that exists of that fine building in Bruges by Van der Poele, and you will remember the fireplace in the Council Chamber, before which you will have stood marvelling at its completeness, its richness, and stately beauty. Can anyone fail to appreciate the story it tells of the pomp and magnificence of the rulers of the old Flemish capital when Charles V., the Count of Flanders, was Emperor of half Europe? It expressed pride in ancestry pride in victory, and conquest accomplished. Can anyone look at this and, thinking of the period, doubt its success?

Well, now, this work was the result of competition, but a competition arranged with such scrupulous care and anxiety to get the best work. In these days sculptors were architects and architects were sculptors, but apart from this the competition arranged by the municipality was for the best work, irrespe of price so long as it fulfilled the purpose. know that some fine competitors, archi and sculptors, entered for this competi We learn that the successful compet Lancelot Blondeel, submitted a large dra and that John Roelandts prepared his mo that the decision was arrived at after deliberation, and that all the compet received a recompense for their trouble. mark the scrupulous anxiety to obtain the work—the successful competitor is sent to towns, to study and to consult sculptors experts in material. The herald Toison is consulted. You see the very hi authorities are consulted; the Council con and I would venture to tell you, rightly con that there is absolute necessity if the real is wanted that those most competent to with the work must handle it. Their must be right, it is expert knowledge require, and not merely even skilful work ship. Toison d'Or is consulted, his fee is Would anyone of these counsellors drea going to a man of lesser repute, less erudite, lesser knowledge? No. And why? Be the Council recognise that the resources man of lesser knowledge would be unw of their town, that a fault in heraldry w expose their fireplace to the unspea contempt of those competent to judge. work is not intended to please and satisf most ignorant, but the most learned who view it. Then understand the anxiety equally impelled them to retain the se of the most accomplished sculptors. sculptor's work had to be also the best and accomplished which could be given—Guy Beaugrant was the selected sculptor; it wa a competition of price. Is it difficult to that an error of taste and accomplish on the one part of the sculptor would have just as much an offence to their eyes as in the heraldry?

Is it difficult to realise the royal cont which would have been freely expressed error in heraldry or at a badly carved There is only one right treatment to be and that is in proportion to the knowledg skill of the sculptor. Treatment is gov by knowledge and not by price, and any treatment but the most accomplished shou useless to your purpose. If you cannot this degree do not parody it in your bui and accept the similar medicine the chea eager to dispose of because it is to his g profit, or, rather, I should express it, less in its drugs to produce. In this manner past was good work encouraged. The bad was burnt or destroyed publicly befor sculptor's doors.

I think it will undoubtedly be said thi expression of a sculptor's highest eloq is the avowal of his religion, the confession faith in all its mysteries. Donatello imagined carving the pillars of the market but he gave his finest thoughts to the ser the Church. To anyone who saw the coll of beautiful pictures in Bruges some yea at l'Exposition de la Toison d'Or it would come to them as a revelation of the piety which inspired those painters in a era of a great nation. If this be realise it will be easy to remember that the scu work—the assistance the sculptor gi architecture—is in a large measure still actual position for which the sculptor de namely, in the buildings themselves. The to see the greater part of their work w take ourselves to it, and in the same spirit which animated these sculptors execution of their work seek to learn thoughts, remembering the times and con under which their work was done.

Art seems to me to owe a vast debt statemanship of men like Philip Le Be Colbert. It may have been the pric love of pageantry, or the desire to exce neighbours which urged the rulers in high to encourage the artist, but I cann thinking that it is rather their statesm and far-seeing ideals for the prosperity country which persuaded them in respective periods to such efforts to ma work of their artists known in count and wide. Artists are attracted for the the artistic education and opportun express their art afforded. This happ Milan under the Sforza, when the was being built at Nuremberg, in churches at Florence, in Rome, in Mad have reminded you, at the time of the

ortugal in the Manoelino period, and in
ce when architecture began to be designed
onvenience under François Ier.
ey were attracted, as I have said, in Bruges
e XVth century, in that brilliant period of
p Le Bon, when the art of Bruges shone a
ant light for a hundred years; and later
nearer to our own time, and being nearer
ers it easier to trace and realise; when
ert the statesman developed the idea
ired by Henry IV. of collecting in the
re artists to develop the marvellous gift
similating the foreign ideas with which they
brought in contact and recasting them to
heir own individuality and views.
at their art came from Italy is no strange
when one realises the influence of the
ntine Medici in France, when one realises
Colbert was himself the pupil of Mazarin.
t says much for these men that they saw
manufacture of beautiful work a method
igmenting the wealth of the country.
Le Bon by his gift of artistic work to
ssadors and foreign princes obtained the
s by which the artists could continue to
for their ideals, and Colbert's wise
ality in this direction created immediately
lesire in the minds of foreign courts that
ad of the despatch of a host of artists
ting now the palaces of Petersburg and
w, now Potsdam and Le Haye; and what
powerful reigning houses did the members
ir courts copied, and money still flows into
which has never lost the tradition of the
ic sense.
ve spoken of the origin of these schools,
have said that artists are attracted by the
ion afforded.
let us see how the personnel of the
s is maintained. Only recently I was
g a book just published, an analysis of
he writer termed "peculiarities of form
pression which give national character
old work." It is asserted that the
tion of artists of different nationalities
impossibility for sound art. Well, let
what the schools of past time have to
and let us see what men of undeniable
ence in art by their own example would
to us as the correct method of training
lves for their advancement and love of
rk in striving after the reputation of their
We know that at Versailles, under the
l organisation of Le Brun, there was
into a school of a most homogeneous
er many nationalities. Among the
rs and carvers and metalworkers alone
are several nationalities. One cannot
membering Tubi the Italian, with his
of Apollo and his group at the entrance
ourtyard; the Caffieri Brothers and their
olding doors to the great staircase;
t the Fleming; Pajou and the decora-
the Opera House; Oppendordt; the
Brothers Marsy, the creators of the
le fountain of Latona; Luc Fairdherbe
linois sculptor; Cuccu the Italian,
s stair balusters and door knobs and
e; Van Opstal and his grotto of Thetis;
ve, and many others, all mingling with
chmen Coustou, Coysevox, Pigalle, and
l the smith, the forger of the balcony on
Royale and the brilliant entrance gates
palace; and lastly, but not least, the
Adam and Lemoyne.
ow that in Louis XVth periods it was
man Hausman, the Fleming Stabre,
Swiss Boulle—in fact, almost every
ty—who formed the school, and the
royalty in the work of their artists
strated by the King's gift of Caffieri, the
lustre, to Louise Elizabeth of France
marriage with the Infant Don Philip

hile working together these great artist
and masterful ones too kept their
ty, and it is easy to distinguish the
Coysevox, the flexibility of Tubi,
ty of Marginer, the vivacity of Legros,
combine to make the qualities of this
which they are such skilful exponents,
nore one looks at their work the more
ds at the strong personality of Le Brun,
d gather round him so many indi-
s and yet inspire them to their best.
turn, one realises that this very
was a continued incentive to fresh
each other's presence, and that their
came more ambitious in their activity.
anted further authority and spoke of
lo not your thoughts fly to Dürer,
and innumerable others who felt that

their very existence in art depended on their knowledge which was to be sought in lands other than their own and in contact with other individualities?

A school, I feel, works in such harmony that those who acknowledge the direction often excel, not the direction, but the skill of the direction; and in such harmony did these sculptors, Girardon, Adamainé, and Tubi, and the others, work that undoubtedly they often did what Le Brun wanted better than Le Brun could have done it himself; but, on the other hand, there is undoubtedly no design Le Brun did not inspire. And so with the work of Caffieri, Verbeckt, Pajou, Oppenordt, and others. Undoubtedly De Cotte, Gabriel, and Manssart inspired them with the air of grandeur and dignity, that these men gave the touch of life and breathing to the building which M. de Nolhac says contains the condensed genius of a whole race, but which, I would venture to say, contains rather the condensed genius of whole periods of art, and that art the best efforts of the whole of the Western nations.

And as it was at Versailles and in France generally in the XVIIth and XVIIIth centuries so were the sculptors of the Netherland celebrated in the XIIIth, XIVth, and XVth centuries, and both received pupils from other lands, and in return, attracted by the rich rewards offered for the fame of their work, attracted themselves to foreign courts in Spain, Italy, France, Germany, and Sweden.

Finally, may I say a few words as regards a statement which is by no means one free from contempt? One often hears the cry that we are decadent in our art, that reputation is only to be now obtained by copying the old work. We talk about our love for the antique until we are frightened from doing anything fresh. We admire the great masters of the Versailles school, as we should, with reverence and wonder, desiring their work and seeking by every means to obtain it, forgetting that if their work had been treated with indifference that great school could have had no existence. We know, however, that such was not the case, for the work of these men was anxiously waited and credited with due praise, for we have only to obtain the records of the time and we read of the enthusiasm aroused by Coustou and Pigalle—Coustou, who repudiated the abject submission to what were less "idées de la belle antique"; Coustou and Pigalle, whose Venus and Mercury, as Lady Dilke points out, were termed by Mathais Oesterreich (Ersterych): "Les plus belles statues modernes de la collection du roi."

It cannot be said that these men were ignorant of classic art, but they learnt from it and put into it the ideals and life of their time, and so should we, and not be driven to a desire for mere antiquarian accuracy in our rendering of any style, whether Adams, Georgian, Classic, or Gothic. Great and scholarly opportunity provokes great art, and while probably the art of the Greek sculptor will never be equalled, we should be careful not to hastily decry our time. We should examine art and in the aggregate, and doing that I am sure we should find that even in our own miscalled time we are doing something; it is the custom of the day to lament the decadence of the present time and deplore that we have no art of the Greeks or of the Romans, but the word decadence is not to be assumed as the same thing as decay. It is often a misplaced word for evolution or transition between two artistic systems. Carpeaux's work on the Louvre during the Second Empire, Dalou's great group, must be judged by generations to come rather than by ourselves. The work is too close on to our own time.

It may or may not be true that the sculptor's art in the aggregate is decaying. If it be true, then the sculptor must not bear the entire blame, for the sculptor can only work in the opportunity afforded. The sculptor does not determine the style of the period; political and special ideas determine habits, and habits determine style. It may be that the growth of interference of women in the architect's province, which towards the end of the XVIIIth century reached so great a pass, obliterated the architect's desire, and so his keenness for this part of his work.

"A pencil, paper! Quick! I have found a way to build my house!" cried Catherine de Viveonne Marquise de Rambouillet excitedly, as we are told, one evening after she had slept a long solitary in deep meditation. We are told also that her wants being attended to she skotched out a plan; and, lo and behold, so superior was it to all French architectural design of the period that houses were built according to her ideas throughout France! Can you wonder, then, if it be true that architects began to prefer to leave the internal decoration of the house alone, and so cut off at once one of the most important portions in which the sculptor could bring assistance to architecture? It is not given to every woman to have the same strong and perfect taste and perfect understanding of style held by Madame de Pompadour.

Direction is desirable to sculpture, but it must be with knowledge, and that in no slight degree, and the architect must have the courage of conviction even as Gabriel had when he contested Louis XVI. in favour of retaining Boucher's decorations.

We have now to regain, even if we had not to create anew, the cunning which has at various times existed in Great Britain in the skilled workman. There are plenty of resources, and although the task may be difficult, we must not underrate the difficulties when we see the presentation gifts to royalty so atrociously bad in refinement and workmanship. To obtain the standard set by the French Court of the XVIIth and XVIIIth centuries will be hard work; it would be interesting, however, to know whether there was so much wire-pulling then as now, and whether the objects of the local tradesman were satisfied by a commission at the expense of the work. I would rather imagine that the stately beauty of the conception was the first consideration, and that as to whether the local tradesman was benefited in any way by a commission for work which he did not produce was a matter which would have appeared the height of absurdity. To produce a remedy he who would speak the truth must have one foot in the stirrup. If these fungi of commercial traditions are cut away, if once again the artist is considered by the architect not to be the servant humbly carrying out his wishes, but a co-equal, receiving the broad outline and indication of the style desired to be followed in the interior and exterior decoration of his building, I can then imagine that with his restored self-respect that artist will not be found wanting in the wide margin of interpretation such as was allowed to the men in the past whose names have come down to us as the masters of their art. Harden energy into strenuousness and earnestness of labour, and again we shall see men work equal to that of Verbruggens at Antwerp and Brussels. Again great truths silently taught will appear on our buildings.

Again the tomb will not be merely a receptacle to place the dead out of sight. Again the church and the house and the street will contain living thoughts, and artisanship will combine with hope and grow and develop into a living art with that scrupulous perfection of finish which alone can give lasting charm. Again we shall see the veracity of the Greeks, the incomparable grace and delicacy of Hardi and Van Cleve, imperceptibly guided by the hand of the architect, with the personality instilled into them, as I have shown you at Nancy and elsewhere, by that adjustment to their capabilities and knowledge of the guiding hand, arriving at your work with the swift skill and hand of the masters. He is the safest in working who holds firmly to his own sense of what is fitting and lovely in decorative art.

Do not, however, dismiss a thing of its style—there is something beautiful in every style. It is only blindness which prevents its being seen and thought out by iron on iron or iron on stone, the sound of human labour, the smoke of the forge quickening the life pulse of the artist with his art, wife and mistress to him, dreaming of no other pleasure than in the conquest of fine form or the erection of a new and beautiful monument, breaking the marble's stubborn sleep in recovering by strenuous labour and purpose in restless energy and untiring vigilance the splendour of bygone times. And when again, as M. de Perate of the Château de Versailles, says, a Gabriel and a Robert de Cotte arises we shall again have a De Cressert, a Caffieri, and a Gouthière."

SUNDAY-SCHOOLS, NEWPORT.

The Wrenford Memorial Sunday-schools are being erected at a cost of about 3,300*l.* from the designs of Messrs. Habershon, Fawckner, & Co., architects, of Newport and Cardiff. The contractor for the work is Mr. C. H. Reed, of Newport.

LEGAL COLUMN.

Water Supply.

A case, Bristol Guardians *v.* Bristol Waterworks Company, which we noted in the Chancery Division (the *Builder*, November 24, 1911), was carried to the Court of Appeal, where the decision was given on April 1. For some time the Guardians of Bristol had obtained a water supply from the defendant company by measure at the rate of one shilling per 1,000 gallons for use in the workhouses, children's homes, and for offices. Committee rooms, etc., which latter were situated in St. Peter's Hospital. In 1910, however, they claimed a supply at an annual rate under sect. 66 of the Bristol Waterworks Act, 1862, which is as follows:—"The company shall at the request of the owner or occupier furnish to every occupier of a private dwelling house or part of a private dwelling-house . . . a sufficient supply of water for the domestic use of every such occupier at annual rents." There are a number of statutes regulating the supply by this company, and, in addition, the sections of the Waterworks Clauses Act, 1847, are also incorporated, except where they are expressly varied by the provisions of the Private Acts. It is curious that legislation relating to water supply is always so complicated that it almost suggests confusion of thought usually associated with stronger elements. In the present case the Court characterised the legislation as almost unintelligible, and the Court of Appeal were divided. The curious result of the legislation may shortly be stated to be that, although under the Waterworks Clauses Act the owner or occupier of any dwelling-house can demand a supply for domestic purposes on certain conditions, the Private Acts only empower the owners or occupiers of private dwelling-houses to demand such a supply, and contain no provision as to the charges to be levied in other cases. The majority of the Court held that these houses were not private dwelling-houses, and that the owners or occupiers could only claim to be supplied by way of bargain. Lord Justice Fletcher Moulton, who dissented, did not hesitate to say that there was an obligation imposed on the company by the Waterworks Clauses Act to supply water to all houses for domestic purposes, and that if the Acts under which the company obtained its powers contained no provision as to the rate to be paid the householder could demand a supply even without payment, but that as here the plaintiffs had offered to pay the full rate chargeable for any dwelling house they were entitled to judgment.

We cannot part with the case without drawing attention to one point which has a bearing on other Acts of Parliament. Lord Justice Vaughan Williams, in his judgment, is reported as having said:—"Another consideration which weighs with me is this—If the word 'private' is disregarded and treated as of no effect, the owner of every warehouse or factory which requires a small amount of water for sanitary purposes will be bound to pay the water rate calculated on its annual value, in addition to a special charge for any water used for trade purposes. This will throw an enormous burden on the inhabitants of Bristol."

Now, has not this "enormous burden" been laid upon the inhabitants of London by the Metropolitan Water Board Charges Act? In Colley's case (the *Builder*, November 17, 1911) the House of Lords held that in addition to the charge by meter for water supplied to a factory for trade purposes the Water Board could also levy a charge based on the rateable value of the premises in respect of water supplied to the workpeople for domestic purposes, *i.e.*, for lavatories, washing, etc. This decison created no small stir among those carrying on business in London, and has been the cause of agitation; but so far no remedial legislation has been obtained.

The Finance Act: Site Value.

An important decision under the Finance Act has just been delivered in the Scotch Courts. The appellants were trustees under a will of certain property in Glasgow. On the death of the testator a provisional valuation for the purposes of increment value duty was made as minus 545*l.*—that is to say, the total value or gross value was placed at 3,775*l.*, but the assessable site value after the deductions allowed by sect. 25 of the Act (4,320*l.*), left a deficit of 545*l.* The Referee under the Act had accepted the view that this minus quantity represented the original assessable site value under the Act, but all three Judges of the Appellate Court held that in such circumstances the original assessable site value must be held to be nil. They negatived the idea that the Act could be construed mathematically or algebraically, and held that the assessable value must be positive and not negative. The site value represents the owner's interest in the land; that might be nil, but could not be less than nothing. It really seems a self-evident proposition, but we have reason to believe that many valuations have been placed at a minus quantity, and, therefore, publicity should be given to this decision, which is of great importance.

If a minus quantity be accepted and the value of the land improves, or the charges on it are lessened, an attempt would certainly be made on a future "occasion" to claim increment value duty; but from this decision it is clear that until the gross value exceeds the sums to be deducted there is no assessable site value at all under sect. 25, sub-sect. (4).

Trade Union Law.

The Divisional Court has recently, in the case of Thomas *v.* Portsmouth A Branch of the Ship Construction, etc., Association, had to consider the effect of the judgments delivered in the House of Lords in Russell *v.* Amalgamated Society of Carpenters, which we noted the *Builder* April 5 last. In the Portsmouth case the claim was in respect of certain sick benefit which a member of the branch claimed from the union. The union set up the fourth section of the Trade Union Act, 1871, and this raised the question whether or not the society, by its rules, was an illegal society, as it was contended if its objects were not illegal then the protection of the statutes did not apply, and the Courts could entertain the action. This point has been raised in numerous cases noted by us, and notably in the second Osborne case, with which we dealt, the *Builder*, March 24, 1911, and in Gezney *v.* Bristol Trade and Provident Society.

In the present case the Divisional Court held that the rules were much the same as in the case of Russell *v.* Amalgamated Society of Carpenters (the *Builder*, April 5 last), and therefore the society was illegal as being in restraint of trade, and the section applied to take away jurisdiction from the Courts; but the real importance of the decision lies in a point taken before the Court, which was not argued before the County Court Judge. It was said that the recent judgment delivered in Russell's case in the House of Lords laid down the proposition that whether or not the society was an illegal society by being in restraint of trade, yet by reason of sect. 4 of the Trade Union Act, 1871, the Courts were deprived of jurisdiction where "any agreement for the application of the funds of a trade union to provide benefits to members" was being enforced. The Judges of the Divisional Court so read the judgments delivered by two members of the House of Lords.

The judgments in Russell's case have not yet been reported in the "Law Reports," and a full report may throw additional light on the question; but it will be satisfactory if the interpretation placed upon these judgments by the Divisional Court is confirmed.

Readers of our Legal Column must have been struck by the useless litigation that has taken place in determining whether or not the rules of trade unions are illegal as being in restraint of trade, and whether as a consequence members can sue the unions or unions can sue their members in respect of agreements mentioned in sect. 4 of the Trade Union Act, 1871. The matters detailed in sect. 4 relate to the internal arrangements of unions and their members, and although in certain cases, of which Osborne's case was a typical example, members may incur hardship at the hands of their unions without a chance of redress in the Courts, yet it must be remembered that under the Trade Disputes Act the public have been deprived of their legal remedy against the unions where unions or their members commit torts or do certain acts in contemplation or furtherance of trade disputes, and if men join the unions they must take the rough with the smooth; in other words, if they, as members of unions, occupy a privileged position outside the law as regards the general public, they cannot complain if they cannot have access to the Courts when disputes come between the unions and themselves.

The Trade Union Acts of 1871-1876 are in general terms, and we have always failed to see how the distinction was drawn in the Courts between those which have rules in restraint of trade and those whose rules do not infringe that principle.

LAW REPORTS.

Sydenham Dust Problem.

THE problem as to whether a local authority is compelled to collect house refuse from front or back door, according to the preference of the householder, was discussed further at Greenwich Police-court on Wednesday, when the Lewisham Borough Council were fendants on an adjourned summons.

The complainant was Mrs. Julia A. Le No. 1, Collingtree-road, Sydenham, alleged that the Council had failed to c her house refuse after receiving forty-hours' notice on two occasions in Marc

It was agreed that for six years the Co had made the collection from the back but that the dustmen had commenced to to the front on the plea that the road le to the backs of the houses was in a dang state.

Mr. Frank Patteson, solicitor, who i owner of the house, conducted the case fo tenant, and said he had caused the back to be repaired, although he was not liab to do.

Since the first hearing of the case magistrate (Mr. Hutton) had paid a vi the premises. Mr. Ponter, for the Co had agreed to collect from the back d the adjournment without prejudice.

Mr. Ponter now stated that further re had been carried out, and the Council willing, so long as the road was kept in state, to collect from the back.

Mr. Hutton: I should like to tell you is in my mind. So long as the road is i state in which it was when I saw it I the dust is placed in an accessible positi should be very glad to know you had co an amicable understanding. Will you be tent to have the case adjourned *sine d* will Mr. Patteson withdraw?

Mr. Patteson replied that he would co if the Council paid costs.

Mr. Hutton pointed out that there woul be such costs as would have been incur another solicitor had been instructed.

Mr. Ponter offered, on behalf of the Co to contribute 2*l.* 2*s.* towards the costs, bu Patteson declined to accept this, and th was fought out.

William Gawthorne, one of the Co dustmen, gave evidence that the old syst collecting at the back was awkward, and they went to some of the houses they very long way to go.

Mr. Hutton intimated that he coul allow any references to houses other tha one mentioned in the summons.

The Borough Surveyor (Mr. Ernest Putten) said the alteration in collectio made under his orders, as he considere road slippery and dangerous.

Mr. Hutton said he thought the might meet the Council by permittin front door to be used in bad weather, bu on the dates in question there could hav collection at the back. He would fin Council 2*s.* 6*d.* and 3*l.* 3*s.* costs on th summons.

The second was withdrawn.

LONDON COUNCILS.

Battersea.—Various works are to be out to the roadway of Clapham Commo at an estimated cost of 4,170*l.*, which i the provision of a drain, 12 in. by kerbing set on concrete both sides of the and the making-up of the carriagewa tarred slag macadam. The woodpaved ca way of Church-road is to be repaired at mated cost of 630*l.* Repairs are also carried out to four other roads in the B at an estimated cost of 267*l.*

Bushey.—Plans and estimates submit the Surveyor have been approved for n up Windmill-street, Nightingale-road, a of Grange-road, and application is to b to the Local Government Board for s to a loan of 2,400*l.* to meet expenses.

Camberwell.—A plan lodged by Me Ward & Sons has been approved erection of a building between No Stafford-street.

Croydon (Rural).—Wood-paving is carried out in High-street, Collier's Wo in part of London-road, Mitcham, at mated cost of 4,443*l.*, subject to a cont of two-thirds the amount from the Council.

Deptford.—A portion of Mantle-road paved with redressed granite setts at mated cost of 178*l.*, as is also a po Grove-street, at an estimated cost o Six other streets are to be paved with at an estimated cost of 2,354*l.* Variou works are to be carried out in thir in the Borough at an estimated cost o

East Ham.—Plans have been pas Mr. G. A. Smith for additions to "[Arms" public-house, High-street No for Mr. A. Dixon for extensions to Whitbread's Bottling Stores, Romfo Manor Park.

lackney.—The sewer in a part of Cassland-d is to be reconstructed with 12-in. and t. glazed stoneware pipes, and a manhole t flushing shaft provided, at an estimated al cost of 120*l.* Electricity mains are to be ended at an estimated cost of 117*l.* The owing plans have been passed:—Mr. D. S. rclay, sixteen houses, Ashstead-road, Spring l; Mr. P. G. Ashton, addition to warehouse the London Indiarubber Works, Chapman-d, Hackney Wick.

Hammersmith.—Tenders are to be invited renovating the stonework of the Passmore wards Library; also for carrying out wood-ing works in Latimer-road. The tender of Improved Wood Pavement Company, Ltd., 4,652*l.*, has been accepted for carrying out nd-paving works in Hammersmith-road. A n has been passed for Mr. J. W. Hawkins the re-erection of premises at 102, King-et.

Fendon.—Application is to be made to the al Government Board for sanction to row 3,799*l.* for making-up and paving, with ficial stone, Green-lane. The paving work o be deferred pending further building elopments. The Surveyor has been directed obt.in estimates for the erection of a con-ience in Cricklewood-lane at an estimated of 100*l.* Estimates by the Surveyor have n approved for making-up the footpath ween Sunningfields-road and Sunny-gardens 147*l.*, and widening works in Lawrence-et, Mill Hill, at 864*l.* Fresh tenders are be obtained for the erection of artisans' llings at Child's Hill. Sanction has been ived from the Local Government Board tenders are to be invited for street improve t works at the junction of Green-lane and nt-street, at a cost of 242*l.*, and sewerage ks in Green-lane, at a cost of 703*l.* The owing plans have been passed:—Messrs. nilton's, eight houses, Vivian-avenue and dley-road; Messrs. Parker & Unwin, group ten flats, Addison-way, also a house at ndway; Mr. T. Higginbotham, six houses, bington-road; Mr. Henry Eldon, twelve ses, Babbington-road. The following have n lodged: Messrs. Hamilton's, six houses, dley road and Vivian-avenue: Messrs vey & Potter, dairy premises, etc., hley-road; Mr. F. W. Bristowe, six houses, Drive, Golder's Green; Mr. S. Johnson, e houses, Blind lane; Mr. E. Streather, dry, Albert-road, Hendon.

Kensington.—The Borough Engineer has n instructed to prepare plans and estimates making-up Kingsbridge road as a new et. Permission has been granted to Mr. V. Stephens, on behalf of Harrod's Stores, to construct a subway under Brompton-l. An estimate amounting to 1,493*l.*, the of making-up the extension of Highlever-e as a new street, has been approved.

Lewisham.—So soon as 75 per cent. of the nated cost of the work has been received, ers are to be invited for paving and ing the third part of Manor-lane. The er of Messrs. J. Mowlem & Co., Ltd., has accepted for kerbing, channelling, and ing-up the roadways of Sangley-road-age at 112*l.*, Phœbeth-street at 385*l.*, and ncemary-street at 645*l.* The tender of srs. Gibson & Co. has also been accepted paving with artificial stone the footways of above-named roads at 3*s.* 7½*d.* per yard r. The following plans have been passed:—L. S. Rogers, four houses, Woolstone-road; rs. J. W. Heath & Son, six houses, Arthur-street; Mr. J. Hughes, fourteen houses, vnhill and Stainton roads.

Wandsworth.—A portion of the footpath on eastern side of Endlesham road, Balham, o be repaved with artificial stone at an nated cost of 70*l.*; as is also a portion of footpath on the northern side of Longley-, together with the retopping of the tar-d portion, at an estimated cost of 227*l.* tender of Messrs. Dowsett & Jenkins, at , has been accepted in lieu of that of rs. W. Johnson & Co., Ltd., at 696*l.*, for erection of a convenience in High-street, ney. The Borough Engineer has been in-ted to report as to the question of wood-ng Long-road, Clapham Common. Tenders to be invited for paving part of Cowick . Tooting, as a new street; also for repairs rt of Crowborough-road, Streatham. The er of Messrs. J. Mowlem & Co., Ltd., has accepted at 567*l.* for flagging a portion he footway in part of Upper Richmond , Putney, with Aberdeen adamant. The wing plans have been passed:—Messrs. W. son & Co., Ltd., alterations and additions ounty of London Electric Supply Com-'s sub station, Tooting Bec-gardens, tham; Messrs. Killby & Gayford, Ltd., l, corner of Atkins-road and Cavendish-South Clapham; Messrs. H. F. Buchan ., fourteen houses, Park-hill, Abbeville-and Briarwood-road, South Clapham; British Land Company, Ltd., three houses and shops, Mitcham-road, Tooting; Messrs. Charnock & Co., Ltd., warehouse, Point Pleasant, Southfields; Mr. J. Parsons, factory at works of Voelker Lighting Corporation Ltd., 57, Garratt-lane, Fairfield; Mr. J. J. Taylor, four shops, Balham High-road; Mr. R. Marrable, cinematograph theatre, Streatham High-road.

Watford.—At the last meeting of the Urban District Council a resolution was carried to the effect that slipper-baths should be provided.

West Ham.—The footway paving in a portion of North Woolwich-road is to be relaid and made good at an estimated cost of 325*l.* Dartmouth-road is to be paved as a new street. The following plans have been passed:—Mr. F. J. Coxhead, rebuilding offices at Messrs. Burt, Boulton, & Haywood's premises, Prince Regent's Wharf, Silvertown; Mr. C. Watkins, alterations and additions to West Ham Hospital, Bryant-street, Stratford; Messrs. J. Corbett & Co., three houses, Hamfrith-road, Stratford; Messrs. Brunner, Mond, & Co., soda factory at their premises at Silvertown. Plans have been lodged by Mr. A. Foster for the erection of cinematograph halls in Plaistow-road and the Broadway, Plaistow.

Westminster.—Repairs are to be carried out to the wood-paving in a portion of the Strand at an approximate cost of 340*l.* Repairs are also to be carried out to the macadam road-ways of Vincent-square and Berwick-street at an approximate cost of 205*l.* Tenders are to be invited for repaving the carriageway of Cliveden-place with wood, at an estimated cost of 1,100*l.*

Wood Green.—Plans and estimates, submitted by the Surveyor, have been approved for making-up a portion of Alexandra Park-road as a new street. The cost is put at 1,401*l.*

Woolwich.—The footway on the west side of Eglinton-road is to be relaid at an estimated cost of 90*l.* Tenders are to be invited for the construction of an underground convenience in Beresford-square at an estimated cost of 600*l.* Plans have been passed for Mr. A. E. Habershon, 30, Green's-end, Woolwich, for the erection of a warehouse at the rear of Nos. 47 and 49, New-road.

OBITUARY.

Mr. E. Hoole.

The late Mr. Elijah Hoole, of "Lastingham," Hornsey-lane, N., was elected in 1869 an Associate, and in 1874 a Fellow, of the Royal Institute of British Architects; last year he was placed upon the retired list of Fellows. Of his architectural works, the following have been illustrated in the *Builder*:—Industrial dwellings in Wentworth-street, Whitechapel, as part of the late Metropolitan Board of Works' scheme for the Goulston and Flower and Dean streets area (November 15, 1886); Red Cross Hall and the cottages, in Little Suffolk street, Southwark (November 9, 1889); Wesleyan Chapel and Schools, Kitto-road, Peckham (June 8, 1889); and the parochial buildings, with parish hall, gymnasium, and school of cookery, in Sewardstone-street, Victoria Park, for the vicar and wardens of St. James the Less, Bethnal Green (October 19, 1901). He was the architect for Toynbee Hall and Lambeth dwellings; Ridley House, with young men's club, residential quarters, etc., for the parish of St. James the Less, Bethnal Green (1904); houses in Glenforth-street and Lower Woolwich-road, Greenwich; the South African War memorial in St. Saviour's Cathedral, Southwark; the restoration in 1891-2 of Wesley's Chapel and House, in City-road, at a cost of nearly 13,000*l.*; the Bermondsey Wesleyan Settlement, Farncombe-street; and the Mission Hall for St. Martin's Church, Gospel Oak (1907).

Mr. C. B. Fox, M.Inst.C.E.

The death, on April 16, in Toronto, is announced of Mr. Charles Beresford Fox, M.A., aged thirty-seven years. Mr. Fox, a member of the firm of Messrs. Wragge & Fox, and elder son of Mr. Francis Fox, C.E., was a grandson of Sir Charles Fox, C.E., and, until lately, a partner of Sir Douglas Fox & Partners. He was educated at Harrow and Trinity College, Cambridge. He was for a while assistant engineer for the extension of the Great Central line from Quainton-road into London, and was then entrusted with the building of the bridge across the Zambesi, at Victoria Falls, for the Cape to Cairo railway. He was subsequently employed upon the Simplon Tunnel, the Nile irrigation works for the Egyptian Government, and many other large undertakings. Last year he married a daughter of Mr. James A. Wheeler, of Merrynook, New Brunswick, New York.

Mr. J. Hogan, M.Inst.C.E.

The death is also announced of Mr. John Poidevin Lemon Hogan, aged fifty-nine years. Mr. Hogan was a pupil in the Thomason Engineering College, Rorkee, and in 1873 entered the Public Works Department of India. Seven years afterwards he was transferred to the railway branch; in 1899 he was appointed a superintending engineer, and in 1901 was made Junior Consulting Engineer for Railways to the Indian Government. Mr. Hogan retired from the service five years ago.

PATENTS.

APPLICATIONS PUBLISHED.*

7,252 of 1911.—James Lees: Manhole and lamphole covers for roads.

7,623 of 1911.—Benjamin Corrick: Road material or road treating material.

8,105 of 1911.—John Murray Leighton: Construction of concrete piles.

8,802 of 1911.—George Bainbridge: Fastening device for use with doors, windows, and the like.

8,925 of 1911. –The Coalbrookdale Company, Ltd., and William Stewart Malcolm: Kitchen-ranges, cooking-ranges, and the like.

9,768 of 1911.—William Henman and William Beasley Heap: Hearths of fireplaces.

10,967 of 1911.—John Robinson Tate and Frank Tate: Apparatus for detecting leakage in pipe lines and the like.

10,978 of 1911.—Arthur Illidge: Sash-fasteners.

12,611 of 1911.—John Leitch: Draw-off tap.

14,795 of 1911.—Carron Company, Thomas Bamforth, and George Pate: Interior or register grates or stoves with movable canopies.

16,032 of 1911.—William Thomas Carling: Boilers and flues for open fire-grates or fire-places.

22,818 of 1911.—Alfred Lill: Door-closing apparatus.

24,125 of 1911.—Clara Nichols: Water-heating fittings for gas and like stoves.

25,628 of 1911.—Wilhelm Siller: Radiators for heating buildings and the like.

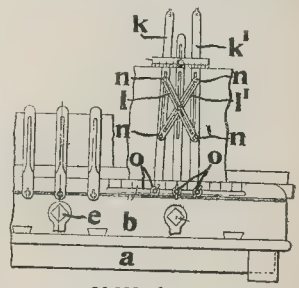
27,636 of 1911.—Frederick William Garner: Joints and couplings for pipes and tubes.

29,121 of 1911.—George Baillescu: Valve for mixing hot and cold water or the like.

SELECTED PATENTS.

26,029 of 1910.—William Hulbert and Charles Henry Hulbert: Cutting shaped bricks.

This relates to a machine for cutting a bar of clay expressed from a pug-mill into arch, camber, and other shaped bricks, and com-



26,029 of 1910.

prises a frame *a* carrying clamping-rails *b* with pivoted arms *k*, *k*¹, adjustable by slotted links *l*, *l*¹, and clamping screws *n*, *o*. A bar of clay on a pallet is placed on the frame *a*, clamped between the rails *b*, and a brick is cut off by means of a bow cutter passed externally down the arms *k*, *k*¹. Templets are attached to the arms *k*, *k*¹ for cutting special shapes. The rails *b* are moved towards and away from each other by screwed shafts, and the pallet is moved forward by rack gearing operated by a shaft *e*.

26,471 of 1910.—Coates Downing and Allan Pye: Chimney-tops.

This relates to a chimney or ventilating shaft, which is divided into two or more curved branches, which meet in an open-ended vertical tube above. The branches may be of D or oval section, and the tube may be bell-mouthed, or have two or more funnel mouths or louvers.

* All these applications are in the stage in which opposition to the grant of Patents upon them can be made.

List of Competitions, Contracts, etc.

For some Contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) are advertised in this number:** Competitions, iv. Contracts, iv. vi. viii. x.; Public Appointments, xix.; Auction Sales, xxiv. Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Competitions.

MAY 1.—**Rhos Ruabon.**—PAIR OF WORKMEN'S COTTAGES.—Premiums of 10*l.* and 5*l.* Assessor, Mr. Raymond Unwin, F.R.I.B.A. Particulars from Mr. G. Meirion Griffiths, Rhos Ruabon.

MAY 1. — **Wombwell.**—SWIMMING BATHS.—The Wombwell U.D.C. invite designs in competition for public swimming baths, to be erected in Hough-lane, Wombwell, Yorkshire. Three prizes of the value of 40*l.*, 30*l.*, and 20*l.* respectively are offered for the designs placed first, second and third respectively by the assessor. See advertisement in issue of February 16 for further particulars.

MAY 15. **Portland.**—COUNCIL OFFICES.—The Portland U.D.C invite competative designs and plans for Council Offices. See advertisement in issue of March 8 for further particulars.

MAY 18.—**Hastings.**—SUNK ARENA AND BAND-STAND.—Cost not to exceed 4,500*l.* Premiums, 15 and 10 guineas. Particulars from the Town Clerk, Hastings. See "Competition News," p. 483.

MAY 21.—**Middlesex Hospital.**—DECORATION OF VESTIBULE.—See "Competition News," p. 483.

MAY 22.—**Southend-on-Sea.**—HAMSTEL COUNCIL SCHOOL.—Architects practising in the borough only. Premiums, 25*l.*, 15*l.*, and 10*l.* Particulars from the Education Office, Municipal Buildings, Southend-on-Sea.

MAY 25. — **Lymington.** — PUBLIC OFFICES. — Thirty and fifteen guineas for second and third designs. Assessor, Mr. R. F. Gutteridge, F.R.I.B.A. Particulars from the Town Clerk, Lymington.

JUNE 1.—**Dunfermline.**—INSTITUTE AT NETHERTOWN. Cost not to exceed 7,000*l.* Premiums of 20*l.*, 15*l.*, and 10*l.* Assessor, Mr. E. A. Jamieson. Particulars from the Secretary, Carnegie Trust, Abbot-street, Dunfermline.

JUNE 3.—**Sheffield.**—CRIPPLES' HOME.—Limited to local architects. Mr. E. M. Gibbs, F.R.I.B.A., and Mr. F. E. P. Edwards, F.R.I.B.A., assessors.

JUNE 14. **Regent's Quadrant.**—DESIGN FOR TREATMENT Premiums, 25 guineas and 25 guineas divided. Adjudicators, Mr. E. A. Rickards and Mr. Alan E. Munby. See "Competition News" issue of April 19 (page 453).

JUNE 28.—**Hale, Cheshire.**—TOWN PLANNING SCHEME.—Premiums 50*l.* and 25*l.* Particulars from the Council Offices, Hale.

JUNE 30.—**Padiham.**—TOWN HALL, BATHS, ETC.—Premiums 40*l.* and 20*l.* Particulars from Mr. J. Gregson, A.M.Inst.C.E., Surveyor's Office, Padiham.

JULY 1.—**Dusseldorf.**—A plan for the extension of the City of Dusseldorf. Premiums of 1,000*l.* to 375*l.* Conditions on application to the Chief Burgomaster, Dusseldorf. A translation appeared on page 365, September 29.

JULY 1.—**Port of London.**—NEW OFFICES.—Limited to those mentioned in "Competition News," issue of April 12 (page 424).

AUGUST 30. — SAXON SPELT PRIZE. — Fifty guineas; with medal, is offered for assay on a hospital subject. Particulars from the Sanitary Institute, 90, Buckingham Palace-road, S.W.

OCTOBER 1. **Ottawa.** MONUMENT TO KING EDWARD VII. Sketch models in plaster to be sent to the Director of National Art Gallery, Ottawa.

NO DATE.—**Birmingham.** BATHS.—Twenty and 10 guineas for second and third designs. Applications for conditions to be sent to the Superintendent Engineer, Kent-street, Birmingham.

* NO DATE.—**Cardiff.**—MODEL COLLIERY TOWN.—A South Wales colliery company offers a prize of 20*l.* for the best scheme for a model colliery town. See advertisement in this issue for further particulars.

NO DATE. **Jordanhill, Glasgow.**—PROPOSED TRAINING COLLEGE.—Limited to six firms, named in Competition News, December 1, page 635.

NO DATE. — **Warrington.** — SCHOOL. — The Warrington Education Committee invite competitive plans for the erection of a public elementary school. See advertisement in issue of February 16 for further particulars.

Contracts.

BUILDING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

APRIL 27. **Blackhill.**—HOSPITAL.—For erection of the Richard Murray Hospital. Mr. J. Eltringham, architect and surveyor, Blackhill.

APRIL 27. **Crediton.** — LAVATORY, ETC.—Erection of a dressing-room, lavatory, and covered playground at the school. Plans and specification with Mr. S. Dobell, architect, of Exeter.

APRIL 29. — **Bradford.** — SCHOOL.—Erection of new school for deaf and physically defective children, Lister-lane. Drawings and general conditions of contract seen, and quantities and form of tender from the City Architect, Town Hall, Bradford.

APRIL 29. — **Carluke.** BUILDINGS. The Caledonian Railway Company invite tenders for the construction of new station buildings at Carluke. Drawings at the offices of the Company's Engineer, Buchanan-street Station, Glasgow. Specification and schedule on deposit of 2*l.* 2s.

APRIL 29. — **Worcester.** — ALTERATIONS.—For alteration to the disintegrating tanks and other works at the Sewage Disposal Works, Bromwich, Worcester. Drawings with Mr. Thomas Caink, A.M.Inst.C.E., City Engineer, Guildhall, Worcester.

APRIL 30. **North Ormesby.**—CHURCH, ETC.—Erection of New Primitive Methodist church and schools at North Ormesby. Plans, specification, and conditions of contract seen, and quantities from Mr. T. W. T. Richardson, M.S.A., architect and surveyor, 57, High-street, Stockton-on-Tees.

MAY 1. — **Bristol.** — HALL.—Erection of the Hannah More Memorial Hall, Fishponds. Plans and specifications seen, and quantities, on deposit of 5*l.* 5s., from Mr. Maynard Froud, architect and surveyor, 1, St. Stephen's-chambers, Baldwin-street, Bristol.

MAY 1. **Kilrea.**—IMPROVEMENTS.—For extensive alterations and improvements to the Catholic Church, Drumagarner, Kilrea, Co. Derry. Drawings and specification with Mr. J. V. Brennan, C.E., architect, Belfast Bank-chambers, Belfast.

MAY 1. **Ormskirk.** CHURCH, ETC.—For erection of Wesleyan church and school, Mount, Outlane. Plans seen, and quantities from Messrs. J. Berry & Sons, architects and surveyors, 3, Market-place, Huddersfield.

MAY 1. — **Portsmouth.**—ADDITIONS, ETC.—For additions and alterations at the infectious diseases hospital; and building conservatory at the infectious diseases hospital. Specifications and plans seen, and forms of tender at the Borough Engineer's Office, Town Hall.

MAY 1.—**Salford.**—ADDITIONS, ETC.—For alterations and additions to the Union Offices, Boardroom, etc., Eccles New-road, Salford. Plans and specifications seen, and forms of tender from Messrs. Topham & Adshead, architects, 4, St. Ann's-square, Manchester. Quantities on deposit of 2*l.* 2s.

MAY 2.—**Aspatria.**—HOUSE, ETC. For erection of dwelling-house, shop, and motor garage in King-street. Plans and specifications with Mr. J. Henney, architect and surveyor, Maryport and Aspatria.

MAY 2. **Ossett.**—HOUSE, ETC.—Erection of a motor-house, house, and store, at the Corporation Yard, Illingworth-street, Ossett. Plans and specifications seen, and quantities and form of tender from Mr. H. Holmes, M.Inst.C.E.I., Borough Engineer, Town Hall, Ossett.

MAY 4 **Llanhilleth.** DRILL HALL.—For erection of a drill hall at Llanhilleth for the 2nd Battalion Mon. Regiment. Plans and specifications seen, and quantities from the architects, Messrs. Jenkins, James, & Co., 28, High-street, Newbridge, Mon. Deposit of 1*l.* 1s.

MAY 4 **Rhosfach.** HOUSE.—Erection of a new house at Rhosfach, Rhosygadair Fawr. Plans, specifications, and particulars from Mr. J. Teifion J. Williams, architect, Napier-street, Cardigan.

MAY 6.—**Gateshead.**—BUILDINGS.—Erection of buildings on the Whinney House Estate, Shotley Bridge, consisting of boiler-house and subsidiary buildings. Quantities from, and plans, form of contract, etc., with, the architect, Mr. Wm. Lister Newcombe, 89, Pilgrim-street, Newcastle-upon-Tyne.

MAY 6.—**Halifax.**—VERANDAH.—Erection of a verandah in Union-street, Halifax. Plans and specifications seen, and forms of tender from Mr. James Lord, M.Inst.C.E., Borough Engineer, Town Hall, Halifax, on deposit of 1*l.*

MAY 6. **Lisburn.**—TANK-HOUSE.—Erection of a tank-house at Lisburn Station. Drawing and specification at the Engineer's Offices at Dublin and Belfast, and quantities and forms of tender from Mr. T. Morrison, Secretary, Secretary's Office, Amiens-street Terminus, Dublin. Deposit of 2*l.* 2s.

MAY 6. — **Llanelly.** — HOUSES. Erection of twenty-four houses on the Old Coke Works site, Ropewalk-road. Plans and specifications at the Surveyor's Office, Town Hall.

MAY 6. — **Manchester.** — SUBWAY, ETC.—struction of a subway, etc., in Chorlton-s City. Plans seen, and specification, quant and form of tender at the City Surveyor's O Town Hall, Manchester. Deposit of 2*l.* 2s.

MAY 7. **Bristol.** PAVILION, ETC. Erecti a new pavilion and other buildings at the B General Hospital. Drawings and specifica seen, and quantities from Messrs. Oatl Lawrence, architects, 25, Orchard street, Br Deposit of 10*l.*

MAY 7.—**Heptonstall.**—ADDITIONS, ETC.—erection of additions and alterations to Bridge Mill, Heptonstall. Plans and spec tions seen, and quantities from Messrs. But & Sutcliffe, F.S.I., architects, New-road, He Bridge.

MAY 7. — **London.** — TRAMWAYS.—The Lo C.C. invite tenders for the roadwork and laying for reconstruction on the conduit sy of its existing horse tramways in Dalston and Graham-road; also for the paving wor the street widenings, etc., on the above and for the partial reconstruction of the br carrying Dalston-lane over the North Lo Railway. Specifications, quantities, forms o der, drawings, etc., with the Chief Engine the Council, Sir Maurice Fitzmaurice, C.I County Hall, Spring-gardens, S.W. De of 5*l.*

MAY 7.—**Londonderry.** HALL. For erecti a lecture hall. Plans and specifications Messrs. Robinson & Davidson, C.E., A.R.I. Richmond-street, Londonderry.

MAY 7. **Mobberley.** WALL.—Erection retaining wall at Mobberley. Drawings, qu ties, and specification with Mr. Joseph brick, M.Inst.C.E. (Messrs. J Swarbrick & 30, St. Ann-street, Manchester. Deposi 1*l.* 1s.

MAY 7. — **Nuneaton.** — ADDITIONS.—For tions to engine-house, etc., at the Elect Works. Plans seen, quantities and form of der, on deposit of 1*l.* 1s., from Mr. F. C. A.M.Inst.C.E., Borough Surveyor, Co Offices, Nuneaton.

* MAY 9. **East Ham.**—OUT-RELIEF STATI The West Ham Guardians invite tenders fo Out-Relief Station at 95, Arragon-road. See tisement in this issue for further particulars

MAY 9.—**Southend.**—CHIMNEY.—Erection furnace chimney at the Sewage Disposal W Plans, sections, and details seen, and spec tion, quantities, and form of tender obtaine deposit of 1*l.* 1s., from Mr. Ernest J. E M.Inst.M.E., Borough Engineer and Surve

* MAY 10.—**Accrington.**—TELEPHONE EXCH —The Commissioners of H.M. Works Public Buildings invite tenders for new phone Exchange. See advertisement in this for further particulars.

MAY 10.—**Aldershot.**—PUBLIC-HOUSE. Fo re-erection of the "Duke of York" public-h Farnham-road, Aldershot. Plans and spe tions seen, and information from Messrs. F & Lloyd, architects, Aldershot.

MAY 10. — **Stanley.** — SCHOOL.—Erection new school. Plans seen, and specifications quantities from the Education Architect, C Hall, Wakefield. Deposit of 1*l.*

MAY 13. — **Bedwas.** — PREMISES, ETC. — Er of bank premises, shops, and billiard-hall f Bedwas-square Building Company. Plans specifications seen, and quantities on depo 2*l.* 2s. Mr. A. F. Webb, M.S.A., architec surveyor, Blackwood.

MAY 13. — **Chester.** — CENTRE. Erection laundry-work instruction centre in the playg of the Love-street Council School. Plans specifications with Messrs. Douglass, Min & Muspratt, 6, Abbey-square, Chester. Q ties on deposit of 1*l.*

* MAY 13. — **Newmarket.** — HALL. The mittee of the King Edward VII. Memorial Newmarket, invite tenders for a proposed See advertisement in this issue for further ticulars.

* MAY 13.—**Rickmansworth.**—NEW BRI The Herts C.C. (Highways Committee) tenders for taking down and rebuilding on main road between Rickmansworth an bridge. See advertisement in this iss further particulars.

MAY 13.—**Ryde.**—STATION.—For erection pumping station at the Knighton Water near Newchurch. Conditions, specific forms of tender, and quantities from Borough Engineer, Town Hall, Ryde, or sulting Engineer, Mr. W. Matthews, 39, Vi street, Westminster. Deposit of 2*l.* 2s.

MAY 14. — **Bury St. Edmunds.** — SCH Erection of new infants' school and alter to the existing buildings at the Brandon street Council School. Drawings, specific and form of contract with the County Arc

BUILDING—*continued.*

ie date given at the commencement of each graph is the latest date when the tender, or names of those willing to submit tenders, be sent in.

A. Ainsworth Hunt, 51, Abbeygate-street, y St. Edmunds. Quantities on deposit of 's.

MAY 14.—**Leigh-on-Sea.** -NEW SCHOOL.—The x Education Committee (Rochford Hundred rict Committee) invite tenders for new ol. See advertisement in this issue for ber particulars

DATE. — **Doncaster.**—PREMISES. Erection ew Liberal Club premises, St. James' street, caster. Messrs. Garside & Pennington, itects and surveyors, Ropergate, Pontefract.

DATE. — **Durham.**—INSTITUTE.—Erection of ew church institute for St. Margaret's, ham. Plans with Mr. W. H. Wood, I.B.A., architect, 20, Collingwood-street, castle-on-Tyne.

DATE. — **Edlington.**— HOTEL.—For erection roposed York Hotel, Edlington, near Don-r. Names to Mr. J. Simmons, surveyor, 10, -street, Doncaster. Deposit of 2*l.* 2s. for ntities. Mr. T. E. Richards, A.R.I.B.A., itect, Market-square-chambers, Pontypridd, n.

DATE.—**Hull.**—PICTURE HALL.—For erection ie Eureka Picture Hall, Hessle-road. Mr. J. ott, architect and surveyor, 18, Newland-ue, Hull. Deposit of 1*l.* 1s.

DATE.—**Huntington.** SCHOOL.—Alterations additions to Huntington Council School. J. C. Wrigley, Secretary, County Hall, hallerton.

DATE. — **Kelloe.** — ADDITIONS, ETC. — For ations and additions to Kelloe P.M. Chapel. J. Wilson Hays, architect, Wingate, Co. ham

DATE. — **Longwood.**—HOUSES.—Erection of semi-detached houses, Salendine Nook. s seen, and quantities from Mr. Sanderson M ford, architect, Longwood.

DATE. — **Newcastle.**—SCHOOL.—Erection of w public elementary school at Walker Gate. ities on deposit of 1*l.* 1s. to Mr. Spurley Secretary of Education Committee, Educa-Offices, Northumberland-road, Newcastle-Tyne.

DATE. — **Redditch.** — EXTENSIONS. — For y extensions at Redditch. Names to Mr. cis F. Baylis, architect, Redditch.

DATE.—**Southminster.**—DRILL HALL, ETC — ion of drill hall, instructor's quarters, , etc. Quantities on deposit of 2*l.* 2s to el F. Johnson, C.B., Secretary, Terri-Force Association, County of Essex, et-road, Chelmsford.

DATE. — **Swindon.**—THEATRE.—Erection of matograph theatre, Fleet-street. Plans and ications with the architect, Mr. R. J. Bes-10, Victoria-road, Swindon.

DATE. **Whitby.**—SHELTER.—Erection of a r on the West Cliff. Particulars from Mr. Scott, Surveyor, U.D. Council, Flowergate.

GINEERING, IRON, AND STEEL.

H 29. **Limerick.** — EXTENSIONS. For ex-n to carbonising plant at the City Gas-, Dock-road. Particulars, plans, and speci-ns at the Engineer's and Manager's Offices, orks, Limerick.

H 29. — **Rotherham.** — SPRINKLERS.—For n of six sprinklers at Aldwarke Sewage . Particulars from the Borough Engineer, Hall.

H 29.—**Westwell.**—DISINFECTOR.—For erec-of a steam disinfector, and erection of a ng to contain same, at the Workhouse, well, near Ashford. Plan and specification Mr J. M. Poncia, Clerk, 17, Bank street, rd, Kent.

H 30. — **Lexden.** -BRIDGE.—Erection of a girder and concrete bridge. Plans and cations at the Surveyor's Office, Mr. J s, Straight-road, Lexden.

1. — **Abergavenny.** — WATERWORKS.—For nstruction of spring and stream intakes, ing, balancing, and dividing chambers. ing and laying cast-iron pipes, also forma-f an open concrete service reservoir of llion gallons capacity, and other works. ngs, specification, and quantities with the r, Mr. E. Wilson Dixon, M.Inst.C.E., t-parade, Leeds. Deposit of 3*l.*

2. - **London.**—TRENCHES.—For excavating ilding trenches for a hot-water and heat-stem and other works at Workhouse and ary, Bancroft-road, Mile End, E Draw-pecification, conditions, and form of tender nitect, Mr. Edmund J. Harrison, 9, Gray's are, W.C. Deposit of 3*l.* 3s. to Mr. in Catmur, Clerk to the Guardians, ans' Offices, Bancroft-road, Mile End, E.

9.—**Antrim.** -WELL.—For sinking a well ection of a pump at Church-lane, Doagh. ation with Mr. J. L. Clark, Clerk, Union Antrim.

E 5. — **Canning Town, E.** — REFUSE CTOR.—The West Ham B.C. invite tenders efuse destructor and steam raising plant. vertisement in this issue for further par-

ITURE, PAINTING, MATERIALS, etc.

29. — **Chertsey.** -PAINTING.—For paint-outside wood, ironwork verandah, etc., of irmary at the Union Workhouse, Otter-Chertsey. Specification with the Master Workhouse, at Ottershaw.

APRIL 30. — **London.** — PAINTING. —External painting and repairs at the Lambeth Parish School, Elder-road, West Norwood, S.E. Forms of tender from Mr James L. Goldspink, Clerk to the Guardians, Guardians' Offices and Board-room, Brook-street, Kennington-road, S.E. Deposit of 2*l.* for specification.

APRIL 30. — **London.**—PAINTING.—For painting road, Leytonstone. Specification, form of tender, work to the outside of the Public Baths, Cathall-and particulars from Mr. E. H. Essex, A.M.Inst.C.E., Surveyor to the Council, at his offices, Town Hall, Leyton.

APRIL 30. — **Sunderland.** — PAINTING. — For painting, etc., at Bishopwearmouth Cemetery Specification seen, and form of tender at the Borough Surveyor's Office, Town Hall.

APRIL 30.—**West Hartlepool.**—PAINTING.—For the painting works at the Ward-Jackson Park, Burn Valley-gardens, and fire brigade station. Specifications seen, and forms of tender from Mr. Nelson F. Dennis, M.Inst.C.E., Borough Engineer and Surveyor, Municipal Buildings.

* MAY 2.—**Various.**—CLEANING AND PAINTING —The Midland Railway Company invite tenders for cleaning and painting station buildings, etc., at various towns. See advertisement in this issue for further particulars.

MAY 6. — **Dartford.** — TIMBER.—For supply of about 150 fathoms of best Baltic yellow deal and batten ends for splitting for firewood. Mr. Eustace J. Hobbs, Clerk, Union Offices, Dartford.

* MAY 6.—**Plymouth.**—DECORATION.—The Plymouth B.C. invite tenders for decoration of the great hall of the Guildhall. See advertisement in this issue for further particulars.

MAY 7. — **Gawsworth.** — PAINTING, ETC.—For painting, distempering, etc., interior and exterior of the school premises. Specifications from the headmaster, Mr. F. W. Proctor

* MAY 8.—**London, S.W.**—CLEANING AND PAINTING.—The Metropolitan Asylums Board invite tenders for cleaning and painting and repairs at Western Fever Hospital, Seagrave-road, Fulham, S.W. See advertisement in this issue for further particulars.

MAY 10. **Pontycymmer.**—PAINTING, ETC.—For painting and repairing the exterior of the Royal Hotel; also thirty-three houses, at Bridgend-road. Specifications and forms of tender from Mr. Frederick Jenkins, A.A.I., surveyor and valuer, 53, Queen-street, Cardiff.

* MAY 14. **West Ham.**—PAINTING, ETC.—The West Ham B.C. invite tenders for painting, cleansing, repairs, etc., of public buildings. See advertisement in this issue for further particulars.

* MAY 20.—**Dartford.**—PAINTING AND REPAIRS. —The Dartford Joint Hospital Committee invite tenders for painting and repairs at Infectious Diseases Hospital, Bow Arrow-lane. See advertisement in this issue for further particulars.

NO DATE.—**Lymington.**—PAINTING.—For painting, papering, and entire redecoration of Boldre Grange House. Specifications and particulars from Mr. Rawdon V. Michell, Wainsford Estate Office (Wainsford Common), near Lymington.

NO DATE.—**Tilbury.**—FENCE, ETC.—For a new corrugated-iron fence and two gates. For particulars apply to the Secretary, Progressive Club, Tilbury.

NO DATE. — **Whitby.**—PAINTING.—For painting and decorating the interior of the Congregational Church, West Cliff. Particulars from Mr. Geo. S. French, architect, Normanby-terrace, Whitby.

ROADS, SANITARY AND WATER WORKS.

APRIL 26. — **Barnstaple.** — DRAINAGE. — For drainage work at Portland-buildings. Mr E Y. Saunders, M.Inst.M.E., Borough Surveyor, Barnstaple.

APRIL 27. - **Downpatrick.**—SEWAGE.—For the construction of a sewer at John-street. Specification at the D.C. Office, Workhouse, Downpatrick.

APRIL 27. — **Southwick.** - FLINTS.—Supply of hand picked flints or of dug flints and fine flint gravel. Forms of tender from Mr. Geo. W. Ware, Surveyor to the Council, Town Hall, Southwick, Sussex.

APRIL 27. — **Wrotham.**—STONE.—For supply of stone. Conditions of contract and forms of tender from Mr. F. T. Elliott, Surveyor of the Council, Borough Green.

APRIL 29.—**Brechin.**—STREETWORK.—For street causewaying with granite or whinstone setts. Specification and quantities from Mr. W. Eggie, Burgh Surveyor, on deposit of 1*l.*

APRIL 29. —**Dublin.** —SEWERS.—For construction of sewers at Sutton and Baldoyle. Plans and specifications by Mr. P. H. McCarthy, B.E., civil engineer, 39, Westmoreland-street, Dublin. Deposit of 1*l.* 1s. for quantities

* APRIL 29. — **London, S.E.**—ROAD-MAKING.— The Camberwell B.C. invite tenders for kerbing, channelling, foundations for asphalt paving, and roadwork in Red Post-hill, North Dulwich, S.E. See advertisement in this issue for further particulars.

APRIL 29. **Macclesfield.**—ROAD.—For diversion of the highway near Wincle Church. Particulars from Mr. Thomas Carswell, the District Surveyor, 19, King Edward-street, Macclesfield

APRIL 29. — **Prestwich.** - STREETS. — Private street improvement in Richmond-avenue. Conditions of contract at the Surveyor's Office, Council Offices, Prestwich. Plan, specification, and quantities on deposit of 2*l.* 2s.

APRIL 29. — **Rathmines.** — SEWAGE.—For the laying of sewers in Rathmines, Rathmines Upper, and Rathgar roads. Plans, conditions of contract, specification, and form of tender at the Engineer's Office, Town Hall, Rathmines. Deposit of 1*l.* 1s.

APRIL 29.— **Walton-le-Dale.**—ROAD. —For converting the present macadamised roadway to granite cube paving on concrete foundation. Plans and general conditions seen, and specification and quantities from Mr. James Leigh, Surveyor, Council Offices, Bamber Bridge, on deposit of 1*l.* 1s.

APRIL 30. — **Stowmarket.** — GRANITE. — For supply of broken granite and broken flints. Mr. P. C. G. Hayward, Clerk to the Council, the Old Bank, Stowmarket

APRIL 30. — **Swansea.** — STREETS.—For private street works in Firm-street. Plans and specifications seen, and quantities from the Borough Surveyor, 13, Somerset-place.

APRIL 30. — **West Hartlepool.**—STREETS.—Construction of May-street, partial construction of Amberton-road. Plans and specifications seen, and forms of tender with quantities from Mr. Nelson F. Dennis, M.Inst.C.E., Borough Engineer, Municipal Buildings.

APRIL 30.—**Whitchurch.**—STREET.—For private street improvement works in Heol-y-forlan, etc., in the parish of Whitchurch. Plans and specifications seen, and quantities from the Surveyor, Mr. James Holden, A.M.Inst.C.E., Park House, 20, Park-place, Cardiff.

MAY 1.—**Broughton.**—STONES, ETC.—For supply of road stones. Forms of tender and particulars from the District Surveyor, Mr. W. Newton, Drury, Buckley, Chester.

MAY 1.—**Hawarden.**—STONES.—For supply of road stones. Forms of tender and particulars from the District Surveyor, Mr. Wm. Newton, Drury, Buckley, Chester.

MAY 1.—**Lanchester.**—ROAD.—For making new road from High Hedleyhope Farm to Tow Law. Drawings, specifications, and conditions of contract seen, and quantities and forms of tender from Mr. G. T. Wilson, Architect and Surveyor, 21, Durham-road, Blackhill, Co. Durham.

MAY 3. — **Harrogate.**—WIDENING.—For widening of East-parade. Plans seen, and quantities from Mr. C. E. Rivers, A.M.Inst.C.E., Borough Engineer and Surveyor

MAY 3. —**Newry.**—SEWAGE.—For constructing a new sewer in King-street. Tender form, plans, drawings, and specifications with Mr. C. Blaney, Town Surveyor, Town Hall, Newry.

MAY 3. — **Richmond.** —STREET.—For construct ing a new street through the garden of "The Elms" to connect with Ennerdale-road Drawings and conditions of contract seen, and particulars from Mr. J. H. Brierley, Borough Surveyor, Town Hall, Richmond, Surrey. Deposit of 1*l.* 1s.

MAY 3. — **Stewarton.** — SEWAGE.—For sewage disposal works. Plans with the Surveyor, Stewarton, and general conditions, specification, and quantities from the engineers, Messrs. Elliot & Brown, A.MM.Inst.C.E., Burton-buildings, Parliament-street, Nottingham, on deposit of 1*l.* 1s.

MAY 4.—**Portrush.**—WATER MAIN.—For laying an additional 6-in. water main from the clear water basin in the Townland of Crossreagh, and the Ballywillan-road, Cromahancock-road, Coleraine-road, and Eglinton-street to Mount Royal, main street. Plans and specification seen, and form of tender and quantities from the Engineer, Mr. J. S. Kennedy, C.E., Bridge-street, Coleraine.

MAY 6.—**Watford.** -SEWAGE.—For construction of stoneware pipe sewer and storm-water sewer, with manholes, etc. Drawing, specification, and form of tender from Mr. W. W. Newman, A.M.Inst.C.E., Engineer *pro tem.*, Council Offices, High-street, Watford.

* MAY 7.—**Bromley, Kent.** — ROAD-MAKING.— The Bromley B.C. invite tenders for sewering, levelling, paving, metalling, flagging, channelling, and making good Shawfield Park. See advertisement in this issue for further particulars.

* MAY 7. —**Frinton-on-Sea.**—ROAD-MAKING.— The Frinton-on-Sea U.D.C. invite tenders for forming and making-up of Crescent-road. See advertisement in this issue for further particulars

MAY 8. — **Gravesend.** — STONE.—For supply of Guernsey granite spalls. Mr. Wm. Jno. King, Clerk to the Guardians, 13, Victoria-place, Stone-street, Gravesend.

MAY 10.—**Basildon.**—GRANITE, ETC.—For supply of broken granite and broken limestone. Apply to Mr. J. Bentley, Clerk.

MAY 10.—**Folkestone.**—SEWAGE. -For the construction of screening chamber, outfall chamber, etc., compressed-air pipe line, sewage lift, air compressing plant Plans, particulars, and forms of tender from Mr. A. E. Nichols, M.Inst.C.E., Borough Engineer, Municipal Offices, Folkestone, on deposit of 2*l.* 2s.

MAY 13.—**Glastonbury.**—SEWAGE. -Alterations and additions to the existing sewerage system. Plans and specification with engineers, Messrs. A. P. L. Cotterell & Carr, M. and A.M.Inst.C.E., of 26, Victoria-street, Westminster, and 26, Baldwin-street, Bristol. Deposit of 3*l.* 3s

MAY 15. — **Isleworth.**—ROAD.—For making-up portion of Ridgeway-road, Spring-grove, Isleworth. Plans and specification seen, and quantities and form of tender from Mr. J. G. Carey, A.M.Inst C.E., Engineer and Surveyor to the Council, on deposit of 1*l* 1s.

MAY 15. - **Lenham.** — SEWAGE. — For main sewerage and sewage disposal works. Particulars, forms of tender, and plans with the consulting engineer, Mr. B. H. Humphreys, 28, Victoria-street, Westminster, S.W. Deposit of 5*l*

NO DATE. — **Howden.**—PAVING.—For channelling and repaving Bridgegate-street, Howden. Specifications and particulars with Mr. John Anderson, Highway Surveyor, Howden.

NO DATE. — **Ogmore Vale.** — ROADS, ETC.—For the construction of new roads and sewers on the Tynewydd Estate, Ogmore Vale, Glam. Plans and specifications at the Estate Department of Messrs. Cory Bros. & Co., Ltd., Bute-street, Cardiff. Quantities on deposit of 1*l.* 1s.

Public Appointments.

Nature of Appointment.	By whom Advertised.	Salary.	Appli to b
*CLERK OF WORKS	Hackney Borough Council	3l. 3s. per week	May
*CLERK OF WORKS	Surrey Education Committee	160l. per annum	May
*CLERK OF WORKS	Gosport, Alverstoke Ed. Com.	2l. 10s. per week	May
*ARCHITECT	Hackney Borough Council	See advertisement in this issue	May
*ASSISTANT ENGINEER FOR BLDGS. & ARCHITECTURE	Bombay Municipality	See advertisement in this issue	May

Auction Sales.

Nature and Place of Sale.	By whom Offered.	D of
*SALVAGE & OTHER STOCK, 86, BANNER-ST., GOLDEN-LANE, E.C. On the Premises	Fryett, White, & Co.	Apr
*BUILDER'S AND CONTRACTOR'S STOCK, PLANT, ETC., ROMFORD On the Premises	J. T. Skelding & Holland	Apr
*BUILDING SITE, LEWISHAM, S.E.—At the Mart	Wiltshire & Co.	May
*BUILDING MATERIALS (BY TENDER), GROSVENOR ESTATE—On the Premises	White, Berry, & Taylor	May
*FREEHOLD BUILDING LAND, STAMFORD-HILL.—At the Mart	Edwin Fox, Bousfield, Burnetts, & Baddeley	May
*FREEHOLD BUILDING SITE, EUSTON-ROAD, N.W.—At the Mart	Edwin Fox, Bousfield, Burnetts, & Baddeley	May
*FREEHOLD BUILDING LAND, ROYAL VICTORIA DOCKS, ETC.—At the Mart	Henry Holmes & Co.	May
*BUILDING SITES, MUSWELL-HILL.—At the Mart	Venton, Bull, & Cooper	May
*FREEHOLD BUILDING LAND, SUDBURY, MIDDLESEX	Millar, Son, & Co.	M

SOME RECENT SALES OF PROPERTY:

ESTATE EXCHANGE REPORT.

April 3.—By F. VARLEY & SON.

Holloway.—51, Davenant-rd., f., y.r. 36l. £330
Finsbury Park.—11, Eunis-rd., u.t. 55 yrs., g.r. 6l. 6s., y.r. 36l. 205
45, Adolphus-rd., u.t. 61 yrs., g.r. 12l. 12s., p. 315

By T. WOODS.

Hounslow, Middlesex. Staines-rd., building site, 1¼ acre, f., High-st., building land, 9 acres, f. and c. 1,920
Isleworth, Middlesex.—Twickenham-rd., f.g.r. 8l., reversion in 54 yrs. 200
24 and 28, Church-st., f. 350
Hanwell.—Boston-rd., two building sites, c. ... 440

By KEMSLEY.

Romford, Essex.—138 and 140, Brentwood-rd., f., w.r. 40l. 6s. 375
94, Albert-rd., f., y.r. 13l. 150

By C. M. STANFORD.

Dovercourt, Essex.—Dovehouse Farm, 42 a. 2 r. 25 p., f. 2,450

April 9.—By SALTER, SIMPSON, & SONS.

Clenchwarton, Norfolk.—Margaretta House and 84 a. 2 r. 19 p., f. 6,450

April 11.—By W. G. CARTER & CO.

Leytonstone.—27, Mornington-rd., f., w.r. 36l. 8s. 250
Bow.—201, Devons-rd. (s.), u.t. 40 yrs., g.r. 5l., w.r. 36l. 8s. 120
Peckham. 9, Oglander-rd., u.t. 63 yrs., g.r. 5l., e.r. 30l. 180

By C. C. & T. MOORE.

Leytonstone.—508, High-rd., u.t. 56 yrs., g.r. 10l., y.r. 40l. 430
Mile End.—8, 10, and 12, Sceptre-st., f., w.r. 66l. 6s. 420
91, West-st., f., w.r. 31l. 4s. 155
Hornsey.—79, Corbyn-st., u.t. 58 yrs., g.r. 6l., y.r. 30l. 200
High Barnet.—Ravenscroft Park-rd., Beechcroft, u.t. 74 yrs., e.r. 8l., y.r. 45l. 400

By F. J. DIXON & SON.

Limehouse.—254, Burdett-rd., u.t. 50 yrs., g.r. 7l., p. 300

By WILLIAM WESTON.

Chalfont St. Peter, Bucks.—The Wheatleys, f., y.r. 85l. 1,530
Rickmansworth-rd., four building sites, f. 160
Mayfield gr., three plots, f 120

April 15. By KEMSLEY.

King's Cross.—6, Railway-st., u.t. 32 yrs., g.r. 5l., w.r. 41l. 12s. 120
Hornsey.—103, Campsbourne-rd., u.t. 49 yrs., g.r. 5l. 10s., w.r. 33l. 16s. 100
Barking.—21 to 23, The Grove, f., w.r. 33l. 16s. 225

By STOATE & STANLEY.

Tottenham. 37 and 39, Fairbourne-rd., u.t. 87 yrs., g.r. 12l. 12s., w.r. 72l. 16s. 340
Harringay. 106, Hewitt-rd., u.t. 85 yrs., g.r. 7l., y.r. 30l. 230

April 16.—By BROAD, WILTSHIRE, & PENNY.

Clapton.—15, 17, and 19, Liuscott-rd., u.t. 66 yrs., g.r. 21l., w.r. 132l. 12s. 490
Hackney.—53, 54, and 55, Haverclock-rd., u.t. 43¾ yrs., g.r. 9l., w.r. 78l. 330

By JOHN BOTT & SONS.

Herne Hill.—18, Holmedene-av., u.t. 89 yrs., g.r. 9l. 10s., p. 330

By WM. HOLLIS.

Hendon. Church-rd., wheelwrights' and blacksmiths' shops, stabling, etc., u.t. 53 yrs., g.r. nil, y.r. 82l. 4s., also l.g. rents 106l. 8s., u.t. 53 yrs., g.r. 10l. 16s. 1,975
New Southgate.—43, Belle Vue rd., u.t. 68 yrs., g.r. 6l., p. 115
Finchley.—10 and 12, Elm Park-rd., f., y.r. 93l. 1,030
17, Salisbury-ter., f., w.r. 26l. 250

By WHATLEY, WING, & BAMFORD.

Great Missenden, Bucks.—Building land, 2 a. 2 r. 24 p., f. 200

By DEBENHAM & WATSON.

Thatcham, Berks. Chapel-st., six cottages, f. 595
Newtown, five cottages, f. 350
Cold Ash, Berks.—Heath-la., two cottages, f. 260

April 17.—By FOSTER & CRANFIELD.

Rotherhithe.—41 and 43, Aspinden-rd., u.t. 41 yrs., g.r. 8l., w.r. 72l. 16s. 420
Stoke Newington.—30, Brighton-rd., u.t. 49 yrs., g.r. 6l., e.r. 35l. £205
Kentish Town.—18, Kelly-st., u.t. 24¾ yrs., g.r. 4l. 4s., w.r. 33l. 8s. 150

By FRANK JOLLY & JAMES.

Dalston.—61, Parkholme-rd., u.t. 79 yrs., g.r. 10l. 10s., y.r. 48l. 410
7, St. Mark's-sq., u.t. 54 yrs., g.r. 8l., y.r. 48l. 320
26 and 28, King Henry-st., u.t. 53 yrs., g.r. 6l., w.r. 59l. 16s. 305

By ROBSON & PERRIN.

Stoke Newington. 24, Mayville-st., u.t. 47 yrs., g.r. 5l. 5s., w.r. 33l. 230
Highgate, 55, Holmesdale-rd., u.t. 66 yrs., g.r. 6l., e.r. 34l. 230
Tottenham. Chalgrove-rd., plot of land, f. 150

By WILLIAM WESTON.

St. John's Wood.—34 and 38, New-st., u.t. 15 yrs., g.r. 11l. 5s., w. and y.r. 99l. 12s. 350
Paddington.—8, Elgin-ave., u.t. 52 yrs., g.r. 10l., p. 425

By MADDISON, MILES, & MADDISON.

Caister-on Sea, Norfolk.—Arable and pasture, 3 acres, f. 210
Grazing marsh, 11 a. 1 r. 32 p., f. 510
Burgh Castle, Suffolk.—Church Field, 4 a. 2 r. 18 p., f. 180

By GRIMLEY & SON.

Warwick. 33 and 35, Jury-st., f., y.r. 39l. 10s... 520
1 to 7, 13 to 21 (odd), North Rock, f., w.r. 77l. 10s. 420

April 18. By H. J. BLISS & SONS.

Victoria Park.—292 and 298, Old Ford-rd., u.t. 42 yrs., g.r. 16l., y.r. 80l. 555

By MORTON & WATERS.

Chiswick.—1, Ravenscourt-sq., f., e.r. 65l. 630

By NEWBON & SHEPHARDS.

Kentish Town.—122, Prince of Wales-rd., u.t. 37 yrs., g.r. 6l., y.r. 42l. 280
Stoke Newington. 1 to 5, Burma-mews, f., w.r. 72l. 16s. 210
Holloway. 31a, Medina-rd., u.t. 39 yrs., g.r. 4l. 10s., y.r. 34l. 245
Barnsbury.—23 and 24, Cumberland-st., u.t. 44 yrs., g.r. 14l., y. and w.r. 94l. 12s. 460
Holloway.—Mulkern-rd., f.g. rents 21l., reversion in 54 yrs. 500
Mulkern-rd., f.g. rents 13l., reversion in 80 yrs. 285
Calverley-gr., f.g. rents 16l. 10s., reversions in 51 and 68 yrs. 410
Gillespie-rd., f.g. rents 15l. 15s., reversion in 69 yrs. 365
42, Scholefield-rd., f., w.r. 28l. 12s. 200
Hornsey.—502, Hornsey-rd. (s.), f., gross r. 62l. 700

By STIMSON & SONS.

Kensington.—35, Milson-rd., u.t. 51¾ yrs., g.r. 3l. 5s., w.r. 33l. 16s. 150
Notting Hill.—24, Fowell-st., u.t. 36¾ yrs., g.r. 6l. 10s., p. 100
Old Kent-rd.—30 to 33, Astley-st., u.t. 9½ yrs., g.r. 14l., w.r. 114l. 8s. 165
Peckham. 1, Linden-gr., u.t. 32 yrs., g.r. 6l., e.r. 50l. 300
Canonbury.—99, Petherton-rd., u.t. 37¼ yrs., g.r. 7l. 7s., w.r. 68l. 18s. 250
Brixton.—228, Stockwell-rd., u.t. 52 yrs., g.r. 8l. 8s., w.r. 65l. 280
1, Hayter-rd., u.t. 55 yrs., g.r. 10l. 10s., e.r. 50l. 280
Streatham.—107, Sunnyhill-rd., u.t. 49½ yrs., g.r. 3l. 16s., y.r. 38l. 300

By CHARLES HALL.

Stockwell.—65, Landor rd., u.t. 57 yrs., g.r. 7l. 5s., e.r. 40l. 300
Clapham. 38, Haselrigge-rd., u.t. 50 yrs., g.r. 5l. 10s., w.r. 49l. 8s. 200
Balham. 60 and 62, Chesnut-gr., u.t. 87 yrs., g.r. 15l., w.r. 114l. 8s. 775

Contractions used in these lists.—F.g.r. for freehold ground-rent; l.g.r. for leasehold ground-rent; l.g.r. for improved ground-rent; g.r. for ground-rent; r. for rent; f. for freehold; c. for copyhold; l. for leasehold; p. for possession; e.r. for estimated rental; w.r. for weekly rental; q.r. for quarterly rental; y.r. for yearly rental; u.t. for unexpired term; p.a. for per annum; yrs. for years; la. for lane; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; cres. for crescent; av. for avenue; gdns. for gardens; yd. for yard; gr. for grove; b.h. for beerhouse; p.h. for public-house; o. for offices; s. for shops; ct. for court.

TO CORRESPONDENTS.

NOTE.—All communications with respect to and artistic matters should be addressed to EDITOR" (and not to any person by name) relating to advertisements and other exc business matters should be addressed to PUBLISHER," and not to the Editor.

All communications must be authenticated name and address of the sender, whether for tion or not. No notice can be taken of ano communications.

The responsibility of signed articles, lette papers read at meetings rests, of course, w authors.

We cannot undertake to return rejected co cations; and the Editor cannot be respons drawings, photographs, manuscripts, or othe ments, or for models or samples, sent to or left office, unless he has specially asked for them.

All drawings sent to or left at this office f sideration should bear the owner's name and on either the face or back of the drawing. De inconvenience may result from inattention to t

Any commission to a contributor to write an or to execute or lend a drawing for publication, subject to the approval of the article or drawin received, by the Editor, who retains the right t it if unsatisfactory. The receipt by the auth proof of an article in type does not necessarily in acceptance.

N.B.—Illustrations of the First Premiated De any important architectural competition will al accepted for publication by the Editor, wheth have been formally asked for or not

PRICES CURRENT OF MATERI

*** Our aim in this list is to give, as far as possi *average* prices of materials, not necessarily the Quality and quantity obviously affect prices which should be remembered by those who mak this information.

BRICKS, &c.

Per 1000 Alongside, in River.

Best Stocks.
Picked Stocks for Facings

Per 1000, Delivered at Railway Depôt.

	£ s. d.		
Flettons	1 13 0	Best Blue Pressed	
Best Fareham Red	3 12 0	Staffordshire... Do. Bullnose	
Best Red Pressed		Best Stourbridge,	
Ruabon Facing	5 0 0	Fire Bricks	

GLAZED BRICKS—

Best White, Ivory, and Salt Glzd. Str'tch'rs	11 7 6	Double Headers One Side and two Ends	
Headers	10 17 6	Two Sides and	
Quoins, Bullnose, and 4½ in. Flats	14 17 6	one End Splays & Squints	
D'ble Stretchers	16 17 6		

Second Quality £1 10s. per 1000 less than b

	s. d.	
Thames and Pit Sand	6 9	per yard, d
Thames Ballast	5 6	"
Best Portland Cement	31 0	per ton,
Best Ground Blue Lias Lime	19 0	"

NOTE—The cement or lime is exclusive ordinary charge for sacks.

Grey Stone Lime ... 13s. 0d. per yard d
Stourbridge Fireclay in sacks 27s. 0d. per ton a

STONE.

Per Ft. Cube.

BATH STONE — delivered on road waggon
Paddington Depôt.
Do. do. delivered on road waggons, Nine Elm Depôt.

PORTLAND STONE (20 ft. average)—
Brown Whitbed, delivered on road waggon
Paddington Depôt, Nine Elms Depôt,
Pimlico Wharf
White Basebed, delivered on road waggo
Paddington Depôt, Nine Elms Depôt,
Pimlico Wharf

STONE (*Continued*).

Per Ft. Cube, delivered at Railway Depôt.

	s.	d.		s.	d.
caster in blocks..	1	10	Closeburn Red		
er in blocks	1	6	Freestone	2	0
eenshill in blocks	1	10	Red Mansfield		
rley Dale in			Freestone	2	4
locks	2	4	Talacre & Gwespyr		
d Corsehill in			Stone	2	4
locks	2	3			

RE STONE—*Robin Hood Quality.*

Per Ft. Cube, Delivered at Railway Depôt. s. d.

ppled random blocks	2 10

Per Ft. Super., Delivered at Railway Depôt.

n. sawn two sides landings to sizes (under 0 ft. super.)	2 3
n. rubbed two sides ditto, ditto	2 6
n. sawn two sides slabs (random sizes)	0 11½
n. to 2½ in. sawn one side slabs (random sizes)	0 7
in. to 2 in. ditto, ditto	0 6

RD YORK—

Per Ft. Cube, Delivered at Railway Depôt.

ppled random blocks	3 0

Per Ft. Super., Delivered at Railway Depôt.

n. sawn two sides landing to sizes (under 40 ft. uper.)	2 8
n. rubbed two sides ditto	3 0
n. sawn two sides slabs (random sizes)	1 2
n. self-faced random flags	0 5

SLATES.

Per 1000 of 1200 at Railway Depôt.

In.	£	s.	d.	In. In.	£	s.	d.
10 best blue				20×10 best Eur'ka			
langor	13	2	6	unfading green	15	17	6
12 ditto	13	17	6	20×12 ditto	18	7	6
10 1st quality				18×10 ditto ...	13	5	0
itto.....	13	0	0	16×8 ditto	10	5	0
12 ditto	13	15	0	20×10 permanent			
8 ditto	7	5	0	green	11	12	6
10 best blue				18×10 ditto	9	12	6
'ortmadoc.....	12	12	6	16×8 ditto	6	12	6
8 ditto.....	6	12	6				

TILES.

At Railway Depôt.

	s.	d.		s.	d.
t plain red roof-			Best "Hartshill"		
ng (per 1000)	42	0	brand, plain sand-		
Hip and Valley			faced (per 1000)...	45	0
(per doz.).....	3	7	Do. pressed (per		
t Broseley (per			1000)	42	6
000)	50	0	Do. Ornamental (per		
Ornamental(per			1000)	47	6
000)	52	6	Hip (per doz.)...	4	0
Hip and Valley			Valley (per doz.)	3	6
(per doz.)	4	0	Staffords. (Hanley		
t Ruabon red,			Reds or Brindled		
rown, or brindled			(per 1000)	42	6
3dw'de) (per 1000)	57	6	Hand-made sand-		
Ornamental (per			faced (per 1000)	45	0
000)	60	0	Hip (per doz.)...	4	0
Hip (per doz.)...	4	0	Valley (per doz.)	3	6
Valley (per doz.)	3	0			

WOOD.

Building Wood.	At per standard. £	s.	d.		£	s.	d.
ds: best 3 in. by 11 in. and 4 in. by 9 in. and 11 in.	14	0	0	...	15	10	0
ds: best 3 by 9	13	10	0	...	14	10	0
tens: best 2½ in. by 7 in. and 8in., and 3 in. by 7 in. and 8 in.	11	10	0	...	12	10	0
tens: best 2½ by 6 and 3 by 6...	0	10	0	less than 7 in. and 8 in.			
ds: seconds	1	0	0	less than best.			
tens: seconds	0	10	0	"			
in. by in. and 2 in. by 6 in. ...	9	10	0	...	10	10	0
in. by 4½ in. and 2 in. by 5 in.	9	0	0	...	10	0	0
sign Sawn Boards—							
in. and 1¼ in. by 7 in.	0	10	0	more than battens.			
in.	1	0	0	"			
timber: best middling Danzig	At per load of 50 c.t.						
Memel (average specifiion)	5	0	0	...	5	10	0
econds	4	10	0	...	5	0	0
mall timber (8 in. to 10 in.) ...	3	17	6	...	4	0	0
mall timber (6 in. to 8 in.).....	3	5	0	...	3	10	0
wedish balks	2	12	6	...	3	0	0
h-pine timber (30 ft. average)	5	5	0	...	6	0	0

Joiners' Wood.	At per standard. £	s.	d.		£	s.	d.
ite Sea: first yellow deals, 3 in. by 11 in.	24	10	0	...	25	10	0
3 in. by 9 in.	22	10	0	...	23	10	0
Battens, 2½ in. and 3 in. by 7 in.	17	0	0	...	18	0	0
econd yellow deals, 3in. by 11in.	19	0	0	...	20	0	0
" 3 in. by 9 in.	18	0	0	...	19	10	0
Battens, 2½ in. and 3 in. by 7 in.	14	0	0	...	15	0	0
hird yellow deals, 3 in. by 11 in. and 9 in.	14	0	0	...	15	0	0
Battens, 2½ in. and 3 in. by 7 in.	11	10	0	...	12	10	0
rsburg: first yellow deals, 3 in. by 11 in.	21	10	0	...	22	10	0
Do. 3 in. by 9 in.	18	10	0	...	19	10	0
Battens	14	0	0	...	15	0	0
econd yellow deals, 3 in. by 11 in	16	10	0	...	17	10	0
Do. 3 in. by 9 in.	15	0	0	...	16	0	0
Battens	11	10	0	...	12	10	0
hird yellow deals, 3in. by 11 in.	13	10	0	...	14	10	0
Do. 3 in. by 9 in.	13	0	0	...	14	0	0
Battens	10	10	0	...	11	0	0
ite Sea and Petersburg—							
irst white deals, 3 in. by 11 in.	15	0	0	...	16	0	0
" 3 in. by 9 in.	14	0	0	...	14	10	0
Battens	11	10	0	...	12	10	0
econd white deals, 3in. by 11in.	14	0	0	...	15	0	0
" 3 in. by 9 in.	13	0	0	...	14	0	0
Battens	10	10	0	...	11	0	0
h-pine: deals	19	0	0	...	21	0	0
nder 2 in. thick extra.....	0	10	0	...	1	0	0
ow Pine—First, regular sizes	48	0	0	upwards.			
ldments	32	0	0	"			
econds, regular sizes	33	0	0	"			
ldments	28	0	0	"			
ri Pine—Planks per ft. cube.	0	4	6	...	0	6	0

WOOD (*Continued*).

Joiners' Wood (*Continued*)—	£	s.	d.		£	s.	d.
Danzig and Stettin Oak Logs—							
Large, per ft. cube.....	0	3	0	...	0	3	9
Small " "	0	2	6	...	0	2	6
Wainscot Oak Logs, per ft. cube	0	6	6	...	0	8	0
Dry Wainscot Oak, per ft. sup. as inch	0	0	10	...	0	1	0
¼ in. do. do.	0	0	8½	...	—		
Dry Mahogany—Houndras, Tabasco, per ft. super. as inch..	0	0	10	...	0	1	1
Selected, Figury, per ft. super. as inch	0	1	6	...	0	2	6
Dry Walnut, American, per ft. super. as inch	0	0	10	...	0	1	0
Teak, per load	18	0	0	...	22	0	0
American Whitewood planks, per ft. cube	0	5	0	...	0	6	0
Prepared Flooring, etc.—	Per square.						
1 in. by 7 in. yellow, planed and shot	0	16	6	...	0	17	0
1 in. by 7 in. yellow, planed and matched	0	14	0	...	0	18	0
1¼ in. by 7 in. yellow, planed and matched	0	16	0	...	1	0	0
1 in. by 7 in. white, planed and shot	0	12	0	...	0	14	6
1 in. by 7 in. white, planed and matched.....	0	12	6	...	0	15	0
1¼ in. by 7 in. white, planed and matched.....	0	15	0	...	0	16	6
⅞ in. by 7 in. yellow, matched and beaded or V-jointed brds.	0	11	0	...	0	13	6
1 in. by 7 in. " "	0	14	0	...	0	18	6
⅞ in. by 7 in. white " "	0	10	0	...	0	11	0
1 in. by 7 in. " "	0	12	9	...	0	15	0
6 in. at 6d. to 9d. per square less than 7 in.							

JOISTS, GIRDERS, &c.

	In London, or delivered Railway Vans, per ton. £	s.	d.		£	s.	d.
Rolled Steel Joists, ordinary sections	7	10	0	...	8	0	0
Compound Girders, ordinary sections	9	10	0	...	10	0	0
Steel Compound Stanchions ...	11	0	0	...	12	0	0
Angles, Tees, and Channels, ordinary sections	9	10	0	...	10	0	0
Flitch Plates	9	10	0	...	9	10	0
Cast Iron Columns & Stanchions, including ordinary patterns ...	7	10	0	...	8	10	0

METALS.

Iron—	Per ton, in London. £	s.	d.		£	s.	d.
Common Bars	9	0	0	...	9	10	0
Staffordshire Crown Bars, good merchant quality	9	5	0	...	9	15	0
Staffordshire "Marked Bars"	11	0	0	...	—		
Mild Steel Bars	9	5	0	...	9	15	0
Hoop Iron, basis price.....	10	0	0	...	—		
" " Galvanised.....	17	10	0	...	—		
(*And upwards, according to size and gauge.*)							
Sheet Iron Black—							
Ordinary sizes to 20 g.	10	5	0	...	—		
" " 24 g.	11	5	0	...	—		
" " 26 g.	12	15	0	...	—		

METALS (*Continued*).

Iron (*Continued*)— Per ton, in London.	£	s.	d.		£	s.	d.
Sheet Iron, Galvanised, flat, ordinary quality—							
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15	10	0	...	—		
Ordinary sizes to 22 g. and 24 g.	16	0	0	...	—		
" " 26 g.	17	0	0	...	—		
Sheet Iron, Galvanised, flat, best quality—							
Ordinary sizes to 20 g.	18	10	0	...	—		
" " 22 g. and 24 g.	19	0	0	...	—		
" " 26 g.	20	10	0	...	—		
Galvanised Corrugated Sheets—							
Ordinary sizes, 6ft. to 8ft. 20 g.	15	0	0	...	—		
" " 22 g. and 24 g.	15	5	0	...	—		
" " 26 g.	16	15	0	...	—		
Best Soft Steel Sheets, 6ft. by 2 ft. to 3 ft. to 20 g. and thicker	12	10	0	...	—		
Best Soft Steel Sheets, 2 g. & 24 g.	13	10	0	...	—		
" " 26 g.	15	10	0	...	—		
Cut Nails, 3 in. to 6 in.	11	0	0	...	11	0	
(Under 3 in., usual trade extras.)							

LEAD, &c.

	£	s.	d.		
Lead—Sheet, English, 4lb. and up	20	7	6	...	—
Pipe in coils	20	17	6	...	—
Soil pipe	23	17	6	...	—
Compo pipe	23	17	6	...	—
Zinc—Sheet— In casks of 10 cwt.					
Vielle Montagne	33	10	0		
Silesian	33	5	0	...	—
Zinc, in bundles, 1s. per cwt. extra.					
Copper—	£	s.	d.		
Strong Sheet .....per lb.	0	1	0	...	—
Thin " ..... "	0	1	1	...	—
Copper nails ..... "	0	0	10	...	—
Copper wire ..... "	0	0	10	...	—
Brass—					
Strong Sheet ..... "	0	0	11	...	—
Thin " ..... "	0	1	0	...	—
Tin—English Ingots..... "	0	2	0	...	—
Solder—Plumbers' ..... "	0	0	9	...	—
Tinmen's ..... "	0	1	0	...	—
Blowpipe ..... "	0	1	2	...	—

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

15 oz. thirds	2½d.	26 oz. fourths	3½d.
" fourths	1½d.	32 oz. thirds	5d.
21 oz. thirds.....	3½d.	" fourths	4½d.
" fourths	2½d.	Fluted Sheet, 15 oz.	3½d.
26 oz. thirds.....	4d.	" 21 oz.	4½d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

⅛ Rolled plate	2½d.	Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white.....	3½d
⅛ Rough rolled and rough cast plate..	3½d.		
¼ Rough rolled and rough cast plate..	3d.	Ditto, tinted.....	5d.

* Not less than two crates.



The KEY to Efficient Lighting

is to install a system that is Inexpensive, Safe, Reliable, Simple, Healthy.

The only system to fulfil all these requirements is

Acetylene

For all particulars apply—

ACETYLENE PUBLICITY, LTD.,
103. CHEAPSIDE, LONDON, E.C.

OILS, &c.		£ s. d.
Raw Linseed Oil in pipes	per gallon	0 3 4
" " " in barrels	"	0 3 5
" " " in drums	"	0 3 7
Boiled " " in barrels	"	0 3 7
" " " in drums	"	0 3 10
Turpentine in barrels	"	0 2 10
" in drums	"	0 3 0
Genuine Ground English White Lead,	per ton	27 10 0
Red Lead, Dry	"	24 0 0
Best Linseed Oil Putty	per cwt.	0 10 6
Stockholm Tar	per barrel	1 12 0

VARNISHES, &c.	Per gallon. £ s. d.
Fine Pale Oak Varnish	0 8 0
Pale Copal Oak	0 10 6
Superfine Pale Elastic Oak	0 12 6
Fine Extra Hard Church Oak	0 10 0
Superfine Hard-drying Oak, for seats of Churches	0 14 6
Fine Elastic Carriage	0 12 0
Superfine Pale Elastic Carriage	0 16 0
Fine Pale Maple	0 10 0
Finest Pale Durable Copal	0 18 6
Extra Pale French Oil	1 1 0
Eggshell Plating Varnish	0 18 0
White Pale Enamel	1 4 0
Extra Pale Paper	0 12 0
Best Japan Gold Size	0 10 6
Best Black Japan	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Knotting	0 10 9
French and Brush Polish	0 10 6

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than* 6 *p.m. on Wednesday.* [N.B.—We cannot publish Tenders unless authenticated either by the architect or the building owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is stated, nor any list in which the lowest Tender is under 100*l.* unless in some exceptional cases and for special reasons.]

*Denotes *accepted.* †Denotes *provisionally accepted.*

ARDGLASS.—For erection of a shop and dwelling, for Mrs. A. Quinn, Ardglass. Messrs. Browne Bros., architects, Ardglass :—

P. Taggart	£403	H. T. Chambers,	
R. McDonald	400	Downapatrick*	£387

BUCKS.—For schemes of improvements at various Council Schools, for the County Education Committee.—

Chesham : Whitehill.

Webster & Cannon	£1,280 0	G. Darlington	£1,200 0
Rust & Ratcliffe	1,251 10	H. & R. Abbott, Chesham*	1,199 0
J. Mead	1,242 0		

Chesham : Townsend-road.

D. W. Smith	£520 0	J. Mead	£470 0
G. Darlington	479 0	Rust & Ratcliffe‡	465 0
Webster & Cannon	475 3	H. & R. Abbott, Chesham*	419 0
S. Fassnidge	475 0		

Chesham : Waterside (Mixed).

H. & R. Abbott	£642 0 0	J. Mead	£405 0 0
D. W. Smith	536 0 0	Rust & Ratcliffe‡	400 0 0
G. Darlington	416 0 0	S. Fassnidge, Chesham*	398 0 0
Webster & Cannon	412 17 6		

Chesham : Waterside (Infants).

D. W. Smith	£234 0	J. Mead	£204 0
H. & R. Abbott	215 0	Rust & Ratcliffe‡	200 0
G. Darlington	209 0	S. Fassnidge, Chesham*	195 0
Webster & Cannon	208 10		

Ellesborough.

	For Alterations.	For Repairs.
Webster & Cannon	£407	£46 0 0
Mayne & Son	390	39 0 0
P. J. Clerke	390	39 0 0
G. Parsons	376	37 5 0
H. J. & A. Wright	259	38 0 0
G. Biggs & Sons, Gt. Kingshill*	290	20 0 0

Tongewick.

G. Tombs & Son	250	53 0 0
W. H. Thomas, Buckingham* ‡	199	38 18 0

‡ Alternative tenders.

CLEETHORPES.—For the erection of the proposed King George Cottage Homes. Mr. Ernest Fiskinson, architect, Cleethorpes :—

W. Ion	£1,096 0	Wilkinson & Houghton	£1,025 0
W. Kirton	1,095 10	Mashford & Sons, Ltd.*	927 10
Hewins & Goodhand	1,075 0		

ELY.—For alterations and additions to the High School for Girls. Mr. R. S. W. Perkins, County Surveyor. Quantities by Mr. F. T. Mullett, Downing House, Cambridge :—

Elworthy & Co., Upwell, Wisbech* ... £541 10

ELY.—For the erection of Chief Constable's Offices and Police Houses, for the Standing Joint Committee. Mr. R. S. W. Perkins, County Surveyor. Quantities by Mr. F. T. Mullett, Downing House, Cambridge :—

Morrias Bros.	£2,520 0 0	R. Shanks	£2,130 0 0
Coulson & Lofts	2,442 0 0	H. Feast	2,126 0 0
H. J. Linzell	2,377 0 0	J. G. Cowell	1,976 0 0
Rands & Son	2,193 17 0	Lawrence & Tucker	1,848 0 0
Farren & Son	2,175 17 6		
Redding & Son	2,175 0 0	G. W. Heath, March‡	1,738 0 0
Clarke & Sons	2,161 10 0		
Kidman & Son	2,160 0 0		

‡ Accepted subject to sanction of Local Government Board.

LEEDS.—For erection of St. Oswald's School and Institute, Hunslet. Mr. F. Mitchell, architect and surveyor, Leeds. Quantities by architect :—

Brick, Stone, Joiner, and Plumbers W. Nicholson & Son (Leeds), Ltd., Sheaf-street* ... } £2,518
Plasterer: J. Phillips, Beeston-road* ... }
Slater: J. Season, Hunslet-road* ... }
Painters: Whiteley Bros., Balm-road* ... }

[All of Leeds.]

LONDON.—For the erection of a warehouse at Park Wharf, Old Ford, E. Mr. Frank Nicholls, architect, 11-12, Finsbury-square, E.C. :—

J. & J. Dean	£2,310	A. Monk	£2,132
Turnbull & Son	2,250	H. Knight & Son	2,125
Perry & Co. (Bow), Ltd.	2,198	W. J. Fryer & Co	2,099
		G. Parker & Sons*	1,995

LOSSIEMOUTH.—For erection of a villa. Mr. R. B. Pratt, architect, Elgin :

Slater: J. Wilson, Lossiemouth	£45 10 0
Plasterer: C. Menzies, Lossiemouth	77 18 5
Mason: D. Forssyth, Elgin	387 17 6
Carpenter: G. Farquhar, Lossiemouth	335 0 0
Painters: Stewart Bros., Lossiemouth	43 6 6
Plumber. A. Morrison, Lossiemouth	112 0 0

SUTTON (Isle of Ely).—For the erection of P Constable's Cottage, for the Standing Joint Commit Mr. R. S. W. Perkins, County Surveyor :—

J. Farren & Son, Earith* ... £245

TORQUAY.—For the erection of two villas, New road. Mr. F. G. Moore, A.M.Inst.M.E., architect, Fleet-street, Torquay :

Vanstone	£1,599	Rovey	£1
Yeo	1,291	Blatchford†	

Ham Hill Stone.
Doulting Stone.
Portland Stone.
The Ham Hill and Doulting Stone Co., Limi
(incorporating the Ham Hill Stone Co. and C. Trask & So
The Doulting Stone Co.).
Norton, Stoke-under-Ham, Somerset.
London Agent :—Mr. E. A. William
16, Craven-street, Strand.

Asphalte.—The Seyssel and Metallic L
Asphalte Co. (Mr. H. Glenn), Office, 42, Poul
E.C.—The best and cheapest materials for da
courses, railway arches, warehouse floors,
roofs, stables, cow-sheds and milk-rooms, g
aries, tun-rooms, and terraces. Asphalte
tractors to Forth Bridge Co. T.N. 2644 Cent

SPRAGUE & CO., Ltd.,
LITHOGRAPHERS AND PRINTERS
Estate Plans and Particulars of Sale prom
executed.
69 & 70, Dean-street, Soho, W.

OGILVIE & CO., Telephone : DALSTON
Many years conn
with the late firm
W. H. LASCELLES
of Bunhill Row.
Amhurst Works, **DALSTON LANE,**
EXPERTS IN HIGH-CLASS JOINERY.
ALTERATIONS AND DECORATIONS. ESTIM
FR

J. J. ETRIDGE, Jr.
SLATE MERCHANTS. LTD.
EXPERTS IN
SLATING, TILING.
BEST WORK ONLY.
Telephone 2685 Wall, or write—
BETHNAL GREEN SLATE WORKS,
BETHNAL GREEN, LONDON, E.

ASPHALTE
For Horizontal & Vertical Damp Cour
For Flat Roofs, Basements, & other Fl
The best materials and workmanship are suppli
THE
French Asphalte C
Whose name and address should be inserted
specifications.
For estimates, quotations, and all informat
apply at the Offices of the Company,
5, LAURENCE POUNTNEY HI
CANNON STREET, E.C.

EWART'S
Cures in 19 cases out of 20.
"EMPEROR"
Write to-day for Illustrated Catalogue Free to
EWART & SON Ltd.,
346-350, Euston Road, London, N.W.
Established 1834.
Telephone : 2570 North.
SMOKE-CURE

THE BUILDER

VOL. CII.—No. 3613. MAY 3, 1912.

CONTENTS.

	PAGE
HE ROYAL ACADEMY EXHIBITION	505
HE PROTECTION OF ANCIENT MONUMENTS	506
OTES	507
HE ROYAL SOCIETY OF PAINTERS IN WATER-COLOURS	507
OTTAGE AT LETCHWORTH (WITH ILLUSTRATIONS)	508
HE SOCIETY OF ARCHITECTS' ANNUAL DINNER	508
OVER WAR MEMORIAL (WITH ILLUSTRATION)	510
URVEYORS' INSTITUTION (SOME PRINCIPLES IN THE VALUATION OF LAND AND BUILDINGS)	510
RCHITECTURAL SOCIETIES	511
ENERAL NEWS	511
OMPETITION NEWS (WITH PLAN)	512
OOKS	513
ORRESPONDENCE	514
TERCOMMUNICATION COLUMN	514
DITORIAL SUMMARY	515
ENDINGS	515
NGINEERING SOCIETIES	515
NOTES TO ILLUSTRATIONS	516
FIFTY YEARS AGO	516
MONTHLY REVIEW OF CIVIC DESIGN.	
THE FUTURE DEVELOPMENT OF OTTAWA (WITH ILLUSTRATIONS)	517
A SCOTTISH JUDGE AND AN ARCHITECT'S CENTENARY	519
TOWN-PLANNING CONFERENCE	520
NOTES	522
DESIGN FOR ART GALLERY AND MUSEUM, CARDIFF	522
THE BUILDING TRADE:—	
RECOVERY OF CONTRACT PRICE WITHOUT THE ARCHITECT'S CERTIFICATE	523
BATH MASTER BUILDERS' ASSOCIATION AND QUANTITIES	524
GENERAL BUILDING NEWS	524
APPLICATIONS UNDER LONDON BUILDING ACTS, 1894 TO 1909	524
PROJECTED NEW BUILDINGS IN THE PROVINCES	525
THE INTERNATIONAL BUILDING EXHIBITION, LEIPZIG, 1913	526
THE LONDON COUNTY COUNCIL	526
WESTMINSTER CITY COUNCIL	526
LEGAL COLUMN	526
LAW REPORTS	527
LONDON COUNCILS	528
OBITUARY	528
FOREIGN AND COLONIAL	528
TRADE CATALOGUES	528
PATENTS	529
SOME RECENT SALES	529
LIST OF COMPETITIONS, CONTRACTS, ETC., OPEN	530
PRICES CURRENT	532
TENDERS	533

Illustrations.

DESIGN FOR THE FAÇADE OF A PALACE. BY MR. S. CLOUGH.

DESIGN FOR A ROYAL MEMORIAL CHAPEL. BY MR. S. CLOUGH.



Cottage at Letchworth: Garden Front. (*See page* 508.)
Mr. J. Algernon Hallam, Architect.

THE ROYAL ACADEMY EXHIBITION.

ONCE more the circle of the year brings us to the opening day of the Royal Academy Exhibition, nd once more the tacit demand is ade that we shall take stock of the osition of British art as presented to s by its official authority. We may rotest and scoff at the title of the Royal cademy to determine the importance or herwise of any new development, but, ter all, it is only a matter of a few years r the forces of innovation to make eir way to the walls of Burlington ouse, even though it sometimes means far longer period before the innovator is lmitted within the ranks of the great who are selected to guide the artistic destinies of the nation.

In practice the Royal Academy is representative of the general conditions of art—of just a brief four or five years ago—and with this proviso in mind we may fairly regard it as a comprehensive exposition on which to base our conclusions as to British art in our own day.

In one respect we are somewhat handicapped; the differences of individual method probably appear more insistent than they would to a critic of another nationality. Thus we may call to mind the Chinaman's dictum that all Europeans look alike to him, while to the European the Chinamen are, to say the least, all brothers. With our own work we lose the type in the varieties, and find it difficult to pick out this or that as peculiarly representative of the national characteristics in art.

The work of the British artist seems to cover the widest range of eclecticism, embracing the points of view of many schools of other nationalities and other centuries. And this is true no less of our sculpture and our architecture than of our painting. To paraphrase Bernard Shaw, our recognised expert in paradox, the character of British art is that it has no character; we fail to see a definite

trend based on a recognised tradition and aiming at some unity in its development. In a way this variety lends interest, but it certainly does not make for strength and vigour. In comparison with other schools our British art is apt to look amateurish and tentative. Assuredly the individual rises above the mass, and genius from time to time breaks its way through an unfavourable environment, enabling us to look without shame on our art of the past 150 years; but we are not solely concerned with genius. If everything were to be referred to our posterity of the next century, this might be admissible, for by that time the lesser men will have dropped into obscurity and only the few giants will remain. Our arts, however, have another function in relation to contemporary life—a function of expression that cannot be dependent on the few, but must be exercised by all who are engaged on work which, to a greater or less extent, involves the exercise of artistic faculties; and it is among these that our annual exhibitions display a lack of direction in ideal. With the man who paints your portrait, quite as much as with he who designs your country house, it is of the first importance to derive strength from fellow-workers possessing to some extent aims and aspirations in common.

Now it is in this respect that the weakness of British art is most apparent. Mainly owing to the disorganised state of our educational methods, but with other minor causes contributing, we see our art meandering along, philandering with this or that influence, and only too often justifying the criticism that it is nerveless and forceless compared with other schools. It has seemed to us desirable to put these reflections before our readers as the result of a first glance round the walls of the Academy before devoting attention to the study of the work of individuals.

Reserving consideration of other sections for future articles. we shall limit ourselves this week to work of a public character in the Architectural Room. The room this year is hung so as to divide itself simply and clearly into three sections—the wall facing the entrance displaying mainly ecclesiastical work; the left-hand wall domestic work; and the remainder buildings of a public or official character.

Taking these latter in numerical order, we come first to Professor Pite's elevation of the south end of the Burlington Arcade, a design showing a very skilful adaptation of the new first floor to the old ground-floor façade.

Messrs. Belcher & Joass are represented by a shaded elevation of their design for the Royal Society of Medicine headquarters, one of the best we have seen from these hands in recent years, and by other work to which we shall refer later on. Mr. Lutyens's design for the Theosophical Society's building, Tavistock-square, with its two projecting wings and deeply-recessed central block crowned by a dome, forms the subject of a brilliant architectural water-colour by a well-known hand. The rendering of this architect's Johannesburg Art Gallery also suggests a charming group, but on closer inspection the design seems to fall in half and rather to suggest two buildings placed back to back.

Mr. S. K. Greenslade has a delicately-drawn bird's-eye view of his National Library of Wales, and near this may be seen a spirited study for a Royal Memorial from the hand of Mr. E. A. Rickards, of Messrs. Lanchester & Rickards, who also show a sketch of their Edward VII. Memorial, Bristol, backed by the Classic portico of the Victoria Rooms. Four of the designs submitted in the final competition for the Manchester Art Gallery may be seen, namely, those by Messrs. Adams & Holden, Messrs. Warwick & Hall, Messrs. T. Worthington & Son, and Mr. Robert Atkinson, whose huge drawing has a prominent place at the right-hand end of the room. Messrs. Worthington's design bears the palm among these for dignity in its conception and the graceful refinement of its detail.

Professor Pite's design for the Pearl Life building is reminiscent of Greek Thomson in its handling, and is treated generally in a broad and impressive spirit—albeit somewhat freakish in the design of the entrance doorway. We regret that another competition design for this building, by Messrs. Cross & Hubbard, shows signs of haste and lack of consideration in the working out, and a consequent coarseness in detail that is unusual in the work of these architects.

We noticed a detail by Mr. Walter Cave for a building in the Haymarket that struck us as a very satisfactory and well-proportioned design for its purpose. Mr. Ralph Knott sends an interior of the London County Council Meeting Hall, and Mr. Burnet two studies of lifts and staircases in the British Museum. The drawings of the National Museum of Wales by Messrs. Smith & Brewer show numerous improvements on the original competition design. Details of the Lincoln Free Library, by Professor Reginald Blomfield, A.R.A., show a carefully studied and interesting little building, while near it is another library detail by Mr. E. Cooper for his building at Homerton.

A large drawing of Oxford-circus shows its appearance when completed from the designs of Mr. H. Tanner, jun., and a bird's-eye view by Mr. Adrian Berrington shows a project for an "Imperial London," the realisation of which is, we fear, much more remote.

THE PROTECTION OF ANCIENT MONUMENTS.

THE Second Reading of the Ancient Monuments Protection Bill was supported by Lord Curzon in an admirable speech, which appears to us to place the matter in the right light, and to call attention to certain of its aspects which are not perhaps generally recognised by the community at large. As he rightly says:—

"The whole attitude of this country and of the civilised world generally had changed towards archæology in recent years. We, and all civilised countries, regarded these national monuments as part of the heritage and the history of the nation. The case in England was different from that of any other country for the reason that these ancient monuments were dear, not only to ourselves but to our offspring who had gone to our Dominions beyond the seas. They were part of their heritage and part of their historical traditions. The duty of keeping these monuments up was, therefore, not merely a national duty but was almost an Imperia duty. The number of historical monumen was greater in England than in almost any oth country, but they had only to study the recor to see that the number was diminishing fro year to year, almost from day to day. Ever where a certain amount of destruction w wrought by the ravages of time, but even mo was caused by indifference, vandalism, and t heedless utilitarianism of the day. We we far behind any other civilised country in t world, not only the greatest, but even t smallest, in the matter of the preservation these records of the past. In other countri the laws were much more stringent. T Governments took powers to assume t charge of buildings, to superintend and condu repairs, and of compulsory expropriation."

We notice that, apparently to disar criticism, Lord Curzon states that "t Bill did not touch inhabited houses, s that there was no invasion of the sanctit of a man's home." Lord Crewe als "thought the Bill went as far in th respect as public opinion would be willin to go." There is no doubt a difficult here which everyone must recognise ar be willing to make allowance for, but, the same time, it is necessary to reali that many of our most cherished ancie monuments are inhabited houses. It not quite clear to us whether the B permits their owners to pull them dow or to wantonly deface them, so destro ing their historic and artistic interes with no regard whatever to the co siderations so eloquently put forward Lord Curzon simply because they happ to be "inhabited," within the meani of the Act.

No doubt proper care will be taken defining this term, as if the mere presen of a caretaker in an otherwise uninhabit old house is to render it "inhabited," a so exempt from the provisions of the Bi the intentions of the Bill in this respe may easily be frustrated, and many o houses may become inhabited simply evade them.

We hope the Bill will be strengthen in this direction to the utmost limit t public opinion will permit, for, though quite agree with Lord Curzon th broadly speaking, the owners of histo houses have fulfilled their charge in spirit of public duty, yet the danger t he anticipates in the future in simil cases to Tattershall Castle and Temp Bar is equally to be apprehended he The Bill having acknowledged t principle that the right of the individu to do as he likes with his own property subject to the superior right of the Sta there seems no logical reason why t same principle should not apply eve where.

A suggestion, to which we hope pro consideration will be given, was made Lord Barnard that municipal authorit should be given the same powers as w proposed to be given to County Coun with regard to the preservation of anci monuments. There may, of course, other ways of effecting this object, l we are certainly of opinion that so thing should be done to awake interest of the Corporations of cou towns, and to throw upon them so responsibility for the care of the anci national treasures within their wa The apathy and indifference of many our towns is deplorable. If such a to as Banbury, for instance, has not eno civic pride to induce it to acquire preserve a well-known old inn of g historic and artistic value which stituted one of the chief objects of inte

isitors to the town, it seems time that e steps were taken to enlighten its ens. To give a more direct authority he citizens themselves than would be vised by the Council of the county in ch they were situated, might possibly luce good results. Lord Burghclere's estion that the definition of "monu-t" should be so framed as to include able objects is perhaps, in the present e of public opinion, a counsel of per-on; but, all the same, there are relics lected with our former Sovereigns or onal heroes now in the possession of ate owners which public sentiment d never allow to leave this country y legal means existed to prevent it. Bill, as Lord Crewe admits, does not ess to be a very far-reaching measure, we think he is right in his contention it contains elements of real value, there is no doubt that it is the recog-n of a responsibility which the State t long ago to have assumed.

NOTES.

Campanile Venice.

No doubt many of our readers who have naturally been perusing with interest the accounts in the daily of the rebuilding and inauguration ie Campanile at Venice will have astonished at the extraordinary e of the work involved. To be told "as long ago as 1906 the work of ation of the Campanile was recog-as urgent, especially at the south corner, which exhibited manifest of ruin," is puzzling enough when alise that years before that date the anile itself was nothing but a heap st and broken bricks. But as we on with growing amazement of the ing of the vaults of the Paradise Apocolypse, of the accurate and e casts that were taken of every before the scaffolding was erected, e marbles brought from the East he Conquest of Constantinople, and Byzantine Peacocks, we begin to that, with that intelligent interest the daily Press always takes in all rs connected with architecture, it een publishing broadcast a descrip-f the restorations of St. Mark's as if lied to the rebuilt Campanile.

yptian vations.

The results of the first half of the season's work of the British School of ology in Egypt are of unusual st to the architect. A large ery has been uncovered dating he earliest historic age down to the of the Pyramids, and probably ng the position of the northern l of the dynastic race before the ng of Memphis and the reign of

Apart from the pottery, figures, her objects usually to be found in ircumstances, the peculiar interest cemetery consists in the exceptional of preservation of the woodwork, of the beams and poles of the roof being still in position, and the of acacia wood being quite strong ound. As the *Times* correspondent

hough the Egyptian houses of that early ve all perished in the cultivated plain, ne precious pieces of house timber were found reused in the construction of the coffins. These pieces agree with Professor Petrie's explanation of the panelled or recessed decoration in buildings, as copied from timber houses, built of overlapping vertical planks. The planks have rows of tie-holes cut in the edges for lashing them together, so that they could slide one over the other when shrinking or swelling. Some examples were deeply weathered outside and burnt inside, showing that a house had been burnt down and the scraps used as waste for coffin building. We have thus preserved to us the examples of those wooden forms which were so generally copied in the early architectural decoration."

Although the forms of the early Egyptian stone and granite buildings have usually been considered to have developed from the wooden constructions which preceded them, we are not aware that any proof of this theory has ever before been discovered in the shape of the actual wooden remains. As a link in the history of the development of architectural styles this find is of striking importance, and leads us to hope for more from the same source when the results of the second half of the season's work is published.

The Competition for the Australian Capital.

The letter to the *Times* from the Secretary of the Institute should serve to make its attitude quite clear on the question of the competition for the New Australian Capital, and should remove any suspicion that English architects are not enterprising enough to take advantage of such a unique opportunity. Sir George Reid's letter was no doubt intended to convey the impression that the Australian Government are quite satisfied that the jury they appointed would command confidence in Australia; but that is not the question involved when English architects are expected to compete. They expect a jury which commands equal confidence here. We cannot refrain from again expressing our very great regret that an unfortunate position should have arisen which has prevented the best men in this country from taking part in a competition of this unusual interest and importance, and has deprived the Australian people of the advantage of their services. We do not, however, see that this deplorable situation is in any way the fault of the Institute or of the architectural profession. If the Australian Government cannot see its way at the eleventh hour to reorganise the whole competition on reasonable lines, it is at least to be hoped that so unfortunate a fiasco will serve as a warning for the future.

The Institute and the Society.

It is only natural that the rejection by the general body of the Institute of the proposals agreed between its representatives and those of the Society of Architects should cause a certain amount of feeling in the Society, and that this feeling should find expression in the speech of its President at the annual dinner. The whole incident is most unfortunate, and it is also unfortunate that it should be possible for the Council of the Institute to go so far with any measure in ignorance of the fact that it was so utterly opposed to the wishes of so large a number of its members. On the other hand, if these proposals were really acceptable to the majority of the general body, and Mr. Bond's suggestion that the real voice of the Institute was not heard at the meeting, is a true one, it seems equally unfortunate that the Institute is so constituted that proposals put forward by its Council and acceptable to the majority of its members should be at the mercy of a few energetic malcontents who take the trouble to pack the meeting. While it remains necessary to take the decisions of the general body of so large and widespread a Society in a room in which it is physically impossible for a majority of its members to be present at the same time, it is always possible to assert that the true voice of the Institute has not been heard at a meeting, and most difficult to deny the assertion. The Institute appears to have outgrown the arrangements thought sufficient in the original Charter. Although we gather from Mr. Bond's remarks that, so far as the Society is concerned, further progress towards fusion is doubtful, yet we are glad to see that he anticipates cordial co-operation with the Institute in everything that tends to the improvement and essential unity of the profession. This unity, we think, can be best secured by the fusion of the whole of the metropolitan architects in one central Society, and this end is worth some sacrifice on the part of the members of the senior Society. But if this ideal cannot be attained, two societies in harmony are better than two in antagonism.

THE ROYAL SOCIETY OF PAINTERS IN WATER-COLOURS.

Mr. T. M. Rooke and Mr. Reginald Barratt devote their main attention to architecture in their numerous drawings at the exhibition of the Royal Society of Painters in Water-Colours. Mr. Rooke is perhaps most successful in his treatment of the sculptured screen of the west front of Exeter Cathedral. Much of Mr. Barratt's work is given to Indian subjects, but he appears to be more at home in his treatment of two Venetian scenes. For the rest, building at the exhibition is largely apprehended in its obviously picturesque phases: its ancient castles, its bits of odd thoroughfares, its thatched cottages, surrounded by immaculate and blooming gardens. The show has, however, other claims to interest. Mr. Sargent's sketch "Genoa" is drawn with spirit and freedom and a breadth of style which usually lifts his work into something of the grand manner; in this case it is the grand manner dashed off, as it were. Apparently quickly conceived in splashes of vivid colour, a tangle of vibrating lines, this sketch arrives at a spacious effect with extraordinary technical skill. Mr. Cayley Robinson is only represented by one work "Jeu d'Enfants," painted in his familiar method and with his sentiment for texture: the three figures are balanced in a pleasantly harmonious "arrangement," which is much more than a pose, while it is suggestive and good to look upon. Amid much of the jangle of modern painting the still small voice of Mr. Cayley Robinson, so quietly modulated and so reticently thoughtful in its utterance, the expression of an original and sure vision, becomes, we fear, a little lost. There are some works of symbolic or allegorical intention at the exhibition. Mr. Charles Sims, whose pretty fancy, as we know, delights in splashing cascades, rainbow hues, sombre leafage, and tiny cupids firing darts at fair maidens, is represented by two charming pictures. Mr. Sims's gift of fanciful presentment would seem, however, somewhat to fail him in the realisation of the principal figure in each of these pictures: her pose suggests the model, and her costume a series



Cottage at Letchworth: Entrance.
Mr. J. Algernon Hallam, Architect.

of detached garments evolved in the process of dressing rather than the romantic completeness, or incompleteness, more natural to idylls of this kind. The meaning of Mr. Crocket's large picture, which he calls "Transition," escapes us. We suppose that the infant in the centre provides the key. We might have attempted an exegesis had it not been for the baffling title. In any case, the picture has an unmistakable attraction; the composition, in a way, suggests the procession of the ages, the conflict of *autres temps, autres mœurs,* or other attitudes towards life or systems of thought. Both Mr. Sims and Mr. Crocket have a poetic sense of composition: a lyrical pictorial sense, which gets away from the definite limitations of the merely "subject" picture, and which makes for the higher abstract and decorative qualities in painting. Mr. Anning Bell is more obviously decorative, if not really so, in his Scriptural evocation of the procession to the Holy Sepulchre on the Monday morning; but his six figures suggest neither joy nor lamentation; the spirit of fine, artistic interpretation, even in its purely decorative aspect, is wanting in their formalistic and uninteresting impassiveness. Mr. Walter Crane, in his two Eastern subjects, an "Indian Dance" and "An Indian Air," seems to discover in himself an old or a new talent, which shows to greatest advantage in

ideas lending themselves to decora
detail and ornamentation. We do not q
understand why these two pictures have
hung below the line, while fluffy landsca
with photographic vistas are given place
honour. Mrs. Laura Knight has achieve
breezy success, of the "Diana of the
lands" type, in "The Flight," two girl
the downs watching a flight of birds;
Clara Montalba's schemes of colour in
Venetian St. Mark's and other Ita
scenes possess a peculiar richness
depth of tone which epitomises cer
qualities of the Renaissance painters with
atmosphere of Italy. The exhibition
tains many subjects drawn from N
Africa and the East. The bright sun
these lands, the adobe and white structu
the people in their flowing garments, mo
white with interesting furbelows of re
blue, provide plain, effective washes and
easy problem for the water-colourist.
there are one or two trifles, one dealing
the Charles statue in Trafalgar-square,
other with the Gordon monument in
same neighbourhood, which suggest
painters may discover nearer afield elem
of the picturesque worth more atter
than the cheaper problem which the
East would seem to provide.

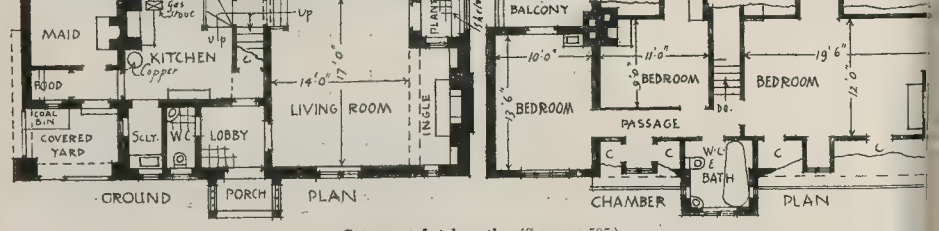
COTTAGE AT LETCHWOR

THIS cottage was built for a client
wished to have one fair-sized living-
hall rather than two smaller rooms.
stairs were arranged so that they coul
used as service stairs without using the
The walls externally are covered with r
plaster, the roof covered with Ca
tiles. The price, including front tile path
gate and trellis, was well under 500*l.*,
drains and gas. The chimneys and fire
are built of small bricks 1¼ in. Thi arch
was Mr. J. Algernon Hallam.

THE SOCIETY OF ARCHITECT

ANNUAL DINNER.

THE twenty-eighth annual dinner o
Society of Architects was held on Frida
week at the Holborn Restaurant, the Pres
Mr. G. E. Bond, J.P., in the chair, supp
by the Rt. Hon. Lord Saye and Sele; His H
Judge Rentoul, LL.D.; Mr. L. A. At
Jones, K.C., M.P.; Sir G. Laurence Gr
Clerk, L.C.C.; Professor W. A. Scott, A.R.
Mr. J. S. Gibson; Mr. Thomas Adams,
Planning Department, L.G.B.; Mr. C. S
Peach; Mr. J. A. Bartrum, Master of the
and Bricklayers' Company; Mr. H.
Bartlett, President of the Institute of Bui
Mr. J. S. Holliday, President of the L
Master Builders' Association; Mr. C. W.
President Quantity Surveyors' Associ
Mr. H. P. Boulnois, Chairman of Council
Sanitary Institute; Mr. A. D. Gre
President of the Institution of Municip
County Engineers; Mr. H. W. Wills;
Needham Wilson; Mr. Ian MacAlister, Sec
Royal Institute of British Architects; Mr.
Yerbury, Secretary Architectural Assoc
Mr. G. A. T. Middleton; Colonel F. S.
R.E.; Mr. Percy B. Tubbs, Vice-Pre



Cottage at Letchworth. (*See page 503.*)
Mr. J. Algernon Hallam, Architect.

r. E. C. P. Monson, Vice-President; Mr. E. J. artridge, Hon. Treasurer; Mr. B. R. Tucker; r. T. Wallis; Mr. J. A. Bowden; Mr. F. C. oscrop Young; Mr. Edgar M. Leest, J.P.; r. A. R. Jemmett; Mr. E. J. Sadgrove; Mr. B. Corby, Mayor of Stamford; Mr. N. W. arrison; Mr. J. B. Fulton; Mr. E. Monson, P.; Mr. W. Banks, City Surveyor, Rochester; r. C. Day, Borough Surveyor, Chatham; r. R. G. Lovell; Mr. Max Clarke; Mr. T. E. idiard James; Mr. C. McArthur Butler, ecretary, and others.

The loyal toasts having been proposed by he President and suitably honoured,

Sir G. Laurence Gomme, Clerk to the London ounty Council, proposed the toast of "The ouses of Parliament," and the Rt. Hon. Lord yre and Sele and Mr. L. A. Atherley Jones, .C., M.P., responded.

is Honour Judge Rentoul, LL.D.,

en proposed the toast of "The Society of rchitects," first presenting the President, on ehalf of the Society, with a gold medal as a emento of the high position Mr. Bond occupied the esteem of the members. Proceeding, e said that the nearest occupation to that of n architect was that of a tailor, for both med at the beautification of things in general nd of nature in particular. An architect, ery much like a poet, was born, not made. In ct, an architect was a poet in his own way. s a poet dealt with commonplace words and ranged them in such a position as to thrill eople, so the architect, with stone, brick, etc., s his words, raised buildings that were to be poem in themselves. There was a poetic ement in the calling of an architect more than any other he could think of—and there ad been great and noble architects. Just as ll chimneys were built from within, so the orks of the architect were built from within—he inspiration came from the architect himself. eople might laugh at the Law Courts in the trand, but they must remember that the nfortunate architect had to construct 950 eparate rooms communicating with one nother as directly as possible for the conenience of barristers, and beauty, acoustics, nd everything else had to be sacrificed to peed in getting from one place to another. he true architect was a man who evolved omething from his own brain, and it was not single part of a building which made its beauty, was the whole taken together. A man who onstructed a great and beautiful building ould have difficulty in explaining how e derived the idea. He was told that one of he commonest dangers that an architect fell nto was in doing something near the end hich spoilt the symmetry and beauty of all he rest. What was the chief charm of Egypt, reece, Italy? It was the imperishable works f man—*i.e.*, the works of architecture which e saw.

he President,

n reply, said once more it was his pleasure to be ble conscientiously to congratulate his fellow-embers upon the continued progress made y the Society. For many years now the nnual reports had placed on record year after ear a steady and consistent increase in its embership, and also a steady and sure velopment of its financial position. And otwithstanding the suspension of their ctivities during several months, in honourable onformity with the spirit of an agreement ntered into between the Council of the Royal nstitute and themselves, a suspension which eriously handicapped them, their progress uring the last eighteen months had beaten ll previous records. Of course, the success f their efforts during that period might be to ome extent attributed to the fact that they ntered into possession of their new home in edford-square in September, 1910. He ventured to say that the strong and powerful osition to which the Society had now attained oke well for the popularity of the cause ith which it had for so long been identified. hey were entitled to ask what progress there as to report in regard to the Registration ovement since the last annual dinner, and in eply he should be obliged to say, none whatever. For more than a quarter of a century, s pioneers in the Registation movement, the ociety had stood and worked alone, in the ace of the most persistent and unfair opposition, n which opponents brought to bear every onceivable weapon of abuse, irony, and ridicule, ut never once that of practical argument, and in the autumn of 1910 the Society had so far advanced that they had just completed a new revision of their proposed Bill, and had the necessary arrangements for its immediate presentation in the House of Lords. But thoroughly to understand the true position of affairs at the moment it was necessary to recognise the fact that an entirely new situation was created when the Council of the Royal Institute pledged themselves to adopt a Registration policy; for during the whole course of the Society's existence they had been expressing the opinion that such was their duty, and that, should they take up the question and submit a fair and reasonable Bill, the Society should be prepared loyally to support them in their efforts to secure its passage through Parliament. In the circumstances three courses were open to the Society—firstly, to have their Bill presented at once as arranged; secondly, to suspend operations for a time and await the production of the Royal Institute's Bill; and, thirdly, to endeavour to open negotiations with the Royal Institute at once with a view to the production of a joint Bill. Of these, from a tactical point of view, the first was a reasonable one, for in all probability the Bill would, in the House of Lords, have reached the Committee stage; and its opponents would have been compelled to formulate their opposition, chiefly by way of proposed amendments, and, whatever the result, matters would thereby have been materially advanced, for the situation would have been clearly defined and the Society would then have been able accurately to locate the position; but in the face of the previously expressed opinion he felt it was a course they could not honourably follow. The second course would have been extremely foolish, as, after waiting years for the production of the Royal Institute's Bill, they might find that in the interests of the Society and of all others concerned outside the ranks of the Institute itself they should be then compelled to oppose it; and as a matter of fact subsequent events proved that they were right in this assumption, for the claim put forward by the Royal Institute's representatives in regard to the composition of the Registering and Administrative Council, under the Act, was one which the Society as an independent body could not then, nor ever would, agree to, and this really led to the suggestion for amalgamation as a way out of the difficulty, because it was now recognised by the responsible leaders of both bodies that neither could possibly carry a Bill through Parliament if opposed by the other. There remained the third and what he submitted was the only sensible and honourable course, and this was adopted. On November 23, 1910, he wrote to Mr. Leonard Stokes, the President of the R.I.B.A., a personal letter, pointing out very fully his views of the situation, and suggesting a joint meeting of representatives to consider it, undertaking, should the suggestion be favourably received, to forward an advance copy of the Society's revised Bill in order to facilitate discussion. Mr. Stokes and the members of his Council, whom he consulted, were favourably impressed by the proposition, with the result that a series of joint meetings extending over twelve months were held. While for obvious reasons he could not speak about the qualifications of the Society's own representatives on that joint Committee, he ventured to suggest that among those who represented the Institute were some of the most astute, practical, and far-seeing minds in the profession, gentlemen perfectly capable of protecting the interests of the Association they represented, and in whose keeping its honour and dignity were perfectly safe, and who, while keeping their eyes definitely fixed upon the object they had in view, unhesitatingly admitted the justice of many of the contentions of the Society, and met them in a broad-minded spirit, with a view to finally settling a very vexed question. Of course, only those engaged in the actual discussion could possibly know all the reasons which led to the adoption of the scheme, ultimately evolved, which included a fusion of the two bodies, but that it was a fair and reasonable one was, he thought, evidenced by the fact that opponents on both sides objected to it for exactly the same reason—that was to say, both sides claimed that they were making very great concessions and receiving very little in return. After being approved by the Councils and members of both bodies, a legal hitch occurred in regard to the power of the Institute to enter into such an agreement, and the Council immediately set to work upon an amendment to the Charter, with a view to surmounting that difficulty. It was a second time submitted for approval in a meeting at which about a seventh of the Institute's members were present, and which was obviously packed by an organised opposition consisting of junior members. It was referred back, ostensibly upon a side issue about which they cared nothing, and by what was practically an adverse vote the twelve months' ceaseless thought and study given to the subject in all its bearings by their duly appointed representatives, and nominal leaders, had been rendered of no avail, and their broad-minded and far-seeing policy had been left in confusion, and this in the face of their President's remark at the last annual dinner that "if there is any honour in the Institute the agreement will be carried out." No great progressive movement was ever carried to a successful issue without some sacrifice, but the grand ideal of the establishment of that professional unity within one strong institution, which would have rendered all ethical and educational reforms within our ranks much easier of attainment, and would at the same time have positively secured that unity of action in regard to Registration which was essential to success, was apparently, by some of the younger men in the profession, not considered worth even the sacrifice of a little petty pride, for they had no difficulty in assuming that they were perfectly justified in committing themselves to a wrecking policy before they had even heard the other side of the question. The present position was an eminently unsatisfactory one, for the real voice of the Royal Institute had not yet been heard upon the question. Further progress in regard to fusion was under existing conditions a very doubtful quantity, but, in any case, the Society were still prepared to continue negotiations with a view to the production of a joint Bill. During the last few years a much more conciliatory spirit had existed between the Councils of the two bodies, and recent meetings had, he was sure, done much to foster and develop that spirit; and, whatever might be the ultimate fate of the subject-matter they had under consideration, there would always remain that mutual appreciation of each other's honesty of purpose in working for what each conceived to be the best interests of the profession, and he sincerely hoped that it might be the pleasure of both to work together in the future with perfect harmony for the grand purpose of maintaining the honour, dignity, and general standard of ability within the profession at the highest possible level.

Mr. Percy B. Tubbs,

Vice-President, then proposed the toast of "The Guests," remarking on the fact that the Society had always been honoured by the presence of many eminent guests. Although the negotiations with the Institute had not so far been successful, they hoped to be able to work together in the cause of Registration, which they felt would be of great benefit to the profession. The Society, like the Institute, was pledged to a policy of Registration, and failing agreement between the two bodies, both would work to that end, but if there could be a united profession they would stand a much better chance of getting a Bill through Parliament.

Mr. J. S. Gibson,

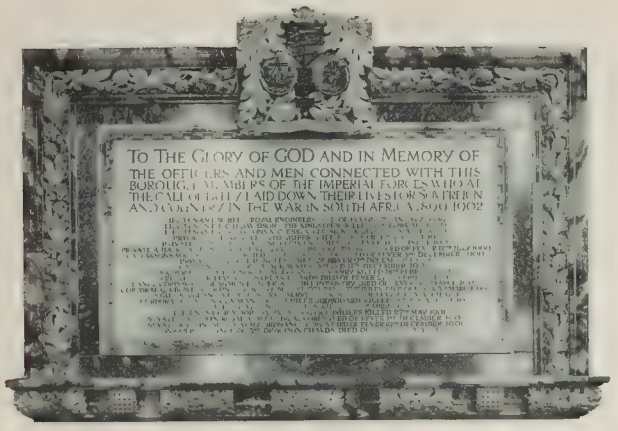
who first responded, said he should be sorry to think that the work done by the societies would be lost, and he could not think that having gone so far it would not be possible to go further. All things were possible to youth, and certain young men to whom the proposals of the Councils of the two societies had been put incontinently referred the whole matter back; but time would tell its tale, and he believed that he and Mr. Bond were young enough to be found working together for this great consummation of the Registration of architects, and he was certain that it would be with the united body of architects behind them who would be giving their entire support.

Mr. A. Needham Wilson

also responded, and said that the Society had occupied a perfectly logical position and had pursued their objects in a fair and open manner. It had been his hope to see the whole profession united with the object of bringing to an issue this great question of Registration, which was of paramount importance to the profession.

The proceedings shortly afterwards terminated.

D



Dover War Memorial. Designed by Mr. H. T. Edwards.

DOVER WAR MEMORIAL.

THE accompanying illustration shows a memorial to the officers and men connected with Dover who died in the South African War. It has been placed in the Church of St. Mary the Virgin. The tablet was unveiled recently by Lord Roberts.

The whole of the material is alabaster, from Derbyshire quarries. The inscription plate is enclosed in a carved frame, in which appears a grouping of the rose, thistle, and shamrock. The keystone is blazoned with the arms of the borough, and contains a copy of the ancient seal. The Victoria Cross (held by one of those commemorated) is grouped in the centre; the war medals of Queen Victoria and King Edward are also reproduced, with the motto of the borough, "Ville et Portus Dovor." This touch of colour adds to the general effect of the various shades of alabaster employed.

The work was designed by Mr. H. T. Edwards and carried out by the Art Memorial Company, of West Norwood.

THE SURVEYORS' INSTITUTION:

SOME PRINCIPLES IN THE VALUATION OF LAND AND BUILDINGS.

AT the ordinary general meeting of the Surveyors' Institution on Monday Mr. G. Taylor Loban read a paper on "Some Principles in the Valuation of Land and Buildings," of which the following is an abstract:—

"Valuation is an art. Behind it there may be—I hope to exhibit to-night some of the respects in which there is—a science more or less exact. But in actual fact valuation, as practised to-day by the very great majority of the members of the profession, is an art pure and simple. Its exponents have learned what to do and how to do it by practice, by constant touching of the things with which they deal. The promptings of years of experience join with the familarity born of years of experiment, and they together produce a certitude of handling of material in any given case that is quite independent of the consciousness of scientific principle behind.

One might ask who are they and what is it that determine value. On what principle is it that such and such a property is bought at 4 per cent. one year and at 5 per cent. another; or why one class of property commands twenty years' purchase of its rental, while another commands only ten. It is hard to answer. But there is a large number of men, chiefly members of this profession, but including also many who operate on their own account, who are always in touch with the property market—buying, selling, weighing, suspecting, avoiding, and incidentally cultivating an instinct to distinguish exactly how much the times permit them to expect from this or to afford to pay for that. These men, whether acting for themselves or for others, are the property dealers, and I imagine that in the long run it is what they do and what they abstain from that creates a market.

Now the property dealer does not work out with tables the prices he will give for securities. He has bought them a hundred times before, and knows to a pound what any particular one may be expected to yield by way of return on capital outlay. He knows, too, the exact moment at which it is worth his while to buy or sell—whether in relation to other openings in the same market or to the markets in other forms of security. The prices that he establishes become substantially the market prices of the day, and he establishes them out of his knowledge and experience and not by computation from tables. So far then as value is established by the custom of dealing the tables have nothing to do with it. It is when a number of disconnected results are to be compared, and when the conclusions to be drawn from them are to be ascertained, that the necessity of some standard of comparison arises.

It rarely happens that any two transactions are alike in every particular. Some means are needed by which they may be cast into similar form, so that common features may be distinguished and observed. Such means and such a standard of comparison the machinery of the tables is found to furnish.

There is, however, another use to which the tables may be put. By their aid a discussion on value may be carried on, in terms of rental, deductions, and years' purchase, with an ease which would be quite impossible in the absence of this part of the valuer's machinery. Causes of difference may then be detected and so be reduced to issues of fact or of opinion. Inconsistencies may be located and corrected. The exchange of views and contentions may be facilitated.

It cannot be too strongly urged or too closely realised that the rates per cent. and the years' purchase are simply convenient catagories or pigeon-holes into which results may be thrust for subsequent reference, and that when they are used for valuing they represent an attempt to reconstruct the conditions of the market by comparison of convenient standards. Apart from the continued sanction of the market there is no virtue in them.

In practice, and for the sake of convenience, however, valuation is very commonly effected by the machinery of the tables, and it becomes of interest to observe the functions of each of the factors that go to make up such a valuation. These factors are the rent, the deductions, and the years' purchase or multiplier.

The legal definition of rent was well known in the days of the examinations, and has been well forgotten since. The valuation definition of rent is that it is an income arising by the letting of property; it is gross if the maintenance charges on the property are to be met out of it, it is net if it is free of these charges. Frequently, as in the case of a weekly tenancy, it is an aggregate of gross rent proper, and of rates, taxes, and other charges. Rent depends partly on accommodation, and bears a certain ratio to it. An increase of accommodation up to a certain point will mean an increase of rent. The limit is reached when the accommodation goes beyond the means
requirements of the class for which it is intend
or for which alone it can be used. From t
point onwards rent ceases to increase w
accommodation. It has to be remembered th
a rent must be obtained out of means wh
the property itself is an instrument to provi
The amount of rent that a property can sta
will depend less on the extent of the prope
than on the extent of the profitable use
which it can be put. Cases of big premi
at low rents and small premises at high re
will occur to every one. Competition also ten
to raise rents, but only to this limit impo
by the productiveness of the property.

Rent is subject to losses by empties and b
debts. Even a net rent will therefore requ
some further reduction by way of what m
be called contingency provision before it c
be regarded as a secured income. Now, wh
expenditure on rates, taxes, and repairs c
be exactly foreseen and allowed for, allowa
for voids and losses is a matter of experien
and estimate. A very close estimate of t
proper proportion of the total rent to be allow
is sometimes made by observing in the prope
accounts the actual loss per cent. under the
heads during a few past years.

The figure by which the net income is mu
plied—commonly called the years' purchas
depends upon security. It also depends
length of term, but not as a matter of judgme
Whatever tends to add security to the inco
tends also to raise the years' purchase. A
thing that detracts from the security of
income lowers the years' purchase. There
some qualities which affect both rent and secur
Greater desirability tends to throw up re
but when rent cannot be increased it reacts
improve security.

An interesting example of the relation of r
and security as factors in valuation is furnis
by a consideration of the levy of duties ur
the Finance Acts, 1894 to 1910. It will be rec
nised that an important part of the proces
valuation is the determination of the amoun
deductions necessary to arrive at inco
from rent. These deductions usually consis
regular payments made periodically, as rates
taxes and insurance, or of payments m
irregularly at uncertain intervals but allowed
at a certain and definite rate as reparati
In all such cases the deductions are made f
the gross annual produce of the prope
and their magnitude, so long as it lies wi
reasonable limits, tends to reduce the inco
and does not affect the security and ye
purchase. There are, however, other deduct
equally certain in incidence, but very uncer
in point of amount and time, and of these
taxes to be levied under the authority of re
legislation are typical. So far as these
calculable in their amount and the time of t
happening they will no doubt be allowed
by their annual equivalents as charges ages
the income derived from the property. Wh
however, the amount and time of incidenc
not determinable they must be regarde
diminishing the security for the continuanc
the level of income, and to that extent they
be expected to reduce the years' purchase.

Few valuers can be found who would re
valuation as an art of exact application. M
hold it is impossible to value certainly wi
5 per cent. The reason is obvious. Value
thing continually fluctuating. On the one h
it depends on long-continued and grad
operating stresses of a political, social, or
mercial nature. On the other hand it is de
dent on capricious and fitful influences that
from day to day—fashion, some fortunate
dent, an idle market, and so on.

This latter variability, arising one can
guess how, cannot be estimated or allowe
in relation to any individual result. No s
instance of a particular price should eve
quoted as an indication of a market. The
indication, as everyone here knows we
obtained by multiplying the number of tra
tions observed. Casual variability has the
opportunity to cancel out. It is only
observations that extend over a conside
period of time and include a considerable va
of circumstances that conclusions may
drawn which will safely indicate the tren
position of the market.

The great majority of the cases with whic
valuer is concerned relate to land or lan
buildings in various combinations. It
becomes of very great importance correct
appreciate the nature of the component part
the relation of these one to another. I pr

orefore, to present for consideration some sort analysis of the relations of these elements. The movement of the value of land is one of e most regular and gradual. Commencing at practically negligible prairie value it proceeds imperceptible gradations through a value as mmon or waste land, woodlands, to a value as ricultural land, again increasing to an accomodation value to a low building value, and so in certain instances to a high building value. Now consider the effect of development on rise in value. Attention must, however, st be drawn to two important principles. he first of them is, I believe, in direct contraction of a very widely held view. It may be ated shortly thus—that the value of a piece of nd and of the building erected upon it is not cessarily or generally the sum of the value of e land and the value of the buildings taken parately. The contrary opinion forms the undation of much practice, but I hope to show at of itself it is fallacious.

An example will illustrate. A piece of land pable of development for building is worth l. per annum, and being uncovered may be lued at 200*l.* in fee. This is the value of the eeholder's interest. A lessee takes it for a ng term of years and erects upon it a building an ordinary market cost of 500*l.* with a view realising on completion of the building. e building being completed he can sell and n obtain 550*l.* for his lease; the extra 50*l.* ing paid by a purchaser who escapes the ouble and risk attendant upon building specuion. At the same time the freeholder is able sell his interest—now secured—at twenty-five ars' purchase, or 250*l.* The value of lease d freehold together is thus 800*l.* The value the land alone is 200*l.* The value of the ilding as measured by its cost is 500*l.*, and the m of these figures is 700*l.*, or 100*l.* less than e real value of the property.

I anticipate a possible objection by saying at the man who organises the building ansaction may always expect to sell at someing more than the mere cost to him—a mething which will be over and above the yment to the builder and architect. The ility to make a profit forms the basis of all ilding, and without reasonable profit no man willing to work.

The explanation appears to be that every ilding erected on its site represents the sum not two but three things. It represents land; (*b*) buildings; and (*c*) a certain ount of knowledge, industry, enterprise, and k, in addition. These last have their economic lue, and in the instance quoted that value represented by 100*l.*

It is to be presumed that the building erected any moment on a piece of land will represent best and most profitable use that can be made the land. But with the improvement in thods of construction, with changing conceptns of convenient building, with the removal statutory restrictions, it has to be said of the jority of structures that ten years after they built they are not of the latest, most profitle type. In other words, ten years or so er a building is erected there are even better es to which the site of it might be put; the ld is not used quite to its best advantage. long, of course, as there is any substantial lue in the building it would not pay to correct is. An owner cannot afford every ten or enty years to scrap his property because of ne slightly improved method of construction development. So the land remains for the eater part of the life of the building—certainly creasing in value—but increasing less rapidly an if it were free and uncovered.

The effect of a building covenant is much same. A lessee may have a valuable plot land covered by quite inadequate buildings—ildings appropriate perhaps to the very ferent conditions that obtained when they re erected, but entirely inadequate to the dern possibilities of the site. It may be that th lessor and lessee know this. But the sor cannot enter to make the change; and lessee does not find it will pay him to do in view of an ever-shortening term of holding. the meantime the covenants of the lease mpel the maintenance of a particular class buildings on land which has become far valuable for them. In this case also the rease in land value is damped or retarded the circumstances.

To focus discussion I may perhaps be permitted to summarise the principles which I er for consideration:

1. There is a tendency to exaggerate the portance of the tables in the practice of valuation, and in the teaching of that practice the place of the tables should be more subordinate.

2. Values are established by the operations of a comparatively small number of dealers, among whom experience takes the place of tables.

3. Market value is a general deduction from a number of varied transactions, and individual results may be misleading.

4. Valuation is essentially effected by comparison, first for resemblances to establish the class, then for distinctions to differentiate in that class.

5. It is more convenient to discuss valuation in terms of rent and years' purchase than by reference to opinions on the fabric.

6. The use of devices such as the special contingency deduction, whereby the valuer may correct errors due to the necessary use of exact rates per cent. on years' purchase, is legitimate.

7. There is a degree of risk appropriate to every rate of income, and so long as that rate is adopted it is not permissible to reduce the risk by excessive allowances.

8. The value of land and buildings in combination is not necessarily the sum of the values of the component parts taken separately. The difference is partly attributable to the enterprise of the person who combines them.

9. The difference between the value of land considered as wholesale and its value considered as retail is the economic return to the person whose enterprise furnishes the convenience of the small parcel.

10. The obligation to maintain buildings, whether it arises from covenant or considerations of economy, damps the rise in the value of the site.

11. It is possible for a rising market to counterbalance the effect of a deterioration in fabric or of a diminution of a leasehold term, and for a falling market to counterbalance the effect of a physical improvement in the property."

ARCHITECTURAL SOCIETIES.

Nottingham Architectural Society.

The annual meeting of the Nottingham Architectural Society was held on Tuesday, April 23. One new Associate was elected. The Council reported that notwithstanding five resignations and one loss through death during the past year the total membership had increased by seven, and now was eighty-eight. They also placed on record their sense of loss of one of their oldest members, Mr. Robert Evans, who had occupied the presidential chair nine times, and to whom the existence of the Society in its early difficulties was largely due. The attendance at the meetings was about the same as the previous year.

The Council had been in consultation with the building trades employers with regard to the difficult problem of specialists and subcontractors, and had also considered the scale of charges suggested by the Royal Institute and the legal liability of architects. They had also brought pressure upon the framers of competitions to ensure fair conditions and reasonable payments.

The statement of accounts showed that notwithstanding increased expenditure the Society was in a sound financial position, and had a balance of over 61*l.* in hand. As the jubilee year of the Society commences next November the Council were asked to consider how best to celebrate it.

Mr. Robert Evans was heartily thanked for his efforts on behalf of the Society during his two years' presidency. The following gentlemen were elected officers for 1912–13:—President, Mr. E. R. Sutton; Vice-President, Mr. H. Gill; members of the Council, Messrs. R. Evans, W. R. Gleave, E. H. Heazell, A. Marshall, H. G. Watkins, A. Dale, and H. A. Dickman; Hon. Secretary and Treasurer, Mr. F. M. Royle; Hon. Secretary of the Designing Club, Mr. W. H. Swann; Hon. Librarian, Mr. R. Spencer; Auditors, Messrs. A. J. Holbrook and J. Woollatt.

BOOK RECEIVED.

MODERN DESTRUCTOR PRACTICE. By W. Francis Goodrich. (London: C. Griffin & Co. 15s. net.)

GENERAL NEWS.

Professional Announcement.

We are informed by Mr. J. Houghton Spencer, architect, No. 5, Hammet-street, Taunton, that owing to impaired health he has disposed of the practice carried on by him at Taunton continuously for forty-four years past to Mr. F. W. Roberts, F.R.I.B.A., No. 2, Hammet-street, Taunton, who will continue to carry on the same at No. 2, Hammet-street, in conjunction with his own practice carried on by him in Taunton for the past twenty years.

The R.I.B.A. Testimonies of Study.

In reference to the alternative scheme of Testimonies of Study for the Final Examination of the R.I.B.A., for the information of students who may not have access to the *Journal* of the R.I.B.A. we propose to publish, as they appear, the subjects for the Testimonies of Study under the revised scheme. Subject III. for the present year is as follows:—

(*a*) A Detached Ballroom to a Large Country House, to be connected with the house by a covered way. The decorations should be specially considered. Shaded drawings to ½-in. scale, showing both interior and exterior, and a detail of decorations.

(*b*) A Landing-Stage to a River or Lake, with a Restaurant. Drawings to show complete construction ¼-in. scale and ½-in.

The dates for submission of designs are:—United Kingdom, June 30; Johannesburg, August 31; Melbourne, September 30; Sydney, September 30; Toronto, July 31.

Royal Scottish Museum Building Extension.

The report for the year 1911-12 by Sir T. Carlaw Martin, LL.D., F.R.S.E., on the Royal Scottish Museum, has been issued. The report states that a necessary first step in the scheme of an enlarged museum is in progress, and it is hoped that another year may see the beginning of a series of halls that are designed to relieve the overcrowding of specimens in the department of natural history.

Lower Thames Valley District Surveyors' Association.

This Association will hold its annual dinner on Saturday, May 4, at the Chiswick Town Hall. Visits of inspection will be made previous to the dinner to (1) Isolation Hospital, Willesden; (2) Metropolitan Electric Supply Company's power station at Willesden; (3) Brentford Gas Company's works at Brentford

Stratford-on-Avon.

Nash's House, now the New-place Museum, has been restored for the trustees of the birthplace, under the directions and superintendence of Mr. G. Pemberton, Mr. Guy Dawber acting as advisory architect for the work.

Royal Society of Medicine: New Buildings.

The new quarters of the Society will be opened by the King and Queen on May 21. They stand in Wimpole-street (south end), and have been erected after the plans and designs of Mr. John Belcher, R.A., and Mr. J. J. Joass, with an elevation in the Classical style.

Fine Art Exhibition, Venice.

The tenth International Exhibition of Fine Arts was opened a few days ago in the English pavilion. The Earl of Plymouth is Chairman of the British Committee, and the Executive Committee consists of Professor Gerald E. Moira for oil paintings, Sir Ernest Waterlow for water-colours, and Mr. F. Derwent Wood for sculpture. About 150 English artists contribute pictures and sculpture.

Art Works for Italy.

The statue, "L'Homme qui Marche," by M. Rodin, is placed in position in the Farnese Palace, which the French Government have recently acquired as their Embassy in Rome. Amongst the pictures and drawings by Mr. Walter Crane, now shown in the Leicester Galleries, is the artist's portrait in oils of himself, which the Italian Government invited him to paint for the Uffizi Gallery, Florence.

Manchester University.

We regret to announce that Professor Stewart H. Capper, M.A. (Edin.), whilst recovering from illness is ordered to take prolonged rest and, under medical advice, has resigned the Chair of Architecture in the Victoria University, to which he, being then Professor of Architecture in McGill University, Montreal, was appointed as first occupant in 1903.

Fire at Clumber House.

Clumber House, one of the notable buildings in the "Dukeries," was the scene of a fire at the end of April. The original house was built for the Duke of Newcastle about 1752, by Stephen Wright, the architect of the University Library, Cambridge. In 1879 much damage was done by a fire at Clumber, but the recent outbreak was not so serious, motor fire-engines being rapidly available.

New Bridges, Glasgow.

The Glasgow Corporation have resolved to construct two new bridges across the River Kelvin, in the western limits of the city; the one bridge between Maryhill and the Botanical Gardens, and the other, which will cost about 12,000*l.*, to join Radnor-street to Kelvingrove Park.

Economic Water Supply.

We have received from Messrs. Longmans, Green, & Co., Paternoster-row, E.C., a copy of the scale to Housden's "Economic Water Supply." This is now issued separately, price 6d. net, and also gratis with copies of the book. The scale is used for ascertaining the diameters of pipes and half-pipes adopting any desired coefficient. It is based on the tables in "The Precise Calculation of Pipe and Drain Dimensions" (Housden), Messrs. Longmans, Green, & Co., and is mainly intended for use therewith, but can also be used independently.

Church Building Society.

The Incorporated Church Building Society held its usual monthly meeting on the 25th ult., at the Society's House, 7, Dean's-yard, Westminster Abbey, S.W., the Hon. Sir E. P. Thesiger, K.C.B., in the chair. Grants of money were made in aid of the following objects, viz.:—Building new churches at Belfield, St. Ann, Rochdale, 100*l.*; and West Fordington, St. Mary, Dorset, 150*l.*; rebuilding the churches at Eastrop, St. Mary, near Basingstoke, 40*l.*; and Thorpe-on-the-Hill, St. Michael and All Angels, near Lincoln, 60*l.*; and towards enlarging the churches at Gillingham, St. Barnabas, Kent, 20*l.*; Gringley-on-the-Hill, St. Peter and St. Paul, Notts, 50*l.*; Morton, Holy Cross, Derbyshire, 20*l.*; and Mottingham, St. Andrew, Kent, 50*l.* A grant of 50*l.* was also made from the special Mission Buildings Fund towards building a mission church at Upton Park, St. Michael, Essex. The following grants were also paid for works completed: Maindee, St. John, Newport, Mon., 100*l.*; Medbourne, St. Giles, Leicester, 20*l.*; Penrhiwceibr, St. Winifred, Glam., 30*l.*; and Westhorpe, St. Margaret, Suffolk, 15*l.* In addition to this the sum of 250*l.* was paid towards the repairs of various churches from trust funds held by the Society. The annual general Court will be held at 3 p.m. in the Church House, Westminster, on May 23, the Bishop of Chester presiding. He will be supported by the Bishops of Manchester and Rochester, Mr. Athelstan Riley, and Mr. Walter Tapper, F.R.I.B.A.

Windsor.

Mr. A. Y. Nutt, M.V.O., Resident Architect to Windsor Castle, will shortly retire after nearly forty-five years' service, in the course of which he has also occupied the offices of Draughtsman, Clerk of the Works, and Surveyor to the Dean and Chapter. The Windsor memorial to King Edward, unveiled on Monday last, consists of a bronze statue of the late Sovereign with allegorical figures in bronze holding shields inscribed with the names: Intuitus (Tact), Sapientia (Wisdom), Humanitas (Humanity), and Felicitas (Geniality) at the four corners of the pedestal. The composition is the work of Countess Feodora Gleichen, whose designs were chosen from those of twenty competitors.

Book Sales.

Messrs. Sotheby have recently sold in their rooms, Wouvermans, Œuvres, 1737–80—30*l.*; Graves and Cronin, History of Sir J. Reynolds's Works, 4 vols. only, 1899—47*l.*; a collection of sixty views of Buildings in Paris, after Durand, etc.—33*l.*; Description de l'Égypte, 21 vols., 1809–13—29*l.*; and Ackermann's Histories of the Universities and Public Schools, 5 vols., 1814–16—43*l.* On April 20 Messrs. Christie sold Kennedy's etched Work of J. M. Whistler, New York, 1910, for 52*l.*, and Smith's British Mezzotint Portraits, 5 vols., for 17*l.* 10*s.*

Houses of Parliament (Oak Panelling).

Mr. Noel Buxton asked the Hon. Member for St. George's-in-the-East, as representing the First Commissioner of Works, whether the work of removing the varnish from the oak panelling in the Houses of Parliament was proceeding; and whether the Debating Chamber of the House of Commons can be dealt with during the summer recess.—Mr. Wedgwood Benn replied that the work was being carried out from time to time, as funds and the convenience of Members permit. The First Commissioner regrets that it will not be possible to remove the varnish in the Debating Chamber this year.

Architectural Assistants.

In Wednesday's Parliamentary papers Mr. Snowden asked the Hon. Member of St. George's-in-theEast, as representing the First Commissioner of Works, if any decision had been arrived at in regard to placing the class known as "Architectural Assistants" engaged in the Office of Works upon the established list; whether the undertaking given on December 7 last, that the wishes of all the men in this class in regard to their desire to be established would be ascertained, had been carried out, and, if any scheme had been prepared, would he say what was the nature of the proposals made?—Mr. Wedgwood Benn replied that a scheme had been submitted to the Lords Commissioners of his Majesty's Treasury, which provides for the establishment of a staff of permanent architectural draughtsmen and technical assistants to the architects.

Property Sales.

Amongst the properties just placed in the market are Moor Park, Farnham, in West Surrey, which embraces 500 acres upon the southern slopes of the Hog's Back, and the beautiful old gardens and pleasure grounds are traversed by the River Wey. It was at Moor Park that Swift entered the service of Sir William Temple, and met Hester Johnson (whom he celebrates as "Stella"), the daughter of Sir William Temple's steward. Not far distant are the remains of the Cistercian Abbey of Waverley, founded in 1128 by Giffard, Bishop of Winchester. Finedon Hall, near Wellingborough, Northants, has been for nearly three centuries the seat of the Dolben family. Consequently upon the death of Miss Mackworth Dolben, the estate, of some 1,600 acres, is to be sold, and Messrs. Knight, Frank, & Rutley are compiling a catalogue of the contents of the mansion, much of which has been in the house during many generations. The works of art and the furniture include an old English tapestry panel representing a hunting scene, a notable panel of Aubusson tapestry, family portraits, and XVIIth-XVIIIth century furniture. Bear Wood, Berks, formerly part of Windsor Forest, will be offered for sale in the course of the summer; the estate, of 3,000 acres, belonged to the late Mr. Walter, of the *Times*.

COMPETITION NEWS.

Regent's Quadrant Competition.

In accordance with our promise, we give below the questions and answers in reference to the Regent's Quadrant Competition instituted by the proprietors of the *Builder*:—

1. Is the hotel façade to be included on the drawings?

It would be desirable to show one bay.

2. Has any notice to be taken of intermedi
streets?

The accompanying plan shows street openi
to be provided for. The treatment of this openi
is left to the discretion of competitors.

3. On opposite side of street there are t
new buildings—one at corner of Oxfo
circus and another midway. They
similar. Does that mean that the whole of th
side will ultimately be of that design?

These buildings need not be considered.

4. Are competitors to adhere to Mr. Norm
Shaw's floor levels?

No, not necessarily.

5. Is a detail of the elevation to be given
No.

6. Are the rooms over shops all devoted
shop purposes? If not, separate entrances w
of course, be necessary?

It need not be assumed that the upper flo
will be let with the shops, and competitors
at liberty to show such separate entrances
they consider desirable.

7. Is the frontage for each shop to be
same as Mr. Shaw's?

No; absolute freedom may be taken in reg
to shop frontages.

8. Does façade include the street at side
hotel?

Yes; see reply to Question 2.

9. Are the ceiling heights as shown on rep
duction to be regarded as fixed?

No; see reply to Question 4.

10. Is the design to be shown connected
the Piccadilly Hotel, or separated from
hotel by Air-street?

Left to the discretion of competitors.

11. Could competitors have a diagr
showing exact finish as existing?

The present building may be assumed
terminate about 6 ft. within the left-hand e
of portion shown in illustration accompany
conditions (issue of April 19).

12. Does the 220 ft. of frontage include fi
the side of hotel entrance feature to the cou
of Piccadilly-circus, or does it include the
bay beyond entrance (which bay is, from mem
already built)?

The present building extends to Air-str
The 220 ft. includes this street and the front
as far as the Circus.

13. Can the existing setting-out of bays
taken as the suitable size for shops required

No; more freedom is desirable in this resp
See answer to Question 7.

14. Presumably for the purposes of this c
petition the slight curve on the Quadrant
be ignored. If not, can the curve be given

The elevation may be drawn as develope

15. Are the building stories above grd
floor

(*a*) To be designed to form extension
Piccadilly Hotel, or

(*b*) To be designed exclusively for the s
floor tenants?

Not necessarily either. The façade shoul
appropriate to premises occupied for bus
purposes. See answer to Question 6.

16. What should be the cost of prop
façade?

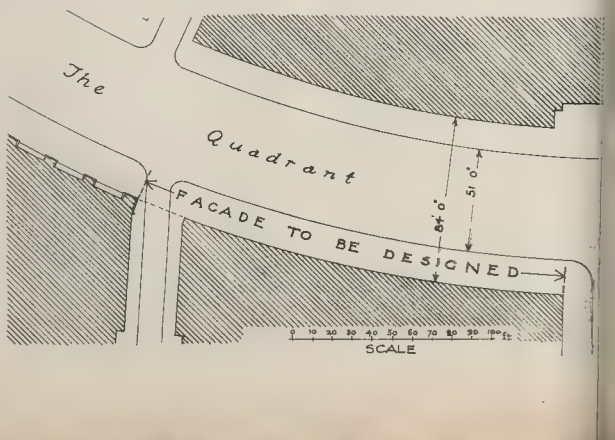
This need not be considered.

17. Is it proposed to refront *only*, or ent
rebuild, adjoining building to Piccadilly Hc

To rebuild.

18. Will the successful design be erec

This competition must be regarded as s
for the premiums offered by the *Builder*.



Parliament Buildings, Winnipeg.

The competition promoted by the Government of Manitoba has been narrowed to five architects, the assessor in the preliminary competition being Mr. Leonard Stokes, R.R.I.B.A. Each of the five competitors will receive a sum of two thousand dollars to complete their designs.

British subjects practising in the British Empire were alone eligible to compete. The cost of the building was estimated at 400,000*l.*

Mr. Leonard Stokes has named the following five architects to proceed further:—

Mr. F. W. Simon, F.R.I.B.A. (Liverpool).
Messrs. E. & W. S. Maxwell (Montreal).
Messrs. Sharp & Murray (Toronto).
Messrs. Brown & Vallance (Montreal).
Messrs. Clemsha & Portnall (Regina, Sask.)

In handing his report to the Minister of Public Works Mr. Stokes testified to the general excellence of the designs sent in.

Church at Carrington, Notts.

Mr. Edward S. Prior, F.S.A., F.R.I.B.A., has now given his award in this competition. The first place has been adjudged to Mr. W. Curtis Green, F.R.I.B.A., 14, Gray's Inn-square, London. The designs of the following competitors were specially commended:—Mr. C. Pascoyne (Westminster), Mr. Macdonald Gill (Lincoln's Inn), Mr. G. C. Horsley, F.R.I.B.A. (Gray's Inn-square), Mr. Charles Spooner, F.R.I.B.A. (Lincoln's Inn). The competing designs are to be exhibited at Carrington, and also by the Nottingham Architectural Society.

Federal Capital City, Australia.

The following telegram from Sydney appeared in the *Times* of April 16:—"The designs for the Federal Capital have been reduced to a dozen, most of them the work of Americans, Frenchmen, or Germans. The British designs have only a small chance."

This announcement was felt to be disparaging to the work of architects in this country. It is well, therefore, that the Royal Institute of British Architects have seen fit to recapitulate the circumstances. "When the conditions of the competition were published by the Minister of Public Works the Australian Institutes of Architects at once protested against their unfair and unsatisfactory nature. There was no proper provision made for the appointment of qualified assessors, and the Australian Institutes warned the Minister that unless the conditions were amended their members would refuse to take part in the competition. The Minister refused to adopt the suggestions of the representative architectural bodies, and they accordingly vetoed the competition. They then appealed for support to the Royal Institute of British Architects, with which they are affiliated societies. The Royal Institute, which entirely agreed with the attitude of the Australian Institutes, endeavoured both by correspondence with the Minister and by deputation to the Acting High Commissioner in London, to induce the Australian Government to put the competition on a fair and proper basis. The Minister again refused to alter the conditions in any way, and the Royal Institute supported the action of its affiliated societies in Australia by issuing a letter to its members against the competition and by informing the American Institute of Architects and the principal architectural bodies on the Continent of the action which it had taken in the matter. There is reason to believe that the great majority of the architects of the Empire have loyally supported the decision of their representative bodies and have not entered for this competition."

This explains the alleged "small chance" of British competitors. We can only repeat the suggestion made in our issue of April 12, that, having made the awards, the Commonwealth would be wiser to start afresh as a lesser evil than the adoption for all time of a scheme which may be inadequate and unsuitable.

Sir G. H. Reid, the High Commissioner for Australia, has written to support the selection of assessors, but, while we have nothing to say against the local status of the gentlemen nominated—Mr. Kirkpatrick, indeed, is an enthusiastic and an able architect—we cannot agree that for an event of such world-wide interest their qualifications are outstanding. We hear that there are over 200 designs submitted.

Mural Decorations.

In addition to the competition for embellishing the vestibule to Middlesex Hospital, referred to in our last issue (p. 483), other awards will be made in connexion with the forthcoming exhibition at Crosby Hall, Chelsea. A space is vacant in the Church of St. Jude-on-the-Hill, Hampstead Garden Suburb (architect, Mr. E. L. Lutyens, F.R.I.B.A.), and a sum of 50*l.* is available towards the remuneration of the artist chosen. Other decorative designs required are for spaces in Messrs. Crosse & Blackwell's factory, in a village hall at Shrivenham, in a village school at Winchelsea, in the projected new building for the Gallery of Modern Art at Dublin, and in Sutton Valence School, near Maidstone. A prize of 10*l.* will be given for the design showing the best disposition of schoolroom equipment. All designs must be ready by May 21. Particulars may be obtained from Crosby Hall, Cheyne Walk, S.W.

Municipal Buildings, Padiham.

The Manchester Society of Architects have issued a notice stating that the conditions of this competition are unsatisfactory and that directly or indirectly no designs should be submitted by members.

Hale Town-Planning Competition.

Another notice issued by the Manchester Society of Architects is to the effect that the Hale Urban District Council decline to make any alterations in the conditions of this competition. "Each competitor has to purchase ordnance sheets for the district at a cost of about 25s., and, as these were last revised in 1908, he will have to go over the whole district and embody the numerous buildings since erected. The competitors are also asked to estimate the total amount of their charges should they be successful. As the duties are to a very large extent at present unknown, this becomes an almost impossible task. There is no guarantee that any qualified assessor will be appointed, either to adjudicate on the plans or to advise the Council. The Competitions Committee approached the Hale Council before the conditions were issued, and as soon as the conditions appeared they pointed out to them the unfairness of the points mentioned above. The Council find that these conditions are unsatisfactory, therefore members of this Society must not submit, either directly or indirectly, any designs in the competition."

BOOKS.

Notes on the Art of Rembrandt. By C. J. Holmes, M.A. With Forty-five Plates. (London: Chatto & Windus. 1911.)

As the Preface opens: "These notes deal almost entirely with the problem of art education, and may thus be regarded as a supplement (though their nucleus is of earlier date) to 'Notes on the Science of Picture-Making,'" by the same author. The nine chapters are based on lectures delivered at Oxford some years ago, and are to be regarded as a crious addition, not so much to opinion on "art education," perhaps, as to the mass of appreciation and data on the art of Rembrandt, as the title, in some opposition to the Preface, implies. The two subjects are found to commingle easily in this instance, however, although with a heavy quantitative balance of Rembrandt, for, whereas all there is to be said of "art education" (what a phrase!) can be said simply and shortly, and even "brusquely," taken or left, and so done with, to what may be said and argued about Rembrandt there is apparently no end. Of art education one may assent, tersely, that it cannot exist. A certain amount of technique may be taught—data, that is to say, may be supplied, or, translating the matter into architectural terms, a knowledge of the Orders may be instilled, bricks may be provided—but the rest, and here rudimentary art begins, must be learnt, and by the aspirant unaided, or, if he have stuff in him, unhindered. Principles, even, of composition and so forth (what else essentially are the Orders?) may be deduced and applied—as in picture-making in Japan, with its *yo* and *in*, etc.—but it will all amount to nothing if the basic rhythms, of which all principles are but imperfect verbal expressions, are not in the bones of the artist, and not the material with which his personality plays. The author embellishes this theme in a chapter called "The Limits of Self-Training" (more properly, "of what may be taught"), with instances and definite suggestions as regards art (*i.e.*, picture-making), which, in conjunction with Mr. Ashbee's recent "Should We Stop Teaching Art?" indicate the incidence, long overdue, of an authoritative, as distinct from a rebellious and scornful, reaction against South Kensington and the academies. By "authoritative" we wish to indicate those who are concerned with the problem rather than with themselves. It is the attitude of the teacher doubting, or, at any rate, officially realising, the limitations of his function. Artists, in varying degrees, have done so since the time of the subject of this book, for Rembrandt appears to be the first artist of note to proclaim by his conduct the modern conception of the imperative individuality of the artist, by breaking away from the practice of his time instead of transcending it in the due line of its development. Having bested his contemporaries, impelled from within, he drew himself aside, following his gleam, a glum and middle-aged rebel, into a realm of his own and into a cloud of obloquy. Mr. Holmes traces his development in terms of his etchings, of which there are many reproductions. We cannot expect enthusiasts to agree with any demur we may make to some of his appreciative estimates, for, on the whole, as admiration of Rembrandt etching goes, they are moderate and well balanced, while in later chapters comparing Rembrandt with Van Dyck and Titian, temperamental devotees of his subject will find matter to combat. A really fine appreciation of Van Dyck goes sadly contrary to the prevailing opinion of the day, and some passages in his well-considered analysis of Titian and the colourists will be accounted heresy by those who hold our somewhat smudgy-faced Dutchman divine. For in this, the last chapter of the book, distinctions are made clear and comparisons formulated which are undeniably true, and dismiss some of the claims which contemporary enthusiasm is apt to make. Rembrandt is seen to be not a maker of beauty, not a painter of delight. To quote the author: "He depends on other arguments, on profound insight into character, and on concentration of effect, and so appeals to our sympathies and intellect rather than to our æsthetic sense pure and simple." And again: "It may be argued that an appeal to the intellect (and it is through the intellect that we have to appreciate such an art as Rembrandt's, even when it calls most directly upon our common human sympathies) is intrinsically nobler than an appeal to the eye, such as that made by a piece of fine decorative colour. Such an argument, however, could, I think, be pressed only by one who was not an artist."

All Saints' Church, Horseheath. By Catherine E. Parsons. (Cambridge University Press. 1911. Pp. 101. 5s. net.)

This little volume, which is dedicated to the parishioners of All Saints' Church, Horseheath, in the Deanery of Camps, Cambridgeshire, contains a detailed account of the church, its monuments, furniture, etc., with five photographic plates and a plan.

The church appears to have been practically rebuilt in the XIVth century on the site of a Norman church, of which certain fragments of masonry, with the Norman zigzag pattern, built into the walls of the present church, are the sole remains.

The structure seems to have suffered the usual indignities, not only during the XVth and XVIth centuries, but also at the hands of the modern restorer, and in this connexion it is noteworthy that the author attributes the loss of the painted glass to the XIXth-century restorer rather than to any destruction wrought in more stormy periods, since there is evidence that there was painted glass in the Perpendicular windows in the nave as late as 1742.

The principal objects of interest from the antiquarian point of view appear to be the XVth-century octagonal font and a monument to Sir Giles Alington (1586). There are also some fine brasses.

Hints to Young Valuers: A Practical Treatise on the Valuation of Property. By ANTHONY CRAGG, F.G.S. With explanations of the legal principles involved by JAMES ROBERT VERNAM MARCHANT, M.A., Barrister-at-Law. Fourth Edition. (London: The *Land Agents' Record*, Ltd. 1912. Pp. 1104. 25s.)

A WORK which has passed to its fourth edition in less than fifteen years requires but little recommendation in the hands of the reviewer. The first edition of this book appeared in October, 1897, to be followed by a second edition in 1901, and we can see no reason why this fourth edition should prove less successful than its predecessors.

In the second edition the authors observed that some exception had been taken to its title, as inadequately indicating the character and scope of the work. Its origin was some articles in the *Land Agents' Record*, intended as hints to young valuers, but, as is now probably well known, this volume contains a compendium of information which should be useful not only to young valuers and surveyors, but to many others connected with the ownership or management of estates.

In this last edition the authors state that the most important changes have been those rendered necessary by recent legislation, such as the Agricultural Holdings Act, 1898, the Small Holdings and Allotments Act of the same year, the Finance Act, 1909-10, and the Licensing (Consolidation) Act, 1910. As regards those portions of the Finance Act which introduced the new taxes on land, text-book writers are at present only in a position to furnish a fairly lucid statement of the apparent effect of the sections, and the authors of this work have attempted nothing further. As we recently pointed out, one of the disadvantages attending modern legislation of this character (which institutes officials not only as the Court of First Instance, but also as the first appellate tribunal, and whose decisions are given no publicity) is that the Acts remain without judicial interpretation, and consequently both writers and the public are left, so to speak, in the dark. Very few persons have the means or the persistence to appeal from the referees under the Finance Act to the courts, and thus very few authoritative decisions have been given under the Act. Many of the chapters in this volume appear to have little connexion with the subject of valuation; we may instance those on Building Contracts, the Relations of Landlord and Tenant, and the Powers of Sanitary Authorities, but it may be intended to serve also as a land agent's handbook. These chapters are not a new feature of this edition, but we may point out that there is one disadvantage which may attend on widening too much the scope of one volume, and that is that the value of that part of the work which is dealt with thoroughly may be obscured by that part in which only an elementary sketch of the subjects touched upon can necessarily be given. The work seems to have been carefully revised, and its clearness of style is retained, and, as we have said, this edition should command the success attained by former editions.

CORRESPONDENCE.

The Decadence of English Architecture.

SIR,—When the work of designing such important buildings as the Ritz Hotel, the *Morning Post* Offices, and the Automobile Club is entrusted to foreign architects it is evident that there is something radically wrong with the architectural profession in England. In the cases we have quoted it can scarcely be urged that the buildings are of such a special nature as to require the services of foreign architects in preference to those which one might reasonably expect could be equally well rendered by our fellow-countrymen.

Why, then, have the owners of these buildings thought it advisable to go so far afield for the professional assistance they required? We are afraid the answer must be that the owners have had sufficient discrimination to see that they are likely to obtain a better result by the employment of the foreigner. In other words, it is impossible to obtain the services of English architects who have been equally well trained in the technique of their art. The dearth of highly-qualified men in this country is due to our present unsystematic and inefficient mode of architectural training. And so long as we remain without properly-organised and properly-administered schools of architecture we may anticipate that the work of the better-trained foreign architect will be more and more in evidence in the United Kingdom.

Recognising this fact, it is imperative that the architectural profession should seriously consider what steps can be taken to cope with the difficulty.

It seems to us that following the formulation of a sound and comprehensive scheme of architectural education the Government should be approached to give its financial support to enable the scheme thus put forward to be realised in its entirety.

We are aware that the British Government rarely, if ever, does anything in the cause of art; but in this particular case it might be induced to see what foreign countries have long ago realised, viz., the undoubted fact that good architecture is a national asset, and as such State assistance to art education has proved a sound financial investment.

But however good such a scheme may be in theory, and however well endowed, all would go for nothing unless the direction of the students' work were under the absolute control of specially-trained men. Handicapped as they have been in the past by the non-existence of any school for the advanced study of their art, the architects of this country cannot be expected to furnish the necessary teachers.

It would seem, therefore, that upon its inauguration a National School of Fine Art would have to rely upon obtaining Professors from foreign countries.

To those who do not know the details of the system of architectural training which has been carried on so long and successfully in France the following brief description of the curriculum of study at the Beaux-Arts may be of interest:—

After a competitive entrance examination for admission the student in architecture attends a course of lectures on each of the following subjects:—

Mathematics, Descriptive Geometry, Stereotomy, Physics, Chemistry and Geology, Construction, Perspective, Building Regulations, History and Theory of Architecture.

In addition to the foregoing subjects, which are specially applicable to the training of architects, it has been wisely felt that, as architecture is but one branch of art, it is necessary that its exponents should receive at least some instruction in the sister arts of Painting and Sculpture.

As the architectural student receives his specialised instruction, so in like manner do the painters and sculptors become specialists in their separate arts. But prior to this specialised training all students of the Ecole des Beaux-Arts, whether painters, sculptors, or architects, are obliged to attend a course of study on Design, Modelling, Elementary Architecture, Literature, and Decorative Design.

By adopting this method of training painters, sculptors, and architects are taught at an early age to appreciate the merits and necessary limitations of their colleagues' work. The exponents of the three arts thus become accustomed to work together, and it is only by this appropriate application of their united efforts that an homogeneous and thoroughly satisfactory artistic result can be obtained.

To compare the results obtained under this methodical training with those that follow the haphazard system (or want of system) in vogue in this country is not only humiliating and depressing, but shows that our much-vaunted commercial instinct in this instance is disastrously astray.

This is only one aspect of the many problems relative to the welfare of the architectural profession which show the urgent necessity of obtaining statutory powers to enforce a satisfactory system of architectural education.

So long as we are content to see untrained men allowed to practise in this country, just as long will the decadent period of architecture now existent be apparent.

GEORGE HUBBARD.
A. W. S. CROSS.

The R.I.B.A. Elections.

SIR,—The time will soon arrive again when the members of the Institute will have to elect their representatives on the Council and various Committees for the coming year, and, bearing in mind the difficulty the average member has in deciding for whom to vo
I venture to inquire if something cannot
done to assist him in his selection.

I think I am safe in saying that to m
members many of the candidates—particula
new ones—are comparatively, if not qui
unknown, or, if known, their ability, expe
ence, and work are not. It must be
membered that the architect gains his kno
ledge of his professional fellows chiefly
means of the building journals and the vari
particulars of buildings they publish; n
there are many men of large practice wh
rames never seem to get into print, and wh
drawings are never published; it follows th
that these men are probably unknown
their brother architects, and when, as so
times happens, they are listed among
candidates, they invariably fail to rece
sufficient support for election, notwithstandi
that their experience is far greater th
many of those who do manage to gain a sea

Would it not be possible, when the nam
of candidates are submitted to the membe
to enclose with the lists some particulars
work carried out, or some indication of
experience of those seeking our suppo
We should then, perhaps, see a steady fl
of new talent, year by year, through
R.I.B.A. instead of the same names alw
recurring on the lists. And we should
then have a repetition of last ye
occurrence when a member, presumably
far removed from the student's stage,
had sent in drawings for one of the travell
studentships, was, in the same year, ind
only a month or so after, elected a mem
of the Practice Standing Committee, a C
mittee which should obviously be compo
of men of ripe professional experience.
could not have happened if the voters
before them some particulars of the experie
of the candidates.

J. H. CORA

INTERCOMMUNICATION COLUMN.

Construction of a Weather-Boarded Cotta

SIR,—Can any of your readers give me
formation as to some publication in w
the details of construction of a weather-boa
cottage are explained, the boarding
attached to wood studs? I want particu
to know how best to form the external a
to the jambs of windows. Should the wea
boarding be nailed to an inner layer of bo
with felt between the two, and do you con
this form of construction for a cottage co
from 200*l.* to 250*l.* cheaper than an eleven
hollow brick wall? Can you also tel
where I can see good examples of wea
boarded construction in the neighbourhoo
London?

BASIL PROCT

Treatment of Brickwork.

SIR,—This efflorescence is working o
the bricks or cement mortar; in all proba
it is in the bricks, especially as they are
which are more liable to contain
efflorescence than others. It is formed
process known as saltpetring, which
somewhat in appearance, and also in che
composition, and is most apparent in
weather. It is generally white in colou
crystalline in structure, the crystals prese
the appearance and being like a thin co
of snow or white sugar. The chemical an
has shown that these crystals vary conside
in composition. They often consist of sul
of magnesia, also sulphate of lime, of
bonate, sulphate or nitrate of soda, of chl
of soda and potash, and carbonate of p
The formation of chlorides is nearly a
take place if sea sand or sea water were
or in bricks made from clay which has
covered by salt water. I would sugges
a very dry day be chosen with an east
which will induce the efflorescence to sh
the face of the brickwork. Then thor
scrub into the face of the work w
scrubbing-brush, dilute spirit of salt in th
portion of about half a pint of spirit
ordinary size builder's pail of clean
Then return to the starting-point with
and brush, and thoroughly wash out.
will eradicate a good bit of it, and it
show slightly again. The operation coul
be repeated if necessary.

WILLIAM J. PYV

ST. GEORGE'S CHURCH, LEICESTER.

This church is being erected from the
of Mr. W. D. Caröe, architect, at a
about 4,000*l.* The foundation-stone of t
building was laid last week.

EDITORIAL SUMMARY.

The leading article deals with the Royal Academy Exhibition.

"The Protection of Ancient Monuments" is the title of a second article, dealing with the Bill now before Parliament (p. 506).

In "Notes" Column (p. 507) will be found observations on: "The Campanile, Venice"; "The Institute and the Society"; "The Competition for the Australian Capital"; "Egyptian Excavations."

A notice of the Exhibition of the Royal Society of Painters appears on p. 507.

The Annual Dinner of the Society of Architects was held on Friday last week at the Holborn Restaurant. A report appears on p. 508.

A meeting of the Surveyors' Institution was held on Monday, when a paper was read, entitled "Some Principles in the Valuation of Land and Buildings" (p. 510).

Replies to questions in relation to the Regent's Quadrant Competition instituted by the Proprietors of the *Builder* appear on p. 512.

Book Reviews (p. 513) include: "Notes on the Art of Rembrandt"; "All Saints' Church, Horseheath"; "Hints to Young Valuers."

In Correspondence columns (p. 514) will be found letters on: "The Decadence of English Architecture"; "The R.I.B.A. Elections."

The Monthly Illustrated Civic Review (p. 517) contains: "The Future Development of Ottawa"; "The Town-Planning Conference"; "A Scottish Judge and an Architect's Centenary"; and Notes.

The Building Trade Section (p. 523) contains: Recovery of Contract Price without the Architect's Certificate"; "Applications under the London Building Acts"; "Projected New Buildings in the Provinces," etc.

In Legal Column (p. 526) will be found notes on: "Trade Union Law"; "Workmen's Compensation"; "Rebuilding Mansion House Settled Estate."

Law Reports (p. 527) include brief reports of the following cases: "Sandon *v.* Mallaby-Deeley"—the decoration of a mansion; London County Council *v.* Jones"—when is a building dangerous?; "The Sun Assurance Company, Ltd. *v.* C. Bushby & Sons"—Account of wages under Workmen's Compensation Act Policies.

MEETINGS.

FRIDAY, MAY 3.

The Institution of Mechanical Engineers.—Discussion will be resumed by Professor J. O. Arnold on the Tenth Report to the Alloys Research Committee: On the Alloys of Aluminium and Zinc." 8 p.m.

SATURDAY, MAY 4.

The Royal Institution.—Professor Reginald Blomfield, R.A., M.A., F.S.A., on "The Architecture of the Renaissance in France, 1494-1661." III.—"1594-1661. Architecture and France." 3 p.m.

Edinburgh Architectural Association.—Visit to Glasgow: (1) The Cathedral; (2) Mitchell Library.

The Institution of Municipal and County Engineers.—South Western District meeting, to be held at the Public Hall, Exmouth.

Lower Thames Valley District Surveyors' Association.—Visits of inspection and dinner. Members will assemble outside Turnham Green station (Bedford Park) at 2.30 p.m.

MONDAY, MAY 6.

The Royal Institute of British Architects.—Annual general meeting. 8 p.m.

The Society of Engineers.—Mr. W. Yorath Lewis on "The Effect of Intermittency in Limiting Electric Traction for City and Suburban Passenger Transport." 7.30 p.m.

Royal Society of Arts (Howard Lecture).—Capt. H. R. Sankey, R.E., on "Heavy Oil Engines"—II. 8 p.m.

TUESDAY, MAY 7.

The Society for the Promotion of Hellenic Studies.—The third general meeting, in the Rooms of the Society of Antiquaries, at Burlington House, Piccadilly, W. Professor Sir W. M. Ramsay, D.D., will read a paper on "The Shrine of the God Men Askaenos at Pisidian Antioch." 5 p.m.

WEDNESDAY, MAY 8.

The Institution of Municipal Engineers (Southern District).—Mr. Sidney Palmer on "The Design and Planning of Working-Class Dwellings." 7 p.m.

THURSDAY, MAY 9.

The Society of Architects.—Professor W. A. Scott, A.R.I.B.A., A.R.H.A., on "Grecian Architecture." Illustrated by lantern slides and drawings. 8 p.m.

Society of Antiquaries.—8.30 p.m.

Concrete Institute.—(1) Annual general meeting. 4.30 p.m. (2) Annual dinner. 8 p.m.

SATURDAY, MAY 11.

The Society of Engineers (Incorporated).—Annual dinner at the Criterion Restaurant, Piccadilly-circus, W. 6.30 for 7 p.m. Mr. John Kennedy, the President, will take the chair.

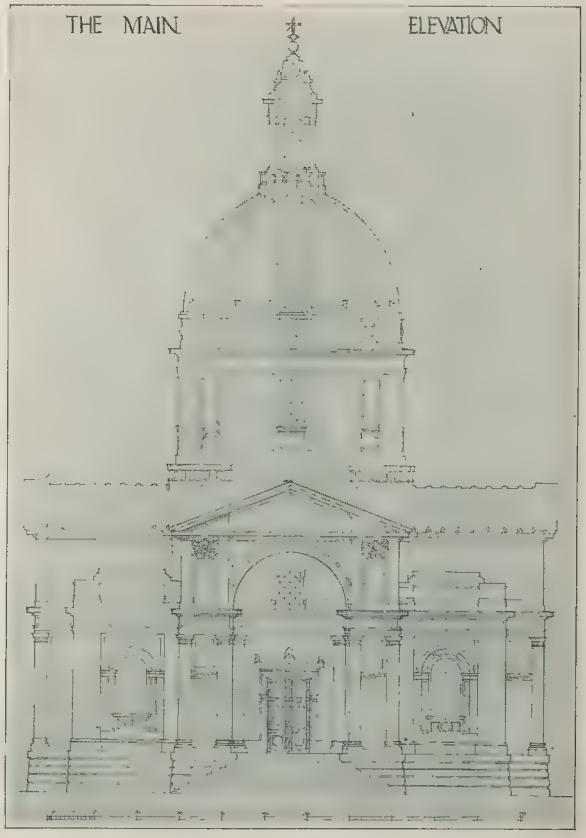
ENGINEERING SOCIETIES.

The Institution of Civil Engineers.

The following are abstracts of two papers read at the ordinary meeting of the Institution on the 16th ult.:—

(1) "The Remodelling and Equipment of Madras Harbour," by Sir Francis J. E. Spring, K.C.I.E., M.Inst.C.E.

The author, who holds the position of Chairman and Chief Engineer to the Madras Port Trust, shows how, on a sandy coast totally devoid of all natural advantages, an artificial harbour with an area of 200 acres had been constructed, originally at a cost of nearly one million sterling; and yet when made, and up to seven years ago, it was found to be of comparatively little use for the easy, cheap, and expeditious transit of cargo between ships' holds and carriers' carts or railway waggons. By an expenditure of 350,000*l.* on the remodelling of the form of the harbour and the formation of a basin for small craft conditions have been secured which enable cargo to be handled between ship and shore in all weathers. This remodelling consisted in closing the east entrance, which allowed the swell to roll in nearly all the year round, and forming a new north-east entrance under shelter of a projecting breakwater. Finally, at an additional cost of 300,000*l.*, equipment has been provided in the shape of works on shore, such as piers and wharves for lighters, a quay for ships, an ample supply of cranes, a large area of shedding, together with railways, roads, and everything else required for the speedy, safe, and convenient passage of goods through the Port Trust's premises. The direct result of the construction of the boat-basin referred to has been to bring into existence a fine fleet of privately-owned lighters, of 40 tons to 60 tons capacity. The effect of this extra two-thirds of a million expenditure over and above the original million is that vessels visiting the port—other than what may be called the passenger ferry-boats trading with Burma and the Malay States—are passing in and out of the harbour in about half the time possible five years ago; whereby its capacity has virtually been considerably enlarged. After a brief summary of the history leading up to recent developments, the author deals with the matters of engineering interest met with in connexion first with the remodelling of the harbour and next with its equipment. He also touches on the important question of sand-movement. The question of wind-action is distinguished from wave-action as a factor affecting the over-side working of vessels moored in the harbour, and it is claimed to have been proved that, as the result of the remodelling, it will be safe to build quays at which large vessels may lie and work their cargo. As such quays seem to be also needed in the harbour, a scheme has been prepared for a length of 3,000 ft. of masonry ship-quay, of which about one-fourth is now well in hand. The rates at which important parts



Design for a Royal Memorial Chapel.
By Mr. G. H. Fogg itt.

of the work have been executed are given, together with an explanation of how funds were provided. The average incidence of the dues levied by the Port Trust is stated, whether on goods per ton or on vessels per ton registered—dues which it has not so far been found necessary to enhance, as the result of the heavy expenditure that has lately been incurred. Finally, the manner and conditions of handling cargo are described, and the extent of the Trust's intervention between steamers and their customers, together with the reasons for such intervention, is dealt with.

(2) "The Alteration of the Form of Madras Harbour," by Mr. H. H. G. Mitchell, M.Inst.C.E. This paper deals with the method of carrying out the actual work of alterations to the harbour. The first consideration was the weather, and special precautions had to be taken to secure the work during the cyclonic season. By taking such precautions it was possible to proceed continuously with the setting of the sloping blockwork. The materials used in and the method of making the concrete blocks are described. In the erection of the north sheltering arm the blocks were dealt with by means of a titan crane capable of lifting the 33-ton blocks at a radius of 62 ft. The blockwork is in the form of sloping slices on a rubble bed, with pell-mell wave-breaker blocks on the seaward side. The opening of the new entrance presented great difficulties, as not only had the existing breakwater to be removed, but also the remains of a former breakwater. By means of the titan crane and a floating barge fitted with a powerful derrick, however, both the pell-mell blocks and the sloping blocks were effectively removed. The rubble base was dredged by means of a bucket dredger, precautions being taken to strengthen the valves, shoots, and hoppers against the pounding of the large stones brought up. On the opening of the new entrance the old one had to be closed. This was satisfactorily completed in September, 1910. The author also describes the construction of the slipway which was made capable of taking vessels up to 500 tons dead weight. Finally, the system of accounts used, and the method of payment of labour are dealt with, and details of the cost of the work are given in an Appendix.

At the ordinary meeting on April 23 the following elections of new members and Associate members and students were reported:—As elected members, G. L. Andrews, B.Sc. (Lond.); G. T. Bradley, Rakwana, Ratnapura, Ceylon; C. Ross Duggan, Calcutta; E. J. Elford, Southend-on-Sea; H. E. Footner, Wealdstone; J. Heron, B.E., Downpatrick, Co. Down; and S. F. Smith, London. Seventeen Associate members were elected.

ILLUSTRATIONS.

Design for the Façade of a Palace.

THIS work, by Mr. S. Clough, was shown at the Royal College of Art last year. A note on the general disposition of the buildings will be found at the side of the plans.

Designs for a Royal Memorial Chapel.

THIS design, shown also at the Royal College of Art, is intended primarily as a design for a scheme of colour for the interior of a chapel. It is, in a broad sense, based on a study of Greek architecture, with an attempt to procure the refinement of line, delicacy of ornament, and general impressiveness which are characteristic of this style.

Much of the smaller ornament was inspired by that on the Greek pottery, etc., in the British and Victoria and Albert Museums. The painted compositions are after Pintoricchio, being selected on account of their refined and delicate handling. The pendentives have painted on them the four Evangelists, whilst the compartments of the dome contain paintings of various saints. The lunettes around the chapel would contain representations of various scenes from the Scriptures and notable events in the reign of the Sovereign it is intended to commemorate. The materials proposed by Mr. S. Clough are Portland stone for the general facing and inner dome, the outer dome of steel being lead and copper covered. The interior decoration to be of white and coloured marbles, with paintings on the stone in some instances and in others on plaster.

Mr. G. H. Foggitt, R.I.B.A., Tite Prizeman, 1911, Travelling Scholar of the Royal College of Art, 1911 (School of Architecture), is the author of the design illustrated herewith. The subject, set primarily as an exercise in colour decoration, was "A Commemoration or Memorial Chapel. Based on the Italian Renaissance." The chapel was designed to crown an eminence, and to ris from a terrace, approached by flights steps. The plan is simple, on the lines the Greek cross, the angles between th arms being occupied by chapels and vestrie bringing the whole to the square. The alt is placed in a small apse, and at either sid of this apse are stairways leading down t the crypt.

Externally the church would be faced wit dressed stone up to the top of the drum the dome; the dome would be covered wit lead.

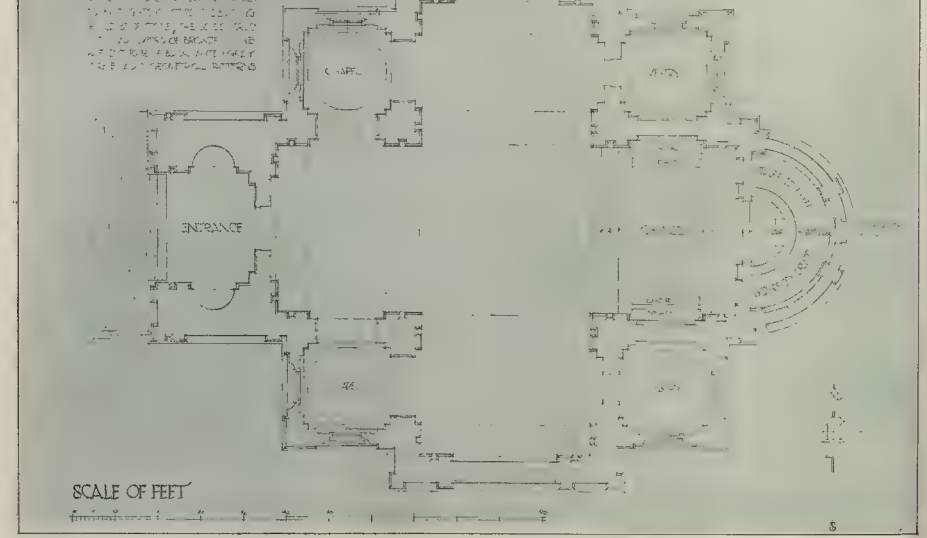
Internally the architectural features woul be left the natural colour of the stone, th intermediate spaces being coloured. Th barrel-vaults and dome are coffered, th coffers having red or blue backgrounds, wit ornament picked out in relief. Between th four windows in the drum are four lar figure compositions. The chapels would treated in keeping with the rest of th building.

FIFTY YEARS AGO.

From the *Builder* of May 3, 1862.

The Lambeth Tramway.

AT a public meeting of the supporters Mr. Train's street railway in Lambeth, M Frederick Doulton in the chair, the Cha man, in opening the proceedings, said sympathies had always been in favour this tramway. He had heard that in t Court of Queen's Bench Mr. Train had be convicted and the vestrymen released fr their indictment. The vestry would, ho ever, support Mr. Train throughout. T tramway was a great convenience to hundr of thousands. Mr. Franklin stated th 596,789 persons during the month of Ma had passed over the tramway. The recei during that period amounted to 4,455*l.* 6*s.* The number of season tickets taken v 6,963. The meeting passed a resolut protesting against the decision of the j and pledging itself to use every constitutio means to vindicate the authority of our lo governments. It was also resolved petition Parliament, praying for the legal tion of street railways.



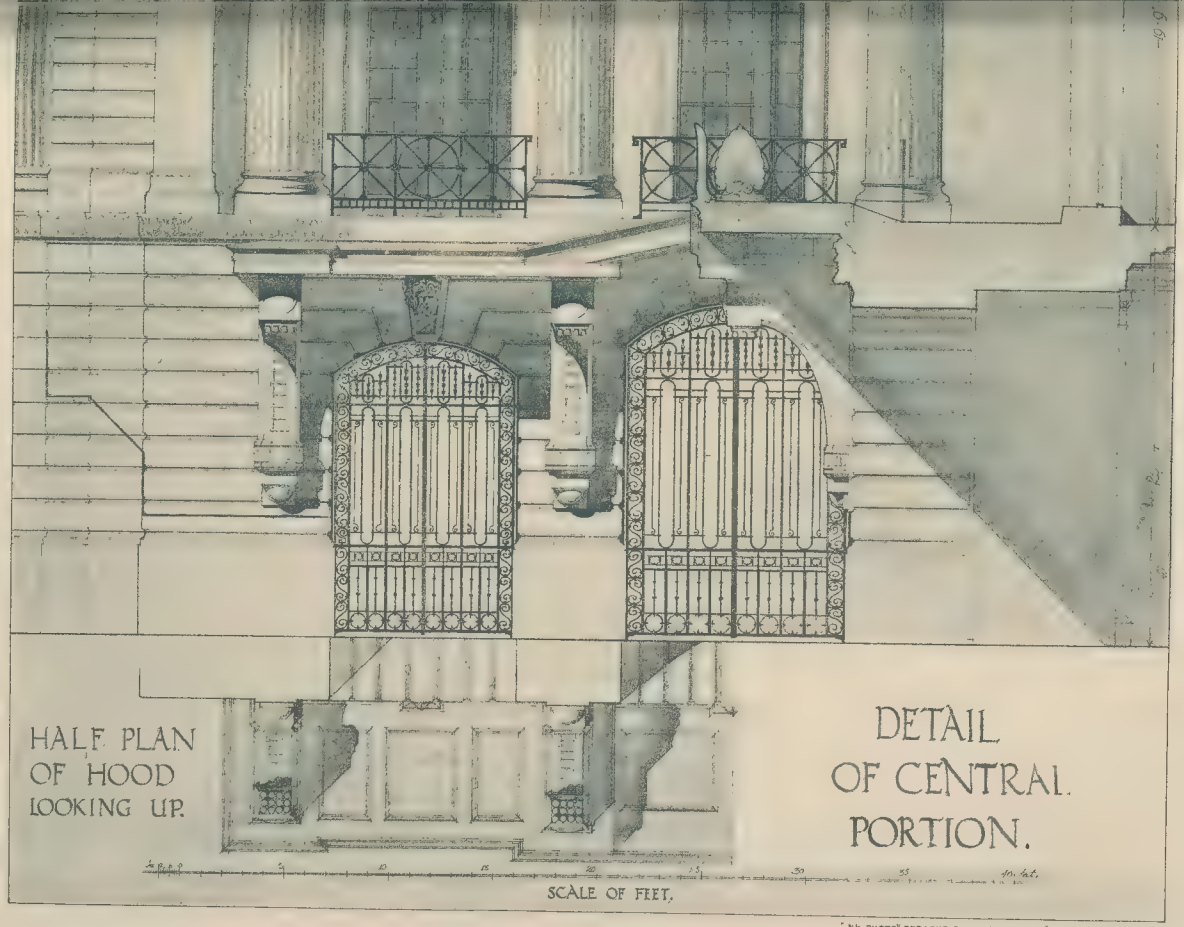
Design for a Royal Memorial Chapel.

By Mr. G. H. Foggitt.



DESIGN FOR A ROYAL MEMORIAL CHAPEL.—By Mr. S. Clough.


DESIGN FOR THE
FAÇADE OF A PALACE
S. CLOUGH
INVT. ET DELT.
FAÇADE OF PORTLAND STONE
GATES GRILLES ETC OF BRONZE
ROOFED WITH GREEN SLATES.



"NK-PHOTO" SPRAGUE & Co LTD 68 & 70, DEAN STREET, SOHO, W

DESIGN FOR THE FAÇADE OF A PALACE.—By Mr. S. Clough.

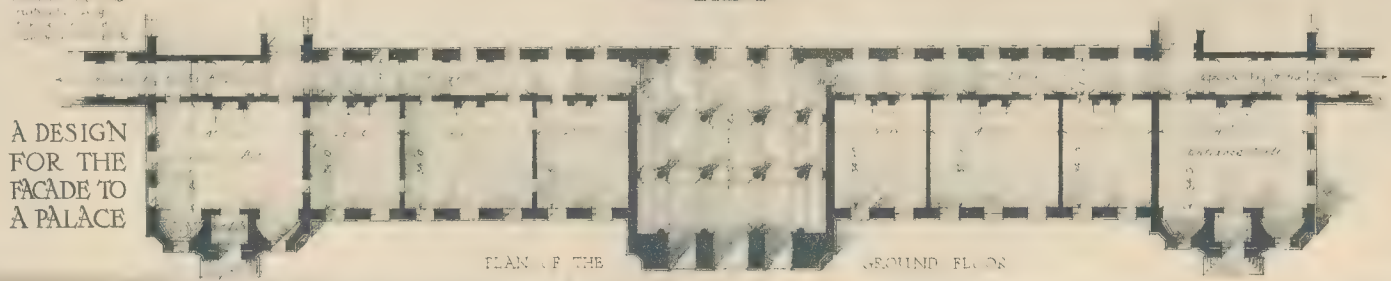
A DESIGN FOR THE FAÇADE TO A PALACE



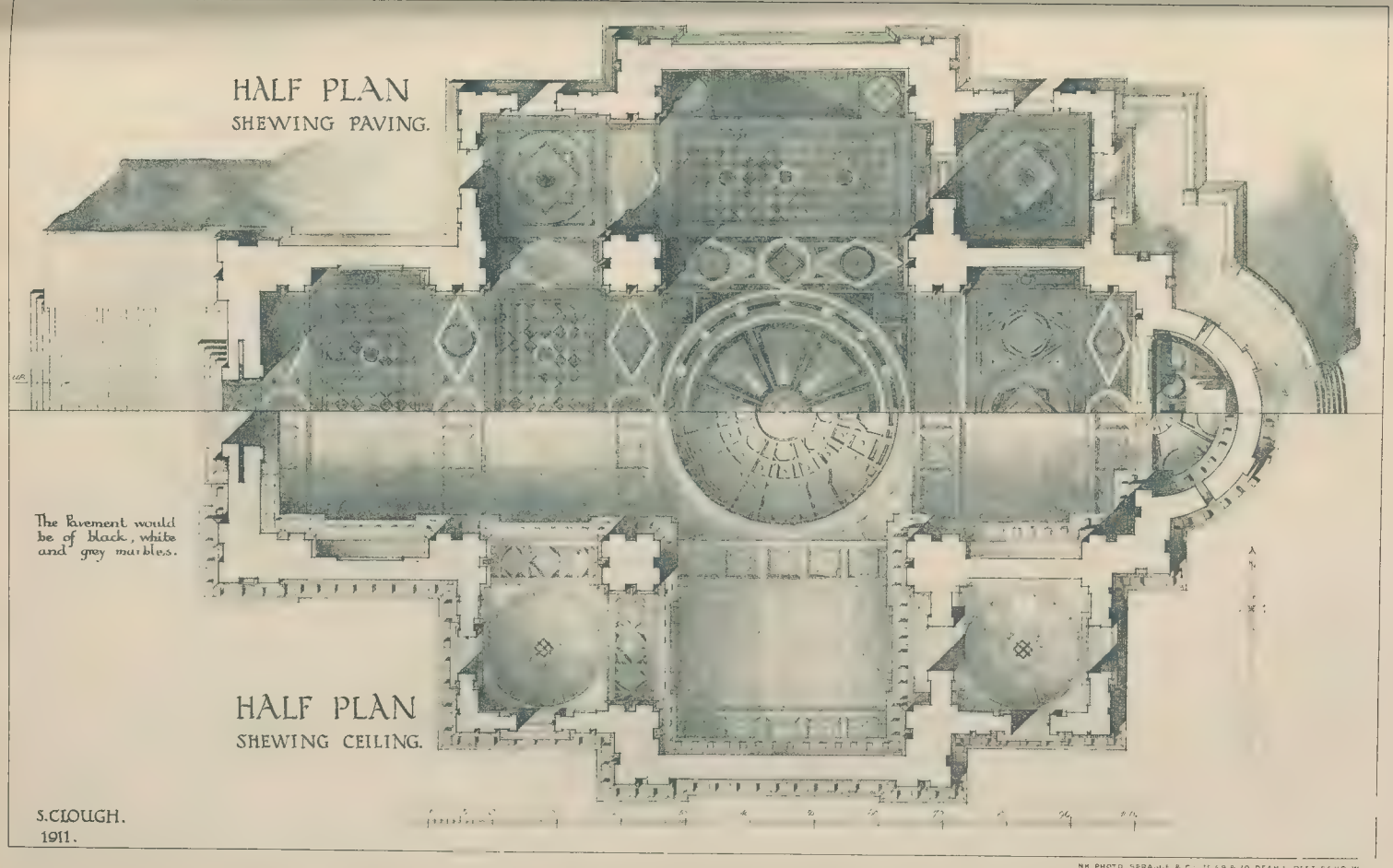
THE PRINCIPAL ELEVATION



PLAN OF THE PRINCIPAL FLOOR



PLAN OF THE SECOND FLOOR



DESIGN FOR A ROYAL MEMORIAL CHAPEL.—By Mr. S. Clough



INK-PHOTO" SPRAGUE & Co LTD 69 & 70, DEAN STREET, SOHO, W

DESIGN FOR A ROYAL MEMORIAL CHAPEL.—By Mr. S. Clough.

MONTHLY REVIEW · *of* · CIVIC DESIGN.



Parliament Buildings from the River, Ottawa.

THE FUTURE DEVELOPMENT OF OTTAWA.

THE future development of Ottawa, the capital city of the Dominion of Canada, the seat of the Dominion islature and of the Supreme Courts, and residence of the Governor-General, is natter of more than local interest, for it cts the prestige of the Empire as a ple.

lthough Ottawa only became prominent 857, when it was chosen as the seat of ernment, the first settler arrived here 1800, settling at the Chaudière Falls, afterwards, it is said, selling his land he Ottawa side of the river for 200 dollars. he origin and growth of the present city probably due to the Rideau Canal, ch was constructed in 1827 to connect er Canada with Lake Ontario, and so ple vessels to pass from the ocean to the t lakes without being subject to inter- nce from the American side of the St. rence.

he Ottawa River being the natural high- to the forest districts of the north and , and water-power being obtainable the Chaudière and Rideau Falls within city limits, Ottawa has become the centre ne lumber trade, and of such subsidiary ufactures as matches and paper. Con- ring the enormous amount of water- er available — 1,000,000 horse-power in a radius of some 50 miles—the future its manufactures would seem to be red.

e natural formation of its site leads partition of the whole city area into e main divisions. The city proper is ted on the southern and higher bank ne Ottawa River in the angle formed by junction with its tributary, the Rideau, es which is a residential district including au Hall, the seat of the Governor-General. ne northern and lower bank of the Ottawa r is the manufacturing district of Hull. he city itself, crowning a high bluff looking the river, from which magnificent views may be obtained over miles of undulating country to the Laurentian Hills, stand the Parliament Buildings of the Dominion. They are grouped round three sides of a square, the fourth side of which is formed by the principal street of the city. In the centre are the Senate, House of Commons, and Library, and on either side the Departments of Finance, Public Works, Agriculture, etc. They were erected in 1860-65, and are built of a light-coloured sandstone with red sandstone dressings.

The chief interest in Ottawa, however, from the architectural point of view is not so much its past achievements as its future possibilities. The views we publish give some idea of the beauty of its situation and of the possibilities inherent in such a site if handled in a sufficiently comprehensive manner with due regard to the special circumstances of the case.

The Canadian Government has for some time past been alive to the necessity of preserving and improving its natural charm. As long ago as 1899 an Act was passed providing for an annual grant of 60,000 dollars to "The Ottawa Improvement Commission" for the acquisition of property



Central Block, Parliament Buildings, Ottawa.



The Canadian Life Building, Ottawa.
Mr. Allan Keefer, Architect.

for the purpose of public parks, driveways, etc., and other work connected with the improvement and amenity of the city.

This Commission proposed a series of driveways from Rockcliffe Park on the eastern end of the city to the Experimental Farm in the west, much of which has since been carried out. To its further efforts the city owes a bridge across the Rideau River, the National and Strathcona Parks, a beautiful driveway at Rockcliffe along the south bank of the Ottawa River, and various other improvements.

But however valuable these improvements may be, especially as preserving the river banks and other features of natural beauty, they seem for the most part to be merely piecemeal and isolated improvements which have no relation to any sufficiently comprehensive scheme.

For this reason the deputations to the Prime Minister, representing all the Societies of Canadian Architects, is especially to be welcomed. Recognising the necessity of immediate action the deputation pressed upon the Government the advisability of creating a Commission with town-plann powers, incorporating in it the pres Improvement Commission. We trust representations will meet with immedi success.

Although such a Commission must doubt consider the future of the city fr many and various points of view, the asp which naturally appeals most to us is t of its development as the capital city the Dominion. This seems to be the governing feature of the situation, the fac which differentiates it from all ot Canadian cities and provides the ruling i of the general lay-out.

This no doubt could be fully realised any properly constituted Commission t may be appointed, and it is to be hoped t the Canadian Government will see the nec sity of securing the advice and assista of the best architectural talent available

Canadians are perhaps too fond of ferring to Ottawa as the "Washing of the North," but if its future devel ment is left in the hands of those l qualified to advise there should be fear that any attempt would be m to copy Washington or to force upon extremely interesting and unusual site arbitrary forms which are not the log outcome of the necessities of the case inspired by the natural charm of the si tion. While not rivalling Quebec, perh in the scale and grandeur of its nat setting, Ottawa has a unique charm distinctive character of her own which all costs should be preserved. No cap city in Europe, with the possible excep of Budapest, has finer natural advant or more romantic possibilities, and it w be nothing short of a disaster if the r is not made of such a magnificent op tunity.

It is, we believe, rather the custom Canada to hold that the country is too in other directions, and is not yet enough to undertake great town-plan schemes, but that later on, with more le and more wealth, they could be dealt wit greater advantage. If, however, we ar judge from the experience of this cou Canada will never be better able to a them. Here such schemes are consid impossible because of the enormous val the land and vested interests conce and it is customary to lament the fact they were not carried out long ago land was cheaper and when, presum the country was poorer.

Be this as it may, the sojourn of the of Connaught at Ottawa, as the first Gove General of the Royal House, seems to su that no moment could be so appropria the present for the initiation of a fine prehensive scheme to render the city worthy of her high destiny.

We have every sympathy also with deputation in drawing attention to the s comings of the public buildings produc the Government Department of Public W We do not believe in departmental art or elsewhere. If in this country the that can be said for the best of such ductions is that they are indifferently the most that can be said for the best of produced in Canada is that they a differently bad. The worst are s deplorable. This is not the fault c officials, but of the system.

Although it might be possible to im the standard of work by thoroughly r nising the Department and offering s that would attract first-rate men, is not the slightest doubt that the sys inherently vicious and that the Gover would be well advised to make a sweep of it and give all public wo the most competent architects in Dominion.

Indeed, the existence of this Depar with its antiquated and inefficient m appears to be particularly unfortun view of the proposed development



View of the Ottawa River and Chaudière from the Parliament Buildings, Ottawa.

. If a Town-Planning Commission is to eed it needs a free hand and undis- d authority. The creation of such a mission would seem to be a good oppor- ty for closing the Department and con- ing the architectural affairs of the e by more efficient and up-to-date ods.

lthough many of the more recent build- in Ottawa designed by independent itects are of a high standard of excellence, ity is developing in the usual haphazard ner. The design by Mr. Allan Keefer itself a good example, refined and ing in detail, of a street architecture h boldly faces the problem involved satisfactorily solves it from the point ew of the individual owner. If, however, satisfactory scheme for the city is to be ed it is evident that some limitation heights must be mutually agreed upon h will enable such problems to be solved equal satisfaction from the point of of the city as a whole.

SCOTTISH JUDGE AND AN RCHITECT'S CENTENARY.

RD COCKBURN, whose name was given to the burn Association, Edinburgh, had at heart rue dignity of a city. "There are some," rote, "who hold a town to be a mere tion of houses, shops, and streets, and that ded there be enough of these duly arranged ilitarian principles all anxiety as to whether esult shall be a Bath or a Birmingham re folly and affectation." With such civic nents to guide him the celebrated Scottish was prepared to act forcibly when any alism was imminent in Edinburgh during rst half of the XIXth century.

en William Edgar, the architect, made his f the city in 1765 he was able to engrave le and two coats of arms in the place now ied by Princes-street and the New Town; ace between the Nor' Loch and the Firth rth was as innocent of buildings as it was Hollar etched the view of the city in the th century, the print of which is so rare. But vements were in contemplation, and Craig's is scheme for the New Town, published in began to take form in 1767. In Alexander rd's map, issued in 1784, the North e, Princes-street, George-street, and Queen- were *faits accomplis*, covering the ground n as Barefoot's Parks.

Craig's plan, inscribed "with the utmost humility" to George III., was introduced with a quotation from the poem "Liberty," written by the designer's uncle, James Thomson :—

> "August, around, what Public Works I see!
> Lo! Stately Streets. Lo! Squares that court the breeze."

The authorities were delighted with the idea, and made much of Craig, giving him the Freedom of the City and a medal.

The fact that the magistrates were led to offer a premium of 20*l.* to the first builder of a house in the new area suggests that the plan did not commend itself to everyone, and, indeed, after the work had progressed the effect was unsatisfactory to many citizens. Lord Cockburn, for instance, then in his youth, noted without enthusiasm the development of the city, "which gives us a taste for grand and melancholy solitude." In after years he wrote :—"We were led into the blunder of long, straight lines of streets divided to an inch, and all to the same number of inches by rectangular intersections, every house being an exact duplicate of its neighbour with a dexterous avoidance, as if from horror, of every ornament or excrescence by which the slightest break might vary the surface. What a site did Nature give us for our new town! Yet what insignificance in its plan! What poverty in all its details!"

In the first few years of the XIXth century, after the death of Craig, it occurred to someone to vary the geometrical lines. Abercromby-place was the result, and it is recorded that a popular pastime of the day was to visit the scene and stare at the street that was curved.

The formal characteristics of Craig's plan became modified in after years by the erection of buildings of architectural variety and interest in the place of the first houses, which were so alike and so unattractive.* Thus the objectionable features of the first scheme were gradually eliminated, and the citizens of Edinburgh rejoice that their ancestors in the XVIIIth century at the outset of their proceedings towards the development of the New Town obtained the architectural plan which secured the present spaciousness and convenience. It is regrettable that those responsible in after years for dealing with extensions of the city elsewhere did not profit by the experience gained in realising Craig's plan. The possibilities of systematic foresight should have been evident, yet, as Lord Cockburn, the strenuous advocate of architectural and municipal reform, failed to grasp the significance of the movement, it is not surprising that less enlightened citizens should have renounced the experiment.

* * * *

One who, had he lived, might have been reckoned among the greatest of architects died in 1813. William Stark was his name, and his work seems to have been overlooked. While he is mentioned in the "Architectural Dictionary" (under the name of Starke), he is ignored by the "Dictionary of National Biography." His title to fame would have been secure, doubtless, if he had possessed an outstanding vice, like the inconspicuous painter who earned distinction as a poisoner, and was transported to Van Dieman's Land, or like the second-rate stipple-engraver who was hanged at Tyburn for forgery, and whose deeds, consequently, are recorded in the annals of the country.

But William Stark, apparently, had no such claims to notice. A native of Dunfermline, he made a reputation in Glasgow by several buildings, including a lunatic asylum, planned with unusual skill. His only remaining monument in Glasgow is, we believe, St. George's Church, the spire of which has been compared to the best of Wren's. Through ill-health the young architect removed to Edinburgh, where his work seems to have been appreciated at once. Lord Cockburn notes that Stark was possessed of exceptionally good principles, "particularly in the composition of towns," and he was consulted by the magistrates of Edinburgh on the best way of laying-out the ground on the east side of Leith Walk. He urged that the planting of trees should be considered as part of the duty of the municipality. Sir Walter Scott, who, in 1811, had bought for about 4,000*l.* the farm of Abbotsford, asked him to design an ornamental cottage "in the style of the old English vicarage house," but before the project could be carried out Stark died. Scott, writing to his friend and counsellor, Daniel Terry, the London actor, said that with Stark "more genius has died than is left behind among the collected universality of Scottish architects." Does modern opinion endorse that tribute?

In the *Scots Magazine* of 1813 the following obituary notice appears :—"At Drumsheugh, near Edinburgh, William Stark, Esq., architect, whose many virtues and amiable disposition endeared him to his family and friends, and whose professional talents were acknowledged to be of the highest order. The noble buildings with which he has adorned Glasgow and other parts of the kingdom will bear lasting testimony to the originality of his genius, the solidity of

* Some illustrations of old Edinburgh were published with an article in the *Builder*, November 5, 1910.

his judgment, and the purity of his taste. His reputation, deservedly high in Scotland, was spreading so rapidly in England that his death may justly be considered a severe loss to the architecture of Britain."

Such evidence and more exists of the ambitions and accomplishments of William Stark. Allowing something for the exaggerations of contemporaries, there remains enough to show that his career, though short, was inspired, and our associates in North Britain, in making up their programmes for the next session, should ensure that the name of their predecessor of a hundred years ago, whose pupil was William Playfair, may be indelibly inscribed on the roll of fame of the nation. A centenary paper read next year before the Edinburgh Architectural Association or the Glasgow Institute of Architects would give prominence to the endeavour to reinstate William Stark in history. Perhaps Professor Geddes or Professor Gourlay could be induced to undertake the task.

TOWN-PLANNING CONFERENCE.

THE National Town-Planning Conference was held at the Westminster Palace Hotel, London, S.W., on April 24 and 25, Alderman W. Thompson (Richmond) being in the chair, and nearly 120 public authorities and societies interested in housing and town planning being represented. The object of the Conference was to obtain a clear idea and precise information as to the procedure to be followed by local authorities in town-planning work.

The Chairman said that the local authorities had to work the Act, although it was unquestionably desirable that the central authority should be strengthened and should do more to make their task easy. The duty of local authorities in administering the Town Planning Act was not to put a burden on the owners, because by so doing they were putting a burden on the occupiers. The essence of it was that they should get sunlight, fresh air, and vegetation around all the dwellings of the people. They must have ideal conditions, but they must take very great care they did not make it too ideal to enable the working man to pay the rent of the cottages which would be placed in the ideal surroundings. It was extremely important for local authorities to consider what they were going to give the owners of property in return for the restrictions put upon them. If they were not able to offer some cheapening in the cost of development, he thought there would be a reaction against attempts to give ideal conditions to the people. A Conference was held in Liverpool recently, when upwards of 600 representatives of local authorities were appointed to attend. The scheme was, he considered, progressing very favourably, as they already had a Bill in Parliament dealing with the matter, which had reached the Grand Committee stage. The best thing they could do now was to use their best endeavours in showing the difficulties Parliament would have to contend with in administering the Act. The ideal of town planning seemed to have been received almost universally very favourably. The scheme would undoubtedly cost money, and he thought it was a matter entirely of balance-sheets. They had not, however, to consider the question in the light of how much the proposed scheme would cost, but how much was lost by the present conditions, which in twenty years he estimated cost the people millions. It was nominally a question of balance-sheets between the owners of property and the local authorities.

Although some printed communications had been sent to the delegates, it was decided that the object of the Conference would be better served by those desirous of information asking questions.

Areas of Town-Planning Schemes.

The question was raised whether existing parks and recreation grounds should be included in town-planning schemes, and

Mr. Henry R. Aldridge, the Secretary of the Housing and Town Planning Council, said that an objection to the scheme raised at Sutton Coldfield was that the area to be taken in under the scheme was not large enough. In fact, the owners and others interested were anxious to be included under the scheme.

Mr. Lovelock (Carshalton Urban District Council) asked whether it was thought advisable to make their arrangements and plans known to everyone. He had had a certain amount of experience in the matter, and he thought it would be best to keep their arrangements as secret as possible.

Mr. Gunn (Malden and Coombe Urban District Council) said the question arose as to whether there were to be definite fixed areas under the town-planning schemes. In the case of Whitby he noticed they proposed to take in the whole of a district.

Mr. Aldridge said that when considering a district it was usual to obtain an ordnance map and mark thereon the portions that would come under the scheme; the land which was not considered suitable was blacked out on the map.

Mr. Gunn said that if the whole of an area was included in a scheme it would be necessary to serve notices all over that area, which was very difficult.

The Chairman said that at Ruislip, where the town-planning scheme had greatly progressed, there were certain areas which had been built upon, the houses of which belonged to a large number of owners. They consequently decided not to take in that portion of Ruislip, as there might have been too many objectors. On those grounds they also decided to leave out Northwood Town. He considered the system of serving notices should be altered, and instead of that advertisements should be inserted in the public newspapers. He had been asked to preside at a meeting of owners of property, etc., who were desirous of coming under the scheme.

Mr. Gunn asked if it was desirable to include large residences under the town-planning scheme, especially houses with perhaps 20 acres of land attached to them.

The Chairman said that at one time Richmond-hill was one of the most beautiful places in the South of England. Some years ago, however, several large residences were disposed of and the land afterwards built upon. In some instances as many as thirty houses were built to the acre, and great high, ugly tenements and flats had also made their appearance, which entirely spoilt the beauty of Richmond-hill. He thought the lesson of Richmond should be taken very much to heart, and that the evil should be prevented from occurring in other places.

Mr. Woods (Surbiton Urban District Council) said he would be glad if someone would tell him the best manner in which to get the names of the owners of property, etc. At Surbiton they had proposed to take in a large number of properties, and they engaged a land agent to make an extensive survey of the properties and obtain the names of the owners, etc. The cost of that procedure was about 100*l.*, which his Council considered was rather high for an initial expense. The consequence was that the progress of the scheme was considerably hampered. As all the information necessary had been gathered by the District Valuer, under the Finance Act, he was of opinion that the Council should have access to it. With that idea he had an interview with the Controller of the Town Planning Department, and received every sympathy, but was told it was not possible for the information given in connexion with the Finance Act to also be given to local authorities. The consequence was any heavy initial expense like that had a very deterrent effect upon the scheme.

Mr. Sheldon (Ruislip-Northwood District Council) said he thought practically all the information should be in the possession of the District Surveyor. The names of the occupiers and owners of property should be on the rate-book.

Mr. Abbott said he thought Mr. Sheldon was a little mistaken. It was astonishing what a large number of names were omitted from the rate-book. He thought the best way would be to pay the 100*l.* and have the thing done properly.

Mr. Lovelock (Carshalton) said that he obtained an ordnance map, and sent out a clerk to gather the particulars necessary and mark them on the map. The result was that a permanent list was established, which required very little trouble to keep up to date.

The Chairman said in their case the work seemed to have been done by an intelligent clerk, so he supposed there must be such things.

Mr. Jenkins (Finchley Urban District Council) said in their case the Borough Engineer prepared a list and eventually obtained every name. He used the rate-book, but also had the assistance of the local estate agents, auctioneers and surveyors, etc., who were very willing to give all the information in their power. The total cost did not work out at more than 25*l.*

The representative of Walthamstow said cost in their town for discovering the name the owners was about 60*l.*; the acreage be about 1,544 acres. They had to contend w the strenuous opposition of about 200 i owners of property.

Mr. Gale (Carshalton) said that, with reg to the cost of ordnance maps, he had a le from the President of the Local Governm Board stating that maps of most towns co be obtained at a cost of 10s. each for the f one and 3s. each afterwards.

Mr. Harpur (Cardiff) said he had a differ tale to tell. In Cardiff some ten years ago t spent 5,000*l.* in the making of a survey of district.

Mr. Glen (Acton) said he should like to someone in authority how to get over a d culty his Council found themselves in. T had a very large public park there, and s discussion arose as to whether that should included when planning a town. His opin was that the park should be utilised, but he overruled by the opinion of the other mem of his Council.

Mr. Ray-Nadin (Sutton Coldfield) said t possessed a park of over 2,000 acres, but t did not think it necessary to use that. A open space which was dedicated to the pu would not be developed, and, therefore, sho not be utilised in any scheme.

Mr. Shawcross, J.P. (Rochdale), said t local authorities would have to be very car when they used land which was in the co of development, as compensation would be to the owners.

The Chairman said that some time ago wrote to the London County Council ask them to prepare a simple town plan London, including and showing all the o spaces in the scheme.

Alderman Morris (Swansea) asked whet if a town was planned on the old lines, it co afterwards be altered without any objec by the Local Government Board.

The Chairman said all town-planning sche had to be passed by the Local Governm Board.

Mr. Ward (Portsmouth) said that some ago they desired to plan a town. As the Department were in possession of a large am of vacant land, it was decided to approach t with the idea of utilising some of it. The Department, however, replied that they clai exemption from the scheme, as they requir for military purposes. Soon after that, h ever, the War Department commenced build operations on their own account and sold land to private owners. They were develo the land now and selling it in the ordinary The result was that a large number of sl ugly, and badly-planned houses had sprun upon the land. He also understood the s thing had been done at Chatham.

The Chairman said if the land was req for military purposes it was a special ma but when a Government Department carri building operations it seemed high time som should ask Parliament why a Govern Department was going, for no adequate re to be exempt from town-planning schemes

Mr. Pain said the same thing happen Chatham. The scheme was objected to b War Office, but they afterwards proceed deal with the land in their own way. The was they now had a very badly-planned t After that he came to the conclusion, ar thought it was now a generally accepted that there "were no brains in the War Offic

The Chairman said it was a state of t that should be altered evidently.

Mr. Abbott (Ruislip) said his district rapidly developing one. In January last applied to have their scheme passed, and had since held several Conferences with landowners upon the matter, and were grad dealing and eradicating the difficulties in way. He considered that local autho would be able to smooth away many a diff if they were given the power to alter by

Mr. Chriswell (Carshalton) then raise question of utilising disused burial groun the purposes of town planning.

Mr. Harold Shawcross (Rochdale) presen paper dealing with the general outline details to be considered by a local aut engaged in the preparation of a plan, the pla of roads, the cost of schemes, standar limitation of the number of houses per etc. He said that the cost of sewers wa sometimes by a general district rate, and times when the roads were first sewered charge on the frontagers. There was in

es a practice, when a sewer had to be made
ng up an outlying part of town or district,
aking a charge for entering the sewer when
r districts are joined up to it. When a
n plan was made for an undeveloped district
ould be possible to make a charge on each
se and property when the same was erected,
over the cost of sewering as applicable to
road near which a house is built. The extra
over the amount chargeable to frontagere
ld probably still be a general charge on ths
s. The main lines of the sewers could be
n on the map, but it would not probably be
ssary to fix the subsidiary lines which could
efined when houses are built. At present,
main sewer is run through an undeveloped
ict it often did not follow the line of roads
use there were no roads fixed. If a town
were made and the sewers defined they could
w the lines of the roads, thus making it
ible to get contributions from owners when
is developed fronting these roads. In
ing the roads upon a town plan it was neces-
to fix the direction of the main roads and
ably the secondary roads, but it would not
ecessary to put the exact position of roads
purely residential districts where a lighter
could be constructed. The local authority
d have carefully to consider how far the
idiary roads could be allowed and how
hey could be allowed as non-traffic roads.
resent property was often ruined by heavy,
motor traffic being driven through purely
ential streets. He thought the local
orities should be very cautious about
shing out into the great expense of making
roads themselves, but where it was neces-
for them to do so it would often be well
he local authority to get the land for the
road, but to make it of a less width at first.
could then afterwards widen it when
ired.

e Conference then discussed the advantages
iherwise of leaving strips of turf along the
instead of macadamising the whole of the
h of the road, and the general opinion
ed to be that, although by the provision of
margins they obtained a more picturesque
there was little or no saving in the cost.
. Ward said they had to cut their coat
rding to their cloth. In his district they had
many footpaths of clinker at a cost of
per yard super. After a few years it was
ssible to distinguish those paths from
macadam. They had two or three thousand
le passing over the paths daily, but they
ed no signs of wearing out.
the close of the day's proceedings a resolu-
was unanimously passed asking the Local
rnment Board to consider the advisability
pensing with the service of personal notices
d Article I., all subsequent notices to be
by public advertisement only.
. H. Shawcross (Rochdale) presided over
econd sitting of the Conference, when the
matter considered was the cost to local
orities of town-planning schemes.

Construction of Roads.

. H. Lloyd Parry (Town Clerk of Exeter)
prepared a paper dealing with the subject.
ointed out that sect. 58 of the Act pro-
that the Local Government Board may
ribe a set of general powers for carrying out
eneral objects of town-planning schemes,
n particular for dealing with the matters
t in the fourth schedule of the Act. The
matter set out in the schedule was "streets,
, and other ways, and stopping up or diver-
of existing highways." The Board had
et prescribed any such provisions, and
ng their issue the doubts that existed as to
extent of the powers of a local authority
ard to the construction of roads under a
planning scheme must continue. There
o doubt that town-planning schemes would
e general case provide for main arterial
, of a width greater than the maximum
prescribed by the existing by-laws,
or the short streets in the quiet residential
ers to be of a width less than the minimum
rescribed. The powers of a local authority
ard to the planning of their road system
practically unlimited, subject to the
val of the Local Government Board and to
yment of compensation where this was due.
compensation was what the authority
d to avoid, and the first question that pre-
d itself was whether the authority were
wered to prescribe a road of a width greater
they would require under their existing
ws without the purchase of the extra land
red. Sect. 55 provided that the by-laws might be suspended for the purpose of the scheme, but suspension involved relaxation, not extension, so that this provision did not seem to assist. Sect. 59 provided that property should not be deemed to be injuriously affected so as to give claim for compensation if the provisions were such as would have been enforceable had they been contained in by-laws made by the local authority. It appeared, therefore, that any width might be assigned to a road without entitling the owner to compensation provided the width was such as would be approved by the Local Government Board if a new by-law to that effect applicable to the particular area had been submitted by the authority. The matter was, therefore, in the discretion of the Board, who would decide the maximum width which the authority could reasonably claim. Any width prescribed in excess of that would require to be purchased by the authority failing agreement with the landowner. The Act contained no express provisions conferring power on a local authority or imposing the duty upon the landowners to construct the roads projected in a town-planning scheme.

Several speakers raised the point as to what compensation would be due to landowners in regard to delay to the development of land due to town-planning schemes, and as to what extent restrictions on land could be varied or revoked.

Mr. Parry said that conditions on land could be varied to any extent subject to compensation.

The Chairman said that local authorities in preparing plans would probably not go just where builders were developing on the outskirts, but would probably take the land a little further away. Then he took it that claims for compensation could only arise during the period of suspense if it be shown that someone had sent in plans of building to the local authority, and that development had been held up during the time the town-planning scheme was being considered. The only compensation would be for delay in building, and he did not think this would be a large amount.

Dr. Lawrence (Medical Officer of Health for Tottenham) urged the Conference to be very careful against any suggestion of relaxing by-laws. When they talked about cheap roads he asked if that meant dust. Some of the medical officers of health were afraid that in the anxiety to hurry forward town-planning schemes they might neglect establishing a reasonable and healthy minimum not only between the front building line, but between the back building line, for he knew that the greater part of the life of people in such a district as his was spent at the back of the house. Whatever might be the beauty of their architecture, the wonderful vista they had, or the number of open spaces, the verdict of the man in the street and the woman in the house would be finally given after they had read the report of the medical officer of health and seen the vital statistics and those of the disease in the districts dealt with.

Recoupment of Cost of Making Roads.

Mr. W. G. Wilkins, J.P., submitted a paper on the construction of roads by local authorities and the recoupment of the cost in the development of estates under town planning. He pointed out that the Act was for the express purpose of bringing about co-operation between local authorities and the landowners so that land likely to be used for building purposes may be planned so as to be of the greatest benefit to all the inhabitants of the neighbourhood. When the plan had the sanction of the Local Government Board it would possess the force and power of an Act of Parliament, and would represent the only way in which those landowners could at any time develop their land. Landowners were thereupon obliged to decide upon adopting one of these courses :—(1) To find all the requisite money, and to make all the bridges, roads, and streets shown upon the plan, as required upon their land. (2) To arrange with the local authority to do the work and consent to the deed which would give the authority a land tax as here suggested. (3) To keep the land for ever as agricultural land, unable to sell it for any other purpose than that specified upon the plan, knowing that any purchaser would be equally obliged, sooner or later, to adopt one of the two first-mentioned courses. If, as had been suggested, the local authority were able to get 1½ per cent. above its cost of borrowing money, and to repay the whole cost in thirty-five years, it would give its subsequent generations a steady income through the adoption of the Housing and Town Planning Act, equivalent to 5 per cent. upon the amount originally spent, after that capital outlay had been entirely repaid. The questions therefore that would arise were :—(1) The power of a local authority to construct roads, streets, or other works upon privately-owned land without the specific request of the owner. (2) The power of a local authority to average the charge for the cost according to the amount of benefit received. (3) The power of a local authority to accept a rent charge upon the land instead of demanding a cash or deferred payment. (4) The power of a local authority to borrow money for the purpose of constructing such works, either on the security of such rent charge or on the security of its general rates. The first two questions seem to be amply covered by the Private Street Works Act, 1892, where that Act had been adopted, and these powers were also evidently implied by the Housing and Town Planning Act. The third and fourth questions could only be satisfactorily answered by the Local Government Board. If, however, it was thought by representatives of local authorities that this proposed rent charge method was the simplest and most efficient way of financing town-planning schemes, then combined representation should be made to obtain official permission for this course to be adopted.

Several speakers having expressed their approval of the views held by Mr. Wilkins, the Chairman said it was merely a suggestion to them when considering schemes, and he did not know they could carry it further.

Limitation of the Number of Houses.

Mr. Raymond Unwin, F.R.I.B.A., submitted a paper on the effect of limiting the number of houses to the acre under Town Planning Acts, in which he said he had endeavoured to conclusively prove that there was no economic reason against landowners limiting the number of houses to the acre, but that, on the other hand, if the number of houses to the acre was limited and the price of land did not fall very heavily in consequence there would be an immense gain. That followed from the fact that the saving in the making of roads was distinctly in proportion to the reduction of the number of houses to the acre. Indeed, he found that it was in a greater ratio. He thought the local authorities were justified in demanding such a limitation of houses to the acre as the medical officer of health thought necessary for the community. In some cases friendly owners of estates had drawn up a scale, and this, he suggested, was the most practical scheme and the easiest way of limiting the number of houses to the acre in order to keep some relation between the size of the building and the size of the ground. The scale might either be by the cube of buildings or by the area on which they stood by a limitation as to height. A scale which he knew had been drawn up was as follows :—Houses not exceeding in cost when cubed at 6d., 225*l.*, not to exceed fourteen to the acre ; not exceeding 300*l.* in cost, twelve to the acre ; houses cubed at 6½d. and costing 500*l.*, not to exceed eleven to the acre ; houses costing 700*l.*, ten to the acre ; houses costing 900*l.* and cubed at 7d., not to exceed eight to the acre ; whilst the average over the whole estate would not exceed seven to the acre gross measure.

Mr. Neville Chamberlain said that in Birmingham they had spent a considerable time in preparing a town-planning scheme. Whilst Mr. Unwin had made out a case that the limitation of the number of houses brought about a simultaneous reduction in the cost of development, still, he did not think the figures would altogether convince people contemplating developing the land, generally for the reason that the land dealt with did not belong to a single owner, and it was no consolation to the men who lost to know that someone else gained. Local authorities must be careful, for they would have to find a lot of money for the making of roads and so on, and they looked forward to a return from the rateable value. If they put too severe restrictions on building they would drive builders to other areas, probably outside the borough. In Birmingham they had to deal with 2,000 acres. The landowner when he wished to build submitted a plan showing the general area of his land, and also a plan showing any other land in the area of the scheme, and they marked off on the plan any land they thought might be affected by the development of the land which the owner submitted. They took the whole land then and fixed the number to the acre. For instance, if they had fixed on the unit of ten to the acre, and 12 acres were to be developed, they would allow 112 houses.

Further, they fixed a certain minimum number of houses to the acre.

Mr. Harpur (Cardiff) said one point he had never heard discussed was what would happen under a town-planning scheme to an area which in years to come might become a business portion of the town, and the houses on which would require to be extended.

Alderman Thompson said that in such a case they could get a second town-planning scheme.

Replying on the discussion, Mr. Unwin said that if they had a flat rate per acre they would have a very great difficulty in regard to the building of small houses. They would simply get the big artisan's house, in which the labourer could only reside by taking another family to live with him.

Mr. Wright (President of the National Association of Master Builders) said he had been interested in the discussion, but a practical difficulty which had not been touched upon was how to provide houses for the lower working classes. The scheme they had touched on would give houses for the artisan, but there was a large class of honest, industrious workers who only earned about 25s. a week, and they wanted houses for such men at about 3s. 6d. a week. How that was to be done from the commercial point of view passed his comprehension. It was a question, however, on which they might well make representations to the local authorities for some concessions with regard to the land required for such buildings.

Alderman Thompson said he had presided over many Conferences which had considered that matter, and they would only be able to provide such buildings when they got cheaper roads, improved travelling facilities, and an amendment of the whole system of by-laws, which at present did not protect them from bad houses, but prevented them building excellent cheap houses. They also required a reorganisation of the system of credit for building purposes and an extension of the powers of societies of public utility.

The Conference subsequently discussed the question of the means of providing open spaces in town-planning areas.

CIVIC DESIGN NOTES.

The International Road Congress, London, 1913.

THE questions to be considered and discussed at the Third International Road Congress (London, 1913) have now been settled by the Local Organising Committee with the concurrence of the Committee of the Permanent Association of Road Congresses. They include a list of the questions on which papers are invited, and on which discussions will take place at the Congress in June, 1913, and a list of the subjects on which communications are invited, but on which no discussion will take place. The questions have been arranged so as to continue the investigations from the point at which they were left by the Congresses at Paris and Brussels. Subjects that were fully dealt with at the previous Congresses have been omitted, and overlapping has been eliminated so far as possible. A new sub-section has been included to deal with "Administration, Finance, and Statistics," subjects which were not discussed at previous Congresses. A Committee consisting of Messrs. H. P. Boulnois (late of the Local Government Board), H. P. Maybury (County Surveyor of Kent), A. D. Greatorex (President of the Institution of Municipal and County Engineers), R. J. Thomas (President-elect of the Institution of Municipal and County Engineers), T. B. Heslop (Secretary to the County Surveyors' Society), and J. Walker Smith (Chief Inspector, Local Government Board for Scotland) has been nominated to select the authors of the papers for the first section (Construction and Maintenance of Roads), and a second Committee, consisting of Messrs. Shrapnell Smith (Hon. Treasurer of the Commercial Motor Users' Association and the Roads Improvement Association), J. Willmot (County Surveyor of Warwickshire), J. E. Jarratt (Town Clerk to the County Borough of Southport and Hampton Copnall, County Clerk of Nottinghamshire) to select writers on the questions in the second section (Traffic and Administration). The Chairman, Sir George S. Gibb, and the Hon. Secretaries, Messrs. W. Rees Jeffreys and G. Montagu Harris, are *ex-officio* members of both Committees. Engineers, surveyors, and individuals engaged in public administration, who have made special studies of one or more of the subjects included in the questions, and who are in a position to communicate papers or memoranda giving data and results from personal investigation since the Brussels Congress in 1908, are invited to communicate with the Hon. General Secretary at the Road Board Offices. An exhibition of road construction machinery and appliances will also be held at the Royal Horticultural Society's Hall, Vincent-square, Westminster, S.W., and on adjoining ground during the week of the Congress. Applications for space should be made without delay, and copies of the special rules and by-laws of the Exhibition and forms of application for exhibitors can be obtained on application to Mr. W. Rees Jeffreys, Hon. General Secretary, The Road Board, Queen Anne's-chambers, Westminster, S.W.

New Road, Wolverhampton to Birmingham.

THE municipal surveyors of Wolverhampton, Birmingham, and of intervening towns have prepared a report upon the proposed main road. They report that, in their opinion, the road should be 100 ft. wide, and consist of a carriageway, 35 ft. wide, two gravelled footpaths, 8 ft. wide, a turfed margin about 44 ft. wide along one side of the carriageway which could be available for a tramway or a sleeper-track, and a similar margin, 8 ft. wide, along the other side of the carriageway, with three rows of trees. As a preliminary measure, however, the Committee recommend the construction of a road 24 ft. wide, with two footpaths, the latter being laid out with turf, which, exclusive of the land, will cost, it is estimated, about 120,000*l.*

Town-Planning Schemes.

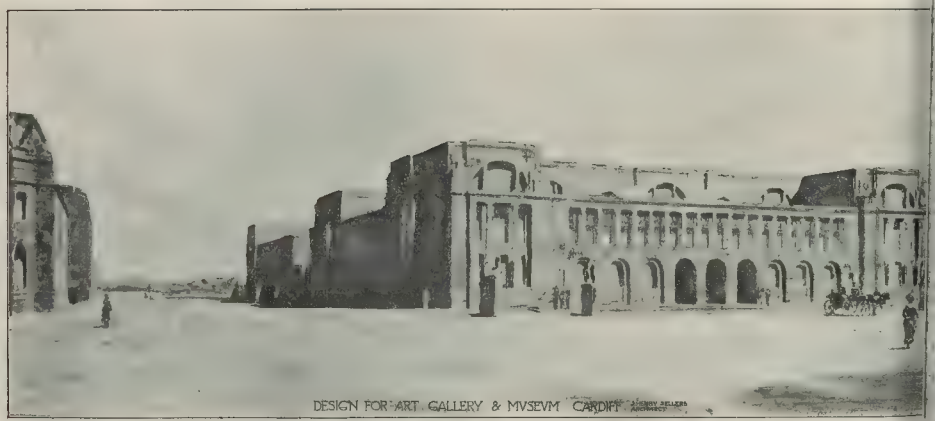
IT is stated that the Local Government Board has authorised the preparation of four schemes relating to Newcastle-on-Tyne and Sheffield. The Sheffield schemes for Sheffield affect an aggregate area of 1,000 acres within the city limits—Sandygate, Greystones, and Bannerdale; Firth Park, Wincobank, and Shire Green. In Newcastle an area of 52 acres at Craighall Dene will be dealt with. The Torquay Corporation have formulated plans for a spa in the town, involving an outlay of 15,000*l.* upon the conversion of the bath saloons into a medical bathing establishment. Mr. A. J. Taylor, of Bath, is advisory architect to the Corporation in the scheme.

Regent's Park One Hundred Years Ago.

THE *Times* reprints a graph in its issue of April 1812, which describes the laying-out of Regent's Park and the approaches. Some changes were made of the plans; the canal was dug around the north, instead of the south side of the Park, and Albany-street, on the east, was eventually chosen, in lieu of Hanover-gate, for the Household Cavalry Barracks. It is interesting to find that even in that day the conversion of "Marybone Park" aroused misgivings. The *Times* says:—

"When the roads are all completed this Park will unquestionably be a very agreeable place of residence, but not a few will regret the loss of those open and verdant fields which formed one of the most airy and pleasant resorts of the pedestrians of the metropolis."

We may here recall that Marylebone Park and Green, being 543 acres of the great Middlesex forest, owed their immunity from encroachment to having been acquired by Henry VIII. from the chase. In 1793 the Treasury had obtained 1,000*l.* premium for laying-out the farm lands and pastures of which the last lease was terminated in 1811. Nash's scheme was practically to one by Leverton and Chawner for building over nearly the whole area. His pupil, Mr. Morgan, engineer of the Regent's Canal from Paddington to Limehouse, prepared the ground, but not until 1838 were the lands admitted into the new Park (472½ acres). Decimus Burton laid out the Zoological Gardens and, with Robert Marnock, the Royal Botanical Society's Gardens, 18 acres, on Jews-harp Nursery, which at first was allotted to the Waterloo memorial and then to the Queen's palace. Nesfield laid out the flower-garden, 12½ acres, of Broad-walk.



Design submitted for the Art Gallery and Museum, Cardiff, by Mr. J. Henry Sellers.

THE BUILDING TRADE.

COVERY OF CONTRACT RICE WITHOUT THE RCHITECT'S CERTIFICATE.

HE builder who has undertaken to carry out work subject to the approval of the architect sometimes finds him- in the awkward position that he fails ecure that approval. The result is that annot obtain the certificate which, accord- to the terms of the contract, is a con- n precedent to payment of any part of contract price. In these circumstances ot unnaturally asks himself :—In what mstances may the certificate be dis- ed with?

is clear law that, in the ordinary course, rtificate may be made a condition pre- nt. As Lord Justice Mellish said, in pe *v.* San Paulo Railway (1873, L. R. . 597) :—"A contract may be so framed nder ordinary circumstances, to take the jurisdiction of the courts of law the courts of equity to determine what e amount payable under the contract. rever, according to the true construction e contract, the party only agrees to pay is certified by an engineer, or what is d to be due by an arbitrator, and there agreement to pay otherwise; that is y, in every case where the certificate of gineer or arbitrator is made a condi- precedent, unless, of course, there has some conduct on the part of the engineer e company which may make it inequit- that the condition precedent should be upon."

is to the proviso to this very clear nent of the law that the builder will n order to escape what he considers to e unjust decision of the architect, for clear that, if a certificate has been ulently or collusively withheld, or if has been a prevention by the employer, er by collusion with the architect or er, or otherwise, a certificate may be ised with.

this matter of granting certificates an ect is in a position very similar to that arbitrator; he must be impartial as s he can be, consistently with the l bias due to his position as architect of the parties, and he must do nothing istent with a judicial position. Any therefore, unknown to one of the s, or any conduct inconsistent with his l capacity, would, it would seem, dis- with his certificate.

offence may consist of not merely with- g a certificate, but in granting a certi- for less than is justly due. For e, to take an illustration which con- an architect and a local authority *v.* Llandaff Rural District Council 2, Hudson's Building Contracts, 347), eared that the plaintiff was employed defendant Council to construct certain In the contract it was provided that decision of the surveyor with respect value, amount, state, and condition part of the works executed, or of rt thereof, altered, omitted, or added, o in respect to any and every ques- at may arise concerning the construc- this contract, or the said plans, draw- pecification, or bills of quantities, or e of prices, or the execution of the nereby contracted for, or in anywise thereto, shall be final and without Disputes arose, and, after pro- negotiations, the surveyor gave his rtificate. The plaintiff brought an against the Council, in which he that the surveyor's final certificate not honestly made or given in the of, or reliance upon, his own judg- ut was made and given by reason nterference of, and in obedience to ctions and orders of, the Council." held that, as the Council had inter- though without any fraud on their th the surveyor in the exercise of his functions as quasi-arbitrator between the parties, the final certificate was not conclusive and binding upon the contractor.

When no certificate is forthcoming, the difficulty is to prove the fraud and collusion. As illustrating the circumstances in which a jury will be ready to find collusion, reference may be made to a case heard in the colony of Victoria. There an action was brought by contractors against Water Commissioners on an engineering contract; the plaintiff alleged due performance, and that the engineer fraudulently, and in collusion with the employers, had refused to certify. It appeared that the Commissioners had passed a resolution that a certificate should be given; the engineer professed to comply, but gave a document which was useless as a certificate, but expressed his willingness to certify if released personally from all responsibility. The contractors applied to the Commissioners to dismiss the architect and appoint another who would act according to the contract. This the Commissioners refused to do. The jury found that there was collusion. It was held that, though the engineer refused to give a final certificate, it was open for the jury to find from his acts and conduct that the work had been completed to his satisfaction, but that the contractor cannot recover from the employer unless it be alleged and proved that the certificate was refused in collusion with the employer. It was also held that an engineer to whose satisfaction work is to be done is not an arbitrator, but a skilled agent of the employer, and is bound to act fairly to both parties (Young *v.* Ballarat Water Commissioners (1879), 4 Vict. L. R. (Law), 306).

Fraud on the part of an architect and collusion with the building owner may also be sufficient to support an action by the builder against the architect alone for damages occasioned by the withholding of a certificate. For instance, in Ludbrook *v.* Barrett (1877) 46 L. J. C. P. 798, it was a condition precedent to payment that the builder should execute the works to the satisfaction of a named architect. Held, that an action could be maintained against the architect for collusively, fraudulently, and to the injury of the builder, refusing to certify that he was satisfied with the works.

Mr. Hudson, in his "Building Contracts," divides the cases in which a certificate may possibly be dispensed with into four classes, viz., (i.) Those where fraud or collusion was alleged; (ii.) those where fraud only was alleged; (iii.) those where before or after the giving of the certificate the engineer has shown that he will not be, or is not, impartial; (iv.) those where the employer intervenes with the architect, either before or in the giving of the certificate.

(1) *Cases of fraud and collusion.*—It is so obvious that fraud and collusion between the building owner and the architect are followed by injustice to the builder that it is not necessary to quote authorities in support of the proposition that such conduct vitiates a certificate when granted, or justifies the builder in suing the building owner direct.

(2) *Where fraud alone is alleged.*—Where fraud on the part of the building owner can be proved, which leads to the withholding of the certificate, he may be made liable, but he cannot be held liable, for the fraud of the architect unless he colluded with him. In the case of Smith *v.* Howden Union Rural Sanitary Authority and Fowler (2 H. B. C. 151) it appeared that the plaintiff, by agreement in writing dated August 5, 1885, contracted to construct certain specified sewers for the defendant Union for the price of 2,616*l.*, payable on certificate by the Engineer of the Union. There was also a clause providing that extras must be ordered in writing. The plaintiff commenced in August, 1885, and, though the work was not a success, proceeded according to the specification, and following the directions of the Engineer, and was not in default when, on July 10, 1886, the defendants took possession of the works and excluded the plaintiff. At that time 2,318*l.* only had been paid to the plaintiff.

The plaintiff sued for the contract price balance and for money due for extras, part of such extras not having been ordered in writing; and it was found by the referee that the Engineer had *mala fide* and wrongfully refused to certify, but that the defendant Union had not colluded with. Held, that the plaintiff's remedy was damages for wrongfully preventing the plaintiff from completing the contract work by wrongfully taking possession, the measure of damages being the amount to which presumably the plaintiff would have been entitled if the work had been completed, and had the Engineer thereupon issued such certificates as he ought to have issued.

In the result the plaintiff had judgment for a large amount due for extras never certified for.

Fraud and collusion will, however, be inferred where the employers know of the engineer's wilful refusal to certify, and take advantage of it. Thus in the case of Kellett *v.* New Mills Urban District Council (1900) 2 H. B. C. 239, the plaintiff agreed to do work for the defendants to the satisfaction of an engineer, and the defendants agreed to pay the plaintiff upon the certificate of the engineer. The engineer never addressed himself to determine and certify, but wrongfully refused, or wrongfully and unreasonably delayed so to determine and certify, and the defendants took advantage of his refusal and delayed payment. Fraud was not alleged. Held, that the plaintiff could recover from the defendants without a certificate.

Mr. Justice Phillimore said :—"I think that they knew here not merely that their man was not certifying, but that he was going through the process of pretended inquiry, which was almost worse than his refusing to inquire; and I think that they were bound in those circumstances to have taken some very decided action on their part.

(3) *Where the architect has shown that he will not be, or is not, impartial.*—Although it is often pointed out in legal text-books that a builder cannot expect absolute impartiality from an architect on the ground that, when he signs the contract, he knows that the architect is employed and paid by the building owner, yet the architect must show no bias in coming to a decision about a certificate. In Pawley *v.* Turnbull (1861) 3 Giff. 70, an architect took possession under a forfeiture clause, and finished the buildings. The builder filed a bill against the building owner and the architect, alleging unfair conduct on the part of the architect. Held, that it was necessary, in order to enable the plaintiff to succeed, to have proof of grossly improper conduct on the part of the architect; that the conduct of the architect (without imputing fraud) had not been of that discreet, impartial, and fair description which it ought to have been, and decreed payment to the plaintiff of the balance due under the contract, subject to a deduction for non-completion, relieved the builder from liquidated damages, declared the architect's certificate not binding, and ordered both defendants to pay the costs of the suit.

(4) *Interference by the employer.*—The last case in which the builder is entitled to ignore the provisions of the contract as to a certificate, and sue the employer direct is that in which the employer interferes with the architect. The question whether there was such interference is, of course, one of fact for a jury to decide. For instance, where an action was brought by a builder against the building owner under a contract by which the architect's certificate was a condition precedent to payment. Plaintiff alleged that the employer, after the work was completed, complained to the architect of alleged defects therein, and told him that he should not accept his certificate unless those alleged defects were attended to and remedied. The defendant denied this, and

produced evidence to the effect that there had been no communication at all between the defendant and the architect. Watkins Williams, J., to the jury :—"If you think that the architect, acting upon his own judgment, withheld this certificate, you must find a verdict for the defendant. If, however, you are of opinion that the withholding of the certificate was due to the improper interposition of the defendant, and that he prevented the architect from giving his certificate, you must find a verdict for the plaintiff." The jury found a verdict for the plaintiff (Brunsdon *v.* Beresford (1883), I. Cab. and El., 125).

It remains to consider other circumstances in which the certificate of the architect will be regarded as dispensed with. If, for instance, the contractor is prevented from carrying out the work by the act of the building owner, or by any act of the architect for which the employer is in law responsible, the certificate will not be a condition precedent. The following may be cited as illustrations :—Failure by the architect to deliver plans, the absence of which prevents the contractor getting on with his work: dismissal of the architect; failure to invest the architect with the necessary authority to grant certificates.

The question whether acceptance of the completed work by the employer operates as a waiver of the certificate, and is one of fact to be decided in each case.

It is, at any rate, clear that mere acceptance of a completed building does not constitute a waiver, because the building, being on the employer's land, he cannot avoid taking possession. Thus, where there was a contract between a builder and a building owner, it was agreed that the work was to be done to the satisfaction of the surveyor, upon whose approval payment was to be made by a time fixed. They were not completed by the time, but were alleged to have been completed five days afterwards, when plaintiff applied for payment. The building owner refused to pay without the certificate of the surveyor, who declared them to be incomplete, and refused to certify. In an action by the builder for the contract price, and in the alternative for a *quantum meruit*, the defendant pleaded that he did not dispense with completion within the fixed time, and that the work was not completed to the approval of the surveyor. Held, on demurrer, that both pleas were good. At that time the building owner was in occupation of the house, there being no other evidence but bare possession. Held, that the plaintiff could not recover in the absence of a certificate, and that the mere fact of the owner's taking possession of his own land, on which the buildings had been erected, did not afford an inference that he had dispensed with the conditions in the contract to pay for the work and labour actually done (Munro *v.* Butt (1858), 8 E. and B. 738).

What is true of a building is also true of works which form the subject of a large contract.

BATH MASTER BUILDERS' ASSOCIATION AND QUANTITIES.

AT a recent meeting of the Bath Corporation Markets Committee a deputation attended from the Bath Master Builders' Association. The spokesman, Mr. Erwood, referred to some proposed work at the Cattle Market, tenders for which had actually been received, and asked that they should be supplied with detailed quantities for the work. He explained that at the present time architects and surveyors practically all over the country were giving these quantities without being asked for them, in the interest both of employers and contractors. It saved a great deal of dispute afterwards as to what was included in the specification and drawings. The builder's work was entirely different from most trades. They had to guess beforehand what a thing would cost, and then, if he might use an historic phrase, they had to "wait and see" if they were right. It was nearly always the builder who made the biggest mistake in taking off his own quantities who got the job. In this instance they had been supplied with what he should call an enlarged specification. As a result of the conversation, it was resolved to accede to the request of the deputation and again advertise for tenders. It was decided that the tenders already received should not be opened.

GENERAL BUILDING NEWS.

CHURCH OF ST. MARY, SOUTHAMPTON.

It is proposed to complete the Church of St. Mary, Southampton, by the erection of the tower and spire. This church was erected in 1879-84, at a cost of about 25,000*l.*, in place of the old parish church, and as a monument to the late Bishop Wilberforce. It is a building in the early English style, designed by the late Mr. G. E. Street, R.A. The church stands on the site of an earlier church dating from the XIth century. The register dates from the year 1650, the earlier portion having been burned.

CHURCH, HARROW ROAD, LONDON.

A small church building is being erected in Cirencester-street, Harrow-road, by Messrs. E. A. Roome &. Co., of 36, Basinghall-street, E.C. The architect is Mr. E. H. N. Major, John-street, Bedford-row, W.C.

COUNTY SCHOOL, BASINGSTOKE.

The designs for this new school are by Mr. A. L. Roberts, the architect to the Education Committee, and the building, when erected, will accommodate 160 girls. There are six classrooms, cookery-room, scullery, central hall, etc., and the contract is being carried out by Mr. W. H. Tigwell, builder, of Basingstoke.

NEW BUILDINGS IN LONDON.

Shops, offices, etc., High Holborn, W.C.; Messrs. Dove Brothers, builders, 15, Studd-street, Islington, N. Shops, showrooms, etc., Bond-street, W.; Mr. C. F. Kearley, builder, 4, Great Marlborough street, W. Shops, showrooms, etc., Vere-street, W.; Messrs. W. J. Fryer & Co., builders, Bravington Works, Harrow-road, W. Conversion of hospital into shop premises, Mitcham-lane; Messrs. E. & A. Watts, builders, 85-7, Mitcham-lane, S.W. Operating theatre, etc., Mile End, E.; Architect to the Mile End Guardians, Bancroft-road, Mile End, E.

TRADE NEWS.

Mr. W. Draper Brinckle, architect, 2616, West Sixteenth-street, Wilmington, Delaware, U.S.A., would like to receive English catalogues of building material.

Under the direction of Mr. George A. Sexton, F.S.I., M.S.A., Kilburn, N.W., the "Boyle" system of ventilation (natural), embracing Boyle's latest patent "air-pump" ventilators and air inlets, has been applied to Holy Trinity Church, Kilburn, N.W.

A feature of the fireproof curtain at the London Opera House is the patent stop or bolt that prevents the curtain from buckling inwards if a fire should occur on the stage. Messrs. T. W. Vaughan & Co. inform us that two bolts are fixed in the stage floor, one under the curtain in the guide and the other near the centre of the stage, on the stage side of the curtain. These two bolts are counterbalanced, so that when the curtain descends the striking bolt in the curtain guide is pressed down, causing the centre stop to rise behind the bottom frame of the curtain, making a rigid stop that will prevent any movement of the curtain when once down.

Messrs. E. P. Allam & Co., electrical engineers, 28, Gray's Inn-road, London, W.C., have been successful in securing the contract for the electric light installation at St. Nicholas Church, Taplow.

Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester, have just supplied their patent warm-air ventilating Manchester grates to the Rural District Council Offices, Durham.

A DECEASED CONTRACTOR'S ESTATE.

Mr. John Martin, of Galwally House, New townbreda, Belfast, contractor, has left estate proved as of the gross value of 59,566*l.*

APPLICATIONS UNDER LONDON BUILDING ACTS, 1894 to 1909.

AT Tuesday's meeting of the London County Council the following applications under the London Building Acts were dealt with. (The names of the applicants are given in parentheses):—

Lines of Frontages and Projections.

Brixton.—Retention of a wood, glass, and zinc roof at the side of No. 144, Coldharbour-lane, Brixton, abutting upon Eastlake-road (Mr. F. Karno).—Consent.

Chelsea.—Re-erection of "Shelley House," Chelsea-embankment, to abut upon Embankment-gardens (Mr. E. Warren for Mr. C. H. St. John Hornby).—Refused.

City of London.—Two three-story projecting oriel windows at Nos. 22-25, Farringdon-street City (Mr. H. O. Ellis for the Amalgamated Press, Ltd.).—Consent.

Finsbury, Central.—Projecting one-s portion of 234, Pentonville-road, Finsb (Messrs. Lovegrove & Papworth for Mr. H V. Harraway).—Consent.

Hackney, North.—Erection of buildings u a site on the eastern side of Stamford-H Hackney, northward of No. 126, Stamford- (Messrs. Edmondsons, Ltd.).—Consent.

Hackney, North.—Erection of sham h timber work, porches, oriel windows, wooden balustrading at sixteen propo houses on the western side of Ashtead-r Hackney (Mr. R. A. Reader for Mr. D Barclay).—Consent.

Hackney, North.—Erection of bay-wind and porches to Nos. 17 and 19, Shacklew lane, Kingsland (Messrs. H. Bradford & Sc —Consent.

Hammersmith.—Erection of a building the northern side of Great Church-lane, H mersmith (Mr. H. W. Sanders for Me Fullers, Ltd.).—Consent.

Hampstead.—Conversion of a porch inf bay-window at No. 66, Fellows-road, Ha stead (Messrs. Dolman & Pearce for Mr. H. Snow).—Consent.

Holborn.—Two showcases and two proj ing signs, and the erection of two stall pl at the "Niche," adjoining the southern of Hampden House, Kingsway (Mr. E. Lewis).—Consent.

Holborn.—Illuminated sign at the Prince's Theatre, Shaftesbury-avenue, Holi (Messrs. J. R. Offer & Sons for Messrs. W F. Melville).—Consent.

Islington, North.—Two showcases at 247, Seven Sisters-road, Islington (Messrs Taplin & Co.).—Consent.

Kensington, North.—Erection of an exte flight of wooden steps at No. 42, Pembri road, Kensington (Mr. E. Perfect).—Conse

Kensington, North.—Projecting wooden s at No. 26, Clarendon-road, Kensington H. W. Currey).—Consent.

Kensington, South.—Retention of a sig No. 4, Bute-street, Kensington (Messrs. V & Co.).—Consent.

Lambeth, North.—Retention of an illu nated sign at No. 156, Westminster-br road, Lambeth (Messrs. S. R. and Bo Worns).—Consent.

Lewisham.—Iron and glass porches to houses on the northern side of St. Mildr road, Lee (Mr. G. A. Lansdown for Mo W. J. Scudamore & Son).—Consent.

Lewisham.—Retention of a conserv addition at the rear of No. 179, Hither G lane, Lewisham (Mr. L. Harman).—Conse

Lewisham.—Projecting bay-windows, por hoods, and oriel windows to sixteen hous the eastern side of Manwood-road, Lewi (Mr. J. Nicholls).—Consent.

Lewisham.—Porch at the side of No Bovill-road, Lewisham, next to Ackroyd (Messrs. Dunsmore Brothers).—Consent.

Lewisham.†—Iron and glass shelter in of a "picture palace" on the southern si Sangley road, Catford (Messrs. Norfo Prior for Mr. J. Wall).—Refused.

Marylebone, West.—Iron and glass shel front of Nos. 268 and 270, Edgware roa Marylebone (Messrs. Gale, Durlache Emmett for the Home and Colonial S Ltd.).—Refused.

Peckham.—Porches to seven houses o north-western side of Ormside-street, Pec (Mr. J. Watts for Mr. A. Seaward).—Co

St. George, Hanover-square.—Iron and shelter in front of No. 51, South-street, fair (Messrs. G. Trollope & Sons and & Sons, Ltd.).—Refused.

St. George, Hanover-square.—Iron and shelter in front of the porch of the C Hotel, Carlos-place, Grosvenor-square (M Anderson).—Consent.

St. George, Hanover-square.† Proj sign in front of No. 64, Conduit-street (M Owensmith).—Consent.

St. George, Hanover-square.—Refaci No. 18, Wilton-crescent, St. George, Ha square (Messrs. Hatchard, Smith, & S Mrs. Darrel).—Consent.

St. George, Hanover-square.—Pro coach-house doors in front of No. 5, mews, Lyall-street, St. George, Hanover (Mr. A. L. Isenberg).—Consent.

St. Pancras, East.—One-story build No. 7, Camden-road, St. Pancras (M Atkinson for the Gas Light and Coke pany).—Consent.

St. Pancras, South.—Projecting facia ported on brackets, in front of No. 49, road, St. Pancras (Mr. A. Davis).—Cons

Strand.†—Projecting oriel window conies, and a cornice at Nos. 39 a Jermyn-street, St. James's-street Emden, Egan, & Co. for Mr. J. Roch Consent.

Strand.—Projecting porch at the Ma Hospital, Dean-street, Soho (Mr. A. Saxe for the Governors of the hospital).—Co

Wandsworth.—Erection of a one-story addition at the rear of Nos. 103, 105, and 107, Tetcham-road, Tooting, to abut upon the south-eastern side of Franciscan-road (Mr. P. Hills for Messrs. Smith Brothers).—Consent.

Width of Way

Hammersmith.—Addition at "Ravenscourt," Ravenscourt-square, Hammersmith (Mr. C. Conner for Mr. R. B. Rathbone).—Consent.

Holborn.—Erection of an addition at Christ Church, Woburn-square, to abut upon the north-western side of Upper Montague mews (Mr. S. B. K. Caulfield for the Vicar and Churchwardens).—Consent.

Islington, North.—Addition at the rear of Nos. 490 and 492, Holloway-road, Islington (Mr. C. T. Lee for the London County and Westminster Bank, Ltd.) —Refused.

Kensington, South.—Erection of greenhouses at No. 1, Holland-park, with a boundary fence (Mr. H. W. Currey for Mr. W. F. Fladgate).—Consent.

Lambeth, North.—Alterations at No. 42, Tyer-marsh, Lambeth (Mr. W. J. Kemp, for Mr. C. Liell).—Consent.

Pancras, West.—Erection of a building but upon Redhill-street and Little Edward-street, St. Pancras (Messrs. Pilditch & Co. for Mr. W. S. Shepherd).—Consent.

Southwark, West.—Buildings upon a site on the southern side of Orange-street, Southwark (Messrs. F. J. Eedle & Meyers for the Hope Street Factory, Ltd.).—Consent.

Whitechapel.—Erection of a building on the north-western side of Half-Moon-passage, Whitechapel (Messrs. Joseph & Smithem for Mr. Lionel de Rothschild and others).—Consent.

Width of Way and Projection.

Southwark, West.—Erection of a projecting internal iron staircase at the premises of the Idenhall Press, Ltd., on the western side of Duncan-street, Southwark (Mr. G. A. Lansdale for the Leadenhall Press, Ltd.).—Consent.

Line of Frontage and Space at Rear.

George, Hanover square.—Seven houses on the eastern side of Park-street, St. George, Hanover square, to abut also upon the southern side of Upper Grosvenor street and the western side of Reeves-mews (Mr. W. Willett).—Consent.

Lines of Frontage and Construction.

City of London.—Erection of an external iron gangway across Manchester-avenue, City, to connect Nos. 3 and 19, Manchester-avenue (Messrs. William Smith (Camberwell), Ltd., for the Clients' Investment Company).—Consent.

Deptford.—Two temporary showcases in front of No. 251, New-cross-road, Deptford (Messrs. R. & J. Foster).—Consent.

Hackney, Central. Temporary one-story addition at No 1, Church-road, Kingsland, building upon the western side of De Beauvoir-road (Mr. P. Foot).—Consent.

Hammersmith.—Erection of an iron and glass shelter at the new entrance to Ravenscourt-park Station on the eastern side of Goldhawk-road, Hammersmith (Mr. J. W. Lamb Hood for the London and South-Western Railway Company).—Consent.

Hampstead.—Motor-car shed on the forecourt of No. 112, Finchley-road, Hampstead (Mr. H. Harris).—Consent.

Rotherhithe.†—External iron and concrete subways over the public way of Essex-place, to connect premises on the southern side of Rotherhithe-street, Rotherhithe (Messrs. Joseph Arnithem for the London Metallic Capsule Company, Ltd.).—Consent.

Width of Way and Space at Rear.

Hammersmith.—Re-erection of a building on the northern side of King-street, Hammersmith, to abut upon the eastern side of Dimes-place (Mr. J. W. Hawkins for Mr. W. J. H. Hall and others).—Consent.

Width of Way and Construction.

Deptford.—Erection of a temporary wood and iron building at the premises of Messrs. J. Musslewhite & Son, on the eastern side of the Grand Surrey Canal, and the northern side of Windmill-lane, Deptford (Mr. W. H. Bailey for Messrs. C. H. Musslewhite & Son). Consent.

Greenwich.—Retention of a wood and glass portion of a temporary character to a coach house at No. 66, The Stowage, Deptford (Mr. Edwards).—Consent.

Kensington, South.—Erection of a temporary wood and iron building at the rear of No. 98, Queen's-gardens-terrace, Kensington, to abut upon Palace-gardens-mews (Messrs. Humphrys, Ltd., for Mr. G. P. Harben).—Consent.

Paddington, South.—Addition to a garage at the rear of No. 15, Sovereign-mews, Paddington (Mr. A. Turner).—Consent.

Space at Rear.

Wandsworth.—Erection of No. 141, Mitcham-lane, Wandsworth, with an irregular open space at the rear (Mr. J. Harding).—Consent.

Formation of Streets.

Hampstead.—Formation or laying-out of streets for carriage traffic to lead out of Redington-road and Templewood-avenue, Hampstead (Messrs. Farebrother, Ellis, & Co.).—Consent.

Alteration of Buildings, etc.

Kensington, South.—Alterations at No. 3, Campden-hill-square, Kensington (Messrs. Chesterton & Sons).—Consent.

Strand.—Alterations and additions at Derby House, St. James's-square, Westminster (Messrs. Edmeston & Gabriel).—Consent.

Westminster.—Alterations at No. 37, Parliament-street, Westminster (Messrs. Joseph & Smithem for the Express Dairy Company).—Consent.

Line of Frontage and Uniting of Buildings.

St. George, Hanover-square.—Erection of forecourt steps to a building known as Nos. 313, 315, and 317, Vauxhall-bridge-road, and Nos. 12 and 13, Wilton-road, Westminster (Messrs. Z. King & Son).—Consent.

Alteration of Buildings and Cubical Extent.

Rotherhithe.—Erection of additional story at No. 120, Tower-bridge-road, Rotherhithe (Mr. J. M. Kennard).—Consent.

Cubical Extent.

Kensington, South.—Erection of an addition to the premises of Harrod's, Ltd., upon the site of Nos. 37 and 39, Hans-road, Kensington (Mr. C. W. Stephens for Harrod's, Ltd.).—Consent.

Uniting of Buildings.

City of London.—Uniting of No. 132, Salisbury-square, City, with St. Bride's House, St. Bride's passage, at the ground floor level (Mr. F. J. Smith for Messrs. J. Haddon & Co.).—Consent.

City of London.—Uniting of Nos. 16 and 17, Bury-street, St. Mary Axe, City (Mr. G. Ashby). Consent.

Deptford.—Armoured doors in lieu of iron doors to staircase openings in a division wall at the premises of Messrs. A. G. Scott & Co., Ltd., Hanlon-street and Grove-street, Deptford (Mr. L. Jacob).—Consent.

Deptford.—Formation of an opening between Nos. 199 and 201, Deptford High-street (Mr. E. J. Francis).—Consent.

Finsbury, East.—Formation of an opening between Nos. 226 and 228, Old-street, Finsbury, at the fourth-floor level (Mr. S. Clifford Tee for Messrs. Lefever).—Consent.

Finsbury, East.—Further uniting of Nos. 17 to 20, West Smithfield, by means of an opening at the fourth-floor level (Fireproof Doors, Ltd.).—Consent.

Hackney, Central.—Uniting of Nos. 183 and 185, Sandringham-road, Hackney (Messrs. G. Billings, Wright, & Co., for Miss Hawkins). Consent.

Holborn.—Uniting of No. 33 with Nos. 34 and 35, Kirby-street, Holborn (Messrs. Bird & Walters for Mr. F. P. Wilson).—Consent.

Holborn.—Opening at the second-floor level, connecting Nos. 77-79, Farringdon-road, Holborn, with warehouse premises abutting upon Castle-street (Messrs. Marshall, Sons, & Co., Ltd.).—Consent.

Rotherhithe.—Armoured doors and an iron shutter in lieu of iron doors to certain openings at Nos. 5, 7, 9, and 9a, Tooley-street (Topping's Wharf), Rotherhithe (Messrs. H. Langston & Co.).—Consent.

The recommendations marked † are contrary to the views of the Metropolitan Borough Councils concerned.

PROJECTED NEW BUILDINGS IN THE PROVINCES.*

ABERCARN.—Additions to works for Messrs. Richard Thomas & Co.

Accrington.—Weaving shed, near Penny-house-lane, for the Accrington Mill Building Company, Ltd.

Arbroath.—Extensions to engineering works of Messrs. James Keith & Blackman Company, Ltd.

Banbury.—Extensions to infirmary (520*l.*); Messrs. Kimberley & Sons, builders, Banbury.

Bedminster.—Free library (9,000*l.*): Mr. T. H. Yabbicom, Surveyor, Town Hall, Bristol.

Blackburn.—Weaving shed for the East End Mill Company (Blackburn), Ltd.

Bolton.—School (5,000*l.*); Trustees, St. George's-road, Congregational Church, Bolton.

Bradford.—Alterations to workhouse (2,100*l.*); Messrs. Collier & Catley, Ltd., builders, St. Mary's Butts, Reading.

Carnoustie.—Entertainment hall; Mr. J. D. Swanston, architect, Kirkcaldy.

Cathcart.—Church hall, corner of Holmlee-road and Garry-street; Trustees, Battlefield Congregational Church, Cathcart.

Clydebank.—Additions at yard of Messrs. John Brown & Co., shipbuilders.

Colston (Glasgow).—Church and hall with offices, Springburn road, Colston Church Trustees.

Conisborough (Rotherham).—Baths (1,180*l.*); Mr. H. Saville, builder, Conisborough.

Crewe.—Proposed bakery (10,000*l.*) for the Crewe Co-operative Society.

Croydon.—Handicraft centre, Boston-road (920*l.*); Messrs. George E. Everitt & Sons, Ltd., builders, Windmill road, Croydon.

Denistoun (Glasgow).—Six tenements, Aberfoyle-street, Alexandra Park Property Company, 65, Bath-street, Glasgow.

Fergusiie.—Spinning mill for Messrs. J. & P. Coats, Ltd., Paisley.

Frodingham.—Enlargement of St. Laurence Parish Church; Mr. H. Marrows, builders, 84, Garden street, Great Grimsby.

Glasgow.—Alterations and additions to buildings, Royal Exchange, for the Society of Proprietors of the Royal Exchange Buildings, Glasgow, Ltd.

Great Harwood.—Catholic school; Messrs. Higson & Sons, builders, 42, Byron-street, Blackburn.

Hayes.—Machine factory, Blyth-road, for the Gramophone Company; factory, Silverdale road, for the X-Chair Patents Company.

Helensburgh. — Hall, William-street (170 places); Rector, St. Michael's Episcopal Church, Helensburgh.

Irton.—Pumping-station; Mr. William Millhouse, Water Engineer, Town Hall, Scarborough.

Kettering.—Proposed improvements at baths and provision of slipper baths; Mr. T. R. Smith, Surveyor, Council Offices, Kettering.

Lincoln.—Improvements at county hospital (1,100*l.*); Clerk to the Governors.

Mansfield. — United Methodist Church, Nottingham-road (7,000*l.*); Messrs. George Baines & Son, architects, 5, Clement's Inn, Strand, W.C.

Neilston.—Building, Main-street, for the Barrhead Co-operative Society.

Oakham.—Additions to school (3,345*l.*): Messrs. Nicholls Brothers, builders, Chapel-street, St. Ives, Cornwall.

Radstock.—Thirty houses (6,600*l.*); Messrs. Bird & Son, builders, Radstock.

Rawtenstall.—Weaving shed, warehouse, etc., Lower Mill, for Messrs. Whitehead & Co.

Renton.—Public school (2,500*l.*); Mr. A. C. Denny, architect, Dumbarton.

Rishton.—Warehouse, Wheatfield Mill, for the Wheatfield Manufacturing Company, Ltd.: mill, Knowles-street, for the Rishton Mill Building Company, Ltd.

Scarborough. — Catholic church, Avenue Victoria, South Cliff; Messrs. John Petch & Son, 6, Westborough, Scarborough.

Seaforth.—Alterations to Seafield House (12,000*l.*); Messrs. W. Hall & Sons, builders, 60, Christian-street, Liverpool.

Southampton.—The following plans have been passed:—Additions, Eye Hospital, Bedford-place, for Mr. A. F. Gutteridge; three houses, Kenilworth and Harborough roads, for Mr. F. W. Young, jun.; alterations and additions, Bevois Town Hotel, Middle-street, for Messrs. Weston & Burnett; additions, Bitterne Park Hotel, Cobden-avenue, for Mr. H. Lawrence; additions, Sunlight Laundry, Winchester-road, for Mr. G. R. Long. Plans have been lodged for the construction of a sewer and for the erection of three houses in Highfield-lane, by Messrs. Lemon & Blizard; and for fifteen houses, Oakmount-avenue, Brookvale-road and Russell-place, by Mr. J. Smith.

Southend-on-Sea.—Alterations to theatre, Leigh-road, for the Raymond Animated Picture Company.

Studley.—School (200 places); Mr. Bolton King, Secretary, Education Committee, Warwickshire County Council, County Buildings, Warwick.

Twickenham.—Almshouses. Church-street, for Messrs. Senior & Furbank, Bank-chambers, Richmond. A plan has been lodged for a cinematograph theatre in Richmond-road, for Mr. R. B. Rowell.

Urmston (Manchester).—Institute (2,000*l.*); Rev. E. H. Cooke, Vicar, St. Clement's Church, Urmston.

Woodford. — Special instruction centre (1,768*l.*); Mr. W. J. Maddison, builder, Clarkson-street, Canning Town, E.

Worksop. — Rebuilding work at Priory Church (12,000*l.*); Vicar, Worksop.

York.—Receiving homes (1,840*l.*); Mr. W. Birch, builder, York.

* See also our list of Competitions, Contracts, etc., on another page.

THE INTERNATIONAL BUILDING EXHIBITION, LEIPZIG, 1913.

WE understand that the object of this exhibition is "to bring before public notice in all parts of the globe a vivid picture of the status of architecture and the building of dwellings from a scientific and artistic point of view and to reveal its social and economical meaning." The undertaking is intended to reveal the importance which the "united work of theory and practice, of science, technical labour, and industry, has had, and will gain yet, for the development of architectural building. In the Universal Exhibition for Architecture and Dwellings there will be a department devoted to showing the great public representations and pictures of modern technical improvements. The exhibition will bring before the public "engineering architecture" so as to give a better understanding of the technical inventions that are not so easily grasped as simple architectural works."

The management of the scientific department of the Architectural Exhibition is in the hands of Herr Ewerbeck, Government Architect, of Berlin. A palace will be erected for the purpose in the exhibition grounds, which will be the home of the scientific department. It will comprise the following points of view:—

Section 1.—The scientific structure of architectural works, which will include the requirements for the principles of drawing up architectural plans; materials, working of and proving building materials; the execution of buildings; representations of plans in general and in particular.

Section 2.—The second large section includes the artistic structure of architectural buildings with their environs.

Section 3.—Section three represents the scientific and artistic structure of streets as a whole, town-planning, and settlements.

Section 4.—A fourth section shows modern improvements in building from a hygienic point of view.

In addition to the particular scientific department there are separate courts devoted to the science of building, wherever there should happen to be more space wanted for industrial exhibits. Besides this the exhibition buildings of the Province of Saxony and the town of Leipzig will offer scientific material. Foreign countries will be represented in their own particular scientific groups.

THE LONDON COUNTY COUNCIL.

THE first weekly meeting after the Easter recess of the London County Council was held on Tuesday in the County Hall, Spring-gardens, S.W., Lord Cheylesmore, Chairman, presiding.

LOANS.—The Finance Committee recommended that loans should be made to borough councils as follows:—Hackney, 3,468*l.* for electricity mains; Westminster, 91,500*l.* for street improvement; Islington, 2,581*l.* for poor law purposes.

ADDITIONAL PUMPS.—In a report of the Main Drainage Committee it was stated that it was advisable to provide additional pumping power at the Falconbrook pumping-station at an estimated cost of 9,500*l.*

THEATRES, ETC.—The following drawings have been approved by the Theatres and Music Halls Committee:—Adelphi Theatre, Strand—Provision of a hot-water boiler, and removal of a wall enclosing the coke store; Alhambra Palace of Varieties—Alterations to dressing-rooms; 538 and 540, Kingsland-road—Additions to the electrical installation; King's Picture Playhouse, Chelsea—Arrangement of the curtain-raising gear; Malden-road, Kentish Town—Provision of a new means of approach to the cinematograph enclosure; New Prince's Theatre, Shaftesbury-avenue—Alterations to the apparatus for raising the safety curtain; 165, Oxford-street (cinematograph hall)—Raising of the rear portion of the ground floor; Paragon Theatre of Varieties, Mile End-road—Rearrangement of stalls and balcony seating and provision of glass screens on both sides of the stalls; Pavilion Theatre, Whitechapel-road—New cinematograph enclosure and rewinding rooms; Royal Academy of Music—Rearrangement of gallery steppings; it is also proposed to erect a cinematograph hall at 114, 116, and 118, Theobald's-road, W.C., and the Committee recommended that the drawings for the same be approved.

WESTMINSTER CITY COUNCIL.

AT the fortnightly sitting of this Council on April 25 the following matters were dealt with:—

National Gallery Extension.—Last year the Council adopted a proposal of H.M. Office of Works to acquire some land for the purpose of forming with land to be added by the Office of Works a widening and prolongation of St. Martin-street, between Orange-street and Trafalgar-square. The Office of Works have now definitely informed the Council that they had abandoned the construction of the new street in order to secure the fullest possible measure of security to the National Gallery against fire. With regard to the vacant space between the National Gallery and the premises of Messrs. Hampton & Sons, the Council understood the intention was to form a courtyard, which in due course will be turf clad.

Building in Piccadilly.—The Improvements Committee reported having again approached the Office of Works regarding the unprecedented delay in the rebuilding of 19 and 23, Piccadilly.

Paving Contract.—The Highways Committee reported the receipt of a letter from the Limmer Asphalte Paving Company, Ltd., dated March 26, with reference to the Council's decision to exercise their option to continue the existing contract for the maintenance of the asphalt carriageway of Victoria-street for a further period of five years, terminating on March 31, 1917, stating they will carry out the terms of the contract to the best of their ability. As regards the Council's inquiry what further reduction in the contract price the company would be prepared to make if the contract were extended for a further period of five years from March 31, 1917, the company say that, while always desirous of in every way meeting the Council with regard to contracts, yet, taking into consideration the continual rise in the cost of raw materials, freights, and wages, they have, after careful consideration, been forced to the conclusion that they cannot offer any further reduction; they would, however, be willing to continue for a further five years at the rate for the five years ending March 31, 1917.

LEGAL COLUMN.

Workmen's Compensation.

A curious and important point under the Workmen's Compensation Act has come for decision before a Judge of the King's Bench Division in the case, Smith's Dock Company, Ltd., *v.* John Readhead & Sons, Ltd.

The plaintiffs, ship repairers, had hired from the defendants a dock, and were carrying out certain repairs in the dock upon a vessel, when an accident occurred to one of their workmen on February 14, as a result of which he died on February 18. For the purposes of the case it was admitted that the accident was due to negligence on the part of the defendants' servants.

The deceased man left only one dependent, an illegitimate daughter, who took proceedings against the plaintiffs under the Workmen's Compensation Act, and an award was made in her favour of 203*l.* 0s. 1d.

In the proceedings in question the plaintiffs were seeking to recover this sum from the defendants. Such proceedings have to be taken under sect. 6 of the Act, which commences:—"Where the injury for which compensation is payable under this Act was caused under circumstances creating a legal liability in some person other than the employer to pay damages in respect thereof," the workman is to have the option of proceeding against either, but shall not be entitled to recover both compensation and damages.

Now, as the workman had died, any right of action he himself would have had had abated, and the action, apart from the Workmen's Compensation Act, could only be brought under Lord Campbell's Act, which is limited to legitimate dependents; therefore it was argued that in this case there was no alternative remedy open to the illegitimate dependent, but her sole remedy was under the Workmen's Compensation Act against her father's employers. The learned Judge said that the case was one of difficulty, but he held that the moment the injury was caused there was a "legal liability" in some person other than the employer. The case is curious, because supposing the man had been instantaneously killed it is clear that then no legal liability could by any possibility be said to exist except under the Workmen's Compensation Act by his dependents against the employers. There would be no claim open against the stra firm in such circumstances.

In making employers liable for the ille mate dependents of their workmen the W men's Compensation Act marked a curious new departure in our law, and if the a decision is correct the Act has affected legal liability of third parties.

Rebuilding Mansion House Settled Estat

A point of some interest to owners of has recently been decided by a Judge of Chancery Division in a case *re* Wyndh Settled Estate. The tenant for life was building the mansion house, and the ques was—What sum could be allowed out of capital settled sums in respect of his expe ture? By sect. 13 of the Settled Land 1890, improvements authorised by the Set Land Act, 1882, shall include "The rebuil of the principal mansion house on the set land, provided that the sum to be app under this sub-section shall not exceed one- of the annual rental of the settled land." Court held that the words "annual rent must be read literally as the total amoun the rents payable to the landlord. If part of the land was unoccupied, this however, also to be considered as produc the rent usually paid for it. Moreover, ascertaining the annual rental, no deducti ought to be made for tithes, land tax, drain rates, or rent charges.

The figures in this particular case illustrate the importance of the decision. gross income of the estate was 4,265*l.*, the going, tithes, land tax, drainage rates, a charge, and interest on mortgage amou to 2,094*l.* 0s. 9d., leaving a net income 2,171*l.* 19s. 3d. The cost of building mansion house was 5,127*l.* 14s. 8d., and tow this the Court allowed half of the gross re viz., 2,132*l.* 10s.

Trade Union Law.

The recent case, Dallimore *v.* Williams Jesson, tried before a Judge and a spe jury, raised some interesting points. action was brought by the conductor proprietor of a band against two member the Amalgamated Musicians' Union, wh was alleged, had induced some members of band to break their contracts by threats pickets, and also the action was for libel slander. After a trial lasting several d the Judge ruled that there was no cas regards the slander, but on other point left the case to the jury, who answered cer questions as follows:—Did the defend without justification and with intent to injur plaintiff, (1) procure and induce the plain employees to break their contracts?— Interfere with the plaintiff's business?— Did they conspire to commit the acts set in question?—Yes. Did Jesson publish libe statements of the plaintiff, and if so, they true?—Jesson published libellous s ments which were untrue. Was there a t dispute?—No. Were the defendants' act contemplation or furtherance of a trade pute?—No. Were the defendants' acts out of spite?—Yes. The damages assessed at 400*l.* for the conspiracy, etc., 100*l.* as against Jesson for the libel, and j ment was given for these amounts; but costs of the issue of the libel were all as regards Williams.

Now, in reference to the conspiracy, in ment to break contracts, and interference the plaintiff's business, the case is clear, a protection afforded trade unionists by Trade Disputes Act, sect. 3, is limite action taken in contemplation or furthe of a trade dispute, and the jury found there was no such dispute in contempl or existence.

This point is covered by the decisio Conway *v.* Wade (the *Builder*, Augu 1909).

The libel raises a more interesting que as it is an action for tort, and sect. 4, is in general terms, and the operative section of which makes no mention of disputes, prohibits the Courts from ente ing such actions against trade unions or members. In the recent case, Vacher & *v.* London Society of Compositors, note us, the *Builder*, April 12 last, the Cou Appeal had to consider a case of libel then the tort was committed, *i.e.*, the was published, in contemplation or furthe of a trade dispute, and the majority Court held that sect. 4 of the Trade Dis Act applied and the action could n entertained.

In this case the Court did not decide wh the section applied when the libel wa published in contemplation or furtheran a trade dispute, but there are *dicta* i judgments of the Lords Justices who gav majority judgments which give the impr

they consider the section general in its ...ation. There is a case, Rickards *v.* ...m, where a Judge of First Instance held ... was jurisdiction to entertain such an ... unless the libel was published in con... ation or furtherance of a trade dispute. ...aw on the subject is, therefore, in a unsatisfactory condition, and a decision ... Court of Appeal or the House of Lords ...ch needed. All that can be said is that ...ms bad enough that libel should be a ...used instrument in furthering trade ...es without a union being able indis... ately to publish falsehoods about persons ...nected with any dispute.

LAW REPORTS.

OFFICIAL REFEREE'S COURT.

(Before Mr. EDWARD POLLOCK.)

The Decoration of a Mansion.

...MENT was given by Mr. Pollock on April ...er a hearing begun last term and con... these sittings, of a claim against Mr. ... Mallaby-Deeley, M.P. for the Harrow ...n, brought by Mr. Edward Henry ..., a builder of Harrow-road, W., for the ...y of a balance of 477*l.* for decorative ... done at the defendant's residence, ...m Court, Surrey.

...plaintiff's case was that in pursuance of ...ten contract, dated May 20, 1911, he ...dertaken to carry out certain work at ...m Court; the job was proceeded with, ... complained that before he could finish ...ntract the defendant repudiated it, and ...ated it, ordering the plaintiff to leave ...ce.

... Mallaby-Deeley, on the other hand, ...d the contract, but claimed he was ... under its terms to put an end to it, ...; that the plaintiff's workmanship was ...d that the whole work had been sub... to faulty supervision, and had not been ...o the satisfaction of the defendant's ...t, Mr. Langton Cole, in accordance ...the contract. Mr. Mallaby-Deeley ... to deduct 272*l.* from the plaintiff's ...n regard to the alleged defective work ... additional sum of 54*l.* as damages for ...

...Pollock, in the course of his judgment, ...t the claim was in respect to external ...ernal painting, and papering carried ...his house in August of last year. Alleg... work and delay, Mr. Mallaby-Deeley ...d that he had been entitled to put an ...e contract with the plaintiff, to employ ... else to do the work, and to charge ...ntiff for the amount he had paid, and ...ought to have damages for the delay. ...t point he had to determine was ... in August last year the defendant ...ht in ending the contract. The de... appeared to have made a complaint ...e work, but there had been no com... by Mr. Langton Cole, the architect. ...named had offered evidence in a way ...ould be acceptable in any Court, and ...Marshall and Adams, assistants in Mr. ... Cole's office, had given evidence that ...litions in August were such that in ...inion Mr. Sandon could and would ...n willing to put right all the matters ...ed of by the architect, and that was ... having regard to the fact that the ...s to be done to the satisfaction of the ... under the contract. Mr. Pollock ...d that in these circumstances the ...t was not justified in putting an end ...ntract, and that Mr. Sandon, there... ... entitled to a *quantum meruit* in any ...he work he had done. Regarding the ...of the work, the learned Official ...pointed out that he had inspected it ...t Mitcham Court, and he was satisfied ...ain parts of the external painting ...complaint, and that some reduction ...e made in that respect. As far as ...work was concerned, Mr. Bankes, on ...lon's behalf, had acknowledged that ... it was unsatisfactory. The only ...remaining was as to what sum ought ...ducted from the claim. Allusion had ...de during the proceedings to the *...ardious* affecting this contract from ... Mr. Sandon had complained that he ... obtain possession of the rooms where ... to get the work done, but Mr. Mallaby... ...d said that Mr. Sandon could have ...room he wanted. He (Mr. Pollock) ...inced from the letters between the ...at Mr. Mallaby-Deeley must be in ... this point. The learned Official ...pressed the opinion that the counter... ...d been much exaggerated. He did ...se to go into matters, but he would treat the affair as if he were a jury, as he had been invited by the parties to do. He thought it would be proper to deduct 70*l.* from the plaintiff's claim. There would be judgment for the plaintiff for 207*l.* beyond the 200*l.* paid into Court (which was to be paid out) on the claim, and judgment for the plaintiff on the counterclaim, with the cost of the action.

Mr. Ralph Bankes and Mr. Whateley (instructed by Messrs. Stanley, Evans, & Co.) appeared for the plaintiff, and Mr. Cecil Walsh and Mr. Ralph Thomas (instructed by Messrs. Church, Adams, & Prior) represented the defendant.

KING'S BENCH DIVISION, DIVISIONAL COURT.

(Before the LORD CHIEF JUSTICE and Justices PICKFORD and AVORY.)

London County Council *v.* Jones: When is a Building Dangerous?

THE COURT, on the 25th ult., heard the appeal of the London County Council from a decision of Mr. d'Eyncourt, the stipendiary magistrate sitting at the North London Police-court, under the London Building Act, 1894. The respondents to the appeal were Messrs. Matthew Jones & Son, the owners of property at 52 and 54, Queensland-road, Islington, but they were not represented.

Mr. Bodkin, appearing for the London County Council, said the case raised the question as to the true meaning of the word "dangerous" as applied to buildings. It appeared that the respondents were the owners of two houses which were derelict and in a ruinous condition. A notice was served upon them to make certain structural alterations, the allegation being that the buildings were in a dangerous condition. Following the receipt of the Surveyor's report to that effect, the Council shored up the buildings, and as the owners did not obey the notice a summons was issued against them, and that came before the magistrate at the North London Police-court. At the hearing it was admitted that the buildings were not at the moment dangerous, because they had been shored up, and even before that there was no danger to the public, because the houses were not inhabited, while if they fell down no harm could ensue because they were fronted by land, and there was a space between the houses and the pavement. It was submitted for the appellants that it was immaterial whether the houses were inhabited or not, or whether the structures stood back from the street and they were dangerous, even though they had been temporarily shored up. The magistrate was of opinion that the premises were not dangerous, although in a ruinous condition, and no person except a trespasser would receive injury from their collapse. Therefore, they did not come within sect. 115 of the Act, and he dismissed the summons.

Mr. Justice Avory: Is a ruinous structure always dangerous? I see that the magistrate says the buildings were ruinous.

Mr. Bodkin said he would argue that a ruinous building was dangerous providing that it was anywhere near a place where the public had access.

The Lord Chief Justice: What was the Surveyor's report?

Mr. Bodkin: That the buildings were dangerous, and would collapse if not shored up.

His Lordship: I can't see that because the Council had temporarily shored them up it could be said that they were not dangerous.

Mr. Bodkin said the buildings were dangerous even if when they fell they injured only water-pipes, drainage, and gas-pipes.

Mr. Justice Pickford: There must be a possibility of the houses doing damage to somebody or something. Of course, it would not be sufficient to say that the buildings were dangerous if they were tumbling down in an out-of-the-way place.

Mr. Bodkin said that what seemed chiefly to influence the magistrate's mind was that the premises had been shored up by the Council, and were, therefore, although in a ruinous condition, at present not dangerous.

The Lord Chief Justice: Can the Council recover the cost of shoring?

Counsel: Yes.

The Lord Chief Justice, delivering his judgment, said, to his mind neither of the magistrate's grounds for dismissing the summons was sufficient. The County Council had power to shore up the buildings for the safety of the public, but it could not be said that because they had done that the buildings were no longer dangerous. They must have been in a dangerous condition to warrant the Surveyor reporting the matter and the Council shoring them up. A point had been made that the houses were in a ruinous condition and deserted, but he saw nothing in the Act which said that a ruinous house was not dangerous. He would not express any opinion as to the degree of danger, but he certainly was not prepared to agree with any argument to the effect that because a building stood away from the road and was not inhabited, it was not dangerous. The case would have to go back to the magistrate to convict.

Mr. Justice Pickford, concurring, said the fact that the danger had been for the moment averted by the temporary shoring up could not be put forward as an argument that a house was not dangerous. Of course, every house which was likely to tumble down was not dangerous, but as the houses in question formed part of a row, it seemed impossible to say that the prospect of their collapse did not afford anxiety to somebody.

Mr. Justice Avory agreed, and the appeal was allowed, and the case sent back to the magistrate.

CHANCERY DIVISION.

(Before Mr. Justice SWINFEN EADY.)

Account of Wages under Workmen's Compensation Act Policies: Motion to Attach Builders.

The Sun Assurance Company, Ltd. *v.* C. Bushby & Sons.

HIS LORDSHIP heard this case on Friday, April 26. It came before the Court upon a motion by the plaintiffs to attach Mr. G. H. Bushby and Mr. W. Bushby, the two partners of the firm who had been served with the notice of motion. The third partner, Mr. Alfred Bushby, was ill, and the plaintiffs had not, therefore, served him.

Mr. Strode, for the plaintiffs, said the ground of the application was that the defendants had not complied with an order to leave in chambers certain accounts, verified by affidavit, showing the amount of wages paid by the firm of Messrs. C. Bushby & Sons, builders and contractors of Leeds, to their employees under the conditions in policies under the Workmen's Compensation Act, issued by the plaintiffs to the defendants. The latter did not appear by Counsel, but Mr. G. H. Bushby appeared in person.

His Lordship (to Mr. Bushby): Why have you not lodged an account of wages? Mr. Bushby replied that he had made an affidavit giving the total amount of wages paid.

Mr. Strode: I have seen that, and it is not a compliance with the order at all. Counsel said that the order under which he was proceeding was made by Mr. Justice Neville on March 12 last, and by it the defendants were directed to lodge with the Registrar within four days an account of all wages, salaries, and other payments paid by the defendants to their employees insured under certain policies with the plaintiff company. The original order in the action declared that the plaintiffs were bound to keep a proper wages book, which should be open to the inspection of the plaintiffs. There were three policies altogether, and the period covered by them was from April 7, 1909, to June 29, 1911.

Mr. G. H. Bushby then read an affidavit of April 20, sworn five days after the issue of the motion to attach, from which it appeared that the amount paid in wages for the contracts and during the period covered by the policies was 3,775*l.* 10s. 11d.

Mr. Strode submitted that the account was not properly verified, nor were the amounts sufficiently identified. The plaintiffs ought to know the number and nature of the employees. He had not been able to see any pay-sheets.

His Lordship said he thought most of the details necessary were in the affidavits. To the defendant: Where did you get the figures to make up the account?

Mr. Bushby said he got them from the pay-sheets.

His Lordship, after examining some of the pay-sheets, said he thought they would give Mr. Strode all the material he wanted. The defendants ought, of course, to have produced those details before.

Mr. Bushby: We thought we had done everything necessary when we produced the books.

His Lordship: I will make no order on the motion except that the defendants pay the costs of it.

CHURCH OF THE HOLY SPIRIT, CLAPHAM-COMMON.

The foundation stone of the Canon Greene Memorial Church, Clapham-common, was laid on April 27. The architect is Mr. H. P. Burke Downing, F.R.I.B.A., and the builders are Messrs. Allen Fairhead & Son, Enfield. The church was illustrated in the *Builder*, August 13, 1910, and May 12, 1911.

LONDON COUNCILS.

Bethnal Green.—The Medical Officer of Health for the Borough, winding up his report to the London County Council on the sanitary condition of a small part in the Borough known as the Brady-street area, states that he is convinced that nothing short of an improvement scheme for the entire reconstruction, will widen any of the narrow streets or abolish the blind alley slums in the area.

East Ham.—An underground convenience is to be constructed on the Barking-road frontage of the Town Hall site at an estimated cost of 500*l.* A plan has been passed for Mr. F. Smith for extensions at the "Coach and Horses" public-house, Romford-road.

Greenwich.—Nine roads in the Borough are to be repaired at an estimated cost of 4,386*l.* Plans have been passed for Mr. W. J. Maddison for extensions at the Greenwich Inlaid Linoleum Company's Works, River Bank; also for Mr. F. Gardiner for building Nos. 179 and 181, Eastcombe-avenue.

Heston and Isleworth.—The following plans have been lodged:—Messrs. Norfolk & Prior, picture theatre and two shops, Staines-road, Hounslow; Mr. E. T. Swinson, additions at Wesleyan Church, Hounslow; Messrs. P. Chase, Gardener, & Co., cinematograph theatre, Staines-road, Hounslow; also bungalow, Hanworth-road, Hounslow, and house, Thornbury-road, Spring-grove; Messrs. Taperall & Haasse, picture palace and shops, Neal's-corner, Hounslow.

Holborn.—A 15-in. stoneware pipe-sewer is to be laid in lieu of the brick sewer in Princeton-street. The tender of Messrs. John Mowlem & Co., Ltd., has been accepted for repaving a portion of the carriageway of High Holborn with fine-squared granite setts at 13s. 4d. per yard super.

Lambeth.—Repairs are to be carried out to the wood-paved carriageway of Railton-road at an estimated cost of 700*l.* Plans have been passed for Messrs. Hulbert & Haysman, on behalf of Mr. G. Roskilly, to drain three shops proposed to be erected in Lansdowne-road. The following plans have been lodged with the London County Council:—Messrs. J. A. J. Woodward & Sons, on behalf of Messrs. Dennis & Ryland, buildings, Dolland-street; Mr. G. C. Miller, on behalf of the London and South Western Bank, Ltd., buildings upon the site of Nos. 335-7, Norwood-road; Mr. G. Bartlett, on behalf of the Duchy of Cornwall, buildings on site of Nos. 38-56, Upper Kenning-ton-lane; Messrs. J. A. J. Woodward & Sons on behalf of Mr. James Wilson, additions to Nos. 2 and 4, Jonathan-street, Vauxhall.

Poplar.—The tender of Messrs. William Johnson & Co., Ltd., at 7,530*l.*, has been accepted, in lieu of that of Messrs. Thomas & Edge, for erecting and completing the superstructure of the extension to the generating-station. The sub contractors for the steelwork are Messrs. Fairweather & Ranger. Plans have been passed for Messrs. J. T. Bressey & Son for additions to the factory of Messrs. Watts, Ltd., in Kelday-road.

Staines.—Plans have been passed for Messrs. Belfrage & Saville for four houses in St. Hilda-avenue, Ashford.

Stepney.—Plans have been passed for additions to the biscuit factory, Nos. 160 and 161, High-street, Shadwell, of Messrs. Meredith & Drew, Ltd. Plans have been lodged with the London County Council by Mr. J. Catley for the erection of additions to the Alexandra Wing of the London Hospital, Whitechapel-road; also by Mr. A. J. Roddis for a cinematograph hall in Chicksand-street.

Walthamstow.—It has been decided by the Committee in charge of the matter to apply to the Local Government Board for authority to prepare a town-planning scheme. Tenders are to be invited for doubling the tramway track at Bell-junction. Plans have been passed for Mr. E. Barltrop for eleven houses in Aveling Park-road, also for Mr. A. G. Barton for a warehouse in Hale End-road. Mr. J. E. Ashby has lodged plans for a foundry, etc., in Blackhorse-lane.

OBITUARY.

Sir John Taylor, K.C.B.

We have to announce, with regret, that Sir John Taylor, K.C.B., F.R.I.B.A., died at Surbiton Hill on the 1st inst. His long association with the Office of Works made him a well-known figure in official and architectural circles, and some notes of his career will be given in our next issue.

Professor O. Seitz.

The death, in Munich, is announced of Herr Otto Seitz, aged sixty-five years, Professor at the Munich Academy, landscape painter, and a pupil of Piloty.

Mr. J. J. Bradshaw.

We regret to announce the death of Mr. Jonas James Bradshaw, of the firm of Messrs. Bradshaw & Gass, latterly Messrs. Bradshaw, Gass, & Hope, of Bolton and London. Mr. Bradshaw was elected a Fellow of the Royal Institute of British Architects in 1886. The following works of the firm have been illustrated in the *Builder*:—Manchester Stock Exchange, with offices, in a limited competition (July 9, 1904, and September 21, 1907), erected at a cost of over 35,000*l.*, after the Renaissance manner; Carnegie Library, Stockport, in competition (November 5, 1910); Manchester Library and Art Gallery, with Mr. A. J. Hope, submitted by them as one of the ten nominated for the competition (December 15, 1911); and the Lancashire and Cheshire Miners' Federation Hall, Bolton, with Mr. A. J. Hope, in competition (April 19, 1912). Messrs. Bradshaw & Gass were the architects of—in Bolton—the Claremont Baptist Schools and clubrooms, Bark-street; pupil teachers' centre in Hilden-street for the Corporation; Wesleyan Church at Haulgh; King's Hall Wesleyan Mission and the Bromley Art Gallery at Bradshawgate; extensive alterations of St. George's Church, with Mr. Hope (1903); Astley Bridge, and Great Lever Branch Libraries; Church Schools, Astley Bridge; Girls' High School; Girls' Club, Kensington-street; Wesleyan Chapel, Cawdor-street; Wesleyan Schools, Radcliffe; Central Stores, Bridget-street; Co-operative Society's premises; Victoria Central Wesleyan Mission Hall; Thomasson Reading Rooms; offices, workshops, and tramway service buildings, for the Corporation, at Bradshawgate; and Wesleyan Church buildings, Castle-street. In Liverpool:—The Charles Garrett (Wesleyan) Mission Central Hall, Renshaw-street, 45,000*l.*, the site excepted (1904). In Manchester:—Zion Institutional Church (in limited competition), 1908; Congregational Church House, Deansgate, in limited competition (1910). In Wigan: Queen's (Wesleyan) Mission Hall, with two halls for 2,800 seats, shops, and offices (1908). In London:—The Leysian Mission, Queen Victoria Hall, City-road, with two halls, for 2,600 seats, twenty-three classrooms, clubrooms, and residential quarters, to cost an estimated total of 108,000*l.*, of which the first completed portion was opened by the then Prince and Princess of Wales on July 11, 1904; and the Tollard Hotel and the Royal London Friendly Society's buildings in Southampton-row, W.C. They were also the architects of Westhoughton District Council Offices; of a large number of mill premises, offices, etc., at Leigh, Eagley, Atherton (with the Free Library), Deane, Horwich, and around; houses at Lowton, Waterfoot, Heaton, Horwich, Darwen, Rugby, Windermere, and many other localities; and, in competition, 1910, of the premises in Albion-street, of the Leeds Industrial Co-operative Society; of the Queen's Theatre, 2,000 seats, 1901, and Baptist Church and Schools, Farnworth; and Fishpool Workhouse, with nurses' home (1896-9).

Mr. R. J. Macbeth.

The death is announced of Mr. Robert John Macbeth, of Queen's House, Inverness, N.B. Mr. Macbeth was elected a Fellow of the Royal Institute of British Architects in 1906. In last February he was nominated, with five other architects, to compete for the Scots National Memorial to King Edward VII., to be erected at Holyrood Palace. Mr. Macbeth was the architect of—in Inverness—the Science and Art Schools, at a cost of about 8,000*l.*; police-station and chambers, and the new halls for the United Free High Church, Bank-street; the United Free Churches, with their manses in Brora, Kirkhill, and Dornoch; restoration of the United Free Church, with hall, etc., Forres; schools at Culburnie and Portree; the public schools at Glenconnith and Tomnacross; the church buildings, Rosehall, Sutherlandshire; and residences and other buildings in Strathcarron, Forres, Portree, etc. Messrs. Ross & Macbeth prepared the plans and designs for the Seaforth Sanatorium at Dingwall, built and endowed by Colonel and Mrs. Stewart-Mackenzie of Seaforth (1907): St. Kessog's Church, Auchterarder, planned for all forms of Christian worship; and the new church, for 900 sittings, at Auchterarder (1905-7); Free Church, Struy; extensive additions to Skibo Castle, for Mr. Andrew Carnegie, at a cost of some 25,000*l.*, in 1899-1901; additions to the Orphanage, Aberlour, and Cluny Hill Hydro, Forres (1905-7); Caledonian Bank, Buckie; church for Mr. Dyson Perrins, at Ardross Castle, for 400 sittings; Aviemore Hotel, Inverness-shire, at a cost of 18,000*l.*; Woodward memorial reredos, St. Mary's Church, Montrose; Cumming-street Church, Forres (1899-1901); and—in Inverness—the Lord Tweedmouth memorial chapel, and the nurses' home, Northern Infirmary; the Free Presbyterian Church, 700 sittings; the new music-hall (1899); the enlargement and improvement of Northern Counties District Asylum, at a outlay of about 31,000*l.*; of the Station H and of the old Free East Church (1897-8).

FOREIGN AND COLONIAL

Building, etc., Works, South Africa.

H.M. Trade Commissioner for South A (Mr. R. Sothern Holland) reports that Estimates of Loan Expenditure for 19 for the Union of South Africa include following items:—Railways and harb 4,910,000*l.*; public works and build 628,601*l.* Sums are to be expended follows:—Law Courts, Cape Town, 80,0 Union Buildings, Pretoria, 300,000*l.*; Courts, Durban, 56,440*l.*; Alexandra Hos 30,000*l.*; school buildings, Transvaal, 100 Further amounts will be required after M 31, 1913, to complete certain buildings follows:—Law Courts, Cape Town, 21,0 Government House, Cape Town, 45,0 Union Buildings, 274,835*l.*; Agricul School, Orange Free State, 35,000*l.*; Alexa Hospital, 68,000*l.*, etc.

Public Works, Argentina.

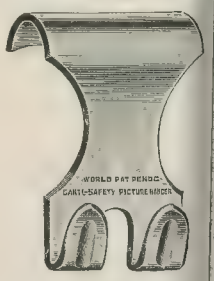
With reference to the notices on p. 1 the *Board of Trade Journal* of April 27, and p. 73 of the issue of April 13, 1911, rel to certain expenditure on public works vided for in the Argentine Budget for year, H.M. Legation at Buenos Aires report the publication of a decree, March 1, authorising the Minister of Fi to retain the balances of certain sum money which were allotted by the 1911 B for the erection of various buildings. balances amount to 4,228,155 pesos (370,000*l.*), and are to be expended on v buildings which have been contracted fo not yet finished.

Railway Offices, Bucharest.

The *Nachrichten für Handel* (Berli April 9 states, on the authority of the G Consul at Bucharest, that the Roum Government intend to erect, on the site has been chosen for the building of a railway-station, a large edifice intended the Head Offices of the State Ra Administration. The cost of the work is mated at 5,000,000 lei (200,000*l.*).

TRADE CATALOGUES.

We have received from the Arm Manufacturing Company, Ltd., of Farri avenue, London, E.C., the latest price "Gral" metal filament lamps and fi We note the "Gral" auto-transform signed to meet the demand for an econ and reliable instrument for reducing the supply voltage to the pressure most s to metal filament lamps. Other fittin plied by the firm include Watt-meters, absorbers, and all forms of shell ro



The Armorduct Company also manufa now well known "Holophane" glass r

We have received from Domestic Ap Ltd., Cheltenham, an illustrated lea price-list of some of their latest cont Of these perhaps the most ingenio "Magic" Door-Opener, an attachm which the handle of a door may be by the foot, with consequent eco crockery. It is supplied in polishe antique copper, or oxidised silver, fo the door both from outside and insi

ing it from the outside only. The "Canti. y" picture-hooks are designed to secure res against falling should the cord, wire, hain break, and to enable them to be d without altering the cord or wire and ut nails. By tying the cords so as to



"Magic" Door-Opener.

an independent loop for each of the two . should one break either will support ther. Another device of the same firm "Gil-Marsh" nailless invisible rug, nd carpet fixer, a contrivance simple in lation which bids fair to abolish that tic man-trap, the slipping mat.

PATENTS.

APPLICATIONS PUBLISHED.*

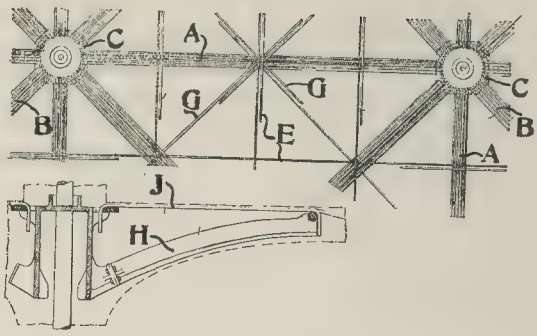
of 1911.—Lewis Marshall: Boilers for g and circulating water.
of 1911.—Harry Aves: Draught and r excluder for doors and windows.
of 1911.—William Hassall: Water-closet and the like.
1 of 1911.—Walter Smith Rock: Gas- g stove.
2 of 1911.—Emil Probst: Method of g sheaths for concrete pile foundations, eaths adapted therefor.
5 of 1911.—James Keith: Ventilators.
2 of 1911.—George John McLacklin: orting mechanism.
9 of 1911.—Alfred Clark and Mabel worth: Ventilating flaps, valves, or the
2 of 1911.—Angelo Vacani Dismore: actuated roller blinds.
5 of 1911.—Harry Linton Allensby and Rudolph Quelch Gibson: Brick-making es.
of 1911.—Francis Oram Russell and Harry Pearson: Bolts for doors and
of 1911.—Lionel Henry Teale: ic firegrates suitable for heating either or coal.
of 1911.—Fletcher, Russell, & Co., Ltd., omas William Fletcher: Gas, fire, and oves.
of 1911.—Eugen Börner: Process for duction of fresco-paintings and coloured proof architectural ornaments.
of 1911.—Heinrich Steffen: Radiators fing buildings and the like.
of 1911.—Paul Burger: Stone-cutting
of 1911.—Anthon Christian Karsten. Christian Serritslev, and De Fornede berier Aktiesel-Skab: Radiators for buildings and the like.
of 1911.—John William Rapp: Metal nd similar devices.
of 1911.—Carl Balke: Rope grips.
of 1911.—Albert Edgar Alexander Development Company): Dams or g walls.
of 1911.—Johann Baptist Horren- Machines for making artificial stones. nd the like.

SELECTED PATENTS.

of 1910.—Albert Edward Downs:

elates to ladders which are prevented pping along eaves, gutters, and win- by extensible spring clips, consisting metal pieces, provided respectively bked ends, and sliding on each other he coils of a spring connected to the es. One hooked end engages a part of er, and the other end is retained in r by a spiked, roughened, or leather

hese applications are in the stage in position to the grant of Patents upon be made.



27,083 of 1910.

or rubber covered plate or enlargement, fixed to, or made integral with, the turned-down part of the hook.

27,083 of 1910.—Robert Thomson and William Affleck Thomson: Floors, columns.

This relates to concrete floors which are reinforced by groups of primary bars radiating from the columns and anchored to rings mounted thereon, and secondary unanchored bars placed to subdivide the floor areas. The ends of the primary bars A, B are turned down to hook over rings C on the concrete or other columns. The bars E, G are placed over and under the bars A, B, and all the bars sag between their supports, but approach the upper surface over the supports. Temporary centring is used for casting the concrete, and the rings are embedded with the bars. For wide spans between the columns the anchor rings are supported by brackets H and ties J.

SOME RECENT SALES OF PROPERTY:

ESTATE EXCHANGE REPORT.

April 11. By BRADSHAW, BROWN, & Co.
Dalston.—Shaklewell-la., Milton Works, u.t. 93 yrs., g.r. 2l. 10s., e.r. 60l..... £755

April 13. By BARBER & SON.
Rushbury, Salop.—Stone House Farm, 28 a. 2 r. 20 p., f..... 1,610
Four cottages and 17 acres, f..... 905

April 16.—By GREEN & SON.
Hammersmith. 56, Hammersmith-rd. (s.), u.t. 71 yrs., g.r. 31l. 10s., y.r. 60l..... 300

April 18. By CLARKE & Co.
Chigwell, Essex.—8 and 9, Bruuel-rd., f., w.r. 31l. 4s. 210

By PERCY W. CLEAVE.
Poplar.—38 and 40, Aberfeldy-st., f., w.r. 65l. . 530

By C. RAWLEY CROSS & Co.
Notting Hill. 20, Lansdowne-cres., u.t. 43 yrs., g.r. 17l., e.r. 90l..... 330

By J. & R. KEMP & Co.
Canning Town.—Wightman-st., f.g.r. 15l., reversion in 88 yrs..... 245

By BUCKLAND & SONS.
Maidenhead, Berks.—91, High-st., f., p..... 1,250

April 19. By JOSEPH E. WALTER.
Fulnetby, Lincs.—Fulnetby Hall Farm, 407 acres, f..... 8,650

By R. LONGSTAFF & Co.
Pinchbeck, Lincs.—Farms and small holdings, 374 acres, f..... 23,770

April 22. By FURBER.
Stoke Newington.—82, Lordship-park, u.t. 50 yrs., g.r. 15l., e.r. 60l..... 225
30, Queen Elizabeth's walk, u.t. 27 yrs., g.r. 11. 3s., y.r. 35l..... 290

By WM. HOUGHTON.
Tottenham.—1 to 4, Prince's-st., f., w.r. 65l. 400

By EDWARD WOOD.
Herne Hill.—279, Mayall-rd., u.t. 56 yrs., g.r. 4l. 4s., w.r. 33l. 16s..... 150
Islington.—89, Church-rd., u.t. 27 yrs., g.r. 5l. 10s., w.r. 75l. 14s..... 250
Ilford. 5, Howard-rd., u.t. 89 yrs., g.r. 4l. 10s., w.r. 24l. 14s..... 100
Seven Kings. 29, Ladysmith-av., u.t. 93 yrs., g.r. 5l., w.r. 24l..... 180

April 23. By COCKETT & HENDERSON.
Poplar. 26, Chrisp-st., 104 and 106, Grundy-st., f., y. and w.r. 161l. 4s..... 610

By MORGAN, BAINES, & CLARK.
Wallington.—Woodcote-rd., Kenilworth, f., p. 1,000

By MULLETT, BOOKER, & Co.
Marylebone.—6, Great Portland-st. (s.), u.t. 36 yrs., g.r. 42l., p..... 3,450

By G. W. & H. G. POTTER.
Hampstead.—5, Rosslyn-hill, u.t. 68 yrs., g.r. 24l. 10s., e.r. 135l..... 1,235

By SNELL & Co.
Charing Cross-rd.—No. 41 (shops and flats), u.t. 53 yrs., g.r. 105l., y. and e.r. 79l..... 6,500

April 24.—By BRODIE, TIMBS, & Co.
Hammersmith.—5, Hammersmith-ter., c., p... 600

By DONALDSON & SONS.
Dalston.—96, Lenthall-rd., u.t. 48 yrs., g.r. 9l. 9s., y.r. 38l..... £265

By DYER, SON, & HILTON.
Blackheath.—17, Vanbrugh Park, u.t. 45 yrs., g.r. 16l., p..... 230

By ROBINSON & PARRATT.
Chelsea.—17, Smith-st., f., y.r. 45l..... 615

By ROBERT TIDEY & SON.
De Beauvoir Town.—177, Southgate-rd., u.t. 19 yrs., g.r. 5l., y.r. 8l..... 165
66, Church-rd., u.t. 25 yrs., g.r. 5l. 10s., y.r. 48l..... 225

By WATERER & DICKENS.
Cudham, Kent.—New Barn-la., Hingoss Orchard, 3¾ acres, f..... 120

By T. WOODS.
Hounslow, Middlesex. 1 and 2, Woodstock-villas; 1 and 2, Oxford-villas, f., y.r. 92l. 1,070
1 and 2, Toronto-villas, f., y.r. 44l..... 565
Lampton, Middlesex. Oakdene, f., w.r. 18l. 4s. 170

April 25.—By JOHN G. DEAN & Co.
Wandsworth Common.—39, Wiseton rd., u.t. 54 yrs., g.r. 4l., e.r. 28l..... 225
Hampstead.—Mill-la., f.g. rents 27l., reversion in 73 yrs..... 648

By FLOOD & SONS.
Paddington.—4, Marylands rd. (s.), u.t. 51 yrs., g.r. 10l., y.r. 60l..... 510
16, 18, and 20, Elgin-av., u.t. 51 yrs., g.r. 30l., y.r. 165l..... 1,220
Harrow-rd.—No. 373 (s.), u.t. 69 yrs., g.r. 14l., y.r. 115l..... 1,100
No. 399 (s.), u.t. 69 yrs., g.r. 14l., e.r. 90l..... 815
Nos. 417 and 419 (s.), u.t. 69 yrs., g.r. 28l., y.r. 190l..... 1,920
No. 454 (s.), u.t. 51 yrs., g.r. 10l., y.r. 71l..... 560
No. 500 (s.), u.t. 51 yrs., g.r. 10l., y.r. 115l..... 1,100

By H. HOOKEY & Co.
Battersea.—159, St John's Hill, u.t. 30 yrs., g.r. 4l., w.r. 20l. 16s..... 110

By R. W. LEAGE.
Willesden.—5 and 7, Cranhurst-rd., u.t. 82 yrs., g.r. 20l., y.r. 105l..... 975

By JOHN LLOYD & SONS.
Leytonstone.—88, 89, to 97 (odd), Norman-rd., f., w.r. 132l. 12s..... 900
Limehouse.—70, Clemence-st., u.t. 60 yrs., g.r. 4l. 10s., w.r. 42l. 18s..... 210
Plaistow. 25, Avenons-rd., u.t. 51 yrs., g.r. 2l. 5s., w.r. 20l. 16s..... 135

By C. C. & T. MOORE.
Leytonstone.—57, Queen's-rd., f., y.r. 30l..... 350
Bethnal Green.—45, Brady-st. (s.), u.t. 33 yrs., g.r. 1l., w.r 68l. 18s..... 250

By NEWSON & SHEPHARDS.
Stoke Newington.—58 and 60, Mildmay gr., u.t. 37¼ yrs., g.r. 14l., w.r. 122l. 4s..... 360
13, Watson-st., u.t. 31 yrs., g.r. 5l. 10s., w.r. 65l..... 260
Barnsbury.—63 and 65, Huntingdon-st., u.t. 37 yrs., g.r. 20l., y.r. 92l..... 500

By STIMSON & SONS.
Islington.—30, 32, and 34, Arlington-st., u.t. 15 yrs., g.r. 12l. 12s., w. and e.r. 123l..... 150
Dalston.—52, 74, 171, 181, and 241, Queen's-rd., u.t. 5 to 12 yrs., g.r. 20l. 10s., y. and e.r. 214l..... 410
Peckham.—30, Drakefell-rd., u.t. 52 yrs., g.r. 6l. 6s., y.r. 30l..... 250
Plumstead.—Burrage-rd., f.g.r. 2l., reversion in 6½ yrs..... 180
Brewery-rd., f.g. rents 10l., reversion in 13½ yrs..... 400
14 and 15, Boston rd., u.t. 85 yrs., g.r. 7l. 10s., w.r. 59l. 16s..... 350
Tooting. 115, Longley-rd., u.t. 78 yrs., g.r. 6l. 10s., y.r. 30l..... 200
Lewisham.—59, Cressingham-rd., u.t. 50 yrs., g.r. 5l., w.r. 31l. 4s..... 175

By TOWERS, ELLIS, & Co.
Paddington.—15, Westbourne-terrace-rd., u.t. 30 yrs., g.r. 10l., e.r. 90l..... 375
12, Fulham-pl., u.t. 24½ yrs., g.r. 6l., y.r. 50l. 260
Hampstead. 42, Adelaide rd., u.t. 27 yrs., g.r. nil, y.r. 75l..... 400
St. John's Wood.—155, Loudoun rd., u.t. 25 yrs., g.r. 10l., y.r. 70l..... 380
4, Hamilton-ter., u.t. 11 yrs., g.r. 2l., y.r. 70l..... 265
Kilburn. 11, Carlton-vale, u.t. 36 yrs., g.r. 8l., y.r. 70l..... 325
20, Cambridge-av., u.t. 46 yrs., g.r. 11l., y.r. 55l..... 305.

RECENT SALES—*Continued on page 532.*

List of Competitions, Contracts, etc.

For some Contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) are advertised in this number:** Competitions, iv.; Contracts, iv. vi. viii. x.; Public Appointments, xix.; Auction Sales, xxiv.

Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Competitions.

MAY 15.—**Portland.**—COUNCIL OFFICES.—The Portland U.D.C. invite competitive designs and plans for Council Offices. See advertisement in issue of March 8 for further particulars.

MAY 18.—**Hastings.**—SUNK ARENA AND BANDSTAND. Cost not to exceed 4,500*l.* Premiums, 15 and 10 guineas. Particulars from the Town Clerk, Hastings.

MAY 21.—**Middlesex Hospital.**—MURAL DECORATIONS THERE AND ELSEWHERE.—Particulars from Crosby Hall Cheyne-walk, Chelsea. See "Competition News," page 513.

MAY 22.—**Southend-on-Sea.**—HAMSTEL COUNCIL SCHOOL.—Architects practising in the borough only. Premiums, 25*l.*, 15*l.*, and 10*l.* Particulars from the Education Office, Municipal Buildings, Southend-on-Sea.

MAY 25.—**Lymington.**—PUBLIC OFFICES.—Thirty and fifteen guineas for second and third designs. Assessor, Mr. R. F. Gutteridge, F.R.I.B.A. Particulars from the Town Clerk, Lymington.

JUNE 1.—**Dunfermline.**—INSTITUTE AT NETHERTOWN.—Cost not to exceed 7,000*l.* Premiums of 20*l.*, 15*l.*, and 10*l.* Assessor, Mr. E. A. Jamieson. Particulars from the Secretary, Carnegie Trust, Abbot-street, Dunfermline.

JUNE 3.—**Sheffield.**—CRIPPLES' HOME.—Limited to local architects. Mr. E. M. Gibbs, F.R.I.B.A., and Mr. F. E. P. Edwards, F.R.I.B.A., assessors.

* JUNE 14.—**Regent's Quadrant.**—DESIGN FOR TREATMENT.—Premiums, 25 guineas, and 25 guineas divided. Adjudicators, Mr. E. A. Rickards and Mr. Alan E. Munby. See advertisement in this issue for further particulars; also "Competition News" issue of April 19 (page 453), and this issue (page 512).

JUNE 28.—**Hale, Cheshire.**—TOWN PLANNING SCHEME.—Premiums 50*l.* and 25*l.* Particulars from Council Offices, Hale. See "Competition News," page 513.

JUNE 30.—**Padiham.**—TOWN HALL, BATHS, ETC.—Premiums 40*l.* and 20*l.* Particulars from Mr. J. Gregson, A.M.Inst.C.E., Surveyor's Office, Padiham. See "Competition News," page 513.

JULY 1.—**Dusseldorf.**—A plan for the extension of the City of Dusseldorf. Premiums of 1,000*l.* to 375*l.* Conditions on application to the Chief Burgomaster, Dusseldorf. A translation appeared on page 365, September 29.

JULY 1.—**Port of London.**—NEW OFFICES.—Limited to those mentioned in "Competition News," issue of April 12 (page 424).

AUGUST 30.—SAXON SNELL PRIZE.—Fifty guineas; with medal, is offered for essay on a hospital subject. Particulars from the Sanitary Institute, 90, Buckingham Palace-road, S.W.

OCTOBER 1.—**Ottawa.**—MONUMENT TO KING EDWARD VII.—Sketch models in plaster to be sent to the Director of National Art Gallery, Ottawa.

NO DATE.—**Birmingham.**—BATHS.—Twenty and 10 guineas for second and third designs. Applications for conditions to be sent to the Superintendent Engineer, Kent-street, Birmingham.

* NO DATE.—**Cardiff.**—FIRE-STATION.—The Cardiff Corporation invite designs and estimates for a fire brigade station in Westgate-street. See advertisement in this issue for further particulars.

NO DATE.—**Cardiff.** MODEL COLLIERY TOWN.—A South Wales colliery company offers a prize of 20*l.* for the best scheme for a model colliery town. See advertisement in issue of April 26 for further particulars.

NO DATE.—**Jordanhill, Glasgow.**—PROPOSED TRAINING COLLEGE.—Limited to six firms, named in Competition News, December 1, page 635.

NO DATE.—**Warrington.**—SCHOOL.—The Warrington Education Committee invite competitive plans for the erection of a public elementary school. See advertisement in issue of February 16 for further particulars.

Contracts.

BUILDING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

MAY 3. **Tredegar.**—HOUSES.—For the completion of ten houses (partly completed) and erection of an additional ten houses at Parkview, Tredegar, for the Parkside Building Club. Plans and specifications with Messrs. Wm. Harris & Son, Bank-chambers, Bargoed.

MAY 4.—**Dunadry.**—SCHOOL.—For building new school near Dunadry. Plans and specifications with Rev. D. Stewart, M.A., The Manse, Dunadry.

MAY 4.—**Glenariff.**—SCHOOLS.—Erection of new schools at "The Bay," Glenariff. Plans and specification and particulars from Mr. T. J. O'Neill, architect, Ballycastle.

MAY 6.—**Bruntcliffe.**—CLUB.—For erection of club premises, for the Trustees of the Working Men's Club, Bruntcliffe. Plans and specifications seen, and quantities from Mr. T. A. Buttery, Lic.R.I.B.A., architect, Queen-street, Morley.

MAY 6.—**Wisbech.**—HOUSE.—Erection of house on farm at Terrington St. Clement. Quantities, on deposit of 1*l.* 1s., from Messrs. Walker & Walker, architects and surveyors, 44, Market-place, Wisbech.

MAY 7.—**Ashton-in-Makerfield.**—STATION.—For erection of a fire-station and other buildings in Council-avenue. Plan and specification seen, and quantities and form of tender from the Council's Surveyor, Mr. Thomas Burgess, F.I.S.E.

MAY 7. **Belfast.**—BOUNDARY WALL, ETC.—For rebuilding and raising, etc., portions of the boundary wall of the Workhouse. Plans and specification by Messrs. Young & Mackenzie, civil engineers, Belfast.

MAY 7.—**Goole.**—SHED.—For erection of a wooden shed at the depôt, Bridge-street. Particulars from the Sanitary Inspector, Council Offices, Goole.

MAY 7.—**Huddersfield.** CHURCH.—Erection of proposed United Methodist church at Primrose-hill. Plans seen, and quantities from Mr. W. Cooper, F.R.I.B.A., 4, Kirkgate-buildings, Huddersfield.

MAY 7.—**Londonderry.**—HALL.—For erection of a lecture-hall. Plans and specifications with Messrs. Robinson & Davidson, C.E., A.R.I.B.A., Richmond-street, Londonderry.

MAY 7.—**Pontypool.**—HOUSES.—For erection of four houses in Cwm Fields. Plans and specification with Messrs. Lougher & Co., architects, Bank-chambers, Pontypool.

MAY 8. **Bury.**—HOTEL.—For erection of new Oddfellows' Arms Hotel at Woolfold, Bury. Plans seen, and quantities from Mr. D. Hardman, architect, Manchester-street, Bury.

MAY 8.—**Cwmtillery.**—ADDITIONS, ETC.—For alterations and additions to the Blaenau-Gwent branch of the Cwmtillery Industrial Society. Plans and specification with Mr. R. L. Roberts, M.S.A., Abercarn.

MAY 8.—**Dalmore.**—STEADING.—For erection of a new farm steading. Plans and specifications with Messrs. A. Maitland & Sons, architects.

MAY 8.—**Dewsbury.**—RESIDENCE.—Erection of a residence at Halifax-road. Plans and specifications seen, and quantities from Messrs. R. Castle & Son, architects, London City and Midland Bank-chambers, Cleckheaton.

* MAY 9.—**East Ham.**—OUT-RELIEF STATION.—The West Ham Guardians invite tenders for an Out-Relief Station at 95, Arragon-road. See advertisement in this issue for further particulars.

MAY 9.—**Sherborne.**—COTTAGES.—For erecting twenty-two workmen's cottages on the Ludcorne Hall Estate. Plans and specifications with Mr. Duncan Brown, Surveyor, Council Offices, South-street, Sherborne.

MAY 10.—**Accrington.**—EXCHANGE.—Erection of Accrington new telephone exchange. Drawings, specification, and conditions, and form of contract at Accrington Post Office. Quantities and forms of tender, on deposit of 1*l.* 1s., from the Secretary, H.M. Office of Works, etc., Storey's-gate, London, S.W.

MAY 10. **Lancaster.**—PREMISES.—For the rebuilding of premises in Market and King streets. Plans seen, and quantities from the architects, Messrs. Harrison, Hall, & Moore, 73, Church-street, Lancaster.

MAY 11.—**Cornwall.**—ALTERATIONS, ETC.—For alterations to the Connor Downs School. Plans and specification with Mr. Sampson Hill, Architect to the Committee, Green-lane, Redruth.

MAY 11.—**Dovercourt.**—CONVENIENCE.—For conversion of a disused stable into a public convenience on the beach at Dovercourt. Plans and specification with Mr. H. Ditcham, Borough Surveyor, 41, Church-street, Harwich.

MAY 11.—**Liskeard.**—ROOM.—Erection of a cookery classroom at the County school. Plans and specification with Mr. John Sansom, architect, Liskeard.

MAY 11.—**St. Cleer.**—IMPROVEMENTS.—For extension of present cloakrooms and improvements at the school. Plans and specification with Mr. B. C. Andrew, Architect to the Committee, Biddick's-court, St. Austell.

* MAY 13.—**Chingford.**—PUMP-HOUSE, ETC.—The Metropolitan Water Board invite tenders for pump-house, gas-producer house, and coal ba two cottages, formation of roads, drainage, e See advertisement in this issue for furt particulars.

* MAY 13.—**Dartford.**—ENGINE-HOUSE.—T Metropolitan Water Board invite tenders engine-house, cottages, formation of roa drainage, etc., at Green-street, Green, Dartford, Kent. See advertisement in this is for further particulars.

MAY 13.—**Ecclesall.**—THEATRE.—Erection of operating theatre at the Workhouse Hospi specification, quantities, etc., from Mr. A. Watson, architect, 38, Church-street, Sheffie Deposit of 1*l.* 1s.

* MAY 13.—**Rickmansworth.**—NEW BRIDG The Herts C.C. (Highways Committee) in tenders for taking down and rebuilding bri on main road between Rickmansworth and bridge. See advertisement in this issue further particulars.

MAY 13.—**Ripon.**—ADDITIONS, ETC.—For alte tions and additions to the day schools connec with the Cathedral and Trinity Church. Pl and specifications with Mr. F. H. Hargra architect, Market-place, Ripon.

MAY 13.—**Treforest.**—EXTENSION.—For extension of refuse destructor buildings. Pl and specifications seen, and forms of tender quantities from Mr. W. E. Lowe, Surveyor the Council, Municipal-buildings, Pontypr Deposit of 1*l.* 1s.

MAY 13.—**Ysceifiog.**—RESTORATION.—For restoration of the parish church of Yscei Plans, specification, and quantities from C. S. Beeston, M.R.S.I., architect, Tanyc Ysceifiog, Holywell.

MAY 14. **Bury St. Edmunds.**—SCHOO Erection of new infants' school and alterat to the existing buildings at the Brandon H street Council School. Drawings, specifica and form of contract with the County Archi Mr. A. Ainsworth Hunt, 51, Abbeygate-st Bury St. Edmunds. Quantities on deposi 2*l.* 2s.

MAY 15.—**Parwich.**—COTTAGES.—For erec of six cottages at Parwich. Plans and speci tions with Mr. J. H. Wheeldon, Sani Inspector, Compton Office, Ashbourne.

* MAY 15.—**Hendon.**—SORTING OFFICE.—T Commissioners of H.M. Works, etc., i tenders for erection of the Hyde (Hendon) sorting office. See advertisement in this issu further particulars.

MAY 15.—**Cardiff.**—STOREHOUSE.—Erection storehouse at 103, Cowbridge-road. Plans specifications with the architect, Mr. E. Seward, F.R.I.B.A., Queen's-chambers, Car

* MAY 18.—**Coventry.** BRANCH LIBRARI The Coventry Corporation invite tenders erection of three branch public libraries, si at Earlsdon, Foleshill, and Stoke. See a tisement in this issue for further particular

MAY 19.—**Boherbue.**—REPAIRS, ETC.—For tensive repairs and improvements to the Cat church, Boherbue. Specifications at Mr. D. Daly's, Boherbue.

MAY 21.—**Wallingford.**—ADDITIONS, ETC.—T alterations and additions to the Wallingford Crowmarsh Isolation Hospital. Plans specifications from Mr. H. S. Morris, Lic.R.I. Broadway-buildings, Reading.

* MAY 22.—**London, N.**—BOUNDARY WA The Shoreditch Guardians invite tenders repairs to the boundary wall at the Infirm Hoxton-street, N. See advertisement in issue for further particulars.

MAY 23.—**Abercych.**—SCHOOL.—For erecti new Council school. Drawings and specifica with the authority's Architect, Mr. C Thomas, Education Offices, 8, Victoria-s Haverfordwest. Quantities and forms of t on deposit of 1*l.* 1s.

MAY 27.—**Thomastown.**—HOUSES.—For e of about thirty houses at Thomastown, n Tonyrefail, for the Welsh Navigation Bu Club. Plans and specifications seen, and ticulars from Mr. Philip J. Jones, architec surveyor, Church-street, Pontypridd.

* NO DATE.—**Banbury.**—HOUSE.—Tenders invited for the erection of a ten roomed hou Banbury. See advertisement in this issu further particulars.

NO DATE.—**Carnoustie.**—HALL, ETC.—For tion of a public hall and cinematograph th for the Carnoustie Public Hall Company Pavilion, Ltd. Architect, Mr. J. D. Swan Redburn-chambers, Kirkcaldy. Deposit of

NO DATE.—**Exeter.**—ROOMS, ETC.—For ex of new artroom, cloakroom, and other w Episcopal Modern School for Girls, E Architect, Mr James Jerman, F.R.I. 1, Bedford-circus, Exeter.

NO DATE.—**Farringdon.**—ADDITIONS, Erection of a farmhouse, and alteration

BUILDING—*continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or names of those willing to submit tenders, may be sent in.

ditions to outbuildings at Crealy Barton, rringdon. Messrs. Ellis. Son, & Bowden, .I., Surveyors and architects, Bedford-mbers, Exeter.

lo DATE.—**Glyncorrwg.**—ALTERATIONS, ETC.— r altering and enlarging the Jenkins Arms tel. Plans with Messrs. Cook & Edwards, I.S.A., architects, Masonic-buildings, Bridg-t. Quantities on deposit of 1*l.* 1s.

lo DATE.—**Haverhill.**—SHED.—Erection of v cowshed at Nosterfield End Farm, for the verhill Industrial Co-operative Society, Ltd. antities and particulars, on deposit of 10s. 6d., n Messrs. Winkworth & Winkworth, archi-ts, etc., 22, Great Colman-street, Ipswich.

lo DATE.—**Lincoln.**—SCHOOL.—Erection of a blic elementary school on the Sincil Dyke ak. Architect, Mr. W. G. Watkins, Silver-eet, Lincoln. Deposit of 1*l.*

lo DATE. **Merthyr Tydfil.**—HOUSES.—For ection of five houses, Well-street. Plans and cification with Mr. O. P. Bevan, P.A.S.I., hitect and surveyor, Express-chambers, rthyr Tydfil.

o DATE.—**New Ferry.**—CHAPEL.—Erection of rimitive Methodist school-chapel in Beacons-d-road. Mr. Hy. Harper, architect, 54, Lord-, Nottingham.

o DATE.—**New Shildon.**—HOUSE.—For erec-t of new curate's house, All Saints' Parish, w Shildon. Messrs. Kitching & Lee, architects, ndgate-chambers, Darlington.

o DATE.—**Paddock.**—COTTAGES.—For erection two cottages in School-street. Messrs. J. B. pey & Son, architects and surveyors, 34a, New-et, Huddersfield.

o DATE.—**Poole.**—ADDITIONS.—For proposed itions to the Cornelia Hospital. Quantities n Mr. H. Kendall, M.S.A., architect and veyor, Poole. Deposit of 10s. 6d.

o DATE.—**Thornhill Lees.**—SCHOOL.—For itions and alterations to Thornhill Lees C.E. ool. Quantities from Messrs. Matthews & eman, 11, Old Queen-street, Westminster, .

NGINEERING, IRON, AND STEEL.

AY 6.—**Fountainbridge.**—HEATING.—For the ting installation at Rollerers School, Foun-bridge. Plans seen, and specifications from J. A. Carfrae, architect, 3, Queen-street, nburgh.

AY 6.—**Glamorgan.**—STAGING.—For con-ction of a river staging on the River Taff at orest power-station, Upper Boat, Glamorgan-e. Plans and specification at the Preforest er-station, Upper Boat. Mr. W. A. Chamen, ineer and General Manager, Royal-chambers, k-place, Cardiff.

AY 7.—**Leeds.**—BRIDGE.—Erection of a toot-ge at the Union Workhouse, Beckett-street, ds. Forms of specification and tender from James H. Ford, Clerk to the Guardians, Law Offices, South-parade, Leeds.

AY 7.—**Newcastle.** -ALTERATIONS, ETC For nsions and alterations to the existing switch-d, for the electrical department. Specifica-, drawing, and particulars from Mr. A. J. C. Renzi, Borough Electrical Engineer, Brook-, Newcastle-under-Lyme, on deposit of s.

AY 8.—**Darenth.**—MACHINE —The Metro-an Asylums Board invite tenders for the allation of a new dough-mixing and kneading hine at Darenth Asylum, near Dartford, t. Drawings and specification, by Mr. W. T. h, M.Inst.C.E., M.I.Mech.E., Engineer-in-f, seen at the Office of the Board, Embank-t, London, E.C. Deposit of 1*l.*

AY 8.—**Penbroke.**—EXTENSION For the ex-ion of 1,500-ampère-hour battery. Specifica-general conditions, and form of tender the Clerk of the Council, Town Hall, Balls-ge, Co. Dublin.

AY 9. **Antrim.**—WELL.—For sinking a well erection of a pump at Church-lane, Doagh. ification with Mr. J. L. Clark, Clerk, Union e, Antrim.

AY 13. **Rickmansworth.**—BRIDGE.—For re-ling the Troy Mill Bridge, near Rickmans-h. Drawings, specification, etc., on deposit . 1s., from Mr. Urban A. Smith, County eyor, County Surveyor's Office, Hatfield.

AY 17.—**Southampton.**—TRAMWAYS.—For the nstruction of the tramways in Shirley-road, een Grove-road and Park-street. Plans, ification, form of tender, and quantities at Tramway Offices, 161, Above Bar-street.

AY 18.—**Somerset.**—BRIDGES.—For the taking and rebuilding Mare Elm Bridge, on the iton to Ilminster main road, about one mile Hatch Beauchamp, and Wagg Bridge, on Langport to Somerton main road, about two s from Langport. Drawings, specifications, form of contract at the County Surveyor's e, Wells. Quantities and form of tender, on sit of 1*l.* 1s., to Mr. H. T. Chapman, ty Surveyor, Wells.

AY 27 **Birkenhead.** LIGHTING, ETC —For ght installation at the Birkenhead Union thouse, Tranmere. Specifications and plans, form of tender, from Messrs. Sloan & Lloyd es, consulting engineers, 34, Castle-street, rpool. Deposit of 3*l.* 3s.

UNE 5. — **Canning Town, E.** — REFUSE RUCTOR.—The West Ham B.C. invite tenders refuse destructor and steam-raising plant. advertisement in this issue for further par-ars.

DATE.—**Apethorpe, Northants.**—RESER-.—For construction of a brick reservoir. ings and specification with the engineers, rs. G. & F. W. Hodson, M.Inst.C.E., Bank-bers, Loughborough. Specification and tities on deposit of 1*l.* 1s.

FURNITURE, PAINTING, MATERIALS, etc.

MAY 4.—**Barnstaple.**—PAINTING, ETC.—For painting, etc., at 17, Litchdon-street, for the Town Council. Particulars with Mr. E. Y. Saunders, F.A.S.I., Borough Surveyor, The Strand, Barnstaple.

MAY 6.—**Bury St. Edmund's.**—PAINTING.—For painting and colouring the exterior and interior of the School of Art. Specification by the Borough Surveyor, Town Hall, Bury St. Edmund's.

MAY 6.—**Gloucester.**—PAINTING, ETC.—For papering and painting at the Union Infirmary, Great Western-road. Specification and form of tender at the office of the Master of the Workhouse.

MAY 6.—**Gravesend.**—PAINTING.—For interior painting at the Hospital. Specification from Mr. W. Pearson, Secretary, Gravesend Hospital.

MAY 6.—**Southampton.**—PAINTING.—For painting works at the Bargate, Portswood, Shirley, and St. Mary's Police-stations. Specification at the Borough Engineer's Office. Deposit of 10s.

MAY 7.—**Swansea.**—CEMENT.—For supply of Portland cement. Particulars and forms of tender from the Borough Surveyor, Guild Hall, Swansea.

MAY 8.—**Blackhill.**—PAINTING, ETC.—For colouring, painting, etc., at Castleside and Blackhill Council schools. Forms from Mr. J. R. W. Sherwood, District Clerk, 22, Queen's-road, Blackhill.

MAY 8.—**Westhoughton.**—PAINTING.—For painting and decorating the isolation wards, ward kitchen, and several rooms in the administrative block of the hospital. Specifications from Mr. Thos. Partington, Clerk, Town Hall, Westhoughton.

MAY 10.—**Pontycymmer.**—PAINTING, ETC.—For painting and repairing the exterior of the Royal Hotel; also thirty-three houses, at Bridgend-road. Specifications and forms of tender from Mr. Frederick Jenkins, A.A.I., surveyor and valuer, 53, Queen-street, Cardiff.

MAY 11.—**York.** PAINTING, ETC.—For painting, colouring, and limewashing at schools during the summer holidays. Specifications from Mr. J. H. Mason, Secretary, Education Offices, Clifford-street, York.

MAY 13.—**Bradford.**—PAINTING.—For painting the outside of Springfield Mills, Idle, Bradford. Specifications with the engineer at the works.

MAY 13.—**Nottingham.**—PAINTING.—For painting the suspension bridge over the River Trent. Specification, quantities, and form of tender from Mr. F. W. Davies, Engineer and General Manager, Water Offices, Castle-boulevard, Nottingham. Deposit of 1*l.* 1s.

MAY 14. **Portsmouth.** PAINTING.—For painting a steel chimney-shaft at the electricity works, Gunwharf-road. Engineer and Manager, Electric Lighting Works, Gunwharf-road, Portsmouth

★ MAY 14.—**West Ham.** -PAINTING, ETC.—The West Ham B.C. invite tenders for painting, cleansing, repairs, etc., of public buildings. See advertisement in this issue for further particulars.

★ MAY 15.—**Hammersmith.**—RESTORING STONEWORK.—The Hammersmith B.C. invite tenders for cleaning down and treating with preservative the stonework of the Passmore Edwards' Library, Uxbridge-road. See advertisement in this issue for further particulars.

★ MAY 16.—**London, E.**—PAINTING, ETC —The Mile End Guardians invite tenders for repairing and painting four iron staircases, and recovering with corrugated zinc roof of bridge at Infirmary, Bancroft-road, Mile End, E. See advertisement in this issue for further particulars.

★ MAY 16.—**Wandsworth.**—PAINTING.—The Wandsworth Guardians invite tenders for painting works at St. John's-hill Infirmary. See advertisement in this issue for further particulars.

MAY 17.—**Barrow-in-Furness.**—PAINTING —For the painting and decorating of various police-stations. Quantities and forms of tender at the Borough Engineer's Office, Town Hall.

MAY 20.—**Dartford.**—PAINTING, ETC. For painting and repairs at Infectious Diseases Hospital, Bow Arrow-lane, Dartford. Names to the architect, Mr. Robert Marchant, A.R.I.B.A., 2, Bedford square, London, W.C. Deposit of 1*l.* 1s.

★ MAY 22.—**Fulham.**—PAINTING, GENERAL REPAIRS, ETC. The Guardians of St. George's Union invite tenders for painting, distempering, general repairs, and erection of sanitary annexe. See advertisement in this issue for further particulars.

MAY 23. **Newton Abbot.**—PAINTING.—For general repairs and painting at Newton Abbot Police-station. Specification with the County Architect, Mr. E. H. Harbottle, Queen-street, Exeter.

NO DATE.—**Blackburn.**—PAINTING, ETC.—For repainting and decorating the entire exterior of the Palace Theatre, Blackburn. Particulars from the Manager, Palace Theatre, Blackburn.

★ NO DATE.—**Watford.**—HOISTING AND FIXING STEELWORK.—Prices are required for the immediate supply of tackle and hoisting and fixing of steelwork at Watford. See advertisement in this issue for further particulars.

ROADS, SANITARY AND WATER WORKS.

MAY 4.—**Gorseinon.**—SEWAGE.—For construction of a 12-in. and 9-in. sewer. Plans, specifications, and conditions with Mr. T. T. Williams, Engineer to the Council Council Offices, Alexandra-road, Swansea.

MAY 4.—**Hampton Wick.**—FLINTS.—For supply of Kentish crown pit flints. Mr. H. Fawssett, Clerk, High-street, Hampton Wick.

MAY 4.—**Inverness.**—ROAD.—For the repair of Porterfield-road. Plans and specification seen, and quantities from Mr. T. H. Scott, Burgh Surveyor. Deposit of 10s.

MAY 4.—**Patrington.**—STONE.—For supply of stone for use on highways. Tender forms and particulars from Mr. W. H. Snaith, Surveyor, Patrington, near Hull.

MAY 7.—**Frinton-on-Sea.**—ROAD.—For forming and making-up Crescent-road. Forms of tender, quantities, drawings, and specification from Mr. E. M. Bate, Surveyor, Council Offices, Frinton-on-Sea. Deposit of 2*l.* 2s.

★ MAY 7.—**Kingston, etc.**—ROADMAKING, ETC.—The Kingston Guardians invite tenders for roadmaking, tar-paving, etc., at Infirmary, Kingston-hill, S.W., and Children's Central Homes, Kingston-road, New Malden. See advertisement in this issue for further particulars.

MAY 7.—**Reigate.**—MATERIALS.—For the supply of materials. Forms of tender and particulars from Mr. F. T. Clayton, Borough Surveyor.

MAY 7.—**Watford.**—ROAD.—For repairs to a portion of Shire-lane. Plans and specification seen, and quantities from the Surveyor, 9, Market-street, Watford. Deposit of 1*l.* 1s.

MAY 8.—**Barnsley.**—STREETS.—For draining, levelling, flagging, and completing of Windermere-road, Freeman-street, Pindar-street, and part of Bismarck-street. Drawings and specifications seen, and form of tender from Mr. J. H. Taylor, M.Inst.C.E., Borough Surveyor, Manor House Offices, Barnsley.

MAY 8.—**Dewsbury.** -PAVING, ETC.—For paving, flagging, etc., of Hollins-road and Boundary-road. Plans, specifications, etc., seen, and form of tender from the Borough Surveyor's Office, Town Hall, Dewsbury.

MAY 9.—**Newhaven.**—FLINTS.—For supply of flints. Conditions of contract and form of tender from Mr. H. W. Coupe, Clerk, Union Offices, Newhaven.

MAY 9.—**Paignton.**—ROAD.—For constructing about 900 ft. of roadway, laying sewers and drains, and other works at Preston. Plans and specifications with the Surveyor, Town Hall, Paignton.

MAY 9.—**Pembroke, Co. Dublin.**—ROAD, ETC.—Widening and improving of the approach to the existing Pembroke Cottages, off Donnybrook Main-street. Drawings by Mr. Edwin Bradbury, architect. Plans and specification seen, and forms of tender at the Town Hall, Ballsbridge, Co. Dublin.

MAY 11.—**Birstall.**—PAVING.—For the levelling, paving, and flagging of Blackburn-road. Plans and specifications with the Council's Surveyor, Mr. T. H. Hailstone, Council Offices, Birstall, near Leeds.

MAY 11.—**Worcester.**—PAVING.—For constructing granolithic pavements. Specification and form of tender from Mr. Thomas Caink, A.M.Inst.C.E., City Engineer, Guildhall, Worcester.

MAY 13. **Brigg.**—GRANITE.—For supply of broken granite. Mr. G. S. Sowter, Clerk, 1, Bigby-street, Brigg.

MAY 13.—**Guildford.**—MATERIALS.—For supply of granite, Bargate stone, and flints. Forms of tender from the Surveyor of the Council, Mr. J. Anstee, C.E., Council's Offices, Commercial-road, Guildford.

MAY 13.—**Pangbourne.**—SEWAGE.—For main sewerage and sewage-disposal works. Forms of tender and plans with the consulting engineer, Mr. H. Howard Humphreys, 28, Victoria-street, Westminster, S.W.

MAY 13.—**Samford.**—GRANITE.—For the supply of 18-in. broken granite. Mr. Arnold J. Haward, Clerk, 34, Princes-street, Ipswich.

MAY 14.—**London.** -ROADWORK.—The London C.C. invite tenders for the roadwork and plate-laying required for the construction, on the underground conduit system of traction, of their authorised tramways from Forest Hill to Rushey Green. Specifications, quantities, form of tender, drawings, etc., from the Chief Engineer of the Council, Sir Maurice Fitzmaurice, C.M.G., County Hall, Spring-gardens, S.W. Deposit of 5*l.*

MAY 14.—**Mountain Ash.**—STREETS.—For street works in Aberdare-road, Mountain Ash. Plans and specification seen, and forms of tender and quantities from the Surveyor, Town Hall, Mountain Ash.

MAY 14.—**Southampton.**—ROAD.—For street improvement works in Villiers-road. Plans, specification, quantities, and form of tender at the Borough Engineer's Office. Deposit of 1*l.* 1s.

★ MAY 15.—**Hammersmith.**—WOOD-PAVING.—The Hammersmith B.C. invite tenders for wood-paving works. See advertisement in this issue for further particulars.

MAY 15. — **Lenham.** - SEWAGE. — For main sewerage and sewage disposal works. Particulars, forms of tender, and plans with the consulting engineer, Mr. H. H. Humphreys, 28, Victoria-street, Westminster, S.W. Deposit of 5*l.*

MAY 17. -**Bournemouth.**—DRAINAGE.—For construction of Winton drainage, Moordown District extension, and Southbourne drainage. Particulars, forms of tender, and specifications from the Borough Engineer Mr. F. W. Lacey, M.Inst.C.E., Municipal Offices, Bournemouth. Deposit of 1*l.* 1s.

MAY 18.—**Halifax.**—ROAD.—For private improvement works in Colin-street. Plans and specifications seen, and forms of tender from Mr. J. Lord, M.Inst.C.E., Borough Engineer, Town Hall, Halifax Deposit of 5*l.*

MAY 31.—**Dunfermline.**—SEWAGE.—Construction of three miles of main outfall sewer. Plans with Messrs. Crouch, Hogg, & Easton, C.E., 14, Blythswood-square, Glasgow. Specification, quantities, and form of tender on deposit of 3*l.* 3s.

NO DATE.—**Cardiff.**—ROAD, ETC.—For new road and sewerage contract on the Victoria Park estate. Mr. J. A. Sant, architect and surveyor, 1, St. John's-square, Cardiff.

Public Appointments.

Nature of Appointment.	By whom Advertised.	Salary.	Application to be m
*CLERK OF WORKS	Berkshire C.C.	2l. 10s. per week	May
*ARCHITECTURAL ASSISTANT	Luton Borough Council	3l. per week	May
*CLERK OF WORKS	Arundel Comm. of Sewers	2l. per week	May

Auction Sales.

Nature and Place of Sale.	By whom Offered.	Date of Sale
*BUILDING MATERIALS (BY TENDER), GROSVENOR ESTATE—On the Premises	White, Berry, & T or	May
*DEALS, BATTENS, BOARDS, TIMBER, Etc.—Great Hall, Winchester House, E.C.	Churchill & Sim	May
*FREEHOLD HOUSES and A BUILDING SITE, VAUXHALL—At the Mart	W. A. Head	May
*FREEHOLD BUILDING SITE, EUSTON-ROAD, N.W.—At the Mart	Edwin Fox, Bousfield, Burnetts, & Baddeley	May
*FREEHOLD BUILDING LAND, SURREY At the Mart	Daniel Watney & Sons	May
*FREEHOLD PROPERTY, MILE END—At the Mart	Daniel Watney & Sons	May
*FREEHOLD BUILDING LAND, NORBURY At the Mart	Daniel Watney & Sons	May
*FREEHOLD GROUND RENT At the Mart	Daniel Watney & Sons	May
*FREEHOLD FACTORY, YORK-ROAD, KING'S CROSS, N.—At the Mart	Prickett & Ellis	May
*FREEHOLD LAND, SUDBURY	Millar, Son, & Co.	May
*FREEHOLD BUILDING LAND, HAMMERSMITH—At the Mart	Edwin Fox, Bousfield, Burnetts, & Baddeley	May
*FREEHOLD BUILDING ESTATE, CHURCH-END, FINCHLEY—At the Mart	Handman Bros.	June

RECENT SALES *continued from page 529*

April 26.—By FERRIS & PUCKRIDGE.

Southall, Middlesex.—Western-rd., freehold land, 9 a. 3 r. p. £3,000
Glade-la., accommodation land, 10 a. 1 r. 32 p., f. 1,300
Lampton, Middlesex. Jersey-rd., two enclosures, 5 a. 1 r. 37 p., f. 1,640

By HUMBERT & FLINT.

Cheshunt, Herts.—Peaks la., two enclosures, 8 a. 2 r. 29 p., f. 1,175

By MABE LILL & SONS.

Walthamstow, 1, Mansfield rd., f., e r 28l ..
Plaistow, 28, Upper rd., f., w.r. 23l. 8s. 285
East Ham, 146, 148, 171, 218, and 410, High-st. (s.), f., y.r. 278l. 4,845

By RIDER & SONS.

Notting Hill.—18, 19, and 20, Blechynden-mews, u.t. 51 yrs., g.r. 17l. 17s., w.r. 113l. 2s. 175

Contractions used in these lists.—F.g.r. for freehold ground-rent; l.g.r. for leasehold ground-rent; i.g.r. for improved ground-rent; g.r. for ground-rent; r. for rent; f. for freehold; c. for copyhold; l. for leasehold; p. for possession; e.r. for estimated rental; w.r. for weekly rental; q.r. for quarterly rental; y.r. for yearly rental; u.t. for unexpired term; p.a. for per annum; yrs. for years; la. for lane; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; cres. for crescent; av. for avenue; gdns. for gardens; yd. for yard; gr. for grove; b.h. for beerhouse. p.h. for public-house; o. for offices; s. for shops; ct. for court.

TO CORRESPONDENTS.

NOTE.—All communications with respect to literary and artistic matters should be addressed to "THE EDITOR" (and not to any person by name); those relating to advertisements and other exclusively business matters should be addressed to "THE PUBLISHER," and not to the Editor.

All communications must be authenticated by the name and address of the sender, whether for publication or not. No notice can be taken of anouymous communications.

The responsibility of signed articles, letters, and papers read at meetings rests, of course, with the authors.

We cannot undertake to return rejected communications; and the Editor cannot be responsible for drawings, photographs, manuscripts, or other documents, or for models or samples sent to or left at this office, unless he has specially asked for them.

All drawings sent to or left at this office for consideration should bear the owner's name and address on either the face or back of the drawing. Delay and inconvenience may result from inattention to this.

Any commission to a contributor to write an article, or to execute or lend a drawing for publication, is given subject to the approval of the article or drawing, when received, by the Editor, who retains the right to reject it if unsatisfactory. The receipt by the author of a proof of an article in type does not necessarily imply its acceptance.

N.B.—Illustrations of the First Premiated Design in any important architectural competition will always be accepted for publication by the Editor, whether they have been formally asked for or not

PRICES CURRENT OF MATERIALS.

*** Our aim in this list is to give, *as far as possible*, the *average* prices of materials, not necessarily the lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

BRICKS, &c.

Per 1000 Alongside, in River.

	£	s.	d.
Best Stocks	1	14	0
Picked Stocks for Facings	2	10	0

Per 1000, Delivered at Railway Depôt.

	£	s.	d.		£	s.	d.
Flettons	1	13	0	Best Blue Pressed Staffordshire	3	15	0
Best Fareham Red	3	12	0	Do. Bullnose	4	0	0
Best Red Pressed Ruabon Facing	5	0	0	Best Stourbridge Fire Bricks	4	0	0

BRICKS, &c. (*Continued*).

Per 1000, Delivered at Railway Depôt.

GLAZED BRICKS—	£	s.	d.		£	s.	d.
Best White, Ivory, and Salt Glzd. Str'toh'rs	11	7	6	Double Headers One Side and two Ends	13	17	6
Headers	10	17	6		17	17	6
Quoins, Bullnose, and 4½ in. Flats	14	17	6	Two Sides and one End	18	17	6
D'ble Stretchers	16	17	6	Splays & Squints	16	7	6

Second Quality £1 10s. per 1000 less than best.

	s.	d.	
Thames and Pit Sand	6	9	per yard, delivered.
Thames Ballast	5	6	" "
Best Portland Cement	31	0	per ton, "
Best Ground Blue Lias Lime	19	0	" "

NOTE—The cement or lime is exclusive of the ordinary charge for sacks.

Grey Stone Lime ..... 13s. 0d. per yard delivered.
Stourbridge Fireclay in sacks 27s. 0d. per ton at rly dpt.

STONE.

Per Ft. Cube.

	s.	d.
BATH STONE—delivered on road waggons, Paddington Depôt	1	6½
Do. do. delivered on road waggons, Nine Elms Depôt	1	8½
PORTLAND STONE (20 ft. average)— Brown Whitbed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2	3
White Basebed, delivered on road waggons Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2	4½

Per Ft. Cube, delivered at Railway Depôt.

	s.	d.		s.	d.
Ancaster in blocks	1	10	Closeburn Red Freestone	2	0
Beer in blocks	1	6	Red Mansfield Freestone	2	4
Greenshill in blocks	1	10	Talacre & Gwespyr Stone	2	4
Darley Dale in blocks	2	4			
Red Corsehill in blocks	2	3			

YORK STONE—*Robin Hood Quality.*

Per Ft. Cube, Delivered at Railway Depôt. s. d.
Scappled random blocks 2 10

Per Ft. Super., Delivered at Railway Depôt.

6 in. sawn two sides landings to sizes (under 40 ft. super.)	2 3
6 in. rubbed two sides ditto, ditto	2 6
3 in. sawn two sides slabs (random sizes)	0 11½
2 in. to 2½ in. sawn one side slabs (random sizes)	0 7
1½ in. to 2 in. ditto, ditto	0 6

HARD YORK—

Per Ft. Cube, Delivered at Railway Depôt.
Scappled random blocks 3 0

Per Ft. Super., Delivered at Railway Depôt.

in. sawn two sides landing to sizes (under 40 ft. super.)	2 8
6 in. rubbed two sides ditto	3 0
3 in. sawn two sides slabs (random sizes)	1 2
2 in. self-faced random flags	0 5

SLATES.

Per 1000 of 1200 at Railway Depôt.

In. In.	£	s.	d.	In. In.	£	s.	d.
20×10 best blue Bangor	13	2	6	20×10 best Eur'ka unfading green	15	17	6
20×12 ditto	13	17	6	20×12 ditto	18	7	6
20×10 1st quality ditto	13	0	0	18×10 ditto	13	5	0
20×12 ditto	13	15	0	16×8 ditto	10	5	0
16×8 ditto	7	5	0	20×10 permanent green	11	12	6
22×10 best blue Portmadoc	12	12	6	18×10 ditto	9	12	6
16×8 ditto	6	12	6	16×8 ditto	6	12	6

TILES.

At Railway Depôt.

	s.	d.		s.	d.
Best plain red roofing (per 1000)	42	0	Best Broseley, Ornamental (per 1000)	52	6
Hip and Valley (per doz.)	3	7	Hip and Valley (per doz.)	4	0
Best Broseley (per 1000)	50	0			

TILES (*Continued*).

At Railway Depôt.

	s.	d.		s.	d.
Best Ruabon red, brown, or brindled (Edw'ds) (per 1000)	57	6	Best "Hartshill" Ornamental (per 1000)		
Dc. Ornamental (per 1000)	60	0	Hip (per doz.)		
Hip (per doz.)	4	0	Valley (per doz.)		
Valley (per doz.)	3	0	Staffords. (Hanley) Reds or Brindled (per 1000)		
Best "Hartshill" brand, plain sand-faced (per 1000)	45	0	Hand-made sand-faced (per 1000)		
Do. pressed (per 1000)	42	6	Hip (per doz.)		
			Valley (per doz.)		

WOOD.

BUILDING WOOD.	At per standard
Deals: best 3 in. by 11 in. and 4 in. by 9 in. and 11 in.	£ 14
Deals: best 3 by 9	13
Battens: best 2½ in. by 7 in. and 3 in., and 3 in. by 7 in. and 8 in.	11
Battens: best 2½ by 6 and 3 by 6	0
Deals: seconds	1
Battens: seconds	0
2 in. by in. and 2 in. by 6 in.	9
2 in. by 4½ in. and 2 in. by 5 in.	9
Foreign Sawn Boards— 1 in. and 1¼ in. by 7 in.	0
¾ in.	1

	At per load of
Fir timber: best middling Danzig or Memel (average specification)	£ 5
Second quality	4
Small timber (3 in. to 10 in.)	3
Small timber (3 in. to 8 in.)	3
Swedish balks	2
Pitch-pine timber (30 ft. average)	5

JOINERS' WOOD.	At per standard
White Sea: first yellow deals, 3 in. by 11 in.	£ 24
3 in. by 9 in.	22
Battens, 2½ in. and 3 in. by 7 in.	17
Second yellow deals, 3in. by 11in.	19
" " 3 in. by 9 in.	18
Battens, 2½ in. and 3in. by 7 in.	14
Third yellow deals, 3 in. by 11 in. and 9 in.	14
Battens, 2½ in. and 3 in. by 7 in.	11
Petersburg: first yellow deals, 3 in. by 11 in.	21
Do. 3 in. by 9 in.	18
Battens	14
Second yellow deals, 3 in. by 11 in.	16
Do. 3 in. by 9 in.	15
Battens	11
Third yellow deals, 3in. by 11 in.	13
Do. 3 in. by 9 in.	13
Battens	10
White Sea and Petersburg— First white deals, 3 in. by 11 in.	15
" " 3 in. by 9 in.	14
Battens	11
Second white deals, 3in. by 11in.	14
" " 3 in. by 9 in.	13
Battens	10
Pitch-pine: deals	19
Under 2 in. thick extra	0
Yellow Pine—First, regular sizes	48
Oddments	32
Seconds, regular sizes	33
Oddments	28
Kauri Pine—Planks per ft. cube	0
Danzig and Stettin Oak Logs— Large, per ft. cube	0
Small " "	0
Wainscot Oak Logs, per ft. cube	0
Dry Wainscot Oak, per ft. sup. as inch	0
¼ in. do.	0
Dry Mahogany—Houndras, Tabasco, per ft. super. as inch	0
Selected, Figury, per ft. super. as inch	0
Dry Walnut, American, per ft. super. as inch	0
Teak, per load	18
American Whitewood planks, per ft. cube	0

WOOD (*Continued*).

DINERS' WOOD (*Continued*)—

	Per square. £ s. d.	£ s. d.
pared Flooring, etc.—		
in. by 7 in. yellow, planed and shot	0 13 6 ...	0 17 0
in. by 7 in. yellow, planed and matched	0 14 0 ...	0 18 0
in. by 7 in. yellow, planed and matched	0 16 0 ...	1 0 0
in. by 7 in. white, planed and shot	0 12 0 ...	0 14 6
in. by 7 in. white, planed and matched	0 12 6 ...	0 15 0
in. by 7 in. white, planed and matched	0 15 0 ...	0 16 6
in. by 7 in. yellow, matched and beaded or V-jointed brds.	0 11 0 ...	0 13 6
in. by 7 in. " "	0 14 0 ...	0 18 6
in. by 7 in. white " "	0 10 0 ...	0 11 0
in. by 7 in. " "	0 12 9 ...	0 15 0

6 in. at 6d. to 9d. per square less than 7 in.

JOISTS, GIRDERS, &c.

	In London, £ s. d.	or delivered Railway Vans, per ton. £ s. d.
ed Steel Joists, ordinary sections	7 10 0 ...	8 0 0
pound Girders, ordinary tions	9 10 0 ...	10 0 0
Compound Stanchions	11 0 0 ...	12 0 0
es, Tees, and Channels, ordi- y sections	9 10 0 ...	10 0 0
h Plates	9 10 0 ...	9 10 0
Iron Columns & Stanchions, luding ordinary patterns	7 10 0 ...	8 10 0

METALS.

	Per ton, £ s. d.	In London. £ s. d.
mmon Bars	9 0 0 ...	9 10 0
ffordshire Crown Bars, good merchant quality	9 5 0 ...	9 15 0
ffordshire "Marked Bars"	11 0 0 ...	—
d Steel Bars	9 5 0 ...	9 15 0
pp Iron, basis price	10 0 0 ...	—
" Galvanised	17 10 0 ...	—
("And upwards, according to size and gauge.)		
Iron Black—		
inary sizes to 20 g.	10 5 0 ...	—
" 24 g.	11 5 0 ...	—
" 26 g.	12 15 0 ...	—
Iron, Galvanised, flat, ordinary quality—		
inary sizes, 6 ft. by 2 ft. to ft. to 20 g.	15 10 0 ...	—
inary sizes to 22 g. and 24 g.	16 0 0 ...	—
" 26 g.	17 0 0 ...	—
Iron, Galvanised, flat, best quality—		
inary sizes to 20 g.	18 10 0 ...	—
" 22 g. and 24 g.	19 0 0 ...	—
" 26 g.	20 10 0 ...	—
nised Corrugated Sheets—		
inary sizes, 6ft. to 8ft. 20 g.	15 0 0 ...	—
" 22 g. and 24 g.	15 5 0 ...	—
" 26 g.	16 15 0 ...	—

METALS (*Continued*).

IRON (*Continued*)—	Per ton, in £ s. d.	London. £ s. d.
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	12 10 0 ...	—
Best Soft Steel Sheets, 2 g. & 24 g.	13 10 0 ...	—
" " " 26 g.	15 10 0 ...	—
Cut Nails, 3 in. to 6 in.	11 0 0 ...	11 10 0
(Under 3 in., usual trade extras.)		

LEAD, &c.

	£ s. d.	
LEAD—Sheet, English, 4lb. and up	20 7 6 ...	—
Pipe in coils	20 17 6 ...	—
Soil pipe	23 17 6 ...	—
Compo pipe	23 17 6 ...	—
ZINC—Sheet—	In casks of 10 cwt.	
Vielle Montagne	33 10 0 ...	—
Silesian	33 5 0 ...	—
Zinc, in bundles, 1s. per cwt. extra.		
COPPER—		
Strong Sheet ..... per lb.	0 1 0 ...	—
Thin "	0 1 1 ...	—
Copper nails ..... "	0 0 10 ...	—
Copper wire ..... "	0 0 10 ...	—
BRASS—		
Strong Sheet ..... "	0 0 11 ...	—
Thin "	0 1 0 ...	—
TIN—English Ingots ..... "	0 2 0 ...	—
SOLDER—Plumbers' ..... "	0 0 9 ...	—
Tinmen's ..... "	0 1 0 ...	—
Blowpipe ..... "	0 1 2 ...	—

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.*

	Per Ft., Delivered.	
15 oz. thirds	2½d.	26 oz. fourths ..... 3¾d.
" fourths	1¾d.	32 oz. thirds ..... 5d.
21 oz. thirds	3¼d.	" fourths ..... 4¼d.
" fourths	2½d.	Fluted Sheet, 15 oz. 3¼d.
26 oz. thirds	4d.	" 21 oz. 4¼d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.*

	Per Ft., Delivered.	
⅛ Rolled plate	2¼d.	Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white ..... 3½d.
¼ Rough rolled and rough cast plate..	2½d.	
⅜ Rough rolled and rough cast plate..	3d.	Ditto, tinted ..... 5d.

* Not less than two crates.

OILS, &c.

		£ s. d.
Raw Linseed Oil in pipes	per gallon	0 3 5
" " " in barrels	"	0 3 6
" " " in drums	"	0 3 8
Boiled " " in barrels	"	0 3 8
" " " in drums	"	0 3 11
Turpentine in barrels	"	0 2 11
" in drums	"	0 3 1
Genuine Ground English White Lead, per ton		27 10 0
Red Lead, Dry	"	24 0 0
Best Linseed Oil Putty	per cwt.	0 10 6
Stockholm Tar	per barrel	1 12 0

VARNISHES, &c.

	Per gallon. £ s. d.
Fine Pale Oak Varnish	0 8 0
Pale Copal Oak	0 10 6
Superfine Pale Elastic Oak	0 12 6
Fine Extra Hard Church Oak	0 10 0
Superfine Hard-drying Oak, for seats of Churches	0 14 6
Fine Elastic Carriage	0 12 0
Superfine Pale Elastic Carriage	0 16 0
Fine Pale Maple	0 10 0
Finest Pale Durable Copal	0 18 0
Extra Pale French Oil	1 1 0
Eggshell Flating Varnish	0 18 0
White Pale Enamel	1 4 0
Extra Pale Paper	0 12 0
Best Japan Gold Size	0 10 6
Best Black Japan	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Knotting	0 10 9
French and Brush Polish	0 10 6

TERMS OF SUBSCRIPTION.

"THE BUILDER" (Published Weekly) is supplied DIRECT from the Office to residents in any part of the United Kingdom at the prepaid rate of 26s. per annum, with delivery *by Friday Morning's Post* in London and its suburbs.

To Canada, post-free, 31s. 8d. per annum; and to all parts of Europe, America, Australia, New Zealand, India, China, Ceylon, etc., 30s. per annum.

Remittances payable to J. MORGAN) should be addressed to The Publisher of "THE BUILDER," 4, Catherine-street, W.C.

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than 6 p.m. on Wednesday.* [N.B.—We cannot publish Tenders unless authenticated either by the architect or the building owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is stated, nor any list in which the lowest Tender is under 100*l.* unless in some exceptional cases and for special reasons.]

*Denotes *accepted.* †Denotes *provisionally accepted.*

BANCHORY.—For additions to central hall, Public School. Messrs. Wilsons & Walker, architects, Aberdeen. Quantities by the architects:—

Mason: F. Morrison, Peterculter* ....
Carpenter: A. Booth, Banchory* ....
Slater: G. G. Robertson, Banchory* ....
Plasterer: E. Waldie, Banchory* ....
Plumber: W. Reid, Banchory* ....
Painter and Glazier: A. Ross, Banchory* ....
Heating: R. Tindall, Aberdeen* .... } £4,500

MR. EDWARD ARNOLD'S NEW BOOKS.

JUST PUBLISHED.

REINFORCED CONCRETE DESIGN.

By O. FABER, B.Sc., A.M.I.C.E., etc.,
Chief Engineer to Messrs. Trollope & Colls, Ltd., and
P. G. BOWIE, A.C.G.I.,
Assistant Engineer to Messrs. Trollope & Colls, Ltd.

xx + 332 pages. With 158 Illustrations. 12s. 6d. net.

In the design of numerous practical structures the Authors have here en into account several important considerations that have been herto ignored in the theory of beams and columns, simple formulæ to ot the more rigid analysis of such cases are given.

THE CHEMISTRY AND TESTING OF CEMENT.

By CECIL H. DESCH, D.Sc. (Lond.), Ph.D. (Würzb.),
ham Young Lecturer in Metallurgical Chemistry in the University of Glasgow.

With Illustrations. 10s. 6d. net.

THE THEORY OF STRUCTURES.

By R. J. WOODS, M.E., M.Inst.C.E.,
ow und Formerly Assistant Professor of Engineering, Royal Indian Engineering College, Cooper's Hill.

xii + 271 pages. 157 Illustrations. 10s. 6d. net.

TENTS: Compound Stresses—Principal Stresses—Earth Pressure—ility of Masonry Structures—Girders with Parallel Chords—Parabolic ers—Curved Girders not Parabolic—Wind Pressure—Portal Bracing gh Steel Trestles—Continuous Girders—Cantilever and Plate Girders ums and Struts—Arched Ribs and Braced Arches—Reinforced Concrete.

Please Write for Prospectuses.

DON: EDWARD ARNOLD, 41 & 43, Maddox Street, W.



SHOWING THE STEADILY INCREASING POPULARITY OF

ACETYLENE

IF THIS INTERESTS YOU, WRITE TO

ACETYLENE PUBLICITY, LTD.,
103, Cheapside, London, E.C.,

AND FIND OUT ALL ABOUT IT.

COSELEY (Staffs).—For alterations and extensions to the Mount Pleasant Council Schools (senior and junior mixed departments), Coseley, for the Education Committee. Mr. A. Ramsell, architect, Sedgeley, near Dudley :—

A. C. P. Teece	£2,664 0	H. Gough & Son	£2,040 0
H. Dorse	2,179 0	W. Willetts & Sons	1,989 10
G. E. Probert	2,150 0	Jakeman & Round	1,982 0
Oakley & Coulson	2,149 0	A. J. Crump	1,975 0
I. & S. Ham	2,133 0	W. Roe, Wolverhampton*	1,974 0
C. A. Horton	2,090 0		
W. A. Herrick	2,080 15		
M. Round & Sons	2,075 0		

COTTINGHAM.—For the erection of an elementary school for boys, for the East Riding County Council. Mr. Bernard B. Stamford, architect. Quantities by the architect :—

S. Lawrence, Thorne, near Doncaster* . . £3,351 3 1

COVENTRY For further extensions for Premier Cycle Company, Ltd. Messrs. Tait & Herbert, architects and surveyors, Leicester and Coventry. Quantities by architects —

Orr Bros, Coventry*‡ . . £2,177

‡ Lowest received.

HORNCASTLE.—For construction of a new courthouse, for Lindsey County Council Standing Joint Committee. Mr. James Thropp, County Surveyor, Lincoln. Quantities by Surveyor —

F. Bell & Sons	£1,265 15	Halkes Bros.	£1,139 0
S. & R. Horton & Sons	1,170 10	J. H. Holmes & Son	1,097 0
F. Scarborough	1,148 8	Sutton & Horton. Horncastle*	1,072 0
C. Hensman & Son	1,139 10		

HOWDEN.—For erection of an elementary school, for the East Riding County Council. Mr. Bernard B. Stamford, architect Quantities by the architect

Hammerton, Surah, & Co., Shafton, near Barnsley* . . £2,499 7 11

LONDON.—For supply of special section rolled-steel bar for magnetic brake shoes, for the London County Council :—

	Prices at a ton both sections, delivered.	
	Within the Specification Radius.	At Siding.
	£ s. d.	£ s. d.
G. Schultz & Co.	9 16 6	9 13 6
District Iron and Steel Co., Ltd	9 10 0	9 10 0
Bayliss, Jones, & Bayliss, Ltd.	9 10 0	9 10 0
	26A Section.	
Patent Shaft & Axletree Co., Ltd.	9 0 0	9 0 0
	25A Section	
	8 15 0	8 15 0
H. Bessemer & Co., Ltd.	8 0 0	8 0 0
Cammell Laird & Co., Ltd.	8 0 0	8 0 0
F. & W. MacLellan, Ltd	7 16 3	7 16 3
Frodingham Iron and Steel Co., Ltd	7 16 0	7 13 6
Earl of Dudley's Round Oak Works, Ltd.	7 12 6	7 12 6
Lilleshall Co., Ltd., Shifnal, Salop*	7 7 6	7 7 6

LONDON. For erection of science and art rooms at the "Reay" Central School, Brixton, for the London County Council

J. Smith & Son (Norwood), Ltd.	£2,306 0 0
J. Garrett & Son	2,136 0 0
J. Marsland & Sons	2,058 0 0
Triggs & Co.	2,021 10 0
J. & C. Bowyer, Ltd.	1,997 0 0
F. W. Fletcher	1,924 0 0
Holliday & Greenwood, Ltd.	1,889 0 0
W. Johnson & Co., Ltd.	1,869 0 0
J. Chessum & Sons	1,860 8 11

[The Architect's estimate, comparable with the tenders, is £1,950.]

LONDON.—For repainting the superintendent's house at Abbey Mills pumping-station, for the London County Council :—

A. Webb	£69 0	W. Harris, North Woolwich*	£54 12
A. E. Symes	57 0		

MIDSOMER NORTON (Somerset).—For the erection of a block of business premises in the High-street, for the Radstock Co-operative and Industrial Society, Ltd. Mr. William F. Bird, M.S.A., architect, Midsomer Norton. Quantities by the architect :—

J. H. Tovey	£3,221 0	Coles Bros.	£2,950 0
E. G. Padfield	3,130 0	T. Foster, Radstock*	2,940 0
F. Amery	3,089 0	J. E. Fursland	2,898 0
E. Walters & Son	3,087 0	J. Bird & Son	2,884 0
F. James & Sons	3,061 0	W. Webb	2,838 0
A. G. Heard	3,033 17		

[Architect's estimate, £3,065.]

NORTON MALTON. For alterations and additions to the Council School, for the East Riding County Council. Mr. Bernard B. Stamford, architect. Quantities by the architect

C. Martin, Longfield-terrace, York* . £1,819 9

PEASEDOWN ST. JOHN (Somerset). For the erection of a new Council School, for the Education Committee of the County of Somerset. Mr. William F. Bird, architect, Midsomer Norton. Quantities by the architect :—

Coles Bros., Peasedown St. John* . . £7,250

PENKHALL.—For alterations and additions at the cottage homes laundry. Mr. A. Raymond Piercy, architect, Union Offices, Stoke on Trent :—

C. Cornes & Son	£150 0	B. James	£127 10
J. Boston	140 0	J. Meiklejohn & Son, Edward-street, Stoke-on-Trent‡	124 0
A. E. Chatfield	139 0		
W. Thomas & Son.	135 0		
Ball & Robinson	130 0		

‡ Subject to Local Government Board's sanction.

TONYPANDY.—For rebuilding business premises, for Mrs. Bevan, Tregroes, Pencoed. Messrs. Gibson, Parry, Williams, & Co., architects, Pontypridd. Quantities by the architects :—

D. Davese & Sons	£1,220 0 0	A. Rickards	£1,090 0 0
J. Hurry	1,113 16 10	Williams & James	1,080 0 0
J. Thomas	1,110 0 0	Watermann & Slade, Tonypandy*	999 0 0
G. Harris	1,089 7 4		
E. R. Evans Bros.	1,098 0 0		

TONBRIDGE. — For secondary school, for Education Committee. Mr. Wilfrid H. Ro architect :—

C. B. Benfield	£12,700	F. & G. Foster	
H. Meades	10,737	J. E. Whiter & Co	
L. Edwards	10,300	C. E. Skinner	
W. E. Blake, Ltd.	10,20	Strange & Sons, Ltd	
Barden & Head	10,148	W. T. Burrows	
J. Podger & Sons	9,853	D Godden & Son	
G. Browning	9,710	Ham-street, Ashford‡	
Martin & Co.	9,500		
G. E. Wallis & Sons, Ltd.	9,347		

‡ Recommended for acceptance.

Ham Hill Stone.
Doulting Stone.
Portland Stone.
The Ham Hill and Doulting Stone Co., L
(Incorporating the Ham Hill Stone Co. and C. Trask The Doulting Stone Co.).
Norton, Stoke-under-Ham, Somerse
London Agent :—Mr. E. A. Willi
16, Craven-street, Strand.

Asphalte.—The Seyssel and Metallic Asphalte Co. (Mr. H. Glenn), Office, 42, P E.C.—The best and cheapest materials for courses, railway arches, warehouse floo roofs, stables, cow-sheds and milk-rooms, aries, tun-rooms, and terraces. Asphalte tractors to Forth Bridge Co. T.N. 2644 Ce

SPRAGUE & CO.'S, Ltd.,
"INK-PHOTO" PROCESS,
69 and 70, DEAN STREE
SOHO,

JOINERY
Of every description and in any kind of W
CHAS. E. ORFEUR, L
ESTIMATES ON APPLICATION.
COLNE BANK WOR
COLCHEST
Telephone: 0135. Telegrams: "Orfeur, Colchest

J. J. ETRIDGE, Jr.
SLATE MERCHANTS. LTD.
EXPERTS IN
SLATING, TILING.
BEST WORK ONLY.
Telephone 2685 Wall, or write—
BETHNAL GREEN SLATE WORKS,
BETHNAL GREEN, LONDON, E.

PILKINGTON & C
(ESTABLISHED 1838),
DEPTFORD WHARF,
190 & 192, CREEK ROAD, DEPTFORD,
Telephone No.: New Cross 1102 (two lines

Registered Trade Mark.
Polonceau Asphalt
PATENT ASPHALTE AND FELT ROO
ACID-RESISTING ASPHALTE.
WHITE SILICA P
SEYSSEL ASPHALTE (*Direct from the M*



ALSO AT DEPTFORD, LIVERPOOL, BRISTOL, GLASGOW, FALK BELFAST, & DUB

Chief Offices: 352 to 364, EUSTON ROAD, LONDON, N.W.

THE BUILDER

VOL. CII.—No. 3614. MAY 10, 1912.

CONTENTS.

PAGE

IGN FOR MARYLEBONE MUNICIPAL BUILDINGS 535
TEMPORARY ARCHITECTURE AT THE ARCHITEC-
RAL ASSOCIATION 535
ROYAL ACADEMY EXHIBITION: DOMESTIC
ORK 536
ES 537
ROYAL INSTITUTE OF BRITISH ARCHITECTS'
NUAL REPORT 537
ONIC HALL, SHANGHAI (WITH ILLUSTRATIONS) 540
HITECTURAL SOCIETIES 541
ELEMENTARY SCHOOL, YORK (WITH PLANS) .. 542
NEERING SOCIETIES 542
ERAL NEWS 543
PETITION NEWS 544
TS (WITH PLAN) 545
ESPONDENCE 546

PAGE

INTERCOMMUNICATION COLUMN 547
EDITORIAL SUMMARY 548
MEETINGS 548
ARCHÆOLOGICAL SOCIETIES 548
THE LONDON COUNTY COUNCIL 548
NOTES TO ILLUSTRATIONS 548
FIFTY YEARS AGO 548

MONTHLY REVIEW OF CONSTRUCTION: -
ADELPHI HOTEL EXTENSION, LIVERPOOL. I. (WITH ILLUSTRATIONS) 549

THE BUILDING TRADE: —
BUILDERS AND STRIKES 555
THE MEDIÆVAL PLUMBER 555
LABOUR IN THE BUILDING TRADE 556
GENERAL BUILDING NEWS 556

PAGE

THE BUILDING TRADE (*contd.*):—
APPLICATIONS UNDER LONDON BUILDING ACTS, 1894 TO 1909 556
PROJECTED NEW BUILDINGS IN THE PROVINCES 556
LONDON COUNCILS 557
METROPOLITAN ASYLUMS BOARD 558
LEGAL COLUMN 558
LAW REPORTS 558
LIST OF COMPETITIONS, CONTRACTS, ETC., OPEN ... 559
OBITUARY 561
PATENTS 561
SOME RECENT SALES 562
PRICES CURRENT 562
TENDERS 564

Illustrations.

THE NEW ADELPHI HOTEL, LIVERPOOL.
MR. R. FRANK ATKINSON, F.R.I.B.A., ARCHITECT.



Design for Marylebone Municipal Buildings.

By Messrs. Lucas, Lodge, & Farey.

(Royal Academy Exhibition, 1912.)

CONTEMPORARY ARCHITECTURE AT THE ARCHITECTURAL ASSOCIATION.

WITH that enterprise and freshness of outlook which should naturally characterise the or professional society the Architural Association has broken fresh nd with an exhibition of contemry work on lines which, if previously cated, have not often, we think, put into practice before.

e novelty and special interest of this bition is that, instead of consisting tow drawings specially prepared by cts in the art of pictorial representaor misrepresentation of architecture, confined to actual working drawings, y ¼ in., and photographs showing nished work in execution.

art from the interest and value of able to compare the working details with the effect they are designed to produce, the exhibition does bring home to us the advantage of the photograph as a means of producing within the limits of the medium a truthful representation of executed work, and coming as this exhibition does simultaneously with the opening of the Academy it inevitably suggests a comparison unfavourable to the latter in this respect.

Three or four small views of a house and its actual surroundings, all on the same mount, with a plan below, certainly seem to give a better idea of the actual result produced than the most effective of show perspectives with surroundings that are generally "composed" to make a picture.

The only thing lacking is colour. If the designer could make an accurate and realistic colour drawing or painting of the actual effect of his building when executed he might be able to give a more complete effect than can be obtained by photography. He might even be able to express in his drawing something more of his own personality or some aspect of his original idea which he had failed to entirely realise in his building. When, however, perspectives, as is too often the case, are done by other people who do not trouble to make studies of the actual building itself, and have possibly never seen it, those advantages are not usually obtained.

The proper use of perspectives is surely for purposes of study or to give a conventional suggestion to others of the effect of a design not yet carried out.

It is a constant source of complaint that architects have so few opportunities to see one another's work. In one way, of course, this is inevitable. Even though they may live and design in close touch with one another, their actual work is scattered about the country in all directions, and few of their colleagues ever see it unless it happens to be in London or in one of the large provincial cities. Particularly is this the case with the designers of country houses, whose best work may be buried in the wilderness.

In such cases an architect depends for the recognition and appreciation of his colleagues almost entirely upon the illustration of his work, and the curious fact may be noticed that many have gained high and no doubt well-deserved reputations, although their actual work may never have been seen by one in ten, perhaps not one in a hundred, of those who applaud it. It seems advisable, therefore, from every point of view that illustrations of executed work should be as accurate as possible, and in this respect there can be no question that the photographs and working drawings at the Association are preferable to the perspectives and show drawings at the Academy.

Although the professional journals fulfil a recognised function in endeavouring to keep the members of the profession in touch with one another's designs, there is plenty of scope for more to be done in this direction, and it appears to us that now the Institute possesses suitable galleries there is no reason why it should not follow the lead of the Association and hold exhibitions of a technical and intimate nature which really explain the works exhibited.

Exhibitions for this purpose need not clash with those at the Association, which, being organised for the benefit of the students, should naturally contain special features not applicable to exhibitions at the Institute.

THE ROYAL ACADEMY EXHIBITION: DOMESTIC WORK.

THE amount of domestic work shown is perhaps slightly smaller this year than usual—at least that is our unverified impression; though what diminution there may be is more probably due to the very imperative demands of other sections rather than to any falling off in the number of designs sent in. In the welter of "nice" and even interesting works submitted, and in the face of irrepressibly varied methods of rendering adopted, the hangers' task must be unenviable indeed. There can be often so "little to choose" between one impeccably symmetrical Georgian façade and another, and of the many little houses, more fitting, one would think, most of them to the water-colour room. Who, not knowing the conditions surrounding each, is to say which of them is the more worthy? Who is to say, indeed, that there are any "conditions"—that the designs, that is to say, are, or ever will be, built? And one wonders that the hanger does not concentrate exclusively on men of well-known names, to whom admission to "Varnishing Day" is an incident in the course of practice, rather an end in itself; for this might easily be done, and no imputation be cast, in a collection which numbers altogether under three-score of exhibitors. Amongst them no great advance and no very remarkable coherence of tendency can be discerned, so that we can but comment upon several as briefly as may be. Mr. Reginald Blomfield, A.R.A., shows two large houses, one (1581) in Norfolk, of the early Georgian style, of the kind with which we have learned to associate his name, which will probably look better in execution than it does as a drawing—in this case a large and hurried one in pencil, looking exceedingly weak. His other (1627) is a house in Jersey, which, we happen to know, is an adaptation of an old building. The drawing shows more forecourt and tree than house (though it is not the worst offender in this respect) and looks as though it ought to belong to a collection of curious mezzotints. Mr. Walter H. Brierley's "Sion Hill" (1612) shows what may be done by ranging round a forecourt in the manner of some old groups of almshouses, with plain, straightforward work. It is shown in a strong realistic water-colour. Mr. F. L. Chesterton has a pleasant little drawing (1616) of a Georgian façade with excellently-drawn and most picturesque gate-piers and wall in the foreground. The legend tells us that it is "alterations" only, and we wonder how much and what is due to Mr. Chesterton. 1596, a house at Leek Wootton, is a very slick water-colour of a kind well adapted to showing Mr. H. B. Creswell's ashlar and clear-cut detail. Mr. Horace Farquharson shows a very low, comfortable-looking house (1621) with a very early-Victorian aspect. We wonder again how much of the house is new. The lower story is covered with green trellis for plants—which looks very well, but would it not be damp? Messrs. Horace Field, Simmons, & A. Faulkner (1587) send elevations of a large and frankly suburban residence in red brick. It looks more suburban—more as though it were in some avenue of such—by reason of the two elevations being placed side by side as though they were to be built so. The design is somehow restless, perhaps because of over-emphasised quoins, keys, and arches, and the club-headed chimney-stacks. 1592, a garden swimming pool, is a pleasant arrangement by Mr. Oliver Hill. 1599, shows a house at Worplesdon, by Mr. Leonard Martin, of considerable size, which is plain and straightforward, and yet legitimately picturesque by virtue of its arrangement. 1598, by Sir Ernest George & Mr. A. B. Yeates, is a wood-frame house, with a brick basement story, in British Guiana. It is not remarkable, though pleasant; but surely it would gain æsthetically and practically by immensely wider eaves? Mr. Brantwood Maufe has an ink drawing (1636) of a large house on an angular plan, which seems to work very well (the plan is given). But the walls are treated with rough-cast or plaster with horizontal courses and perpendicular streaks of brick cropping through, the reason for which, structural or æsthetic, eludes us. The quality of Mr. Ernest Newton's work can hardly be grasped for the excee cleverness of his draughtsman. A hc which on one small drawing shows and long, is shown in part on ano large one, looking high and almost he The detail illustrates sound and work with all its author's qua Mr. George Nott shows a large and st drawing of a house (1613) the siz which may be gauged variously from figures by the door and the wind which appear small for a house of size, the house itself seeming sm than on a first impression, if one l into it. But the whole should, we th be distinctly pleasing in actuality. a good example of sound modern de which avoids any apeing of past st and, if one excepts some blue-b "spot decoration," avoids also the m tricks and vagaries apparently incide to their abandonment. The colou if one is to take it as realistic, show appreciation of sober brown brickw Mr. Goodhart Rendel (1604) has interesting essay in the combinatio two colours of stone, a red-brown for dressed stone with grey rubble in betw He attempts windows of perhaps gre width in proportion to height than be done happily in traditional mate Also the doorway is distinctly w But this little house affords gre promise of successful work in the fu than almost anything shown. Mr. D Richter exhibits one of his clev coloured, if somewhat heavy inte (1602). Mr. A. Winter Rose's dra shows well and prettily the atmosp and feeling we may suppose him to at in his work, but little of the linear reality which allows us to j for ourselves. "Atmosphere" and fe are well enough and properly attrib of a picture. But actual building st unfortunately, by being new. And weather is so changeable. Oh, ha architects, could the sun but shine alv and from a constant quarter!

Mr. Andrew N. Prentice shows on two characteristic examples. Mr. D Spain (1583) exhibits a small hous Harpenden, which is an attempt t a monumental scale within a s compass; so that the house look though it were related closely much bigger house. Perhaps i We hope that Mr. Spain will be showing us some more impor work which will be worthy of the we of this heavy detail. 1641, Port Alls, Cornwall, by Mr. Philip A. Tilde interesting and really well drawn in and-ink. There is very little of whic feel justified in saying positively th should not have been admitted. perhaps, a suburban house; but this, poor and hopelessly out-m "half-timber" work though it be, claim a right, as apparently does so m else, on the ground that the R Academy is almost officially boun represent as fairly as it may the av level of artistic ability. All stric on the Royal Academy itself mus qualified by this reflection.

PROFESSOR OF CIVIC DESIGN, LIVERPOO

Professor A. D. Adshead, F.R.I.B.A., ha appointed to the new chair of Civic Des the University of Liverpool. He was Associate Professor of Civic Design in M 1909.

NOTES.

Regent's Quadrant Competition.

It has been obvious to those who have studied the proposed rearrangement of Piccadilly-circus d the designs for the new Regent's adrant that the business with a cial claim to consideration is that ned by Messrs. Swan & Edgar, Ltd. r can we be astonished that this firm, common with similar establishments pending largely on the display of ds, object to the proportion of masonry luded in Mr. Norman Shaw's scheme. e are, therefore, not surprised to receive following communication from ssrs. Swan & Edgar, and we desire to w the attention of competitors to the tifying intimation that the firm are pared to take an active interest in the npetition :—

Sir,—Your competition for what is practic- r a rebuilding of our premises appeals to as likely to be extremely useful in offering tance for the solution of this difficult problem. should like to indicate our approbation of proposal in some practical way, and have ided that in the event of a thoroughly able design for our purposes being obtained, roved by us and adopted, we will offer author some recognition of his ability, er by way of additional premium, or, if ecomes practicable, a professional position ch will enable him to put his design in erial form, our principal requirements being d light to all floors and suitable shop dows.—Yours faithfully,

For Swan & Edgar, Ltd.,
Walter Morford,
Managing Director."

are sure that all who have entered for competition will feel the stimulus his unsolicited expression of the views ne of the firms chiefly concerned.

e Prevention Vandalism.

We are glad to notice that a meeting, presided over by the Bishop of ichester, has been held at Farnham tle in order to form a Society for the servation of the beauty and historic ures of the town, and to control the hetic aspect of any future develop- nts. The Dean of Wells, in support the proposal, drew attention to the essity of such societies in every town England, and to the difficulties that et civic authorities for lack of proper lic support. There is no doubt that, adly speaking, the authorities of a n have only too good reason for eving that they occupy their position rder, first and foremost, to look after material interests of its inhabitants. that any activities outside that rather ricted sphere of usefulness are likely neet with condemnation. It is very essary, therefore, to be able to show n that every town has a large propor- of its inhabitants who are willing to port all reasonable proposals for its rtification, and indeed consider this ne of the rightful functions of its civic norities. To this end such societies his may contribute much, and we e to see them established through the th and breadth of the land.

otection of onuments.

With reference to our article on the discussion in the House of Lords of the for the further protection of ancient uments, a correspondent draws our ntion to the fact that there are two Bills. On referring to that put forward by Lord Eversley we find that "this Act shall not apply to any structure which is occupied as a dwelling-place by any person other than a person employed as a caretaker thereof and his family." This seems to make it quite clear that the Act cannot be evaded simply by putting a caretaker into an otherwise uninhabited house; but, all the same, there does seem to be a possibility of withdrawing buildings from the protection of this Act by the simple process of letting them, so that when inhabited the owner can deal with them as he pleases. We hope this point will not be overlooked.

Mural Decoration.

Dr. Randall Davidson, in responding for the "Guests" at the Royal Academy Banquet, did not fail to impart to his speech the fitness of expression and sympathy with artistic ideals associated with the highest ecclesiastical traditions. His plea for mural decoration should serve as an exhortation not only to those able to employ the "cohort of artists inferior to no previous generation," but to the artists themselves. The speech should be taken to heart, especially by those who are competing for the numerous prizes offered by the Committee at Crosby Hall for various decorative projects. Painters should be stimulated by the Archbishop's references to artistic possibilities in connexion with secular and other buildings. With definite proof of the existence of a budding Puvis or a XXth-century Watts, it should not be long before "the drab walls, the long purse, the skilled pencil and brush" are brought together for public and private benefit. Could not the Royal Academy itself make use of Lord Leighton's bequest of 10,000*l.* to give effect to the Primate's vision?

Street Name-Plates.

Following a recommendation of the Art Committee, the Council of the Royal Institute of British Architects have invited local authorities to a Conference proposed to be held on May 22, at 9, Conduit-street, to discuss the possibility of providing uniform name-plates at street corners in London thoroughfares. Although but a minor civic matter, it is one which claims attention. For our own part, we do not value uniformity so highly as legibility by day and night; but if a standard size and style can be agreed upon, and if the lettering suggested is both clear and artistic, the scheme will be worthy of support. There should be no difficulty in devising a system of direction with both useful and decorative qualities.

Danish Art at Brighton.

This, the third in a series of exhibitions dealing with the work of Continental schools, was recently opened at the Corporation Art Galleries. Though perhaps not quite so strong as the Swedish Exhibition last year, it is decidedly interesting, few of the artists having exhibited work in this country before. The portraiture, both in painting and sculpture, is strong and individual, and there is also to be seen a good collection of Copenhagen porcelain, including a case of figures, of small size and delicately coloured, illustrating the life and costume of the country, which is specially worthy of notice. The exhibition remains open until July.

Hospital Criticism.

In commenting on our article on Sir Henry Burdett's criticism on Sheffield Royal Hospital our contemporary, the *Hospital*, appears to miss the point of our observations. Whether the Report of the Investigation Committee is right or not, and whether this hospital is well designed or not, we should still hold that "a layman's opinion can hardly be accepted as the last word on hospital construction." It is not necessary to remind us that the object of Sir Henry Burdett's inspection of hospitals has been to help to raise the standard of efficiency. It is just because we realise the importance of such work that we regret its value should be discounted by statements reflecting on hospital designers, which do not appear to be in accordance with the facts, and which so far as we are aware have been neither substantiated nor withdrawn.

ANNUAL REPORT.

The annual general meeting of the Royal Institute of British Architects was held on Monday, when the annual Report was received and adopted. We take the following information from the Report:—

The Coronation.—On the occasion of his Majesty's Coronation the Council presented a loyal address, designed by Mr. Grailly Hewitt, on behalf of the members of the Royal Institute, and a scheme of decoration for the premises was prepared by the Hon. Secretary, Mr. Henry T. Hare.

Obituary.—The losses by death have been as follows:—Hon. Fellow. Sir Francis Sharp Powell, Bart.; Fellows: Henry Bloomfield Bare, Franc Sadleir Brereton, William Glover, Alexander Graham, William Henry Hill, George Gordon Hoskins, Francis William Humphreys, Robert John Macbeth, Duncan McNaughtan, Dr. John Samuel Phené, James Pigott Pritchett, George Ransome, William Forrest Salmon, Charles Smith; Retired Fellows: Frederick William Albury, Elijah Hoole, James Radford; Hon. Associate, Edwin Austin Abbey, R.A.; Associates: Sydney Bridges, John Codd, William King Lucas, John Bevan Phillips, William C. Poole, Thomas Miller Rickman, Henry Shackleton; Licentiates: John Davidson, Harry Edward East, Gascoigne Hastings, Fowler-Jones, William Pickels, Edward Ashby Smith, Wilfrid Travers Wire; Honorary Corresponding Members: Fernand de Dartein, Pierre Jérome Honoré Daumet, Alexander von Wielemans.

Royal Gold Medal.—The Royal Gold Medal was awarded last year to Dr. Wilhelm Dörpfeld, F.S.A., in recognition of his eminent services to architecture through his archæological researches. Greatly to the regret of the Council, a serious illness made it impossible for Dr. Dörpfeld to receive the medal in person

at the meeting on June 26, 1911. It has been decided to award the medal this year to Mr. Basil Champneys, F.S.A., in recognition of the distinguished merit of his executed work in architecture. His Majesty the King has graciously signified his approval of the award, and the medal will be presented to Mr. Champneys at the general meeting on June 24.

Membership.—The following tabular statement shows the present subscribing membership of the Royal Institute compared with corresponding periods of 1909, 1910, and 1911 :—

Year.	Fellows.	Associates.	Hon. Associates.	Total.
1909	888	1,344	46	2,278
1910	874	1,451	48	2,353
1911	862	1,509	55	2,426
1912	859	1,581	54	2,496

During the official year since the last annual general meeting thirteen Fellows have been elected, 108 Associates, and two Honorary Associates. The Council have decided to consider the situation which arises from these figures.

Licentiates.—The period for the election of Licentiates having been extended to the end of June, 1912, applications have come in freely during the whole year, and at the present moment a total of 1,834 Licentiates have been elected, and many other applications are under consideration.

New Allied Societies.—Since the publication of the last annual report the Council have had the pleasure of admitting the Northamptonshire Association of Architects into alliance with the Royal Institute.

Registration.—In the last annual report the Council outlined the steps that had been taken to secure united action by the Royal Institute and the Society of Architects in advancing the policy of Registration. Legal and constitutional difficulties made it necessary to lay before the members a proposal to obtain the Privy Council's sanction for a Supplemental Charter and by-laws conferring the necessary powers on the Royal Institute. The Council's proposals for this purpose were laid before a special general meeting on January 8, 1912, and an amendment was carried referring them back to the Council for further consideration. The Council at once appointed a strong and representative Registration Committee to consider and report upon the question, and this Committee is now actively at work under the Chairmanship of Mr. John Slater.

Architectural Copyright.—In the new Copyright Act, 1911, the privileges of artistic copyright are for the first time extended to works of architecture.

Board of Professional Defence.—The Board have held a number of meetings, and have given advice to members in questions of a legal nature. They have given attention to several recent judicial decisions which have appeared to enlarge the legal responsibilities of architects, and the possibility of safeguarding the profession against hitherto unforeseen dangers is being carefully considered.

Professional Conduct. — The Professional Questions Committee have considered a number of cases referred to them from time to time, and have advised the Council upon them. The Council are now considering the advisability of drawing up and publishing a Code of Professional Ethics for the guidance of members.

The Membership Diploma.—A Sub-Committee of the Council is engaged in the preparation of a design for a new membership diploma, to take the place of the old membership certificate, under the terms of the Supplemental Charter of 1909.

The Schedule of Charges.—The Council have been engaged for some time upon the revision of the schedule of charges. The Councils of the allied societies in the United Kingdom have been consulted in the matter, and it is hoped that the draft will be ready for submission to the general body at an early date.

The Town Planning Committee.—During the past year this Committee has been in communication with the allied societies with the object of bringing architectural opinion to bear on the town-planning schemes that are being prepared throughout the country. It has already prepared and published a pamphlet for the guidance of promoters of such schemes.

The International Congress, Rome, 1911.—The ninth International Congress of Architects took place at Rome between October 2 and 10. The British visitors numbered sixty-six out of a total attendance of some 500, and the Royal Institute was represented by its President, Mr. Leonard A. Stokes, Mr. John Belcher, R.A., Past-President, and Mr. John W. Simpson, Vice-President, and Secretary of the Comité Permanent. The British Government was represented by Sir Henry Tanner, C.B., I.S.O. [*F.*], and Mr. W. E. Riley [*F.*] represented the London County Council.

Henry Jarvis Bequest.—This bequest is now in the hands of the residuary trustees, and the Council have advised them, under the terms of the will, to apply the available income to the foundation of Jarvis Studentships at the New School at Rome. If the Council's proposals are accepted there will be an annual examination for the studentship, which will be open to all students and Associates of the Royal Institute of British Architects under the age of thirty years, and one studentship will be awarded every year, of an annual value of about 180*l.* and tenable for two years.

Finance.—The auditors have framed th report in such a form as to give the membe an independent statement of the gene financial position of the Royal Institute. T attention of members is particularly direct to this report.

Examinations.—The Progressive Examin tions were held in June and November, 191 The Preliminary was held in London, Brist Leeds, Manchester, and Newcastle-on-Tyn the Intermediate in London, Bristol, Lee Manchester, and Newcastle-on-Tyne. T Final and Special Examinations were he in London, and the Special Examination f Colonial candidates in Johannesburg, Sydne and Toronto. The Council desire to reco their thanks for the valuable services render by the Hon. Secretaries and Examinati Committees of the various allied societi The results are shown in the following tabulat form :—

	Admitted.	Exempted.	Examined.	Passed.	Relegated
Preliminary Examination	241	81	160	123	37
Intermediate Examination	242	15	227	120	107
Final and Special Examinations	235	—	235	115	120

The New British School at Rome.—During the Presidency of Sir Ernest George the Council gave much consideration to the possibility of founding a British School of Architecture at Rome. A Special Committee was formed to consider the project, and had entered into negotiations with the authorities of the existing British School at Rome. The Council therefore welcomed the intervention of the Commissioners of the Exhibition of 1851, who came forward at a critical moment and, with the assistance of the Royal Institute, the Royal Academy, the Royal Society of Sculptors, and the British School at Rome, founded and endowed a new and enlarged School of Painting, Architecture, Sculpture, and Archæology, which will soon begin its work. The Royal Institute of British Architects is represented on the Council of the new School by Mr. Reginald Blomfield and Mr. John W. Simpson. At the request of the Commissioners the Council have prepared a scheme for the examination of the candidates for the Architectural Scholarship which will be awarded every year by the Commissioners, and it is intended that the holders of the proposed Jarvis Studentship should also be in residence at the new School for a period of two years each

New London Bridges.—In the last annual report the Council referred to the efforts they were then making to induce the Corporation of the City of London to consider the question of the proposed St. Paul's Bridge from an architectural point of view. The action of the Council was largely instrumental in leading the House of Commons to defer the passing of the Bill until the scheme had been considered and reported upon by a specially-appointed Committee of architects, consisting of three members of the Royal Institute—Sir William Emerson, Mr. T. E. Collcutt, and Dr. J. J. Burnet. The Council have also been in communication with the London County Council with reference to the new Lambeth Bridge, and have urged the importance of treating the design of the bridge from the outset as an architectural problem of great importance to London.

The Joint Committee on Reinforced Concrete.—This Committee has compiled and published, with the sanction of the Council, a second report on reinforced concrete. It has also considered the London County Council's draft regulations for reinforced concrete construction, and has reported upon them to the Council, who have submitted various criticisms and suggestions to the Local Government Board, whose sanction is required for these regulations.

Competitions.—The Competitions Committ have had under their consideration the co ditions issued by various promoters, and cases where the conditions have been unsat factory the promoters have been communicat with and urged to modify them. In the ca of the competitions for the Australian Fede Capital, Oakwood Avenue Council Scho Warrington, and Blackwood Hall, the Co mittee's efforts to obtain satisfactory amen ment of the conditions having been unavailin the Council by publication in the *Journal* a in the professional Press have warned membe and Licentiates not to take part in them.

The following have been the Presiden nominations to assessorships during the offic year :—

Cardiff	Technical Institute	Mr. James S. Gibson.
Cardiff	New Fire Brigade Station	Mr. A. Marshall Mackenzie.
Dovercourt	School	Mr. Paul Waterhouse.
East Sussex	New Hospital	Mr. Edwin T. Hall.
Felixstowe	Church	Mr. Gerald C. Horsley.
Harrow-on-the Hill	Enlargement and Alterations of Public Offices	Mr. William Flockhart.
Newcastle (Walker Gate)	School	Mr. John Bilson.
Northwich	New Baths	Mr. F. T. Baggallay.
Nottingham (Carrington)	Parish Church	Mr. E. S. Prior.
Nottingham	Baptist Chapel	Mr. Herbert W. Wills.
Portland	New Council Offices	Mr. A. Needham Wilson.
Stockport	New Infirmary Buildings	Mr. Herbert W. Wills.
Wallsend-on Tyne	Elementary Schools	Mr. A. W. S. Cross.
Willesden	New Buildings for Children	Mr. A. W. S. Cross.

The President accepted an invitation from t Government of Manitoba to act as assess in the competition for the new Legislati Buildings at Winnipeg.

Report of the Board of Architectural Education.

The Board has held fifteen meetings since t issue of the last report. Mr. Reginald Blo field has acted as Chairman, Sir Aston Webb a Mr. Lewis Solomon as Vice-Chairmen, Mess Ernest Newton and John Slater as Ho Secretaries. The following Committees ha met and reported to the Board :—Offic Committee, Examinations Committee, Exem tions Committee, Testimonies of Study Co mittee, Designs Committee.

In November, 1911, the Council approv of a recommendation of the Board that t Slade Professors of Fine Art at the Universit of Oxford and Cambridge, and Profes A. Beresford Pite, of the Royal College of A should be invited to become advisory memb of the Board, and the Board's invitation w accepted by these gentlemen.

Licentiates' Examination.—The Board h drawn up a detailed scheme, which has b approved by the Council, for the examinati of Licentiates desirous of becoming Fello and the first examination will be held at end of June. The examiners appointed conduct the first examination are :—Reginald Blomfield, A.R.A. (Chairman of Board); Sir Aston Webb, C.B., C.V.O., R (Past-President); Mr. Henry T. Hare (H Secretary).

Examinations.—The Board has conduc the Royal Institute examinations, and results as reported to the Council have b published.

Revision of Examinations.—The Board has had under consideration a revision of the Syllabus of the Intermediate and Final Examinations. Many important modifications therein have been made and approved by the Council. A scheme of problems in design has been instituted to take the place of the old Testimonies of Study for the Final Examination, and the first sets of drawings were submitted for the approval of the Board at the end of February. Other designs will be sent in every two months, and each candidate for the examination is required to submit four of such approved designs as Testimonies of Study before being admitted to the examination. The allied societies are co-operating with the Board in carrying out this scheme by examining the designs in their respective localities. Eighteen sets of designs for the first subjects set by the Institute have been received by the Board, and eight of them have been approved. The Board has selected some of these approved designs and has sent them to the allied societies as examples of the work done by students in answer to the design problems. The various alterations in the examinations, full particulars of which have been published in the *Kalendar*, will come into operation in November next.

External Examiners.—The Board has recommended the Council to require that the work of students at the recognised architectural schools who claim exemption from the Intermediate Examination shall have been examined and approved by an External Examiner appointed by the school, such appointment having been previously approved by the Council. This recommendation has been approved by the Council, and a communication embodying this decision has been sent to the heads of the various universities and schools.

Architectural Scholarship, Rome.—A Committee of the Board, appointed at the request of the Council, has drawn up a scheme for the award and tenure of a Scholarship in Architecture instituted by the Royal Commissioners of the 1851 Exhibition, and the scheme has been approved by the Commissioners.

Prizes and Studentships.—The Board appointed Committees—comprising several members of the Institute outside the Board itself—to judge the various designs and drawings submitted for the Institute and other prizes, and reported thereon to the Council. The pamphlet of the prizes and studentships for the ensuing year, prepared by the Board, has been approved by the Council. The Board desire to draw special attention to the valuable new studentship which the "Jarvis Bequest" has enabled the Institute to found. A scheme for this studentship has been drawn up by a Sub-Committee and has been approved by the Board and forwarded to the Council.

Report of the Art Standing Committee.

In the course of their report the Art Standing Committee state that reference was made in the previous report to the Sir R. Geffrey Almshouses at Shoreditch, St. Paul's Bridge, and minor improvements in London.

It is satisfactory to record the successful issue of the Committee's efforts on behalf of the almshouses. The recommendations of the Council on the subject of the new St. Paul's Bridge were adopted by the City Corporation and expert advice was taken on the whole matter.

The subject of the uniform treatment of street name-plates in London has been further dealt with, and the Council of the Royal Institute have obtained an expression of opinion on the matter from Borough and City Councils in London. These opinions, although not unanimously in favour of a uniform treatment, were generally sympathetic. Representatives of all the civic authorities of London have been invited to a Conference to be held on the Institute premises to discuss the matter.

The Committee's inquiries were directed towards the matter of the "English" bridge at Shrewsbury. The Corporation of that town have decided to widen the bridge and not to replace it with a new structure. The threatened demolition of an extremely interesting half-timber house in the same town is now engaging the attention of the Committee.

The Committee have been engaged upon the consideration of the injurious effect of public hoardings upon English landscapes. At the suggestion of the Committee the Council expressed its approval of the efforts made in this direction by the New Malden, Surrey, District Council.

The Society for Checking the Abuses of Public Advertising invited the Royal Institute to criticise and make suggestions upon the Bill, which it is about to promote in Parliament, to extend the existing Advertisements Regulation Act. The Art Committee recommended the Council to lend the weight of their general support to the measure.

The King Charles I. equestrian statue at Charing Cross has for some time engaged the attention of the Committee, who are formulating proposals for the erection of a plaster cast in South Kensington Museum.

The sale of Tattershall Castle and the subsequent removal of the stone mantelpieces once again emphasised the necessity for adequate legislation for preventing such regrettable occurrences. The Committee urged the Council of the Royal Institute to invite the co-operation of other learned societies, with a view to formulating legal procedure to prevent the defacement of historic buildings or monuments. The National Trust for Places of Natural Beauty, desiring to take similar action, invited various societies to discuss the question. A Conference was held, which the President of the Royal Institute and a representative of the Art Committee attended. A draft measure extending the powers conferred by the existing Ancient Monuments Act was prepared and is about to be presented to Parliament.

The Literature Standing Committee.

At the request of the Council the Committee have appointed a Sub-Committee to be called the "*Journal* and *Kalendar* Committee," to assist and advise the Secretary and Editor in all matters connected with these two publications, and to make recommendations to the Council from time to time with regard to them. A further Sub-Committee has also been appointed to consider the question of the valuation of the contents of the library for fire insurance. This matter is at present under consideration, as well as a scheme for providing more adequate safeguards for the protection of the library against fire.

The Practice Standing Committee.

Since the date of the last annual report, but prior to the end of last session, the Sub-Committee which has been engaged on the question of revising the schedule of charges, and had very carefully dealt with the suggestions made in reply to the circular sent out by the Council to all members of the Institute presented their report. The proposed new schedule drawn up by them, after being carefully considered by the Committee, was forwarded to the Council with an urgent recommendation for its adoption at as early a date as possible. During the current session the members of the Sub-Committee have been invited to meet the Committee of the Council appointed to consider and report upon the matter, and the proposed new schedule is now receiving the consideration of the Council. The importance of removing some of the admitted deficiencies of the existing schedule is emphasised by the fact that, of the large number of difficulties arising in practice which have been brought before the Committee, at least one-third have dealt with questions of professional charges.

By the courtesy of members of the American Institute of Architects, the Committee have been favoured with copies of the standard documents relating to contracts, etc., which have recently been issued by that Institute, and these are being carefully considered by the Sub-Committee.

It having been brought to the knowledge of the Committee that the London Master Builders' Association is endeavouring to draw up a form of agreement between contractors and sub-contractors, a special meeting of the Committee was held at which a deputation from the Association was invited to be present. The Chairman, Secretary, and several members of the Council of that body accordingly attended. They explained the difficulties at present existing in regard to the subject and the direction in which they were trying to overcome them. A general discussion followed in which a useful interchange of views took place.

The Science Standing Committee.

Skeleton-Frame Buildings.—In the last annual report of the Science Standing Committee reference was made to the draft of a uniform scheme for preparing the necessary particulars and calculations to be submitted to District Surveyors under the provisions of the various London Building Acts, 1894–1909. During the year that has passed this scheme has been fully considered, and the Committee have now finally approved the suggestions of the District Surveyors' Association governing the deposit of drawings and calculations with District Surveyors in connexion with skeleton-frame buildings. These suggested regulations have been published by the District Surveyors' Association in folio, giving in a cheap and handy form the requirements of the latest Act, explanatory particulars of the formulæ and symbols to be employed, working stresses, weights of materials, load tables for standard sections of beams and stanchions, and diagram sheets on which may be set out the calculations in detail for easy reference. Members of the Institute will appreciate the utility of this compact publication, copies of which may be obtained from the District Surveyors' Association or their printers.

Research on Building Materials.—The approval given by the Council at the close of last session to the effort of the Committee to promote research on materials in matters affecting the profession has led to correspondence with the Imperial Technical College and interviews with the Rector and Professors. At an early stage in the negotiations it was found hopeless to expect State aid to further the object of the Committee, but it has been definitely ascertained that facilities would be afforded by the Imperial Technical College, as the leading technical institution, if some scheme of study and research could be agreed upon. The draft of a scheme prepared by the College has recently come before the Committee and is now under their consideration, but this having been put forward by the College as suggestive only and intended to form the basis of further discussion, it may be some time before the Committee will be able to report finally upon a satisfactory conclusion of its labours with regard to research.

Mortar Tests.—The volume mentioned in last year's statement of this Committee, containing the report and data of the series of tests, which extended over two years, has now been published under the auspices of the Science Standing Committee, with the generous support of the Council. This report should be in the hands of all members, as it forms a publication which will be found extremely useful to the profession at large, and contains much valuable matter and numerous diagrams. Being the latest of the Royal Institute of British Architects' series of publications, it is therefore obtainable by members from the Institute. The Committee wish to place on record their appreciation of the assistance given by the Council to their experiments and in the publication of the report referred to.

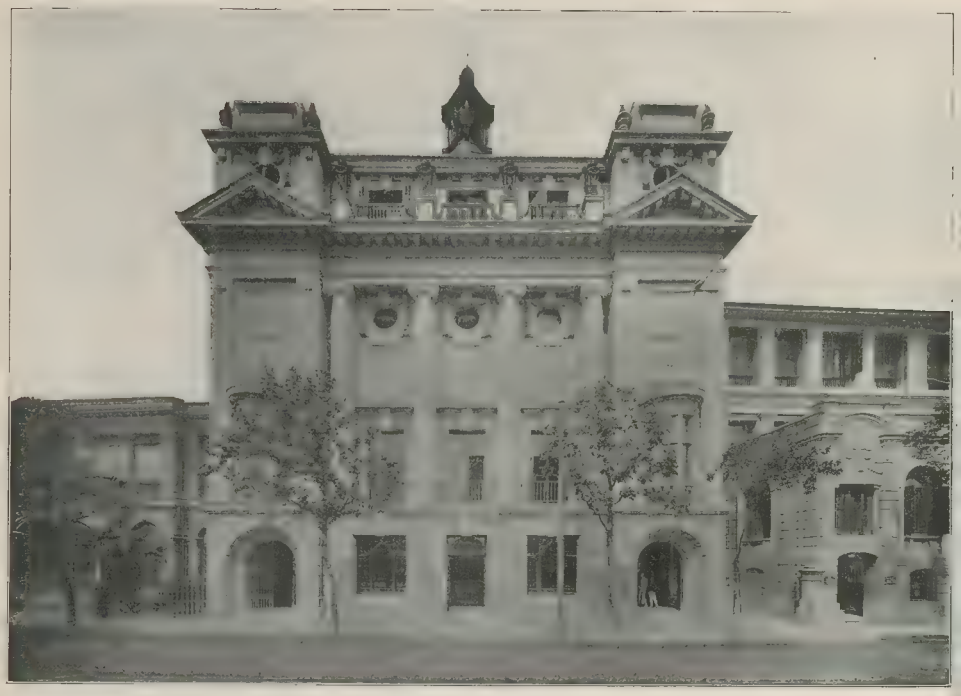
Monograph on Paints. The issue of the monograph, "Notes on the Properties and Ingredients of Commercial Paints," compiled by the Science Standing Committee, has been amply justified by the large sale of copies. Again the Committee have to thank the Council for their valuable aid in putting before the profession much important matter in a concise and handy form, and the interest shown in the issue of this pamphlet by manufacturers and the trade generally is an indication of the importance of the subject and the utility of its consideration when the Council first seeks the advice of experts and then generously gives its assistance in a material form by putting before the profession the benefit of such expert opinion.

The Use of English Timber.—A movement initiated by the English Forestry Association to promote the use of home-grown timber, and foster the industries connected with it, led to a Conference on February 20 last between the representatives of that body and four delegates appointed by the Royal Institute of British Architects' Council viz., Messrs. Max Clarke, Ernest Flint, Alan E. Munby and Wonnacott. One meeting only having been held, the Committee will, after further discussion, be able to report the result of these deliberations to the Council.

Incorporated Joint Committee on Water Regulations.—A reference from the Council to the Committee has resulted, after inquiry and correspondence, in the Institute ceasing to be represented on this body.

Among minor matters dealt with in the course of the session, on which advice has been sought or which are still under investigation, may be mentioned:—

(*a*) *Defects in Roofing Tiles*, particularly



Masonic Hall, Shanghai.

Messrs. Christie & Johnson, Architects.

machine-made varieties. Specimens, with information bearing on them, are being collected from various quarters. The Committee gratefully record the offer of assistance from Mr. H. Greville Montgomery, M.P., who has promised a collection of defective tiles and to assist with information in every way possible.

(*b*) *Valve Closets.*—As some public authorities have recently taken up the attitude of condemning this pattern of fitting as out of date, the Committee have been unable to support this view, as the alleged defects arise from removable causes and not from the design of the apparatus.

(*c*) *Preservation of Decayed Stonework.*

(*d*) *Corrosion of Pipes and Tanks* by moorland waters, on which the Committee hope shortly to issue a brief statement.

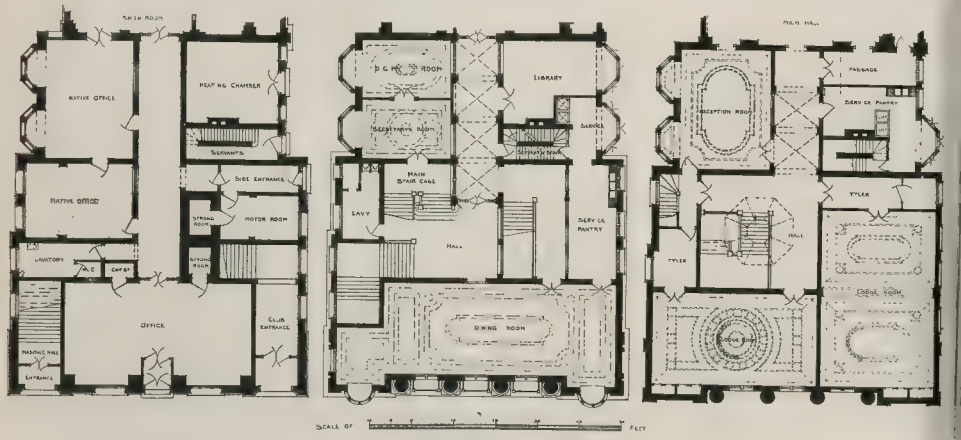
(*e*) *South African Marbles and Building Stones*, and

(*f*) *Decay of Lead Dressings on Roofs.*

MASONIC HALL, SHANGHAI.

THIS Masonic Hall has been completed by Messrs Christie & Johnson at the port of Shanghai. The work was carried out in two portions, the first or back portion being finished about two years ago, and that which is illustrated, and which completes the scheme of reconstruction, was opened about a year ago.

The building is faced with artificial stone blocks backed with local bricks, whilst the woodwork generally is of Singapore hardwood. The main staircase is of teak wood, as is also the panelling of the two lodge-rooms. The building throughout is heated by radiators on the low-pressure hot-water system, the foul air being carried away by means of extract fans. Fresh air is introduced into the lodge rooms by special ventilating shafts.



Ground Floor. **First Floor.** **Second Floor.**

Masonic Hall, Shanghai.

Messrs. Christie & Johnson, Architects.

ARCHITECTURAL SOCIETIES.

The Architectural Association.

The Architectural Association spent a very ɔeasant evening last Friday. At 7.30 the resident, Mr. Gerald Horsley, opened an xhibition of loan drawings and photographs of ɔntemporary work—to which we refer in ır leading article—and at 8.30 presided over most enjoyabe and successful smoking ɔncert arranged by the members.

The designs illustrated included details of . Paul's Girls' School, by the President; the ritish Museum extensions, by Mr. J. J. Burnet, ustrated by perspective views, ¼-in. tails, and photograph of a model; the rand Trunk Railway, the Royal College of ience, and other works by Sir Aston Webb; e London, Edinburgh, and Glasgow Insurance ices in Euston-square, by Professor Pite; iginal drawings, details, and photographs, Mr. Ernest Newton; photographs of houses, Mr. T. E. Collcutt; photographs and details houses, by Mr. Lutyens, Mr. Guy Dawber, ofessor Blomfield, Mr. Bolton, and others. ntributions also came from Mr. Charles ooner, Mr. Voysey, Messrs. Ashley & Winton ewman, Mr. Wontner Smith and Mr. Carõe; o from Messrs. H. T. Hare, Curtis Green, offry Lucas, C. G. Scott, Walter Tapper, rwick & Hall, Ralph Knott, Ernest George & ates, W. A. Pite, Walter Cave, Forsyth & ule, H. M. Fletcher, Robert Atkinson, Theore Fyfe, and Stanley Hamp. Mr. Greenslade it his ½-in. details for the Aberystwyth rary, and Mr. Herbert Baker the Union ildings at Pretoria.

The Exhibition, which is well worth a visit, is n to May 11.

The A.A. Athletic Club.

The Council of the Architectural Association given the General Committee of the Athletic b power to elect any member of the kindred fessions, *i.e.*, Architecture, Painting, Sculpe, and Surveying, as a member of the Club. Club was founded in 1906, and owing to rowing popularity it was decided to purchase a ground of 6½ acres at Boreham Wood, which is situated near the station and about half an hour from town. The whole of this land has now been drained and levelled, and Rugby football, hockey, and cricket pitches arranged. A pavilion has been erected with accommodation for changing, washing, and light refreshment. The ground was formally opened last summer by Lady and Sir Aston Webb. It has cost nearly 2,500*l.* Members wishing to join the Club should apply to Mr. John H. Squire, Hon. Secretary, care of the Architectural Association.

Sheffield Society of Architects.

At the annual meeting of the Sheffield Society of Architects and Surveyors, held at the University, Mr. J. B. Mitchell-Withers presiding, the Hon. Secretary, Mr. James R. Wigfull, presented the twenty-fifth annual Report. Referring to Sheffield's new building by-laws, Mr. Wigfull said there was a want of elasticity in their provisions, while too great a desire to conserve the old methods of building was evinced, and too little encouragement given to more modern methods and materials.

Referring to the competition for plans for the Sheffield King Edward Memorial Cripples' Home, he said that the conditions for the competition had been issued, and the Council hoped that the response would be such that the local authorities would be encouraged to follow this example and again place some of the plans for the public buildings of the city in the hands of architects in private practice. Such a course would promote a spirit of healthy rivalry, from which the city would derive benefit.

The Council had had under consideration, continued Mr. Wigfull, various proposals with regard to the width of roads, especially with a view to their modification in circumstances where they are not main thoroughfares and where only a few houses are served by them. A suggestion by Mr. Sandford that on hilly sites, where terrace roads are formed, these should be of half the usual width and have houses on one side only, met with general approval; but it was felt that this proposal dealt only with part of the problem so far as Sheffield was concerned, and that in such circumstances as those indicated above a general reduction in the width of road was desirable.

The report was adopted on the motion of Mr. Potts, seconded by Mr. Frank Winder.

It was reported that the past year had seen the credit balance of 60*l.* reduced to 38*l.*, and in accounting for this Mr. Wigfull said it was not so bad as it appeared to be, as the Society had paid during the year two contributions of 25*l.* (for two years) to the Sheffield University.

The election of officers for the ensuing year resulted as follows:—President, Mr. J. B. Mitchell-Withers (re-elected); Vice-President, Mr. A. F. Watson (re-elected); Hon. Treasurer, Mr. R. W. Fowler; Hon. Secretary, Mr. J. R. Wigfull (re-elected); Council, Messrs. W. G. Buck, F. E. P. Edwards, C. B. Flockton, J. R. Hall, C. F. Innocent, H. L. Paterson, H. I. Potter, E. Winder, and F. H. Wrench.

A selection from the prize drawings of the Royal Institute of British Architects, 1912, was on exhibition.

Guild of Architects' Assistants.

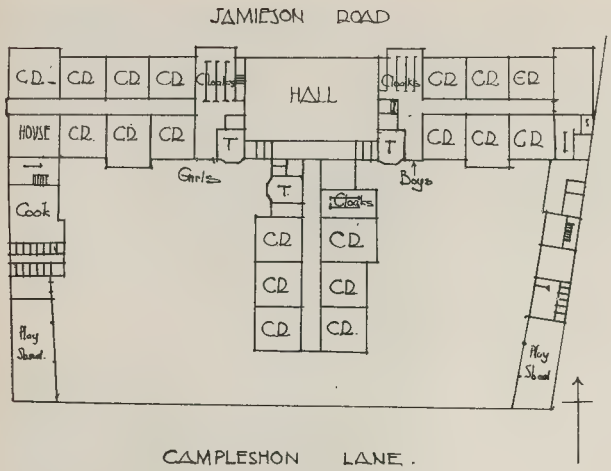
The annual general meeting of the Guild of Architects' Assistants was held at Prince Henry's Room, 17, Fleet-street, E.C., on May 1, the President of the Guild, Mr. A. W. S. Cross, M.A., F.R.I.B.A., presided. The following resolution was proposed by Mr. S. Douglas Topley, A.R.I.B.A., seconded by Mr. J. V. Hibbert, F.S.I., and carried unanimously: "The Guild of Architects' Assistants declares itself in opposition to the published proposals for the Registration of Architects, and calls upon its members and friends in the promoting societies to oppose any measure lacking complete provision for the interests of the pupil and the assistant." Copies of this resolution have been sent to the Royal Institute of British Architects and the Society of Architects.

Royal Institute of the Architects of Ireland.

A meeting of the Council of this body was held on May 6 at the Institute Rooms, No. 31, South Frederick-street, Dublin. The President, Mr. A. E. Murray, R.H.A., F.R.I.B.A., was in the chair. There were also present Messrs. W. Kaye-Parry, R. Caulfeild Orpen,



Masonic Hall, Shanghai: North Lodge Room.
Messrs. Christie & Johnson Architects.



York Elementary School: First Premiated Design.

By Mr. J. T. Proffitt, M.Inst.C.E.

L. O'Callaghan, F. Hayes, C. H. Ashworth, A. G. C. Millar, H. Allberry, J. H. Webb, F. Hicks, G. P. Sheridan, Professor Scott, and C. A. Owen, Hon. Secretary.

The minutes of the previous meeting were read and signed. The correspondence, including several letters from the Royal Institute of British Architects, the Labour Exchange, the National University, the Local Government Board, etc., was dealt with.

It was decided to subscribe towards a portrait of the President of the Royal Institute of British Architects. A notice of motion in connexion with the examination scheme was handed in.

NEW ELEMENTARY SCHOOL, YORK.

AN open competition has recently been held for a new elementary school at York. Messrs. T. Mellard Reade & Son were appointed assessors, and their award, as has been previously announced, was as follows:—(1) Mr. J. T. Proffitt, Walkden, near Manchester; (2) Mr. E. R. Barrow, Strand, W.C.; (3) Mr. J. A. O. Allan, Aberdeen.

No less than 203 designs were submitted We would compliment the promoters of the competition upon the fact that they have endeavoured, as much as possible, to reduce the amount of labour imposed upon competitors. The plans were to be drawn to 1-16-in. scale, and neither details nor perspective were required, and we hope this will be a precedent for future competitions of this nature.

But we are bound to deplore again, in this as in many other cases, the enormous amount of energy expended by the profession for so little reward.

In this competition over two hundred architects are engaged upon a problem which is all the more difficult and uncertain because of the vagueness of the Board of Education requirements at this juncture. Just at a time when some interesting, and perhaps novel, development in school planning is to be expected, we see a large section of the profession, including many well-known experts, concentrated upon the problem as presented in this instance; and the reward for this is nothing more than the chance of securing a commission on work which will be carried out—a commission which, be it noted, will afterwards have to be earned in the ordinary course by the fortunate winner. We cannot blame the promoters, except that it is not to their credit that in this, of all competitions, no premium is awarded.

The profession may, however, congratulate itself on the exhilarating exercise in school planning which has fallen to its lot.

Accommodation was asked for 250 boys, 300 girls, 250 infants, with a limit of cost of 10,000*l*. The site is in Campleshon-lane, about a mile from the centre of the town. It is bounded on three sides by streets not yet formed, and one cannot but regret the manner in which the development of this part of York is taking place. In a few years it will have the appearance of the slum of a manufacturing town, little worthy of a city of the architectural dignity of York.

In view of the large number of schemes submitted, it is natural that many excellent solutions of the problem were found. In the uncertainty of the regulations of the Board of Education, the disposition of the hall is at present the main consideration of the plan, and this point was left entirely to the discretion of the competitors. The evolution of the hall of the elementary school will form nearly as interesting a study as that of the hall of the manor house has been in the past.

There is great similarity in plan between the first and second premiated designs. Both have adopted a T-shaped plan, with the hall at the intersection to serve the three departments. The playground is thus open to the south, and, being divided into two, the girls and infants will play together, which is no doubt the best arrangement.

The drawback of this plan is that t cloakrooms are in the centre of the bloc and their cross-ventilation and disconnexi cannot be obtained so effectively as wh they are at the end of the building. T classrooms accommodate forty children, wi two for fifty children, a great improveme on many recent schools, where the majori of the classrooms are for fifty or more. T arrangements of the winner are general quite satisfactory, but the steps leading the hall on the boys' side are at an awkwa place, though they are no doubt unavoidab from the sloping nature of the site.

The second premiated design is inferi to the first in one or two respects. The pla grounds are too irregular, and the infan entrance, at a distance from the cloakroo is hardly satisfactory, while the author h shown ingenuity in preventing the teache from overlooking the playgrounds.

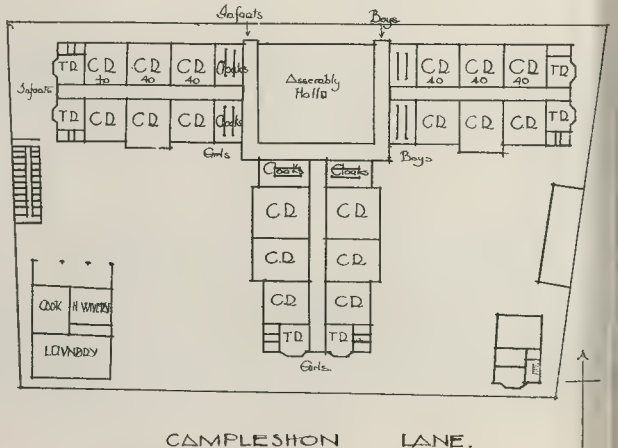
We welcome the third premiated design a clever attempt on more or less origin lines. South light has been provided every classroom, the hall is thoroughly w lighted and cross-ventilated, and each cor dor has windows on one side. The obvio drawbacks are the irregularity of the pla grounds and the cubical contents—we dou if it is at all possible to build an elementa school at 5d. per foot. On the whole, doubt the winner will provide a school whi will prove serviceable and convenient, b the elevations are feeble and uninteresti and we are sorry that some more come design could not have been chosen to carried out within a mile of York Cathedr

ENGINEERING SOCIETIES.

The Concrete Institute.

A meeting of the Concrete Institute to place at Denison House, 296, Vauxhall Brid road, Westminster, S.W., on April 25, Profes Henry Adams, M.Inst.C.E., in the chair.

A discussion took place on two Repo presented by the Tests Standing Committee the Concrete Institute, entitled (*a*) "The Testi of Concrete, Reinforced Concrete, and Materi Employed Therein"; (*b*) "The Testing Reinforced Concrete Structures on Completion The following took part in the discussion: Mr. M. E. Yeatman, M.A., M.Inst.C. M.Am.Soc.C.E., M.C.I., Mr. William G. Kir aldy, Assoc.M.Inst.C.E., M.C.I. (Chairman the Tests Standing Committee), Mr. D. Butler, Assoc.M.Inst.C.E., F.C.S., M.C.I., M A. O. Trechman, F.C.S., M.C.I., Mr. R. Sinclair, M.C.I., Mr. Percival M. Fras A.R.I.B.A., M.C.I., Mr. J. B. Travers Sol Assoc.M.Inst.C.E., M.C.I., Mr. Arthur Willia Bungard, Lic.R.I.B.A., M.C.I., Mr. George Roberts, M.C.I., Professor Henry Adam



York Elementary School: Second Premiated Design.

By Mr. E. R. Barrow, F.R.I.B.A.

M.Inst.C.E., etc. (Member of Council of the Concrete Institute), and Mr. Alban H. Scott (Secretary of the Tests Standing Committee).

Institution of Civil Engineers.

At the annual general meeting of the Institution of Civil Engineers, held on Tuesday evening, April 30, the result of the ballot for the election of officers was declared as follows :—President—Mr. Robert Elliott-Cooper (London); Vice-Presidents—Mr. Anthony George Lyster, M.Eng. (Liverpool), Mr. Benjamin Hall Blyth, M.A. (Edinburgh), Mr. John Strain (Glasgow), Mr. George Robert Jebb (Birmingham); other members of Council—Mr. John A. F. Aspinall, M.Eng. (Liverpool), Mr. John A. Brodie, M.Eng. (Liverpool), Mr. William B. Bryan (London), Colonel R. E. B. Crompton, C.B. (London), Mr. J. M. Dobson (London), Sir Frederick H. Donaldson, K.C.B. (London), Mr. E. B. Ellington (London), Mr. W. H. Ellis (Sheffield), Mr. W. Ferguson, M.A., B.A.I. (Australasia), Sir Maurice Fitzmaurice, C.M.G. (London), Sir John Purser Griffith (Ireland), Mr. C. A. Harrison, D.Sc. (Newcastle-on-Tyne), Mr. Walter Hunter (London), Mr. Harry E. Jones (London), Mr. E. H. Keating (Canada), Sir Thomas Matthews (London), Mr. W. H. Maw, LL.D. (London), Mr. C. L. Morgan (London), Mr. Basil Mott (London), Hon. Sir Charles Parsons, K.C.B. (Wylam-on-Tyne), Mr. F. E. Robertson, C.I.E. (London), Mr. Alexander Ross (London), Hon. Sir Francis, J. E. Spring, K.C.I.E. (India), Mr. A. M. Tippett (S. Africa), Sir Philip Watts, K.C.B. (London), Mr. W. B. Worthington (Derby). This Council will take office on the first Tuesday in November, 1912.

The Council have made the following awards for papers read during the Session 1911-12 :—Telford Gold Medals to Messrs. Ernest and Walter Mansergh (London); a George Stephenson Gold Medal to Mr. Roger T. Smith (London); a Watt Gold Medal to Mr. A. H. Roberts (Leith); Telford Premiums to Messrs. John Goodman (Leeds), A. B. McDonald (Glasgow), G. Midgley Taylor (London), D. C. Leitch (London), W. C. Easton (Glasgow), and D. H. Morton (Glasgow); and the Manby Premium to Mr. S. H. Ellis (Liverpool).

The award for papers published in the *Proceedings* without discussion and for students' papers will be announced later.

GENERAL NEWS.

Fleet-street Alterations.

The widening of the south side of Fleet-street will be advanced shortly by the demolition at Serjeants' Inn of the Norwich Union building. Enlarged offices for the company will be built on about the same site from designs by Messrs. Howell & Brooks, 4, Queen Victoria-street, E.C.

Houses of Historical Interest in London.

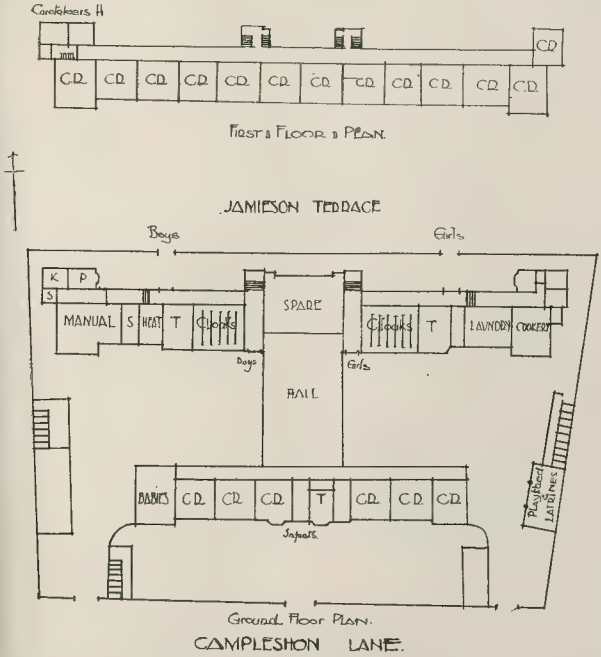
Commemorative tablets have been affixed to No. 32, Craven-street, Strand, where Heinrich Heine lived in 1827; No. 12, Seymour-street, Portman-square, a home of Balfe in 1861-4; and No. 28, Finchley-road, St. John's Wood, the home of Thomas Hood from 1843 until his death in 1845. It is stated that the Duke of Westminster has undertaken to affix a tablet to No. 10, South-street, Mayfair, which was the residence of Miss Florence Nightingale during the last thirty-five years of her life.

Metropolitan Public Gardens Association.

At their last quarterly meeting, held under the presidency of Sir William Vincent, Vice-Chairman, it was announced that the laying-out of St. Mary's churchyard, Bow-road, the hospital garden, Putney, and Southwark Cathedral yard was completed, and that the disused burial-ground in Philpot-street, Stepney, would be dealt with as soon as an arrangement is made for its maintenance; this last-named ground appertained to the Wycliffe Congregational Chapel, lying behind St. Andrew's (Scottish) Church. The Association agreed to grant 100*l.* towards the acquisition and vesting in the National Trust of a tract of 1¼ mile, with meadow and woodland, for a recreation ground by the side of the Wandle, near Wimbledon; a sum of 3,000*l.* is needed in respect of the proposed playground in Kensal New Town.

Housing Exhibition in Paris.

An "Exposition Internationale des Arts de Travail" will be held in the Grand Palais des Champs Elysées, Paris, from July to October. British exhibits will be welcome. The office of the Exhibition is 72, Rue Saint-Lazare, Paris.



York Elementary School: Third Premiated Design.

By Mr. J. A. O. Allan.

Panama Exhibition, 1915, San Francisco.

Mr. John Hays Hammond, President of the Commission, and his colleagues have arrived in London. The Commissioners are appointed by the President of the United States to support his request to European Governments to participate in the Exhibition at San Francisco to celebrate the formal opening of the Panama Canal on January 1, 1915, by the President of the United States. The exhibition will be held in that year upon a site having a frontage of 2 miles to Francisco Bay. A sum of ten millions will be expended upon the grounds and buildings, and a congress hall will be erected in San Francisco at a cost of 200,000*l.*

Memorial to the Pilgrim Fathers.

Mr. R. M. Lucas has prepared the designs of a monument which it is proposed to erect in Southampton upon, or close to, the spot of embarkation in the *Mayflower* in 1620. Panels for the composition will be contributed by various American patriotic societies.

The Flodden Wall, Edinburgh.

It is understood that the contemplated enlargement of the Royal Scottish Museum buildings will cover the site of the portion of the Flodden Wall at the rear which was exposed to view recently. It is proposed that a part of the structure shall be retained *in situ* and in such a manner that it shall constitute an exhibit in the Museum.

Exhibition at Hammersmith.

In connexion with the Hampshire House Club for Working Men, in Hampshire Hog-lane, Hammersmith, a free picture exhibition will be opened until June 2. Works by the following living artists are shown among others :—Mr. Muirhead Bone, Mr. Brangwyn, Mr. Cadogan Cowper, Mr. Cameron, Mr. Clausen, Mr. Connard, Mr. Crane, Sir Charles Holroyd, Mr. John, Sir W. B. Richmond, Mr. Charles Shannon, Sir Frank Short, Mr. Strang, Mr. Havard Thomas.

Lectures on Concrete Engineering.

The periodic lectures on practical and theoretical concrete engineering have been resumed at the Cambridge University Engineering Laboratories, the lecturer being Mr. A. C. Davis, of the Saxon Cement Company, Cambridge.

Architectural Draughtsmen and the Board of Works.

Mr. P. Snowden had three questions on the paper on Monday night to ask Mr. Benn, as representing the First Commissioner of Works, with regard to the architectural staff of the Board of Works. The first was whether the proposed staff of permanent Architectural Draughtsmen and Technical Assistants is intended to include all the men in the present staff classed and certificated as Architectural Assistants; and whether he will see that the misnomer Draughtsmen formerly applied to these professional men but remedied, at the request of the class, to Architectural Assistants in 1907 shall not be again reverted to.

Mr. Benn said the answer to the first part of the question was in the negative. Only those gentlemen who were eligible under the new scheme are intended to be included in the proposed new class. If there is a general desire the name of the proposed establishment can be altered. The scheme which is under consideration lays down certain conditions, and if these conditions are satisfied they will be asked if they desire that be included in the new scheme.

Mr. Snowden next asked whether, in view of the undertaking made by his predecessor in this House on December 7 last that the desires of all of the class termed Architectural Assistants engaged in the Office of Works shall be ascertained if they desire to be placed upon the established list, he is aware that no such inquiry has been made; and whether he can now state how soon this undertaking will be carried into effect.

Mr. Benn replied that so soon as the scheme now before the Treasury has been approved the desires of all those gentlemen who are eligible for appointment to established rank as Architectural or Technical Assistants, as the case may be, will be ascertained.

Mr. Snowden further asked whether he is aware that his proposal would lower the status of those professional men engaged for years in his department and termed and certificated as Architectural Assistants by their inclusion

in the proposed staff of Architectural Draughtsmen and Technical Assistants; and whether he is aware that the professional ability and duties performed by this class are at the least equivalent to the class termed Assistant Architects, and therefore will he consider the justice of awarding in return equivalent conditions of service to all the class in question to that now granted to the Assistant Architects' class.

Mr. Benn said the First Commissioner is not of opinion that his proposal will involve any lowering of the status of those gentlemen, but if they object to the designation of Architectural Draughtsmen he is quite ready to style them Architectural Assistants. Mr. Snowden was mistaken in supposing that the professional abilities and duties of these two classes are the same.

Office of Works and Public Buildings.

The following is a summary of the salaries and other payments provided for in the Civil Service estimates for the year ending March 31, 1913, in respect of the Architects and Surveyors' Division of his Majesty's Office of Works and Public Buildings:—Principal Architect and Surveyor, England, 1,200*l.*; ditto, Scotland, 1,000*l.*; eleven architects and surveyors (minimum 550*l.*, maximum 750*l.*, except in three cases in which the maximum is 900*l.*), 7,550*l.*; twenty assistant architects and surveyors, first class (minimum 350*l.*, maximum 450*l.*), 8,100*l.*; twenty-eight assistant architects and surveyors, second class (minimum 200*l.*, maximum 300*l.*), 7,139*l.*; one sanitary assistant, first class (minimum 350*l.*, maximum 450*l.*), 425*l.*; two sanitary assistants, second class (minimum 200*l.*, maximum 300*l.*), 500*l.*; one clerk, first class (old establishment), 400*l.*; three staff clerks (minimum 300*l.*, maximum 400*l.*), 945*l.*; nine clerks, second division (minimum 70*l.*, maxima 130*l.* and 300*l.*), 1,135*l.*; nineteen assistant clerks (minima 45*l.* and 55*l.*, maxima 85*l.* and 150*l.*), 1,279*l.*; three female typists, 186*l.*; one draughtsman (minimum 210*l.*, maximum 280*l.*), 270*l.*; draughtsmen and technical assistants for additional services that may be required (no fresh appointments to the post of permanent draughtsmen being at present made), 25,750*l.*; one shorthand writer, 87*l.*; eight clerks of works, first class (minimum 250*l.*, maximum 300*l.*), 2,662*l.* (seven of these officers receive as house allowance one-sixth of salary, and one has an official residence); one clerk of works, first class, temporary, 326*l.*; nineteen clerks of works, second class (minimum 150*l.*, maximum 220*l.*), 4,210*l.*; two clerks of works, temporary (for Ancient Monuments and Historic Buildings), at 4*l.* 4*s.* per week, 436*l.*; temporary assistance at office in China, 1,400*l.*; professional charges and expenses, 1,200*l.*; tracing drawings, 700*l.* The Principal Architect, in addition to his salary of 1,200*l.*, receives an annual payment of 400*l.* for his services as architect in connexion with the erection of the new public offices at Westminster.

Parliament and the Town Planning Act.

In the House of Commons on May 1 Sir A. Griffith-Boscawen asked the President of the Local Government Board what steps had been taken under Part II. of the Housing and Town Planning Act, 1909, by any of the local authorities of London and of what is termed Greater London; and whether, in view of the tendency of the population to move outwards and the desirability of encouraging this tendency, and in view also of the great multiplicity of authorities in Greater London, he will consider the possibility of forming a Housing and Town Planning Board to embrace the County of London and the districts outside with a view to attaining uniformity and consistency in the planning of these new districts? Mr. Burns, in a written reply, pointed out that the London County Council was the only local authority in the Administrative County of London under Part II. of the Housing and Town Planning Act, 1909, but he was not aware that any steps had been taken by the Council with a view to the preparation of any town planning scheme. As regards districts in the immediate vicinity of London, Ruislip-Northwood and Hanwell have received authority to prepare schemes, Walthamstow had made application for such authority, and Enfield, Southgate, Finchley, East Barnet, Hendon, Willesden, Wembley, Bushey, Greenford, Hayes, Southall, Norwood Acton, Twickenham, Barnes, Richmond, Ham, Esher, and the Dittons, Surbiton, Malden and Coombe, Merton, Epsom, Epsom Rural, Sutton, Carshalton, Croydon, Croydon Rural, and Beckenham have all taken steps in the matter, and many of these authorities have been in consultation and co-operation with one another. On the information before him he should not be disposed to regard the formation of a Housing and Town Planning Board for Greater London as desirable, but he should agree that in certain matters there should be consultation and co-operation between the local authorities, and he would expect the London County Council to take a leading part in securing it.

Ravenhead Scholarship.

In acknowledgment of a suggestion by Professor Reilly, whereby improvements were effected in the stock bricks of the Ravenhead Brick Company, the company have offered an open entrance scholarship of 30*l.* a year for two years to the School of Architecture. The scholarship is open to any architectural student between the ages of eighteen and twenty-three years on June 1. Candidates will be required on or before June 1 to submit to the Professor of Architecture not more than six sheets of drawings and designs, attested as their own work, together with evidence of having studied the elements of building construction. The drawings must be accompanied by a written statement giving details of general and professional education. Selected candidates shall go to Liverpool if thought necessary by the examiners and submit themselves to a short examination, oral or otherwise. The examiners shall be the Professor of Architecture and the two lecturers in the school. The successful candidate shall take the Certificate Course in Architecture (which exempts students from the Intermediate Examination, R.I.B.A.), and enter upon it in the following October term. The scholarship may be withheld by the University in the second year on the report of the Professor of Architecture as to the work done by the scholar during the first year.

Diplomatic and Consular Buildings.

The estimate of the amount required to be voted by the House of Commons for the maintenance and repair of diplomatic and consular buildings, and the maintenance of certain cemeteries abroad, during the year ending March 13, 1913, is 37,712*l.* During the same period it is proposed to spend 41,090*l.* on new works, alterations, additions, and purchases, the chief items under this head being as follows: Provision of reception-room in Agency House at Cairo, 6,000*l.*; adaptation of Legation House at Cettingé, 3,250*l.*; rebuilding of Embassy House at Therapia, Constantinople (destroyed by fire last year), 5,000*l.* on account (ultimate estimated cost, 20,200*l.*); erection of new Legation House at Sofia, 10,000*l.* on account (ultimate estimated cost, 22,600*l.*); for completion of new consulate at Changsha, China, 300*l.* (amount already expended, 5,500*l.*); on account of new consulate at Dairen, 2,000*l.* (total estimated cost, 7,500*l.*); on account of rebuilding of consulate at Hakodate, 2,000*l.* (ultimate estimated cost, 4,000*l.*); additions to Supreme Court and consular offices at Shanghai, 3,000*l.* on account (ultimate estimated cost, 4,000*l.*); extension of servants' quarters at Ambassador's House, Tokio, 1,100*l.* Subjoined is a list of the buildings and cemeteries maintained out of the principal vote of 37,712*l.*: Embassy Houses at Berlin, Constantinople, Madrid, Paris, Rome (including summer residence at Posilipo), St. Petersburg, Tokio, Vienna, and Washington. Legation and consular buildings in China, Japan and Corea, Abyssinia, Egypt, Morocco, Persia, Siam, and Zanzibar. Legation Houses at Athens, Brussels, Bucharest, Christiania, Copenhagen, Lisbon, Mexico, Rio de Janeiro, Petropolis, Stockholm, and The Hague. Consular House at Dakar, Leopoldville, Lourenço Marques, Mozambique, Mourovia, Noumea, Samoa, Stanleyville, Tahite; and elsewhere. Cemeteries at Athens, Bayonne, on the Bosphorous; in China, Japan, Corea, and Siam; in the Ionian Islands (Corfu, Cephalonia, Zante, Ithaca, Cerigo, Paxo, and Santa Maria); Cathcart's Hill, Crimea; Gallipoli, the Pirœus, and at Suakin.

COMPETITION NEWS.

New Town Hall for Newcastle.

At the meeting of the Newcastle Town Council a report from the New Town Hall Committee was considered, in which the opinion was expressed that the most suitable site for the purpose of the new City Hall would be that now occupied by the Northumberland Baths. On this site, the Committee state, one large hall, to seat 3,500, and also a smaller hall to seat 800, could be provided, and sketch plans prepared by the property surveyor showed the provision also of suitable reception-rooms. The estimated cost of the scheme, including furnishings, contingences, etc., and site, is put at 100,000*l.* If the Council approved of this scheme, the Committee further recommended that they be authorised to advertise for competitive designs for a new City Hall, and to offer, therefore, the following premiums for the three best:—First, 500*l.* (to be merged into commission in the event of the recipient obtaining the work); second, 250*l.*; third, 125*l.* Sir Henry Newton, in moving the adoption of the Committee's report, stated that the town of Newcastle was the Northern Metropolis, and that it was not creditable that they should be without a gathering ground for great occasions. Mr. A. J. Robinson, in seconding the motion, said that the present Town Hall had never been satisfactory, and could not be made so, inasmuch as it had been ill-designed, uncomfortably seated, with entrances and exits which were, in the opinion of at least one city engineer, really dangerous. Alderman Fitzgerald, in opposing the scheme, said that for the size of its population no city was better equipped in the matter of halls than Newcastle, and pointed out that the profits on the present Hall had only been 42*l.* per annum for the past few years. After further discussion the matter was adjourned.

Municipal Buildings in Glasgow.

The Municipal Buildings Committee of Glasgow Corporation have appointed, subject to the usual sanction, Mr. John James Burnet, A.R.S.A., Hon.LL.D., assessor in connexion with the competitive plans and designs to be invited from outside architects for the erection of new buildings on the east side of John-street, at an estimated cost of 80,000*l.* Dr. Burnet is to be paid 30*l.* for his services, plus one-fifth per cent. upon the estimated cost of the proposed buildings. The Committee have remitted to the City Engineer, with the assistance of Dr. Burnet, to prepare and submit to them the drafts of the terms and conditions of the competition.

Padiham Municipal Offices.

Members and Licentiates of the Royal Institute of British Architects are asked not to take part in this competition, because the conditions are not in accordance with the published regulations of the Royal Institute for architectural competitions.

Mill Hill Music School.

A limited competition has recently been held for a Music and Art School at Mill Hill School to commemorate the twenty-one years' work of the present headmaster, Dr. J. D. McClure. Nine architects, who were Old Millhillians, were invited by the Old Millhillians Club to compete, and seven sets of plans were received. The result was, first, Mr. Martin S. Briggs, A.R.I.B.A., 14, North Audley-street, W.; second, Messrs. Crompton & Bedells, FF.R.I.B.A., 6, John-street, Bedford-row, W.C.; third, Mr. Ivor P. Jones, A.R.I.B.A., 18, St. Mary-street, Cardiff. The assessors were Messrs. Collcutt and Hamp.

Fire Station, Cardiff.

Mr. A. Marshall Mackenzie, A.R.S.A., is the assessor in the competition for a new Fire Station in Westgate-street, Cardiff. The author of the design placed first will be employed to carry out the work, subject to the usual reservations, and premiums of 75*l.*, 50*l.*, and 25*l.* will be given to the authors of the second, third, and fourth designs respectively.

Cheshire County Council School, Port Sunlight.

The Competitions Committee of the Liverpool Architectural Society are in correspondence with the Cheshire County Council over the proposed competition for a school at Port Sunlight. Members are requested to refrain from applying for the conditions at present, as the Society are pressing for the usual 5 per cent. commission and premium to competitors.

Cottage Hospital, St. Anne's-on-the-Sea.

After lengthy consideration of the designs submitted in this competition, the Committee have returned the drawings to the various competitors with the intimation that, having had "the benefit of the opinion of a competent assessor, they do not see their way to make an award. They are strongly advised that none of the designs can possibly be carried ou

for the sum of 2,500*l.*, the limit specified." The ending of this competition is felt to be unsatisfactory. None of the competitors has been given the opportunity to qualify his estimate, and there seems reason to believe that matters could have been adjusted.

Regent's Quadrant Competition.

An additional inducement to competitors in the competition organised by the *Builder* is referred to in "Notes," page 537.

BOOKS.

The Abbey of St. Mary, Croxden, Staffordshire. By CHARLES LYNAM, F.S.A. (London: Sprague & Co. 1911. 25s. net.)

THIS is one of the most complete monographs on a subject at once worthy of exhaustive treatment, and not so intricate or extensive as to defy the attempt, that we have seen. The ruins investigated are comparatively little known, and, although essentially in the same category, they cannot rank, in the matter of interest chiefly due to better preservation, with such examples as Tintern Fountains or Rivealux. Mr. Lynam, who has known the place for the greater part of his life, has undertaken his research with a thoroughness and zealous patience which virtually endow him with ownership of the ruins as they stand, and certainly of the buildings as they must have been, since the monks who lived in them are so long dead. Not the least interesting section of the work before us deals with these same monks as they were, their life and affairs and tribulations, in the form of lengthy extracts translated from the monkish Latin chronicle of William of Schepeshered—whose account begays a daily round and a yearly calendar of the most ordinary and average description. Indeed, the whole abbey and matters connected with it have such pronounced conformity to type—that elusive "type" which is seldom exists in historical actuality—as to afford matter for very real satisfaction to the synthetic historian who values the rule, as distinct from the analytic kind that professes to dilate on the exception. The plan, as pieced together from what remained above ground, together with what has been discovered by excavation, is an almost exact parallel to that of Beaulieu, with its apsidal end and chapels. The analogy is so close that perhaps it may help to settle one, at least, of Mr. Lynam's doubts—that one, we mean, concerning the wall running east and west between the south walls of the warming house and kitchen, which apparently cuts across the end of the fine long frater or refectory. May it be that, as the severity of the Order relaxed somewhat, they found it desirable to have a sort of servary or anteroom between the refectory and the kitchen, acting also as a vestibule to the cold side of the cloister beyond, such as the arrangement indicated by Mr. Brakespeare on his plan of Beaulieu? We make this suggestion with all diffidence. Study of drawings and photographs and sketches, however complete—and in this case they are very complete indeed, there being seventy-five plates altogether—cannot hope to add much to sixty-two years of loving familiarity with the stones themselves, for the author, in his dedication to the Earl of Macclesfield, the owner of the property, says that he has known the ruins since 1850, he being now eighty-two years of age. He follows his dedication with descriptive particulars of the surroundings of the abbey and its site, which show that in this instance the monks were in no way inferior to others of their kind in the sagacity of their choice. The abbey stands in the accustomed fertile and sheltered vale, watered by a clear stream, which supplies power and all their needs. Within half a mile there is the hill from which the stone for all the buildings was quarried. The settlement was made in the midst of 70 acres, enclosed by a high wall. Descriptive notes on each part follow, but these must be left to those who will procure the book itself. As will be seen from the plan herewith, the church is of well-proportioned design, with a chevet of five apsidal chapels. The total length is 235 ft., with a total internal width across nave and aisles of 52 ft. 8 in. The reproduction does not show the colours, which indicate the dates ascribed to the various buildings. The church itself and sacristy are of the late XIIth and early XIIIth centuries. The chapter-house, novices', and warming room, and the hospital, etc., are dated 1242-1274. The western buildings, rere-dorter, and abbot's lodging, the early XIVth century, with the small piece of wall above referred to, and cutting the frater in two is ascribed to the late XVth century. Eighteen plates of measured drawings, twenty-one of sketches, thirteen of photographs, and sixteen of measured details follow. There is a reproduction of the original charter, from the Bodleian, with a translation; a page of the original chronicle, with a translation of all relevant matter from the whole; and the book concludes with a list of the abbots and monks, and an account of the origin of the Verduns, who founded the house in 1176—altogether, as we have said, a model of thoroughness and of what such a monograph should be. Nor must we omit to mention the excellence of the plates and general *ensemble* by Messrs. Sprague.

Practical Chemistry for Engineering Students. By ARTHUR J. HALE, B.Sc. (London: Longmans, Green, & Co. Pp. 192. 3s. net.)

EVERY engineering student worth his salt wants to know something more about the materials which he has to handle than facts learned at second-hand as to their suitability for certain particular purposes and conditions; and, indeed, the need for a knowledge of chemistry in so far as it affects engineering materials is now generally acknowledged by the educational authorities of the profession. At the same time, it is useless to ignore the practical difficulty of finding space in the curriculum for a general course in chemistry, and the consequent danger of learning many things ill and nothing well. Mr. Hale has endeavoured to meet the difficulty by compiling a course of progressive laboratory experiments in which, so far as it is practicable, the materials usually selected by the text-books are replaced by those with which the engineering student will need to be familiar in his subsequent career. The soundness of this principle is affirmed by so able a chemist as Professor Meldola, who, in an introduction to the book, says: "The fundamental principles of chemical science can be developed as philosophically from the study of what may be called 'engineering' materials as from those made familiar through the multitudes of existing text-books, and chosen because of the facility with which they can be manipulated by the student so as to bring out the desired general principles. It certainly can be claimed as a matter of experience that such treatment is much more successful in arousing the interest and fixing the attention of the student."

A feature of the book which will appea especially to those who find the difficulty of time a pressing one is the arrangement of the



The Abbey of St. Mary, Croxden, Staffordshire. Plan after Excavations.

matter in such a way that the student can choose between three courses of varying length to suit the time at his disposal without destroying the consecutive character of the experiments. Building students who can command time to work through the programme will find some sections of value to them in their work, but the book is written primarily for engineers, and to them it can be warmly recommended.

House Painting and Decoration: A Popular Guide. By Arthur Seymour Jennings. (London: Thomas Tofts. Pp. 182. 2s. net.)

THIS is a small popular guide on painting and kindred works for the use of small house owners and tenants or of farmers and works' managers who desire from time to time to indulge in a little decorative renovation without employing a professional painter; thus while it will be welcomed by one class of citizens it will be deplored by another. The book covers all the subjects on which the amateur decorator is likely to seek information. Brushes, materials, painting on old and new work and on different materials, limewhiting, whitewashing, paperhanging, enamelling, graining, staining, etc., and it is almost entirely free from technical language. Directions are given in a clear and practical way, and the book should find a good public.

Small Water Supplies: For the use of Engineers, Estate Agents, and Owners of Country Property. By F. NOËL TAYLOR, C.E. (London: B. T. Batsford. Pp. 174. 6s. net.)

THIS is an outline treatise on the subject of water supplies to country houses, and will prove a good friend to the engineering student and to the country gentleman or his agent. Mr. Taylor has dealt with his subject in a broad and practical way. Commencing with a short investigation into the causes of impurity in water and simple means of testing, he then deals with the several sources of supply, devoting considerable space to wells and well sinking. Hydraulic rams, and the principal types of pumps, the methods of water storage and distribution, and the calculation of the flow of water through pipes and the strength of retaining walls, etc., are adequately described, and some notes are included in an appendix on the causes and cure of noises in pipes. Mr. Taylor refers in his Preface to the need which he himself experienced in his early professional life of some such guide as that which he has now endeavoured to provide, and there can be no doubt that his book will prove very helpful to a large number who feel the same need to-day.

BOOK RECEIVED.

THE THEORY AND PRACTICE OF HEATING AND VENTILATION. By A. H. Barker. B.Sc., B.A. (Lond.). (London: The Carton Press.)

CORRESPONDENCE.

The R.I.B.A. and Registration.

SIR,—Messrs. Cross and Hubbard's letter in your issue of the 26th ult. is, to my mind, deplorable. The very fact that the Royal Institute of British Architects' Council went to such lengths as to negotiate a fusion with the Society of Architects, a body whose main justification for existence is its original and persistent advocacy of Registration, proves the reverse of "apathy or indifference" on the Council's part with respect to this great question. It is true that these efforts were futile, but this was owing to the inherent difficulties of amalgamation and to the very faulty principles adopted in the drafting of the headings of the Bill incorporated in the scheme laid before the general meeting on January 8 last. Both these gentlemen have been on the Royal Institute of British Architects' Council and its Registration Committee, and presumably assisted in drafting and acquiesced in this scheme, which, in spite of a consensus of opinion in favour of the principles of Registration, was rejected by the meeting.

Messrs. Cross and Hubbard now repudiate the policy adopted by the Royal Institute of British Architects during the past five years. That policy was dictated first of all by the Registration Commission or "Jury" which after taking exhaustive and impartial evidence for and against Registration, reported, if my memory serves me: -

(1) That the members of the Royal Institute of British Architects must bear a better numerical proportion to the whole profession before it could effectively appeal to Parliament for statutory protection; and (2) that unless its examinations were controlled by its own Council and not by a General Registration Council representing other important examining bodies—such as the Universities—its principal prerogative as an Art society would be likely to be impaired. I believe Messrs. Cross and Hubbard heartily approved the report and recommendations of this Commission upon which all the Institute's subsequent policy has been founded. They now announce that they repudiate that policy which has, at any rate, been effective in approximately doubting its membership!

Reforms, Sir, so great and complicated as Registration can only be realised by tackling the acknowledged difficulties at close quarters. The Institution of Civil Engineers and the Surveyors' Institution must be approached and their concurrence gained by clauses in the draft Bill safeguarding their interests.

I am convinced that the adoption of a tentative and experimental procedure on the part of the Royal Institute of British Architects has been a wise one, and I deplore the fact that those who have shared in its counsels and are jointly responsible for its work should now charge it with apathy, incompetence, and self-seeking. Such an attack does not contribute to the end we have in view, nor to the dignity of our Institute. W. H. SETH-SMITH.

A Clean Slate.

SIR,—You have been kind enough to publish one or two letters from us bearing both directly and indirectly upon the vital subject of Registration.

Some of our friends think that we have perhaps expressed ourselves more strongly than the circumstances warrant; but, to our minds, when we review the paucity of the results attained by the Institute after some five years' consideration, we are forced to the conclusion that the present serious position can only be satisfactorily dealt with by administering a drastic remedy.

The Institute, after much labour, has obtained a revision of its Charter and By-laws so as to make it possible for the Society of Architects to be incorporated with the Institute. This labour has had a futile result, as the Institute, by a large majority, has now absolutely declined to sanction the incorporation of the Society. In fact, the compromise which was made between the Registrationists and Anti-Registrationists has completely broken down, as was almost inevitable from its very inception.

No great cause has ever been won without a corresponding expenditure of energy, and we hope that the vast majority of the members of the Institute, who have the cause of Registration at heart, will not be discouraged by the fact that there is absolutely nothing to show for the immense amount of time which has been expended upon it.

Now is the opportunity to rub out the faint scratchings upon the slate which are generally unintelligible. What is wanted is a clean slate—on this should be mapped out in clear and unmistakable lines a programme framed to satisfy the members of the Institute as well as all others whose claims are properly entitled to consideration.

There is no getting away from the fact that the combined wisdom of the members of the Institute must in the end evolve the only workable policy, and it seems to us that there is no other way of obtaining this combined wisdom than by holding a series of general meetings in which provincial members, who carry on their work under greater difficulties than their London brethren, are well represented. By this method clear and unmistakable lines may be mapped out on a clean slate, and then, and then only, will be the time for Committees to be formed in order to give effect to the policy of the general body.

A. W. S. CROSS.
GEORGE HUBBARD.

"The Modern Bricklayer and His Work."

SIR,—You invite your readers' remarks on the subject-heading quoted above, and I would like to preface my remarks by the following excerpt from a little book, now out of print but to be found in the Patents Office Library:—

"Bricklaying is an art manual by which two or more bricks are made to adhere as if they were one brick."

The definition is about as tersely put as it very well could be, and it should be borne in mind when we ask the recurrent questions:—"How many bricks should a bricklayer lay in a day?" "Can a bricklayer lay 1,000 in a day?" and so on. These questions would then be qualified by the added words—or the thought of them—if the 1,000 bricks are "made to adhere as if they were one brick."

If the question were a few times put in this way one doubts whether it would ever again be asked—at least, not in the unqualified ways in which it is now asked.

Every architect, builder, and quantity surveyor knows very well that, taking one job with another, day in and day out, that 1,000 bricks cannot be laid in a working day of nine hours—*i.e.*, laid to comply with the written requirements of an architect's specification.

At the same time, there are instances in which the 1,000 bricks a day are exceeded, but the instances are abnormal, such as in footings very thick walls, and scamped work.

I will now quote from your article, giving the experience and observations of some of your previous correspondents:

"One says that the men will not lay more than 300 bricks a day, unless you watch them.

"Others concur that 500 is the usual daily average." "One has a special man who can lay 1,500 in a day."

"Two bricklayers dispose of 7,500 bricks in eight hours while building a party-wall."

To dispute the accuracy of the last statement would seem unnecessary. We will only say that one should be given the thickness of the party-wall; and, at the same time, point out that party-walls generally have flues and fire places, which absorb some time in forming, also chimney breasts on both sides of the wall, and that each chimney-breast has four plumbing places, the number of plumbing places adding considerably to the cost of labour, as every quantity surveyor and estimator knows.

It is not possible to make a statement as to how many bricks a man can or should lay in a day that will fit into all conditions in building, for the conditions are so varied. The quantity surveyor is aware of this, and in "taking off" allows so many rods of brick work, adding all labours.

The writer of this letter, when a builder's general foreman, working under what he conceived to be the best management, could not on an average (various thicknesses of wall) get more than 600 bricks laid in a day of nine hours, laid to comply with an architect's specification.

The present writer finds himself unable to agree with the experience of a previous correspondent, who depreciates the brickwork executed to-day by comparison with the brick work executed "sixty years ago," as seen in the works of demolition.

Sixty years ago lands us in the reign of stucco—a period when exterior wall surfaces were Portland cement stuccoed, the interior surfaces plastered, and the walls themselves often built of inferior bricks, now chiefly confined to the trade of the speculating builder. One does not dispute that some good brickwork was also done in that period.

But the examples of what was then called ornamental brickwork were so few within the metropolitan area that the building known as the Philological Schools, Marylebone road, was cited as a good example of brickwork in the current literature of a date subsequent to six years ago. The only distinguishing feature about this building is a judicious use of polychrome bricks in the facings; there is the entire absence of cut brickwork.

Your contributor describes the modern bricklayer's method of building a wall, again the way of depreciating present-day work with that of sixty years ago. Given a competent builder's foreman and a clerk of works who knew and was determined to do his work, such a method would find no tolerance.

I don't know whether the same author objects *in toto* to "grouting." Both the bricklayer and the mason must get his facework in alignment, and to do this it is not always practicable to put up the "perpend" joints in full depth of the stone or brick facing, and grouting or flushing is subsequently resorted to, with no detriment to the stone or brick.

In obtaining solidly-built walls the best and most economical method is to lay the outside course of brickwork (or stone, as the case may be) on the interior and exterior face,

then, by the process known to bricklayers as "larrying up," draw up the vertical joints between each brick laid full of mortar, so that they (the bricks) are "made to adhere as if they were one brick."

But the stuccoed front with its repeating blocks (jointings) of equal size in simulation of Classic architecture—with its walls built of "place" bricks—is gone, killed by the criticism of such men as William Morris, John Ruskin (never tired of inveighing against the ugliness of their times), and the healthy architectural thought of their earlier days, to be succeeded by the Queen Anne revival, and some first-class terra cotta-faced buildings.

Of trade unions—*qua* trade unions—the writer has nothing to say.

Your article deals largely with this. But one cannot help but notice the similarity of thought expressed by you and by Professor Thorold Rogers (1823-1890), when dealing with this subject:—

"I know nothing," says Rogers, "which would exalt the reputation and justify the action of trade combinations more than the establishment of a rule that members of such unions would denounce and expose dishonest scamping work, and protect those of their order who may suffer ill-usage or wrong-doing for having reported and checked such nefarious practices.

As yet the rules of trade unions are principally confined to the process of bettering the whole class. Hereafter they will, or should, extend towards purifying the class and making it a potent instrument for the moral and material advancement of all. Other professions exclude, either formally or informally, misbehaving, disreputable, or incompetent persons from their ranks. It cannot be doubted that in time to come artisans and labourers will elaborate those necessary police regulations, by which they will increase the usefulness, elevate the reputation, and cultivate the moral tone of those who ply the craft whose interests they seek to serve, and whose characters they ought scrupulously to maintain."

F. WALKER,
Clerk of Works.

Ideal Homes and Ideal Lighting.

SIR,—The Ideal Home Exhibition has just closed its doors, and before the memory of it has passed completely away I should like to draw attention to a very serious omission on the part of the organisers.

In regard to the interior decoration and furnishing of our homes, and the provision of sundry labour-saving conveniences, the Ideal Home has taught us many useful and sadly-needed lessons.

But amongst the numerous experts who must have been consulted in the arrangement of the house it is perfectly obvious that there was no lighting engineer. As a consequence, the lighting arrangements comprise quite an interesting museum of out-of-date, ugly, and inefficient accessories.

The "glare" accentuating conic opal shade was in evidence in the servants' quarters, while the reception and bedroom electric-light fittings were equipped with ornamental glass shades of which the best that can be said is that they do not absorb more than 50 per cent. of the available light.

What in the world could the organisers have been thinking of to light the Ideal Home by such hopelessly discredited means?

There are now available a number of types of reflector, scientifically designed to control and redirect the light in useful directions.

Why was no advantage taken of this fact?

Or another method of lighting which might have been utilised was the one employed for the illumination of the Electrical Hall at the Smoke Abatement Exhibition. The illumination was obtained indirectly by diffuse reflection from the ceiling, and the effect was delightfully mellow and restful. The fittings appeared to consist of ornamental metal bowls, suspended from the ceiling, and containing reflectors and lamps. These latter were, of course, invisible. Light rays would at first thrown on to the ceiling, and from there evenly distributed over the room. Such a system, with its total absence of eye-straining glare, struck me as being peculiarly suitable for the illumination of the Ideal Home. However, the gravamen of the present charge is not that the organisers of the Home omitted to employ a system which I personally might recommend, but that they apparently failed altogether to appreciate the importance of lighting in the domestic scheme, and consequently did not trouble to obtain competent advice on the matter at all.

HAROLD G. GOODY.

Pompeian Decoration.

SIR,—On reading the criticism of Mr. R. A. Briggs's book in your issue for April 26 it struck me that your reviewer was very unfair on a work which has otherwise been so well received.

In these days when an architect's calling is so much complicated with the multifarious duties connected with his profession it is difficult to find leisure for the production of artistic works such as this, in which he may be interested, besides the difficulty of obtaining a sympathetic publisher.

The profession is always ready to welcome an interesting work from one of its members, especially as in the case of Mr. Briggs, when his endeavours have been to place before it in a more truthful manner a few examples illustrating some of the beautiful fragments of decoration discovered at Pompeii.

It has been already stated that the number of works and pamphlets on the subject amount to about 500, and the publication of yet another, by the aid of the three-colour process, is a distinct advancement, being, I gather, all that Mr. Briggs claims.

The details, in my opinion, are not poorly drawn and feeble, but quite the contrary. Certain subjects in white marble must be delicately drawn, and especially when seen by the artist in the strong reflected light of an Italian sky.

During the present year I understand fresh beauties have been revealed by the excavators, and I hope that Mr. Briggs will return to Pompeii at no distant date and give us a further series of his charming three-colour reproductions.

AND. N. PRENTICE.

The Town Planning Conference.

SIR,—Will you allow me to correct the report of the Town Planning Conference which appears in your edition of May 3, as far as my remarks are concerned?

A delegate from another town asked whether Crown lands could be included in the town-planning schemes, and I stated that in Portsmouth we had been told by the War Department representatives that they were exempt from the scheme, and that they had already established that scheme. In these circumstances I advised the inquirer to try to come to some mutual arrangement with regard to the Crown lands within his district.

I could not have said that "a large number of small, ugly, and badly-planned houses had sprung up upon the land," as, as a matter of fact, the land has not yet been laid out as a building estate, the plans only of the roads having been deposited.

The whole question of the Crown lands seems to be a matter for mutual arrangement rather than compulsory powers under the Act, and this is the only point which I made at the Conference.

ARTHUR W. WARD
(Borough Engineer).

Lighting by Air-Gas.

SIR,—Under the heading, "Monthly Review of Engineering," in your issue of April 26, a comparison is made as to the relative cost of lighting by acetylene and petrol air-gas. It is stated that the cost of maintaining a 100-candle-power light for ten hours with acetylene is 1s. 3d. and with air-gas 1½d.

This statement is absolutely incorrect, as will be seen by the simplest calculation.

One pound of good quality carbide at 1½d. per pound produces 5 cubic ft. of acetylene.

An ordinary 45-candle-power burner consumes 1 cubic ft. per hour, or 10 cubic ft. in ten hours.

Therefore, the cost of maintaining a 100-candle-power light for ten hours with acetylene is 6d., not 1s. 3d.

By using an efficient mantle this amount can be reduced by more than half, bringing the cost down to somewhere about 3d.

In comparing the two systems of lighting, acetylene and air-gas, there are other considerations of importance besides the actual cost of the carbide or the petrol. There is the question of plant, piping, burners, fittings (pendants, brackets, globes, etc.), safety, health, convenience, and general appearance.

In every case acetylene possesses undeniable advantages over petrol air-gas, excepting perhaps in the case of fittings, where the cost will be the same in each case.

With regard to another statement in the same article, "That the first cost and upkeep of an acetylene installation rendered its general adoption impracticable," I would simply refer the writer to the fact that the consumption of carbide in Great Britain for the year 1903 was 3,000 tons, whereas in 1911 the total consumption reached 20,000 tons, a great percentage of this being for lighting purposes.

I am sure a journal of the standing of the *Builder* would not wish to mislead its numerous readers on this or any matter, and I therefore hope my letter will be published without delay.

ACETYLENE PUBLICITY, LTD.
VICTOR D. DUVAL (Manager).

[**** A letter to the same purport has been received from the Thorn and Hoddle Acetylene Company, Ltd. The question of the production of any gas depends mainly upon the present market price of the material from which the gas is produced. The price of petrol varies according to the market, and similarly with calcium carbide used for acetylene lighting. The table in the article was (as stated) one issued by a particular firm, and, of course, should be modified according to circumstances. In it petrol was assumed to cost 1s. 3d. per gallon, a fair average price. A good quality carbide costs 3d. per pound for a 1 cwt. drum. As 1 lb. of carbide produces 5 cubic ft. of gas, and 100-candle-power light consumes 2·22 cubic ft. of gas per hour, the cost of maintaining such a light for ten hours is 1s. 1d. The discrepancy complained of seems to be based on the price quoted for carbide, which is given by our correspondent as half that at which it is offered to the ordinary purchaser. It may be admitted that modern improvements in acetylene plant have overcome the more serious objections to it, as we propose to show in an article on the subject at present in hand.—ED.]

INTERCOMMUNICATION COLUMN.

Projecting Sign.

SIR,—A certain local authority have put sect. 91 of the Public Health Act (Amendment Act), 1907 (Sky signs), into force, and three years ago compelled a certain hotel proprietor to take out a licence for a projecting wrought-iron sign 4 ft. out from the wall and about 15 ft. high from ground level; and as the licence expires at the end of three years, and by the Act is not allowed to be renewed, the local authority have served the owner with notice to remove the sign. The owner is advised that such a sign does not come under the Act relating to sky-signs. Can the local authority take down the sign or enforce the penalty under the Act?

ENQUIRER.

THE ROYAL SANITARY INSTITUTE.

At an examination in Sanitary Science as applied to Buildings and Public Works, held in London on April 26 and 27, twenty-three candidates presented themselves, and thirteen were granted certificates, *i.e.*—D. J. Bell, Millbank; B. W. Brooman, Tunbridge Wells; A. H. Carter, Westminster; W. J. Dorey, Brixton; G. C. Headley, Hertford; F. S. Jasper, Bayswater; W. W. S. King, Wimbledon; Tulsi Dass Kochhar, South Kensington; W. Mitchell, Upper Norwood; T. E. Moore, Welwyn; J. W. Stevens, Feltham; A. C. Tomlinson, Palmers Green; A. Venkataraman, Kensington.

At an examination in School Hygiene, including Elementary Physiology, held in London on April 26 and 27, ten candidates presented themselves for the certificate, and seven were granted certificates. At an examination for Inspectors of Nuisances, held in London on April 26 and 27, sixty-four candidates presented themselves, and thirty-one candidates were certified as regards their sanitary knowledge competent to discharge the duties of Inspector of Nuisances under the Public Health Act, 1875.

EDITORIAL SUMMARY.

"Contemporary Architecture at the A.A." is the title of the leading article.

The second article deals with the domestic work shown in the Architectural Room at the Royal Academy Exhibition (p. 536).

In "Notes" columns (p. 537) will be found observations on: "Danish Art at Brighton"; "Mural Decoration"; "Street Name-Plates"; "Regent's Quadrant Competition"; "Protection of Monuments"; Hospital Criticism"; "The Prevention of Vandalism."

A *résumé* of the annual Report of the Council of the Royal Institute of British Architects is given on p. 537.

In "Architectural Societies" (p. 541) short notices of the following will be found: "Sheffield Society of Architects"; "Guild of Architects' Assistants"; "The Architectural Association."

Some notes on the York Elementary School Competition, with plans of the premiated designs, appear on p. 542.

Book notices (p. 545) include: "The Abbey of St. Mary, Croxden"; "Practical Chemistry for Engineering Students"; "House Painting and Decoration"; "Small Water Supplies."

In Correspondence columns (p. 546) are letters on: "The R.I.B.A. and Registration"; "A Clean Slate"; "The Modern Bricklayer and His Work"; "Ideal Homes and Ideal Lighting"; "Pompeian Decoration"; "The Town Planning Conference"; "Lighting by Air-Gas."

The Monthly Review of Construction (p. 549) is entirely devoted to an illustrated article on the Adelphi Hotel, Liverpool.

The Building Trade Section (p. 555) includes: "Builders and Strikes"; "The Mediæval Plumber"; "Labour in the Building Trade"; "Projected New Buildings in the Provinces"; "Applications under the 1894 Building Acts," etc.

In Legal Column (p. 558) will be found notes on: "Workmen's Compensation."

In Law Reports (p. 558) will be found short reports of the following cases: "Ashwell & Nesbitt, Ltd. *v.* Allen & Co."—validity of architect's certificate; "The King *v.* The Tribunal of Appeal (*ex parte* the London County Council)."

MEETINGS.

SATURDAY, MAY 11.

The Society of Engineers (Incorporated). Annual dinner at the Criterion Restaurant, Piccadilly-circus, W., 6.30 for 7 p.m. Mr. John Kennedy, the President, will take the chair.

The Institution of Municipal and County Engineers. Midland District meeting to be held at Nuneaton.

Northern Architectural Association.—A meeting at Armstrong College, Newcastle, when the new School of Art will be visited. 3 p.m.

MONDAY, MAY 13.

Royal Society of Arts, Health Lectures.—Capt. H. R. Sankey, R.E., on "Heavy Oil Engines" III. 8 p.m.

The Incorporated Clerks of Works Association (Carpenters' and Londesborough). Paper by Mr. Harvey Piper, "Round and Round St. Paul's." 8 p.m.

The Surveyors' Institution. Adjourned discussion on Mr. G. Taylor Loban's paper on "Some Principles in the Valuation of Land and Buildings" will be continued. 8 p.m.

WEDNESDAY, MAY 15.

Royal Society of Arts.—Mr. E. K. Scott, A.M.Inst.C.E., on "The Manufacture of Nitrates from the Atmosphere." Sir William Ramsay, K.C.B., will preside. 8 p.m.

THURSDAY, MAY 16.

Royal Society of Public Health Session. Mr. N. Priestley on "Indian Railways." 4.30 p.m.

Institution of Electrical Engineers.—Annual general meeting. 7.45 p.m. Ordinary general meeting. 8.30 p.m.

FRIDAY, MAY 17.

Junior Institution of Engineers. Visit to the works of the Orchestrelle Company at Higes. 3 p.m. At 39, Victoria-street, Westminster. Mr. G. C. Allingham on "Storage Battery Engineering." 8 p.m.

SATURDAY, MAY 18.

Edinburgh Architectural Association.—Visit to Raith, Kirkcaldy.

ARCHÆOLOGICAL SOCIETIES.

Surrey Archæological Society.

The fifty-seventh annual meeting of this Society was held at the Town Hall, Guildford, on Saturday, April 20. Alderman F. F. Smallpeice, J.P., presided, supported by the Mayor of Guildford (Mr. W. T. Patrick), Sir John Watney, Sir Edward Brabrook, Rev. A. P. Glyn, Rev. T. E. Cooper, Rev. H. M. Harke, Colonel Sykes, Dr. H. M. Chester, Dr. Finny, Dr. Gardner, Messrs. Eastwood, H. E. Malden, Mill Stephenson, Ralph Nevill, G. H. White, P. Woods, A. J. Style, M. Giuseppi, R. Garraway Rice, Hilary Jenkinson (Hon. Secretary), H. F. Elsley (Librarian), and many others, ladies and gentlemen, members and visitors.

The Mayor welcomed the Society to Guildford, which was rich in archæological associations, and hoped that they would derive pleasure and instruction from their visit. The Report stated that the Council of the Society had much pleasure in submitting this, the fifty-seventh annual Report and Statement of Accounts for the year ending December, 1911. The annual excursion was held July 13, 1911, the places visited being Guildford, Shere, and Albury. The Council thanked all who helped to make that meeting a success, and the Master of the Charterhouse (the Rev. Gerald S. Davies) for his kind invitation to the Charterhouse on the afternoon of Saturday, October 14. The annual volume for the year 1910 (Volume 24) contains valuable papers by Mr. R. A. Roberts, Dr. Eric Gardner, Mr. P. M. Johnston, F.S.A., Miss Ethel Stokes, Dr. J. M. Hobson, Mr. F. Lasham, and Mr. C. T. Davis. The annual volume for the past year (Volume 25) is now in hand. The lengthy process of editing for the Press the general index to the first twenty volumes of the Society's Collections is still proceeding, and the manner of its publication, an expensive matter, has been engaging the attention of the Council, and will be the subject of a proposition to be made by it at a special general meeting immediately following the annual meeting. The question of the preservation of threatened antiquities has been before the Council in many forms during the past year. Quite the most serious danger, though public attention was not strongly drawn to it, was that threatening St. George's-hill British camp, at Weybridge. This hill has upon it an exceptionally fine early British camp, the interest and importance of which (described in last year's volume of the Society's Collections) are enhanced by the very numerous finds of pottery and weapons made recently in its neighbourhood. Building operations, now inevitable there, at one time threatened the most interesting features of the hill, but the Council is glad to report that, thanks to the constant efforts of the Society's local Secretary, Dr. Gardner, and to the ready acquiescence of the new owners, the worst dangers have been averted. A case of danger to antiquities which has had a larger share of public attention is that touching the old houses in the Farnham-road, Guildford. With regard to this the Council has little to add to the remarks on the same subject made in a former Report. This matter, however, occupied considerable space in some of the daily papers, and has served to attract to the whole question the attention of the Surrey County Council, which has now elected a Committee, upon which this Society is duly represented, to consider the question of the preservation of Surrey antiquities. Partly in connexion with this action of the County Council, and partly in response to an appeal for information made by Sir Schomberg McDonnell, of H.M. Office of Works, the Council has decided to undertake a schedule, arranged alphabetically under parishes, of all Surrey antiquities of importance. It is hoped that this list, which will be printed during the year and issued to members of this Society, may prove to be of considerable value. Another danger, one of a different kind, may be referred to in connexion with the recent presentation of a large number of private deeds of the XVIIth and XVIIIth centuries, for which the Council has to thank Lord Grantley. It cannot be too strongly urged upon members that such deeds, even though they be of comparatively late date, will be in the future, if they are not now, a principal source of information upon local history; that under the present requirements for the proving of title their legal value is small: that they tend, consequently, either to be ill-kept and neglected, or to be so separated for the purpose of collectors as to lose a large part of their historical value; and that in the absence of any official provision the County Archæological Society is obviously the proper custodian for them. Some account of Lord Grantley's gift, and of other deeds in the possession of the Society, will be given shortly in the Society's Collections. Other additions to the libra and museum include a set of photograph negatives and prints of a collection of wate colour paintings of Surrey churches and oth buildings made at the beginning of the XIX century. The Council is much indebted to t owner, Mr. Edgar Sharpe, of Reigate, f permission to photograph this valuable colle tion. The library has also profited by a gi from Miss Smiles of twenty-four volumes of t *Genealogist*, and by the deposit, upon loa of a number of volumes of *Archæologia*, with t general index volume, by Mr. Ralph Nevi F.S.A. The formal opening of the ne museum, control of which is shared by th Society with the Town Council of Guildfor took place during the year. This Socie numbers at present 491 members. It h gained during the past year thirty-three, a has lost by resignation twenty, and by dea nine members. Among the last-mention the Council has particularly to deplore tw old members and Vice-Presidents, the la Sir William Grantham and the late Earl Onslow. The present Earl of Onslow, Viscount Cranley, who was already a memb of the Society, has accepted the position Vice-President in succession to his fathe The members of Council who retired by rotatio were re-elected, and also the Hon. Auditor Votes of thanks were passed to the Mayor f use of Guildford Town Hall and for hospitalit and to Alderman Smallpeice, J.P., for presidin

THE LONDON COUNTY COUNCIL.

THE usual weekly meeting of the Lond County Council was held on Tuesday in t County Hall, Spring-gardens, S.W., Lo Cheylesmore, Chairman, presiding.

Loans.—The Finance Committee had loans to local bodies to report.

Embankment.—The Highways Committ reported that it was desirable to renew considerable area of tar-macadam paving the Victoria-embankment, and recommend that the work should be carried out by t Trinidad Lake Asphalte Paving Compan Ltd., and the Roadamant Company, Ltd. T estimated cost of the work is 1,690*l.*

Chief Fire Station.—It is proposed that portion of the office block, recreation-room, a basement at the chief station of the Fi Brigade be wired and fitted for electric lighti at an estimated cost of 70*l.*

Perry-vale Fire Station.—The paving of t run-in at this station and portion of the ya is in need of renewal, and is to be repaved wi granite setts and ironstone tiles at a cost about 138*l.* 17*s.*

ILLUSTRATIONS.

The Adelphi Hotel, Liverpool.



OUR plates this week consist entir of illustrations of the complet portion of the New Adelphi Hot Liverpool. This work, by R. Frank Atkinson, F.R.I.B.A., is descrit in detail in our "Construction Review" (p. 54

FIFTY YEARS AGO.

From the *Builder* of May 10, 1862.

British Cotton-Spinners.

GREAT distress, in a dark and omino manner, is threatening the industri population, not only of the Lancash district, but also of those other neighbo hoods which are dependent on the cott supply for the means of providing t daily food; and in this instance the evil d not arise from any fault of either the Brit employers or their operatives. There h been no strikes or disputes at home: bu great civil war, the effects or endurance which it is not easy just now to foretell, h by stopping to an immense extent the portation of the raw material, either thr thousands of industrious cotton-spin entirely out of employment or materi lessened the amount of their earnings.



Photographed by Bedford, Lemere & Co., 147, Strand, W.C.

Sprague & Co. Ltd., Printers, 69 & 70, Dean St., Soho

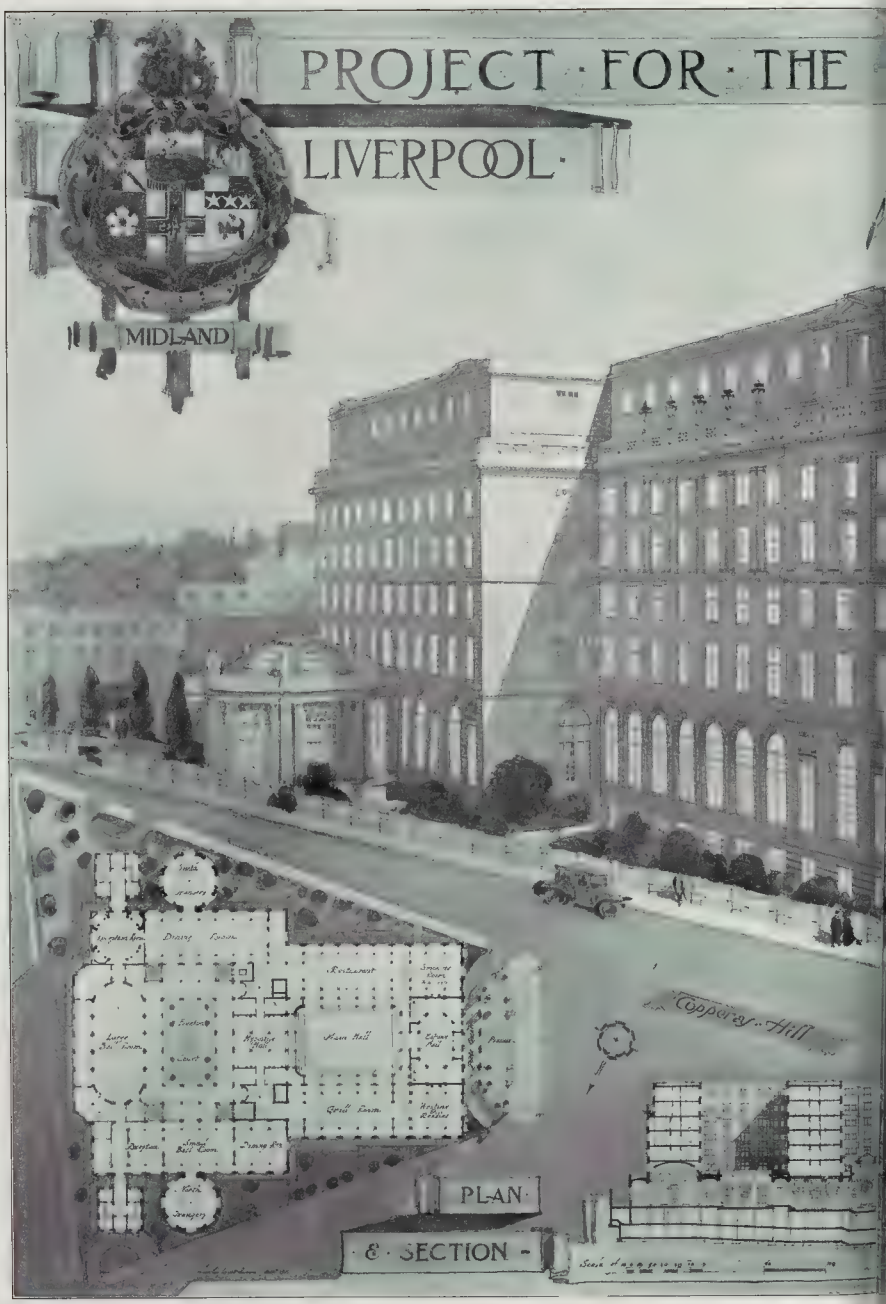
THE ADELPHI HOTEL, LIVERPOOL: TERRACE, WEST SIDE.—Mr. R. Frank Atkinson, F.R.I.B.A., Architect



Photographed by Bedford, Lemere & Co., 147, Strand, W.C.

THE ADELPHI HOTEL, LIVERPOOL: HYPOSTYLE HALL. MR. R. FRANK ATKINSON, F.R.I.B.A., ARCHITECT

Sprague & Co., Ltd., Printers, 69 & 70, Dean St., Soho, W.


PROJECT · FOR · THE
LIVERPOOL ·
MIDLAND
Coppery Hill
PLAN
& · SECTION -



Sprague & Co., Ltd., Printers, 69 & 70, Dean St., Soho, W



Photographed by Bedford, Lemere & Co., 147, Strand, W.C.

Sprague & Co., Ltd., Printers, 69 & 70, Dean St., Soho, W.

THE ADELPHI HOTEL, LIVERPOOL: THE RESTAURANT.—Mr. R. Frank Atkinson, F.R.I.B.A., Architect.



Photographed by Bedford, Lemere & Co., 147, Strand, W.C.

Sprague & Co. Ltd., Printers, 69 & 70, Dean St., Soho, W.

THE ADELPHI HOTEL, LIVERPOOL. TERRACE, NORTH END.—Mr R. Frank Atkinson, F.R.I.B.A., Architect.

MONTHLY REVIEW · *of* · CONSTRUCTION.

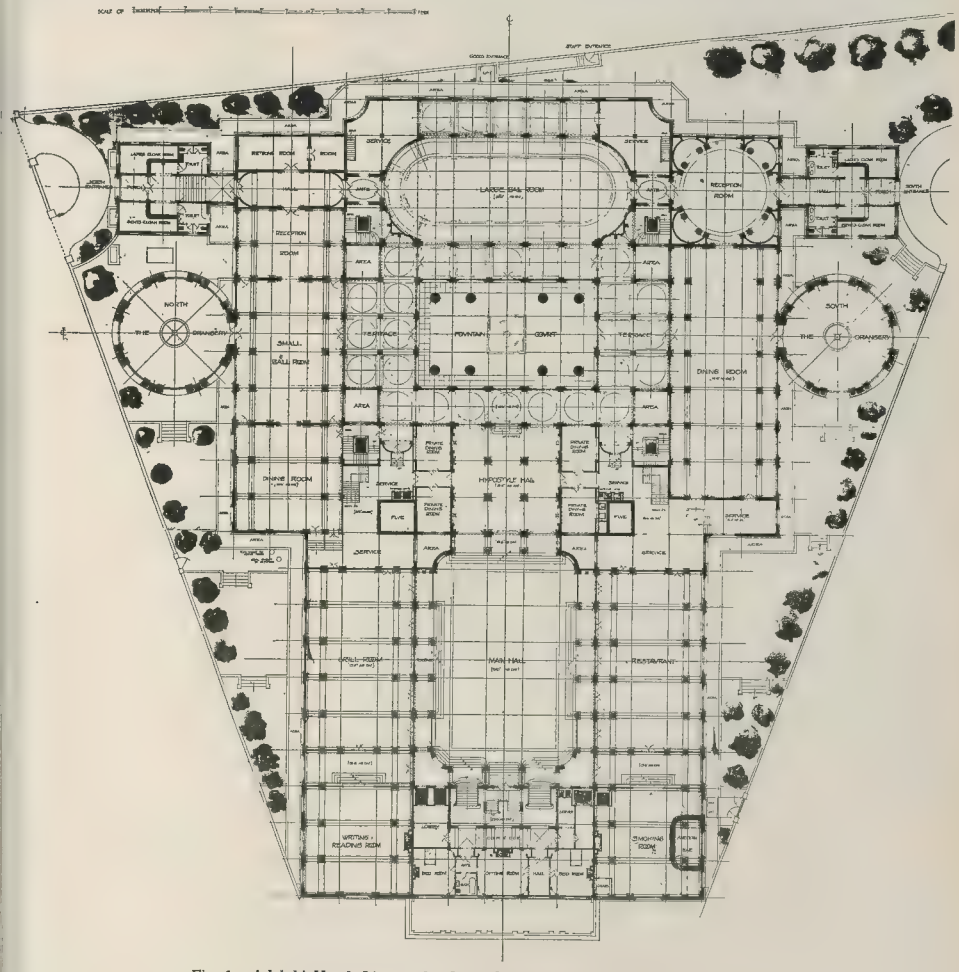


Fig. 1. Adelphi Hotel, Liverpool. Ground Floor: Plan of Complete Scheme.
Mr. R. Frank Atkinson, F.R.I.B.A., Architect.

ADELPHI HOTEL EXTENSION, LIVERPOOL.—I.

FOR many years past railway travellers have been familiar with the admirable hotels provided in various places on Midland Railway system and with the ressive introduction of new ideals in hotel- gn and equipment by the hotels depart- t of the same company, as evidenced, for ance, by the remodelling of the Queen's el, Leeds, and the building of the Midland el, Manchester.

he latest example of the enterprise displayed he Midland Railway in the direction indi- d is afforded by the completion of the first of the scheme prepared by Mr. R. Frank nson, F.R.I.B.A., for the reconstruction of Adelphi Hotel, Liverpool.

e are indebted to Mr. Atkinson for permis- to reproduce the accompanying perspective for giving us various particulars of the s so far completed.

e original hotel on the site, facing Ranelagh- , and bounded on either side by Copperas- and Brownlow-hill, was built in 1828, and, as our readers may remember, is mentioned by Charles Dickens in his *American Notes*.

That structure was rebuilt in 1876, when the new hotel was considered to be one of the best establishments of its class in Great Britain, and many visitors would still consider it adequate for all requirements. But owing to modern developments and ideas affecting the question of hotel accommodation, and the need of providing for larger numbers of visitors than formerly, the railway company found it necessary to extend the hotel considerably. With this object they acquired a large area of land behind the building of 1876, the land thus acquired, together with the old hotel property, forming an island site of 2¼ acres approximately. This site was intersected by three streets which have now been closed and included in the area, but an equivalent area has been deducted from the new site and added to the bordering streets, thus permitting the boundary lines to be straightened, the streets widened, and the surroundings generally improved.

In considering the question of enlarging the hotel attention was wisely given to the ultimate extent of building and rebuilding operations. Therefore the designs for the large block that has been erected as an addition to the original part of the hotel were included in a comprehensive scheme, providing for further extension at the back and the rebuilding of the existing hotel at the front. Thus all the apartments, halls, and corridors in the first portion of the new hotel have been planned so that they will be in every way appropriate to the arrangement that will be established when the time has come for the final realisation of the general project.

The scope of the latter is made clear by the perspective, with plan and longitudinal section, reproduced as one of our plates, and more fully by the complete ground-floor plan in Fig. 1.

The task of planning the scheme as a whole presented considerable difficulty, as will be appreciated when it is stated that the rise in the side streets from Ranelagh-place to the back of the site is some 20 ft., that the new ground

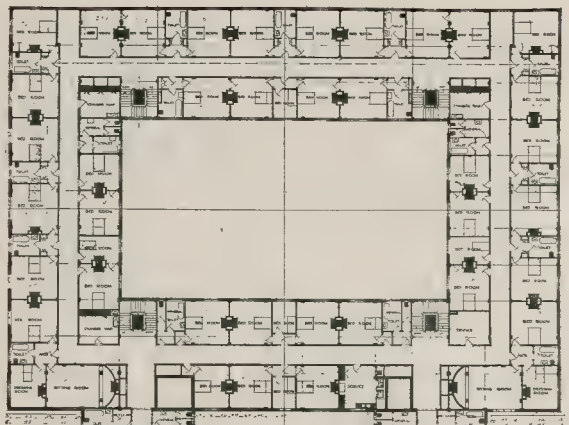


Fig. 2. Second Floor: Plan of Complete Scheme.

floor is only about 18 in. below the first floor of the old hotel, and that the first floor of the new hotel is about 18 in. above the third floor of the old hotel.

However, this rise of the land has not resulted in any change of level in the main features of the exterior, as it will be seen by the longitudinal section that all horizontal lines are maintained, with the exception of the terraces, which follo by stepping to some extent the natural rise the land.

The necessary adjustment of interior flo arrangements has been effected without inco venient results, and by reference to the lon tudinal section it will be realised that the leve of the ground floor have been so treated in t architectural scheme as to produce very fi effects.

As indicated by Fig. 1, the lines of t building do not follow those of the stre frontages in the usual manner, which had be adopted in the case of the old hotel, but bo blocks of the building are set four-square on central axis, being the bisection of the tw converging side streets on either hand of t irregular site, the various spaces so form around the hotel being utilised for the co struction of orangeries, porches, approache terraces, and gardens, which will add materia to the convenience and pleasant appearan of the hotel.

The whole scheme embodies planning on t broadest and most simple lines, everythi being laid out on squares of 14 ft. 3 in. fro centre to centre. All the principal rooms ha floor areas which are multiples of this un dimension, the adoption of the system co ducing to great simplicity, uniformity, and ea working, and, as pointed out later, it very mu simplified the design and construction of t steel frame forming the skeleton of the blo already erected. The same point is illustrat by the second-floor plan given in Fig. 2.

Although in the complete project there really only one building, this may for all pra tical purposes be regarded as consisting of tw blocks, the site of the front block being at pres occupied by the old hotel, while the part of t rear block lately built has been temporari arranged so that it can be worked as a comple hotel during the rebuilding of the old hotel, wi or without the hinder part, which will be adde when occasion may demand.

Before discussing the details of the wo recently executed we will take a brief surve of the hotel as foreshadowed by the gener project.

The front block measures about 140 ft. wi by 160 ft. from front to back, and includes ni stories in all. The main entrance gives adm sion to a spacious hall, whence two short fligh of steps lead into the main hall, a noble apar ment 85 ft. long by 56 ft. wide, without takin into account the bordering terraces. The hall lighted from the roof, and occupies the botto of a large light court surrounded on all sides b the upper stories of the building. On eith side of the main hall are the restaurant and gri room respectively, the former communicati

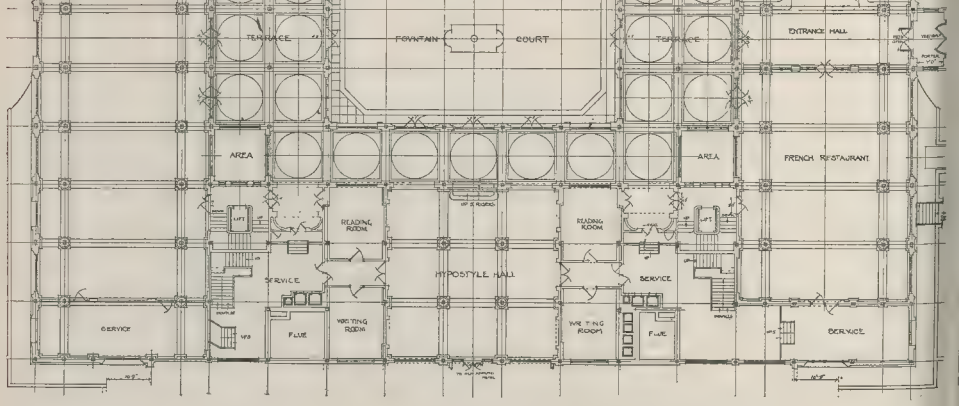


Fig. 3. Ground Floor: Plan of Portion Completed. (Temporary Arrangement.)

n a smoking-room, and the latter with a ing and reading room.
t the farther end of the hall a broad flight of s communicates with the hypostyle hall, the apartment in the rear block of the hotel.
rom this hall the visitor passes to a series of aces with vaulted roofing and surrounding a e open area known as the fountain court. ve the terraces and court is a light court, nd which are the upper stories of the ding.
n each side of the hypostyle hall are service- ns in direct communication with the kitchens w, their central situation rendering them ally convenient for the needs of the front and k portions of the hotel.
eyond the fountain court is the large ball- n, an apartment of fine proportions, with icircular ends, and a terrace along the outer of the building.
t the right hand of the court and ballroom a reception-room of circular form with four ves and a spacious dining-room. The are pavilion, connected by a short corridor h the reception-room, is approached from wnlow-hill by a carriage sweep, and contains k and toilet rooms, in addition to a porch entrance hall. The public dining-room on same side of the building is in communica- with the circular orangery shown on the n.
t the left hand of the large ballroom another are pavilion with an entrance from Copperas- gives access through an entrance hall to the e ballroom and to a reception-room leading the small ballroom, opening in turn into ther dining-room. The small ballroom mmunicates also with an orangery similar to on the opposite front of the hotel.
ven from this brief and incomplete sum- y the reader will be enabled to gather an of the spacious accommodation provided, merely in the various apartments, but also he connected series of halls, terraces, and r spaces extending throughout the building. he grouping of the principal rooms around main hall and fountain court gives a sense penness, space, and light, the vistas from points being long and pleasing, especially e on the main axial lines between north south and east and west.
he foregoing brief description, however, a measure prophetic, because it deals with arrangement of the main floor of the hotel will be when the project of Mr. Atkinson been completely realised.
ttention must now be directed to the portion h has been actually completed, and it should bserved that in this part the temporary ngement adopted to enable the block be employed as a self-contained hotel necessitated the employment of some rooms purposes different from those to which will be put after the front block has been

ig. 3 is a revised ground-floor plan denoting present uses of the various rooms. In e of the south orangery there is a tem- ry entrance from Brownlow-hill, and the ic dining-room has been divided into two s, one providing an entrance hall with the omary auxiliaries, and the other used as rench restaurant. Reading and writing as take the place of the four private dining- as on either side of the hypostyle hall, and he Copperas-hill side of the hotel is one e room to be used as a ballroom, banquet- hall, or grill-room, as occasion may demand. the basement are situated the kitchens, all the necessary auxiliary offices, stores, -room, plate-room, china-rooms, bakery, ants' hall, staff toilet-rooms, engineers' and ers' shops, wine stores, baggage-room, lemen's temporary toilet-room, and other mmodation. On the mezzanine floors on r side of the hypostyle hall are wine- ensing rooms, waiters' dressing-room, and a loir for ladies with attached toilet-room.
he new block measures about 215 ft. wide 115 ft. deep, and comprises nine stories in the total height above street level being ft.
is constructed on the steel skeleton riple, with enclosing masonry walls, which only 14 in. thick from top to bottom, as are carried by steel girders at each floor , and consequently have to support no beyond their own dead weight.
ne exterior walls are of Portland stone, and architectural design is marked by extreme licity, as may be judged by inspection he drawing showing the complete design he exterior.

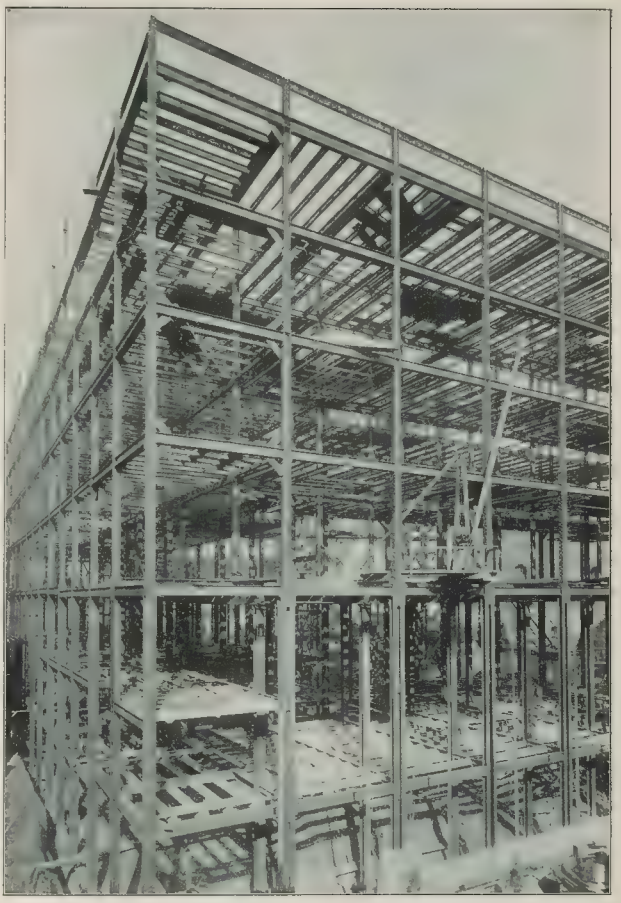


Fig. 4. Adelphi Hotel, Liverpool. Steel Skeleton.

Fig. 4 is from a photograph of the completed skeleton, at the bottom of which may be seen the first courses of the masonry construction.

As may be seen by this view and the half plan of the steelwork at first-floor level (Fig. 5), the lay-out of the building is based on a very simple and practical system of rectangulation. The site of the structure occupies an area divided into 120 squares, represented by fifteen bays in one direction and eight bays in the other direction, each bay having the length of 14 ft. 3 in.

Referring to the half plan of the steelwork, it may be mentioned that the plate girders and some of the compounded girders there shown carry the stanchions in the upper corridor partitions. The chimneys starting at the same level are responsible for the somewhat unsymmetrical arrangement of the girders and transverse beams. Another circumstance affecting the arrangement of some girders projecting below the general ceiling line was the need for compliance with the decorative scheme elaborated by the architect for the treatment of the ground-floor ceilings.

In most instances the stanchions are situated at the intersecting points of the lines of the square floor bays.

The general arrangement is one conducing to economy in respect of the steel construction, one indication of this fact being furnished by the small number of heavy built-up girders in the steel frame.

The largest members of the kind are those at first-floor level, spanning the large areas on the ground floor for the entrance hall, grill-room, hypostyle hall, and other apartments. Sixteen of these girders have the average weight of from 6 to 7 tons each.

It was originally intended that the present fifth floor should constitute a temporary roof, leaving the fifth and sixth stories to be added later, but in accordance with a later decision these stories were completed at the same time as the remainder of the building.

As may be noted by reference to the perspective, the front walls are set back above the fourth story, the actual distance being 4 ft. 9 in. The arrangement for carrying these upper walls and the stanchions embedded in them is such that the ceilings of the room in the fourth story shall be flush and all girders requiring to be encased shall be situated in the partition walls.

False ceilings are suspended under the floors of the lavatories and bathrooms, affording space for plumbers' work and pipes.

The most weighty stanchions are in the exterior walls, being built up of two 9-in. by 7-in. I-beams connected by a 12-in. by 6-in. I-beam, the result being a stanchion of wide H-section.

This form was adopted with the object of keeping the stanchions within the thickness of the enclosing walls, and to make the exterior face of the masonry not less than 4½ in. clear of the steelwork.

Wind bracing is provided at various points in the form of gusset plates acting as knee braces between the shafts of the stanchions and the flanges of the girders supporting the panels of the enclosing walls.

Thanks to the fact that sandstone was encountered at a short depth below surface level, and capable of withstanding with perfect

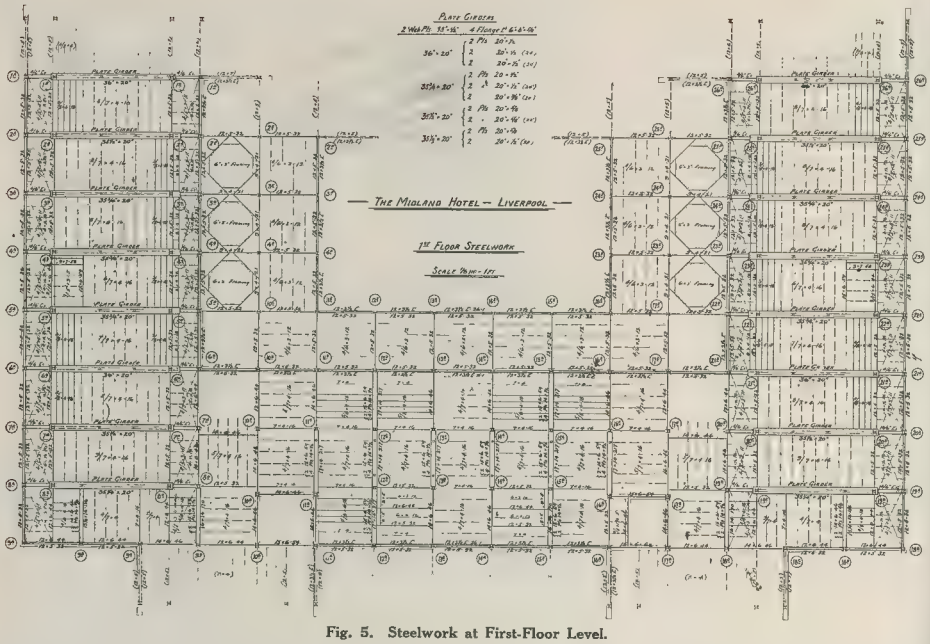


Fig. 5. Steelwork at First-Floor Level.

safety pressures up to 7 tons per square foot, the foundations for the stanchions were of simple character, and formed of grillages, comprising a single tier of I-beams embedded in concrete below the stanchion bases.

The total weight of steel in the new building amounts to 1,770 tons, of which 720 tons, or rather more than 40 per cent. of the whole, is in the form of stanchions.

The amount of work involved in the preparation and erection of the steel frame may be gauged in some measure by the statement that it has required the use of about 230,000 bolts and nuts and 520,000 rivets.

The whole of the steel is of British manufacture, having been supplied and erected by Messrs. Richard Moreland & Son, of London, under the superintendence of Mr. C. V. Childs, A.M.Inst.C.E., who was associated with the architect in the capacity of consulting engineer.

As a safeguard against fire and corrosion the steel frame has been thoroughly protected by concrete and other materials, among which may be mentioned the plaster applied in the decorative work described hereafter.

All the floors are of approved fire-resisting construction, embodying hollow concrete tubes, reducing the dead weight and conducing to the sound-resisting properties of the flooring. The stairways throughout are of fire-resisting construction. The contract for the floors fire-resisting casings, and the hollow partition walls throughout was let to Messrs. B. H. Johnson & Sons, of London.

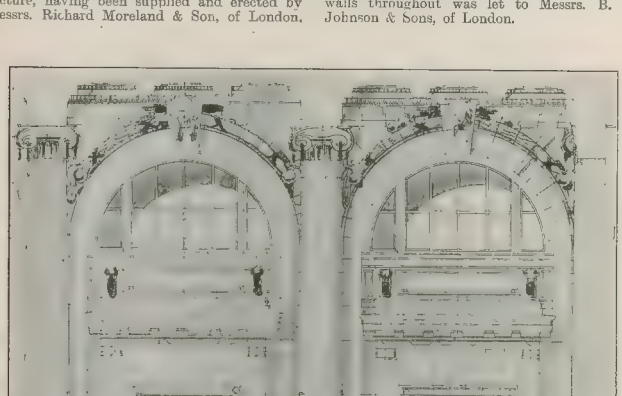


Fig. 6. Hypostyle Hall: Details.

All excavations, drainage, brick and masonwork was carried out by Messrs. W. Thornton Son, of Liverpool, the building contractors.

Bearing in mind the fact that in April, 19 nothing but the bare steel skeleton had be erected, the completion of the building e its complete equipment ready for occupatio in March last is a sufficient testimony to t rapid execution of the work entrusted not onl to the builders, but also to the numerou specialist firms contributing their share t the task of realising the designs of the architec

To deal adequately with the architectur and decorative treatment of the numerou fine apartments, halls, and other spaces in th new hotel would be impossible in an artic such as the present, and we can only attem to give a few brief notes, together with a f typical illustrations of the interior.

In the entrance hall, fountain court, gril room, hypostyle hall, terraces, and corridor on the ground floor, and elsewhere in the build ing, specially selected varieties of marbl have been employed by the architect wi charming effect.

The true purport of the hypostyle ha will not be fully revealed until the entir project has been completed. The hall wi then occupy a central position where its bor rowed lighting and subdued tone will form pleasing contrast to the main hall and fountai court, each directly lighted from the sky. Th fine pillars and general treatment of this ha will help to give that atmosphere of mystery an shade which is so desirable in a large buildin of the kind now under consideration. Th interior is designed in dignified style, executed in English stuc with polished black marb. skirting, base steps, and other details. Th treatment of the hall is shown by Fig. 6, an by one of our plates.

In this hall are some beautifully bronz balustrades, doors, and electric light fittings all specially designed by the architect. Th balustrades and doors, as well as those in th adjoining terrace, were executed by Messr Singer & Sons, of Frome.

The paving of the hypostyle hall is la on a geometrical plan of much artistic mer in white Echaillon and black marbles, and th same treatment is continued on the flooring of the hypostyle hall terrace and the othe terraces in connexion therewith around th fountain court.

The Echaillon marble is of a delicate ligh buff tint, and, although little used so far Great Britain, is very popular among Frenc

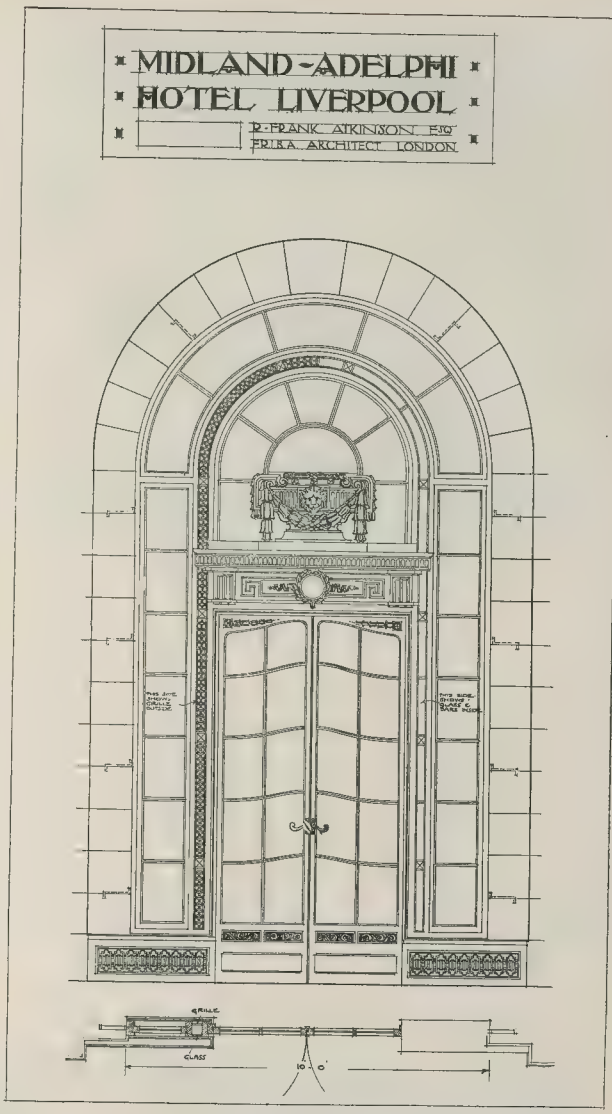


Fig. 7. Typical Window Doorway: Fountain Court.

ects. a well-known building where it be seen being the Opera House, Paris.
ne of the marbles employed came from outh of France, and of the others Brêche is a pink marble of exquisitely soft tone white markings, quarried within the Circle.
corridors and staircases generally are with wall panels executed in delicate tinted white marble with decorative gs and markings of bluish grey. The are bordered by narrow bands of the coloured veined marble known as accia, and finished by a frieze in light marble of a variety hitherto little used hitectural practice. The floors are also ed in marble and carpeted in blue with orders, giving an excellent effect.
the marble work was executed to the s of the architect and under his super- by Messrs. H. T. Jenkins & Son, of y.
French restaurant, occupying a part of ea that will ultimately form the public room of the completed hotel, is treated severely in the Louis XVI. style, the ng being deep cream with mouldings te with appropriate gilding. A view of partment is reproduced as one of our and details are given in Fig. 8. The back- and flat portion of the ceiling panels mauve, the curtains being of camel- d watered silk with woven border in and rose, and the carpet exhibiting a round with blue ribbon design and broad in blue.
ball, banqueting, or grill room is a fine ent in the Empire style, the general tone walls being green of various shades and th the ceiling panels of pale blue. The e of mahogany with appropriate gilding, carpet provided for use when required en and deep gold, the curtains being of reen with gold bordering.
e large columns in this room of vert- Scagliola marble with black bases were y Messrs. Bellman, Ivey, & Carter, Ltd., lon. Each column, with a shaft 17 ft. is formed in one piece and fixed around d concrete cores without showing the ace of a joint. The same material pted for panelling the corresponding in the room.
looring, by Messrs. Morton & Son, is of pended on special springs for dancing, and t so that it can be made rigid when the being used as a banqueting hall or grill-

e middle of the building is the fountain pen to the sky, constituting a cool and retreat in summer-time and providing admission of natural light to the sur- terraces.
alls of the court are built in Portland th some excellently carved masks and and the wide portals are surmounted carved vases. A Hopton-Wood stone alk extends around the grass-plot, in dle of which is a plain lead fountain pton-Wood stone curb.
acious terraces surrounding the foun- t and communicating with the hypostyle l other principal apartments are by arches and domes supported by y simple piers finished in English ithout a single moulding of any kind. ing is harmonious with that in the e hall, and the terraces are provided ne lights executed in wrought and cast ing obscured glazing which gives a lly soft light. For artificial illumi- ectric lamps are furnished on bronze- gs with vert-antico Scagliola placques. tographs of the terraces are given as

awing reproduced in Fig. 7 represents ne large windows enclosing the terrace ne fountain court, and may be taken as f many similar windows elsewhere building. This excellent work was by Messrs. Peace & Norquoy, Ltd., hester, who had the contract for all the interior and exterior windows tel.
tive plaster work has been extensively with admirable effect in the main ts on the ground floor and elsewhere, n plastering has been largely used rts of the building for the twofold f providing a suitable surface finish ing additional protection against fire. orative modelling, carried out to the s designs by Messrs. H. H. Martyn & Co., Ltd., of Cheltenham, is in complete harmony with the general architectural motive, and deserves the highest commendation. Fig. 9 illustrates some of the modelling done by this firm. The execution of the plain and decorative plastering as well as the English stucco work in the hypostyle hall and terrace was entrusted to Messrs. B. H. Johnson & Sons, of London.

The whole of the mahogany fittings, doors, and screens were manufactured by Messrs. Waring & Gillow, Ltd., at their Liverpool works. The large doors in the ballroom are particularly fine examples. The painting and gilding generally throughout the building was executed by the same firm.

On the first, second, third, and fourth floors are arranged suites of sitting, bed, and toilet rooms, all self-contained and entered through a small hall; also suites comprising ante bed and toilet rooms; bed-sitting and toilet rooms for business men; and bedrooms without auxiliary accommodation, but all approached through either a vestibule or double doors to shut off sound from the corridors. All these rooms have furniture designed and fitted as part of the room, and comprising wash-stand, dressing-table, chest of drawers, and wardrobe.

The fifth floor behind the balustrade on the exterior of the building is devoted to staff bed, bath, and toilet rooms, and on the sixth floor are plain bedrooms without fireplaces, but all fitted with radiators and lavatories, the public bath and toilet rooms being arranged in groups at four points.

The decorations of the principal apartments, sitting-rooms, and bedrooms, as well as the furniture, carpets, hangings, electric light, bath and lavatory fittings, and details too numerous for individual mention are, with the exception of those in nine sitting-rooms, in accordance with the general scheme and designs of the architect, to whom fell the congenial task of realising the desire for a palatial building complying in every respect with practical



Fig. 8. French Restaurant: Details.

requirements, and completed down to the smallest detail in the most perfect harmony and taste.

Some of the specialist firms who have participated in this duty under the direction of the architect have already been mentioned. The nine sitting-rooms mentioned above were decorated by Messrs. Hampton & Sons, Ltd., and Messrs. Liberty & Co., Ltd., and Messrs. Waring & Gillow, Ltd., and as these were not in accordance with the general style of the building the architect preferred to abstain from dealing with them.

Three charming sitting-rooms, decorated and furnished by the former firm, are modelled on the styles of the Stuart and Queen Anne periods and on the style prevalent in England during the middle of the XVIIIth century. The attractive character of the room treated in the last-mentioned style is largely due to the manner in which the fireplace is divided off at one end of the room by panelled pillars and the china closets built into the walls on either side of the chimneypiece.

Three sitting-rooms decorated and furnished by Messrs. Liberty & Co. are equally worthy of attention, as also are various examples of bedroom furniture elsewhere in the hotel.

Three sitting-rooms have been decorated and furnished by Messrs. Waring & Gillow in various historic styles, all of which have been adapted to the requirements of a modern hotel.

The lavatory, bath, and toilet rooms are finished with tiled floors and walls executed by Messrs. W. B. Simpson & Sons, of London. The flooring is of grey tint with coloured borders, and is laid with foreign-made tiles similar in appearance to the familiar encaustic variety. The wall tiles are finished with Simpson's patent eggshell gloss surface, which is a pleasant change from the highly-glazed finish of ordinary tiling.

Telephones are provided in all bed and sitting rooms, as well as in the public-rooms, installed by the Post Office Telephone Department, and taking the place of electric bells throughout the building.

The equipment also includes installa of vacuum cleaners, gravity tubes, auton fire sprinklers, and hydrants.

As a last reference to the equipment of hotel we give particulars of the passe and other lifts supplied by the Otis Ele Company, Ltd., of London.

The two passenger lifts for visitors have the vertical travel of about 100 ft., run at speeds of 250 ft. and 300 ft. per mi respectively. The motors and operating m nery are overhead, and the lifting capaci about 1,500 lb., equivalent to the weigh nine or ten persons.

The guides and runners for the cars are m T-section, machined to ensure smooth and s working. Safety appliances of the v clamp type are provided, to operate in the e of excessive speed being attained from any c whatever.

These two lifts are operated from the ca self-centring lever handle switches, the trollers permitting the cars to be run at c fast or slow speed at the will of the attend and providing for an easy start and acce stop to be made without those sudden which are so much disliked by many of lifts.

The other lifts include one passenger for use by the staff and five service lifts various rises and rates of travel from 15 180 ft. per minute, and are operated on automatic push-button system. All the are equipped with indicators showing position of the cars, with electrical gat door contacts, and with all the custo accessories.

While desirous of expressing our appreci of the architectural design as a whole, an unsurpassed mastery by the architect o innumerable details constituting the app ments and equipment of this great hote feel that it would not be right to omit n nition of the credit due to Mr. William T the chief of the Midland Railway H Department, for the preliminary conceptio the project worked out and realised by Atkinson, as well as for the expert aid ren to the architect as the result of long pe experience in hotel management and s intendence.

While the new building and its equip furnishes an excellent illustration of mi hotel construction worthy in every way o architect, and of the artistic, scientific, practical experts who have worked unde direction, the results so far achieved give a foretaste of the ideal to be realised lat the final completion of the project. W informed that the plans for the front bloc now being detailed and that it is hoped this work will be completed within the twelve months. The demolition of the portion of the hotel has already commenced.

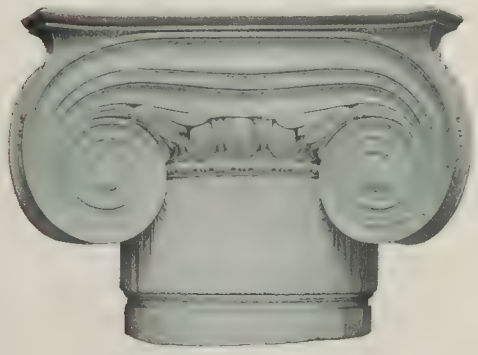


Fig. 9. Capital in the Hypostyle Hall.



Capital in the French Restaurant.

THE BUILDING TRADE.

BUILDERS AND STRIKES.

WITH rumours of a general strike in the building trade floating through the air the builder who has contracts in contemplation or in progress naturally asks of the precautions which may be necessary to avoid disaster.

It is proposed in the present article to examine some of the more important decisions of the Courts in order to see how far a strike clause can be made to protect the employer. Where the contract is silent, it will be taken that the mere fact of delay arising caused by a strike is no excuse for a breach of contract. For instance, it has been held that the charterer of a vessel, having undertaken to provide a full cargo of coals, is not excused by a strike of colliers making impossible to provide a cargo.

Where, however, a building has to be completed "within a reasonable time," it is received that the supervention of a strike might have the effect to extend the reasonable period.

For instance (in another shipping case), a bill of lading specified no time for discharge. During the unloading a strike occurred, which delayed the ship twenty-five days longer than otherwise would have been the case. In these circumstances it was held that the obligation on the consignees was to unload within a reasonable time, and the obligation was discharged if he unloaded in a reasonable time in the circumstances, assuming that those circumstances, as far as they caused delay, were not caused or contributed to by him.

A variety of interesting questions may arise as to the determination even in cases where, to all appearances, the rights and liabilities of parties are all set forth in black and white. Let us borrow and foremost:—"What is a strike?" Suppose an employer suddenly announces his intention to reduce wages by one-half, and, owing to the consequent stoppage of work, he is unable to fulfil his agreement, is he excused? It seems to have been clearly decided that a strike in its legal sense includes a stoppage which may have been more or less voluntary so far as the employer is concerned. Thus to borrow an illustrative form of the law laid down in another "coal case"), a colliery company agreed to supply 4,000 tons of coal to one P., at the daily rate of supply of 150 tons. In the event of a strike the company was not bound to keep up the daily supply. A strike occurred, owing to the refusal of company's workmen refusing to accept a reduction of wages proposed by the company, which strike lasted for four months, during which the company delivered no coal. At the end of the strike P. refused to take any more coal. It was held that the strike was merely a strike, although caused by a threat to lower wages; that the effect of the strike was merely to postpone deliveries; and that P. was bound to accept the coal remaining undelivered. It was also held that the delay was not such as to entitle P. to consider the contract as at an end in the commercial sense (King *v.* Parker (1876), 34 L. T. N. S. 5).

The question sometimes arises whether an ordinary stoppage by the men as if for a day amounts to a strike within the meaning of the clause. In the case of an arbitration between Allison & Co. and Rose Richards, which was heard by Mr. Justice Bigham on November 5, 1903, it appeared that on April 1, 1903, the plaintiffs entered into a charter party to carry a cargo of coal by their steamship to Leghorn. The charter party contained the clause providing as follows:—

"The cargo to be loaded in 130 running hours (excluding Sundays, Custom House, Derby, and local holidays, Easter Monday and Tuesday, Whit Monday and Tuesday). And further:—"Any time lost through strikes, lock-outs, or any dispute between masters and men occasioning a stoppage of pitmen, trimmers, or other hands connected with the working or delivery of the coal for which the steamer is stemmed; or by reason of accidents to mines or machinery, obstructions on the railway or in the docks; or by reason of floods, frosts, fogs, storms, or any causes beyond the control of the charterers, not to be computed as part of the loading time."

The colliers belonging to the colliery from which the coal was taken gave notice that they would work on Good Friday and the next day, but that they would take the Wednesday after Easter Monday, and on that day all work was stopped. It was contended on the part of the plaintiffs that demurrage was payable in respect of the Wednesday upon which the men refused to work, inasmuch as it was not a "holiday" within the meaning of that term, as used in the charter party. Further it could not be said to be a stoppage caused by a strike, as there was no dispute with the masters, who had done nothing either by way of approval or disapproval. It was argued on the other side that, although this Wednesday may not have been a "holiday" within the meaning of the charter party, yet the stoppage on that day was a stoppage *ejusdem generis*, with loss of time caused by strikes, lock-outs, etc. The late Mr. Justice Wright gave judgment for the defendants. He said:—"This was a holiday not within the control of the masters, and was, therefore, not within the exception contained in the charter party. . . . I am inclined to think, however, that a holiday taken by the men without the concurrence of the masters is sufficiently *ejusdem generis* with stoppage of work caused by a dispute between masters and men, and perhaps of strikes, and therefore within the exception."

Finally, it is useful for those who contemplate bringing pressure to bear upon a builder to know that he is generally well protected against strikes. For instance, building and engineering contracts usually contain some such clause as this:—

"The contractors are to complete the whole of the works (except papering and painting, or such other works as the architect may desire to delay) within . . . calendar months after the commencement of the same, unless the works be delayed by reason of any inclement weather, or causes not under the contractor's control or in case of combination of workmen, or strikes, or lock-out affecting any of the building trades, for which due allowance shall be made by the architect."

Sometimes the question whether a strike has caused delay is left to the decision of the architect. For instance, Clause 25 of the Form of Contract sanctioned by the Royal Institute allows the architect to extend time if works are delayed "by reason of any local combination of workmen, or strike, or lock-out affecting any of the building trades." If a dispute arises with the architect in regard to this matter the dispute may be referred to an arbitrator acting pursuant to Clause 32 of the same contract.

THE MEDIÆVAL PLUMBER.

THE mediæval plumber occupied a somewhat indefinite position as a craftsman. From the nature of his calling he was frequently required to work by the piece. The records of these jobs afford us little aid in attempting to appraise the value of his labour. It would be supposed that when working by time a comparison of the wages earned would enable us to easily estimate his position. But here again we find a difficulty in the fact that his wages varied widely. Sometimes a plumber would be paid 5d. a day, at another time he received 11d., his assistant, or "server," getting 4d. to 6d. a day.

The mediæval plumber often cast and recast the lead in "fyllettes." We read of the purchase of bellows for the fire in which the lead was melted, the "mold" and "panne" used, and "the svve to syfte their sande in." (Public Record Office Exch. Acc. 488-28-30.) The mould mentioned above was made by a carpenter, and was of sufficient value to be conveyed about from one scene of operations to another.

The plumber operated on cisterns, pipes, gutters, etc., and the purchase of lead, solder, nails, and wood for his fire, known as tallwood or byllettes, are common items in mediæval builders' accounts.

In the records of the Church of St. Mary-at-Hill, near London Bridge, printed by the Early English Text Society, will be found a plumber's bill for a large quantity of lead supplied in "quarters" to the churchwardens. In this volume, too, we have an account of money laid out for a shoulder and a breast of mutton for the plumbers and of "brekfastys" prepared for them.

In some accounts (Rec. Off. MS. 489-9) we read of the engagement of a plumber to work at Carnarvon and of his ride on horseback to Bangor to fetch his tools, the expenses of the journey being defrayed by his new employer.

In another set of accounts (MS. 488-27) we find the cost of carriage of the tools of the plumbers set down as paid by the employer.

In another series of accounts (489-7) is an interesting little story of the failure of two plumbers to keep an appointment. We may summarise the details as briefly as possible:

On June 20, 1532, Rauf Ratclief, who was employed as a labourer at Beaumaris Castle in North Wales, was sent by John Karvar, the "master of the workes," to the Abbey of Whalley in Lancashire to fetch two plumbers. Ratclief rode all the way on horseback, the cost of the hire of the animal, 3s. 4d., being defrayed by the master of the works, the messenger himself receiving also 3s. 4d. Ratclief delivered his message, but without success, for the record tells us that the two plumbers failed to "appere at Lammas" (August 1st). A second messenger was despatched. He, too, was a labourer, and his name was Thomas Haltmegge. He, too, rode a horse "lente" him by the master of the works, and, like Ratclief, he also received 3s. 4d. for himself, the same sum being paid again for the hire of the horse. Haltmegge was more successful, and the two plumbers arrived at Beaumaris Castle on August 21, where they worked for three days, one receiving 6d. a day and the other 5d. The failure of the plumbers to appear when wanted so much incensed John Karvar that on August 28 he "bounde the above-named plummers to appere there agayn at the Feast of Ester or within viii. dayes then nexte followyng then & there to work vpon the Kynges workes & not to departe withoute lycens, gyvyng them towards their costes homewardes xvid."

Why plumbers should be required to come all the way to North Wales from an abbey in the north of Lancashire, a distance there and back, as the record itself tells us, of 200 miles, is not clear. The above, however, is not the only instance of plumbers being fetched from this abbey. In some building accounts, numbered 488-27, we read of a man being sent to fetch two plumbers from Whalley Abbey to do work at Hardelagh, also about 100 miles from Whalley. In this case the cost of the plumbers' journey "cumyng and goyng" amounted to 6s., and the men worked for six weeks. The names of these two men were respectively Nicholas and Robert Whalley (the surname evidently a corruption of Nicholas and Thomas *of* Whalley). Of the two Nicholas held the higher place, but both men, if we may judge from the wages paid them, were singularly expert craftsmen. Nicholas received the unusual wage of 11d. a day and Robert 10d.

REPERTORY THEATRE, LIVERPOOL.

This building, recently opened, is a reconstruction by Professor Adshead, of the old Star Theatre. At the back of the new stage is a plastered wall, lighted with electric points, on to which coloured lights can be thrown from a baton floating in the flies, so as to give a novel effect of mysterious distance. The decoration is Renaissance in character, mainly of white and gold: the foyer, beneath the pit, represents an old Italian garden-terrace. There are two box tiers, and two of the boxes have balconies.

LABOUR IN THE BUILDING TRADE.

EIGHTEEN separate trade unions, representative of every section of workers engaged in the building and woodworking industries, took part in a meeting on the 5th inst. in Trafalgar-square to agitate for improved conditions of labour, shorter hours, and increased pay. The meeting was organised by the Woodwork Joint Trade Movement Committee, and about 7,000 people were in the square.

Mr. S. Stennett, General Organising Secretary of the Amalgamated Society of Carpenters and Joiners, said that the Committee were prepared to recommend an increase of a half-penny an hour, beginning in the first week in September.

Other speakers stated that several sections of workers had given in their notices to the employers, and the first batch of notices would expire on June 10.

A labour correspondent writes to the *Manchester Guardian*:—"All the trade unions engaged in the building trade are taking joint action on national lines to secure an increase of wages. District Conferences between employers and workpeople have been arranged at all the important centres to discuss the demands, but in almost every case the employers seem disposed to restrict them. In common with the shipbuilders, the employers in the building trade contend that the coming into force of both the unemployment and sickness sections of the Insurance Act will place on their trade burdens as great as it can bear at the present time, and this is assigned as a reason for refusing the men's request. No settlement will be satisfactory to the men unless it is a national one.

All the negotiations are timed to end during the month of May, so that if a strike should be necessary it will begin in the first week of June."

According to the *Western Mail*, no arrangement has yet been made as to the date upon which the Conciliation Board will meet to adjust the questions outstanding between the master builders of Cardiff and their workmen. The plumbers have agreed to the provisional arrangement whereby their Association will come within the scope of the Conciliation Board for the purposes of the present negotiations, but no reply on this phase of the position has been received from the painters, and the meeting of the Conciliation Board cannot be fixed until this reply has been received.

The labourers' section have signed their agreement with the Master Builders' Association. Besides providing an increase of a half-penny all round, with a minimum for general labourers of 6d. per hour and 6½d. for scaffolders and men on special work, the agreement deals with overtime, granting overtime at the rate of time and a quarter for the first two hours, time and a half for the third, fourth, and fifth hours, and double time for longer periods. A code of working rules has also been set up between the parties.

Builders' labourers at Swansea threaten a strike on the question of a demand for an increase of a halfpenny per hour. The men say that their demand has been flatly refused, and the question is being placed before the General Council of the Gasworkers' and General Labourers' Union, and permission is asked to strike. About 250 men are concerned.

Altogether 118 Dunfermline joiners came out on strike on the 1st inst. It was reported that about one dozen were working.

Motherwell joiners are continuing their agitation for an increase of wages. A request was made for an additional ½d. per hour, to take effect on May 3, and another ½d. six months later.

Stirling master joiners have agreed to advance the wages of their workmen from 8d. to 8½d. per hour.

Girvan plumbers have struck work. They demand a penny per hour increase in their wages.

It is stated that the offer of the London Master Builders' Association to the disaffected workmen to increase their wages a halfpenny an hour on condition that they withdrew their demands for a increase of 1½d., a reduction of summer working hours from fifty to forty-seven, and double pay for overtime, has been declined by the men. The notices which have been handed in, due to expire during the first and second weeks of June, are therefore still in operation.

TOWN HALL, OLDHAM.

Plans have been passed for an extension of the Town Hall, to cost about 26,000*l*. The result of the scheme will be to bring the various departments of the Corporation, now carried on in different buildings, under one roof. The architects are Messrs. Taylor & Simister, of Oldham.

GENERAL BUILDING NEWS.

ALL SAINTS' CHURCH, EAST FINCHLEY.

The Bishop of London consecrated on Monday evening (6th inst.) the chancel section of All Saints' Church, East Finchley. This section, which consists of chancel, Lady Chapel, north transept, vestries, and heating chamber, completes the church of which the nave portion was built in 1891. The church is XVth century, perpendicular in style, and externally is built of red bricks, Bath stone being used for all doorways, windows, strings, buttress heads, copings, bell gable, etc. The roofs are covered with red tiles. Internally the nave arcade and columns are of Bath stone and the walls red bricks. The chancel—the east end of which is apsidal and filled in with five two-light windows—is richly treated with stonework, the scheme of windows being carried along the north transept and Lady Chapel arcades as stone panelling, the panels being filled between the stone mullions with brickwork covered with plaster. A carved oak screen divides the nave from the chancel. The main dimensions of the church are:—Length of chancel, 52 ft. by 25 ft. wide and 52 ft. high to the roof ridge; length of nave, 80 ft. by 25 ft. wide and 54 ft. high. The height to top of cross on bell gable is 66 ft. Messrs. Cutts, of Southampton-street, Strand, W.C., are the architects, and the chancel section of the work has been carried out by Mr. A. Porter, of High-road, Tottenham, N.

TRAINING COLLEGE, BARRY.

This college for women students is to be erected on a site at the Buttrills, overlooking Barry Dock and the Bristol Channel, from the designs of Messrs. Teather & Wilson, FF.R.I.B.A., architects, of Cardiff. The college will consist of three blocks, the centre building being the education block, and the blocks on either side being the hostels, each hostel providing accommodation for sixty-five students. The contract has been secured by Messrs. W. Thomas & Co., builders, of Cardiff.

CARNEGIE LIBRARY, MIDDLESBROUGH.

This new public library has been erected at a cost of about 18,000*l*. from the designs of Mr. Edwin Cooper, F.R.I.B.A. The lending department will accommodate 40,000 books, and on the first floor are the reference, law, and patents libraries. The building is of fire-resisting construction, and the contract was carried out by Mr. Henry McNaughton, builder, of Middlesbrough.

SCHOOL ENLARGEMENT, BATTERSEA.

We understand that Mr. A. H. Ryan Tenison, F.R.I.B.A., has been commissioned by the Governors of Sir Walter St. John's Schools, Battersea, to prepare a scheme which has been approved by them and is now before the Board of Education and Local Education Authority for enlargement of the said school.

TRADE NEWS.

Messrs. Mason, Maclaren, & Co., 26 and 27, Bush-lane, and 3, Suffolk-lane, Cannon-street, London, E.C., have recently been appointed buying agents for a Vancouver firm, who will be purchasing large quantities of all kinds of building materials, both external and internal, including electrical fittings, etc.

Messrs. E. A. Roome & Co., of 36, Basing-hall-stret, E.C., are carrying out an extension to the Convent of St. Mary of Nazareth, Edgware, under the supervision of Messrs. James Brooks, Son, & Adkins.

Messrs. Patman & Fotheringham, Ltd., of 100 and 102, Theobald's-road, London, W.C., have secured a large contract for building new offices at Nos. 48-52, Fleet-street, E.C., for the Norwich Union Fire and Life Insurance Society, Ltd. (See p. 543.)

APPLICATIONS UNDER LONDON BUILDING ACTS, 1894 to 1909.

AT Tuesday's meeting of the London County Council the following applications under the London Building Acts were dealt with. (The names of the applicants are given in parentheses):—

Lines of Frontage and Projections.

Bethnal Green, South-West.—Erection of buildings on the western side of Coventry-street, Bethnal Green (Mr. P. K. Allen).—Consent.

Hampstead.—Erection of three buildings on the north-eastern side of Eldon-road, Hampstead (Mr. S. C. Lathbridge for Mr. J. Russell).—Consent.

Lewisham.—Retention of a wooden coal office in the railway yard on the southern side of St. Mildred's-road, Lewisham (Messrs. Martin Brothers).—Consent.

Lewisham.—Retention of porches and bay windows to five houses on the western side of Verdant-lane, Catford (Mr. J. Hughes).—Consent.

Marylebone, East.—Showcase in front of No. 34, Finchley road, St. Marylebone (Dorland Agency, Ltd.).—Consent.

Paddington, South.—Additional story over projecting one-story portion at No. 97, Inverness terrace, Paddington (Mr. H. Redfern for Mrs. C. Bubb).—Refused.

Strand.—Projecting sign at No. 3, Piccadilly-circus (Mr. H. M. Wakley for Mr. Norris).—Refused.

Walworth.—Iron and glass shelter at the entrance to a cinematograph theatre upon the site of Nos. 42 and 44, Old Kent road, Walworth (Messrs. Z. King & Son).—Refused.

Wandsworth.†—Addition at No. 175, Longley road, Tooting (Mr. J. E. Jefferson).—Refused.

Wandsworth.†—Retention of a wood and glass building in front of the coachhouse at No. 40, Streatham-hill, Wandsworth (Mr. H. G. Finch).—Consent.

Whitechapel.—Addition to the Alexandra wing of the London Hospital on the north-eastern side of Turner-street, Whitechapel (Mr. J. Oatley for the Governors of the London Hospital).—Consent.

Lines of Frontage and Construction.

Clapham.—Showcase in front of No. 116, Clapham Park-road, Wandsworth (Messrs. H. Bignold & Idle).—Refused.

Finsbury, Central.—Temporary wooden rack for the storage of ladders on the forecourt of No. 7, Pentonville-road, Clerkenwell (Messrs. J. H. Heathman & Co.).—Consent.

Hammersmith.—Retention of a steel and concrete gangway over the public way of Wood-lane, Hammersmith, at the Wood-lane Exhibition (Mr. F. White for Mr. Imre Kiralfy).—Consent.

Line of Frontage and Building for the Supply of Electricity.

Wandsworth.—Additions to an electricity transformer-station on the southern side of Tooting Bec-gardens, Streatham (Mr. W. Stanley Peach).—Consent.

The recommendations marked † are contrary to the views of the Metropolitan Borough Councils concerned.

PROJECTED NEW BUILDINGS IN THE PROVINCES.*

BAINSFORD (Falkirk).—Re-erection of hall and offices, Smith-street (1,000*l*.); Trustees, United Free Church, Bainsford.

Barry.—Training college (38,000*l*.); Mr. William Thomas, builder, Canton.

Blairlogie.—Proposed housing accommodation for 120 miners; Secretary, Manor Powis Coal Company.

Bristol. — Extensions to Colston School (2,450*l*.); the Governors.

Burnley.—Foundry for Messrs. G. H. Pemberton & Co., loom-makers.

Chasetown.—Completion of mining institute (5,330*l*.); Messrs. Mason & Son, builders, Hednesford.

Colbren.—Proposed 100 houses; Mr. Evans Bevan, Neath.

Dundee.—Reconstruction of Morgan Academy (10,500*l*.); Dundee School Board Committee.

Dunfermline.—School clinics for Carnegie Dunfermline Trust (20,000*l*.); Messrs. James Stewart & Sons (mason work), Dunfermline.

Eastbourne.—The following plans have been passed:—Alterations, New Hotel, for Mr. C. S. James; Messrs. M. Martin & Sons, builders. Additions to laundry, Station-road, for the Willingdon Laundry Company, Ltd.; Mr. H. B. Ransome, architect. Addition, Longstone Hall, for the Building Committee of the Assembly of Brethren; Mr. A. W. Vennes, architect. Four houses, Mountney and Charleston roads, for Mr. A. Avard; Mr. W. F. Box, architect. Alterations, Lamb Hotel, for Messrs. Harvey & Son; Mr. Andrew Forc, architect. Addition, "Angles," Royal-parade, for Mr. J. H. Taylor; Messrs. Miles & Selmes, builders. Additions, "Astonville," Motcombe-road, for Mr. P. H. Mold: Messrs. Gibbons Brothers, builders. Additions to "Bolsover," Bolsover-road, and "Glenrise," Carew-road, for Mr. B. Earp. Additions to premises, Bath-road, for Mr. C. Godfrey; Mr. P. D. Stonham, architect; Mr. F. S. Shelley, builder.

Eccles.—A plan has been lodged for a picture house, Eldon-place, Patricroft, by Mrs. Bennie.

Edinburgh.—Additions to works, Scienne road, for Messrs. Bertrams, Ltd.; clubhouse, Wardie-avenue, for the Edinburgh Women Students' Athletic Club.

Elland.—School and completion of church (5,000*l*.); Vicar, All Saints', Elland.

Elvet Moor.—Power sub-station; Secretar

* See also our list of Competitions, Contracts, etc., on another page.

ity of Durham Electrical Power Distribu- Company, Ltd.
ex.—School, Woodford (400 places), and gement of school, Richmond-avenue, Shoe- ess (300 extra places); Mr. J. H. blas, Secretary, Education Committee, ty Council Offices, Chelmsford.
ghington.—Parish hall; Mr. G. Walesby , architect, Darlington; Messrs. Scott, rs, Aycliffe.
lbeach.—Alterations to premises, High- , for the Lincoln and Lindsey Banking any.
ve.—Plans have been passed for two s and one house and shop, Bolsover-road, Mr. J. J. Cooper, and four houses, nce-gardens, for Mr. P. B. Hunter, on of Mr. A. Lewer. A plan has been d for a kinematograph factory, Wilbury by Mr. J. P. Briggs, on behalf of the al Colour Kinematograph Company, Ltd. ntington.—Proposed 5-600 houses for the on Collieries Company.
ton.—Dairy and hostel (9,390*l.*); Archi- o the Education Committee, Lancaster y Council, Preston.
hton Buzzard.—Remodelling of post- Mr. T. Bishop, architect, Leighton rd; Messrs. Cook & Sons, builders, Ash reet, Leighton Buzzard.
rpool.—Library, Old Swan (1,900*l.*); Mr. Alexander, Building Surveyor, Town Liverpool.
estoft.—House (400*l.*); Mr. E. C. Aller- rchitect, Lowestoft.
inge.—Infirmary and nurses' home); Mr. R. Lonergan, Clerk, Elham ians, Folkestone.
erton (Driffield).—School; Mr. A. Beau- Surveyor, East Riding of Yorks County l, County Hall, Beverley.
lle's Cross.—Laundry for the Co-opera- aundries, Ltd.
Malden. —Special subjects centre); Messrs. Cropley Brothers, builders, treet, Epsom.
port (Mon).—Offices, Corporation-road; . C. Bishop, Electrical Engineer, Town Newport. Extensions to County Council ; Mr. William Tanner, Surveyor, County l Offices, Newport.
hampton.—Plans have been passed as :—Warehouse, Bull Head-lane, for Mr. Cleaver: three houses, Ardington-road, . G. F. Sharman; five houses, Sand- n-road, for Mr. W. C. Throssell; four Harborough-road, for Mr. Berrill.
n Brierley.—Children's home (1,905*l.*); E. Helmsley, Clerk, North Brierley of Guardians, Clayton, Bradford.
rwich.—Twenty-four houses (170*l.* each); ohn Brooke, Surveyor, Council Offices, rich.
nden (South).—Enlargement of school ; Mr. G. Brown, builder, Maidstone- Grays.
am.—Schools (2,500*l.*); Trustees, Regent- Congregational Church, Oldham.
stry.—School (4,925*l.*); Messrs. J. Dallow builders, Blackheath, Birmingham.
roke (Ireland).—Baths, etc. (13,000*l.*); or, Urban District Council Offices, Pem-
on.—School (5,000*l.*); Rev. C. W. W. y, St. Jude's Church, Preston.
enstall.—Extensions to electricity works: Bryland & Preston, builders, New titleborough, Manchester.
(Herts).—School (fifty places); Mr. Smith, Surveyor, Herts County Council, l.
Albans.—School, site of St. Paul's Trustees, St. Albans Adult Schools, ans.
ld.—Coroner's court and mortuary, -street and Wicker-lane (5,000*l.*); Mr. P. Edwards, architect, Town Hall, l. The following plans have been —Four houses, Chesterfield-road, for Laver; additions to premises, Carlisle- or the Spartan Steel Company, Ltd.; ouses, Skelwith and Brathay roads, for ank Gosling: additions to premises, dow-street, for Messrs. S. Peace & d.; additions and alterations, Spring Boston-street, for Messrs. Tennant , Ltd.; fourteen houses and motor- Elham and Banham roads, for Messrs. E. Sadler; additions and alterations, shire Arms public-house, Sorby and streets, rebuilding "New Inn," Car- reet, and alterations, Stag Inn, lane and Wilson-street, for Messrs. W. Ltd.; six houses, Pickering-road, for Hughes; armour-plate and projectile awke-street, for Messrs. Vickers, Ltd.; ouses, Goddard Hall-road, for Mr. rry; eight houses, Priestley-street, for A. Green; additions and alterations, ink, for Messrs. C. T. Skelton & Co., ir houses, Ulverston-road and Farm- Mr. James Sivil.

Shrewsbury.—Sixty-two houses (10,700*l.*): Mr. W. C. Eddowes, Surveyor, Town Hall, Shrewsbury.
Sonning Common.—School (2,307*l.*); Messrs. A. Cox & Sons, builders, Abingdon.
Sunderland.—Additions at hospital (6,000*l.*): Mr. T. Young, Surveyor, Rural District Council Offices, Sunderland.
Swilley (Devonport).—Proposed extensions to Borough Hospital (10,000*l.*); Mr. J. F. Burns, Surveyor, Town Hall, Devonport.
Thirsk.—Constitutional club and public hall, Westgate; Mr. W. H. Brierley, architect, 13, Lendal, York.
Tilbury.—Manual centre (2,932*l.*); Messrs. Bruty & Son, builders, Hornchurch, Essex.
Wardle.—Weaving shed for the Crossfield Manufacturing Company, Ltd.
Warrington.—A plan has been passed for a bakehouse, etc., Black-yards, for Messrs. Greenall, Whiteley, & Co., Ltd.
Washington.—Remodelling and brickworks for Mr. W. Lowry, of Messrs. J. & W. Lowry, contractors, Corporation-street, Newcastle-on-Tyne.
Waterfoot.—Additions to Baltic Mill for Messrs. Stansfield & Co.

LONDON COUNCILS.

Battersea.—The carriageway of a portion of Battersea-rise is to be repaired with granite macadam at an estimated cost of 118*l.* Repairs are also to be carried out to the carriageways of Strath-terrace and Boutflower-road with tarred slag macadam at estimated costs of 118*l.* and 257*l.* respectively. The surfaces of the carriageways of forty-two roads are to be tarred at an estimated cost of 802*l.* Electricity mains are to be extended in four roads at an estimated cost of 167*l.* A plan has been lodged with the London County Council by the Morgan Crucible Company, for the erection of a factory in Fords-place.

Bermondsey.—The following plans have been passed:—Messrs. Barlow & Roberts, 15, Red cross street, Southwark, S.E., factory, site of No. 224, Tower Bridge road; Messrs. G. Potton & Son, Nos. 2 and 4, Riley-street, Bermondsey, S.E., on behalf of the proprietors of Butler's Wharf, Ltd., Shad Thames, warehouse on site of Nos. 1, 2, and 3, Curlew-street; Mr. W. G. R. Sprague, architect, Criterion-chambers, Jermyn-street, W., cinematograph hall, Irwell-place, Rotherhithe.

Bushey.—The County Surveyor of Hertfordshire has been instructed to carry out kerbing works and improving the footpath of Falconer-road, at an estimated cost of 130*l.*

Camberwell.—New floors are to be constructed by direct labour to cover the Council's first-class swimming-baths at Church street and Dulwich, for the winter season. The tender of Messrs. Manders & Co., at 1,454*l.* 5s. 10d., has been accepted for kerbing, channelling, providing foundations for asphalt paving, road work, etc., in part of Red Post-hill.

Croydon.—The County Council has accepted the tender of Messrs. J. Smith & Sons, Norwood, S.E., at 1,710*l.*, for the erection of a boiler-house and chimney-shaft at the Borough Hospital at Waddon. Plans have been passed for Messrs. Paish, Tyler, & Co., Ltd., 5, Station-road, for four houses, Sefton-road; also for the Stroud Green House, Ltd., 30a, George-street, for three houses in Blackhorse-lane, and six houses in Sissinghurst-road.

Deptford.—A portion of the carriageway of Grove-street is to be paved with redressed granite setts and wood-blocks, at an estimated cost of 1,717*l.* Six other roads are to be paved with asphalt at an estimated cost of 2,554*l.* A plan has been passed for Messrs. Oldman & Sons for the erection of thirty-eight houses in Troutbeck-road, and twelve houses in New Cross-road.

Hackney.—Two-thirds of the estimated costs of the work having been obtained, the paving of a portion of Hertford-road as a new street, and the passage leading from Reading-lane to Florfield-road, are to be carried out at estimated costs of 229*l.* and 124*l.*, respectively. Plans have been lodged with the London County Council by Mr. C. G. F. Rees for the erection of a block of buildings on the western side of Clifton-grove, Graham-road. The following plans have been passed:—Messrs. J. & J. Dean, buildings, Theydon-road; Mr. J. Tennant, factory, Hertford-road; Messrs. Sheffield Brothers, additions to factory, Bruns wick-place, Farleigh-road; Messrs. O. & L. Chillingworth, twenty-two houses off Upper Clapton-road.

Islington.—Repairs are to be carried out to the carriageways of five roads, at an estimated cost of 775*l.* Dowrey-street is to be made-up and paved as a new street. Repairs are to be carried out to the carriageways of Highbury-crescent and Russell-road, at an estimated cost of 206*l.* The wood-paving in Highbury-grove, Hornsey-road, and Holloway-road, is to be renewed and repaired at an estimated cost of 1,600*l.* The carriageway of Fonthill-road is to be repaired at an estimated cost of 156*l.* The sewer in Mildmay-grove is to be reconstructed with 9-in. stoneware pipes encased in Portland cement concrete, at an estimated cost of 365*l.* The brick sewer in Seven Sisters-road is to be repaired at an estimated cost of 350*l.*

Kensington.—The carriageway of Ansdell-street is to be repaved with Kensington clinker blocks at an estimated cost of 90*l.* Tenders are to be invited for renewing the wood-paving in six roads and laying new wood-paving in two other roads. Plans submitted by Messrs. Joseph & Smithem, architects, 83, Queen-street, Cheapside, E.C., for the erection of a building at the rear of 45, Edwardes-square, have been approved.

Lewisham.—Tar-paving works are to be carried out in various streets in the Borough at an estimated cost of 172*l.* Plans have been lodged with the London County Council by Mr. C. T. Standen for six houses, in Brockley-rise. Plans have been passed for Mr. A. H. Attwater for the erection of a picture palace in Brockley-road.

Marylebone.—The tender of the French Asphalte Paving Company has been accepted by the Borough Council for carrying out asphalt works in Church-street and North-street at 13s. per super. yard; as has also the tender of the Val de Travers Company for carrying out similar work in Bird-street, at 10s. 6d. per super yard.

Rickmansworth. — London-road is to be diverted at Batchworth-hill at an estimated cost of 500*l.*

Southgate.—The Surveyor has been directed to prepare plans and estimates of the probable cost of making-up Cannon-road. The following plans have been passed:—Mr. A. Arnott, four houses, Conway road; Messrs. Edmondsons, Ltd., three houses, Queen's-avenue, Winchmore Hill; Mr. W. J. Keene, jun., twenty-four houses, Hazelwood-lane, Palmer's Green.

Wandsworth.—A portion of the footpath on the north-eastern side of Chestnut-grove, Balham, is to be kerbed with new 12-in. kerb and repaved with artificial stone, at an estimated cost of 100*l.* A portion of the footpath of Valley-road, Streatham, is to be similarly paved, and a portion of the existing kerb relaid with a new kerb fixed where necessary, at an estimated cost of 142*l.* A plan and specification submitted by the Borough Engineer has been approved, and tenders are to be invited for paving part of the carriageway of Long-road, Clapham-common, outside the tramway tracks and margins, with granite setts, relaying the kerb on the southern side of the road, and restopping the existing tar-paved footpath. Tenders are further to be invited for wood-paving and other works in Mitcham-lane and Southcroft-road, Streatham, Wimbledon-road, Balham, and Clapham Park-road, Clapham South, also for repair works in a part of Prince's-road, Southfield. The following plans have been passed:—Mr. C. Banks, four houses, Sutherland-grove, Southfield; Mr. T. C. Ranger, additions, Gordon Dene, Prince's-road, Southfield, and two houses and motor garage adjoining; Messrs. Swain & Selley, forty-five houses, Brudenell-road, Balham; Mr. F. T. Dear, buildings, Hill Side, Atkins-road, Clapham South; Messrs. L. & W. Whitehead, two shops, High-street, Clapham; Messrs Chapple & Utting, four houses, Ockley-road, Streatham.

Westminster.—Various works are to be carried out in Grosvenor-road at an estimated cost of 140*l.* The tender of Messrs. Love & Co., Exeter-street, Strand, W.C., has been accepted, at 84*l.* 6s. 8d. and 412*l.*, for carrying out repairing and painting works at the public urinals and underground conveniences in the Borough. The City Council has granted the application of Mr. Claude W. Ferrier, architect, 11, Waterloo-place, S.W., for consent to the construction of vaults at 12, Waterloo-place and 30, Charles-street, subject to a clear space between the surface of the carriageway and the top of the vaults of 27 in., and the vaults being specially strengthened to carry vehicular traffic. Plans have been lodged with the London County Council by Messrs. Metcalf & Grieg to erect a building on the site of Nos. 1 and 2, Clare-market.

Wimbledon.—The Borough Surveyor has been instructed to submit estimates of the cost of making-up the back passages of each block of houses on the Ashen-grove Estate. A proposal is on foot to set back the kerb-line and make-up the carriageway of a portion of Durnsford-road; also for the laying of new sewers in Park-side and Queensmere-road, at an estimated cost of 273*l.* Plans have been passed for Mr. H. W. Rickard for the erection of four houses in Dora-road; also for Messrs. Ryan & Penfold, for houses in Durnsford, Arthur, Ryfold, and Strathmore roads.

METROPOLITAN ASYLUMS BOARD.

AT the fortnightly sitting of this Board on Saturday the following matters were dealt with:—

Leuvesden Asylum.—A letter was received from the Local Government Board stating, with reference to the proposal to provide bridges at this asylum, at an estimated cost of 7,000*l.*, that, having regard to the increasing number of infirm cases at the asylum, they will raise no further objection to the provision of some additional means of escape in case of fire, but that they are not satisfied that it is necessary to incur the expenditure proposed for this purpose; and suggesting that tenders should be invited from selected engineering firms on a brief description of the requirements only, leaving the tenderers a free hand as to detail, so that stock materials could be used, as the Board are advised that this course would prove more economical than inviting tenders upon a specification of an inelastic character and with due care should prove equally satisfactory.

Quantity Surveyors.—Messrs. W. T. Farthing & Son were appointed to take out the quantities in connexion with proposed work at Darenth Asylum, at a commission of 2½ per cent. on the amount of the accepted tender.

Accepted Tenders for Works.—The following tenders for works were accepted:—Erection of wall at casual ward, Mr. W. Hussey, 229*l.*; cleaning and painting work at East Cliff House, Margate, Mr. H. H. Inns, 36, Camomile-street, E.C., 297*l.*; repairs to roads, etc., at Northern Hospital, Mr. E. Greenfield, Bush Hill Park, Enfield, 186*l.* 10s.; repairs to roads, etc., at South-Western Hospital, Messrs. Chittenden & Simmons, Maidstone, 201*l.* 3s. 6d.; installation of lifts at Tooting Bec Asylum, Titan Lift Company, 18, Red Lion-street, W.C., 420*l.*; cleaning and painting works at Tooting Bec Asylum, Mr. H. H. Inns, 1,025*l.*; heating apparatus at the Downs School, Mr. L. Hill, Edgehill, Liverpool, 674*l.* 15s.

LEGAL COLUMN.

Workmen's Compensation.

The case Rex *v.* Templer, noted by us January 5 last, when before the Divisional Court, has been carried to the Court of Appeal. The case is chiefly of importance as illustrating the litigation that is caused by drawing Acts of Parliament in loose terms with ambiguous language. The case arose under the Workmen's Compensation Act, 1897, but is of application under the Act of 1906. A workman was injured in March, 1907, and had received compensation from his employers, a memorandum of which was registered. There was a representative Committee in existence which had dealt with the case in various stages, and in September, 1910, had made an award of 1d. a week to keep the claim alive. In February, 1911, the workman applied to the County Court for a review of this last award, and the question for the Court was whether the Committee or the County Court Judge as arbitrator was the proper tribunal to deal with the case. The County Court Judge held that he had not jurisdiction; the workman then appealed to the Court of Appeal. The Court of Appeal held that the appeal ought to have been taken to the Divisional Court. The Divisional Court held that a review was a fresh matter, and that the County Court had jurisdiction; on a further appeal the Court of Appeal found that the question was difficult to determine owing to the ambiguous wording of the Act, but on the whole agreed with the Divisional Court. The case will therefore go before the County Court Judge, and thus there will have been five trials over a matter which the Court of Appeal characterised as wholly unimportant which way it was decided. The facts are set out in full in our former note.

LAW REPORTS.

(COURT OF APPEAL.)

(Before Lords Justices VAUGHAN WILLIAMS, FLETCHER MOULTON, and FARWELL.)

Validity of Architect's Certificate: Ashwell & Nesbitt, Ltd. *v.* Allen & Co.

THIS case came on for hearing on the 1st inst. upon the defendants' appeal from a judgment of Mr. Justice Coleridge.

The plaintiffs, Messrs. Ashwell & Nesbitt, Ltd., of Leicester, brought the action against Messrs. Allen & Co., of Westminster, to recover 377*l.* for work done and material supplied to a building in Regent-street, London, under a contract dated May 12, 1909, under a certificate of Mr. F. T. Verity, the architect for the building owners, Messrs. Lewis & Allenby. The defendants were the general contractors for the work, which was that of re-erecting premises belonging to the Crown in Regent-street, and the plaintiffs were sub-contractors for the heating and hot-water installation to the amount of 3,320*l.* Various payments were made to the plaintiff on account up to March, 1911, falling short of the sum due by 377*l.*, of which sum the defendants denied liability. Defendants alleged that the work was done under contract, that it was a term of the contract that payment should only be made to the plaintiffs on the inclusion of the amount in the architect's certificate, and on payment to the defendants by the building owners of the amount.

It appeared that the defendants had settled a claim for extras with the building owners for 5,000*l.*, part of which was paid in cash and part in prior lien bonds, issued by the building owners on the property. Plaintiff contended that the terms of the settlement were equivalent as between themselves, and the defendants, to payment to the defendants, and that the defendants were estopped from denying that they had received payment, and that because the defendants chose to enter into an arrangement with the building owners, they had no right to hold over the balance of the plaintiffs' account. The formal certificate for 377*l.* was issued on March 1, 1910, by Mr. Verity, which the plaintiffs forwarded with a request for the cheque, and this certificate, Mr. Verity alleged, was included in a certificate he issued in November, 1910, to the defendants, for 1,595*l.* This, however, the defendants denied, and their case was that at the time in question disputes were going on as to the number of radiators put into the building, and that they had given the building owners large credits for a large difference in the numbers supplied, and that they could go behind the certificate upon that ground, and also upon the ground that the architect, without any notice to the defendants, had issued the certificate for 377*l.* Mr. Justice Coleridge, after hearing the evidence, held that in the circumstances the plaintiffs were entitled to recover, and gave judgment for them for the amount claimed, with costs. Hence the present appeal of the defendants.

Mr. Hudson, for the appellants, said that the point for the Court was the validity of the architect's certificate. He contended that the architect had completely abrogated his functions as a certifier. He submitted that the architect, in the circumstances, had no power to give the certificate, and the account, having been settled, it was invalid.

Mr. Matthews, on behalf of the respondents, said it was admitted there was no collusion or conspiracy; therefore it was a valid certificate upon which his clients were entitled to be paid. If he failed in regard to the validity of the certificate, then he would submit that, though the contract between Messrs. Allen & Co. and the building owners was not incorporated in the sub-contract, as the architect had authority to give orders for various alterations under the larger contract, that authority extended to the sub-contract.

In the result their Lordships said that, in their opinion, the validity of the certificate was doubtful, and that probably it was a case for a new trial. In the circumstances, however, the appeal would be allowed, the 377*l.* paid into Court to be paid out to the appellants, who would receive the costs of the appeal and the costs which they had paid. The case could be tried on *quantum meruit*.

KING'S BENCH DIVISION. DIVISIONAL COURT.

(Before the LORD CHIEF JUSTICE, Justices PICKFORD and AVORY.)

The King *v.* The Tribunal of Appeal (*ex parte* the London County Council).

THE Court heard arguments dealing with the Euston-road building line dispute, and in connexion with the rule *nisi* for mandamus obtained by the London County Council, and calling upon the Tribunal of Appeal to show cause why they should not state one special case for the purpose of appeal, instead of three special cases.

Mr. F. F. Daldy appeared for the London County Council; Mr. A. H. Bethune for the Metropolitan District Railway; Mr. A. F. Wootton for the owners of the Adam and Eve public-house; and Mr. Herbert Smith for the trustees of the late Mr. Leslie.

Mr. Bethune said a rule had been obtained ordering the Tribunal of Appeal to show cause why they should not state one special case in the matter of certain appeals against the Tribunal's decision as to the London County Council's Superintending Architect's certificate *re* a building line in the Euston-roa
The ground of the rule was that the Tribuna
having given a decision in the matter
several appeals, decided to state three speci
cases, one for each appellant. Mr. Dal
objected, on behalf of the County Council,
the stating of three separate cases. T
Metropolitan Railway Company wanted
special case dealing with their own particul
matter, because they said their point w
entirely different from the others. T
Tribunal of Appeal had expressed its willin
ness to state separate cases with the points
law if the Court so ordered.

Replying to the Lord Chief Justice, Coun
said the Superintending Architect, at t
instance of the County Council, laid down
general building line in the Euston-road. T
line originated with two houses belonging
Mr. Leslie's trustees, and ran from Osnebur
street to Hampstead road, and included t
Metropolitan Railway Company's property,
wall as the Adam and Eve public-house.

The Lord Chief Justice: The County Coun
want the one special case stated for all t
appeals?

Counsel: Yes.

His Lordship: On what ground?

Counsel: They say it would be more co
venient to have the one case and one set
Counsel. We object, because we say our po
is different from the others.

His Lordship: What point are you raisin

Counsel: The Tribunal has held that th
is no general building line at all, because
the houses within a certain distance mark
on the map have been pulled down. That
a decision in favour of the Metropolitan R
way Company, and that is the only point t
could be raised for argument on their o
With regard to the other appellants,
Tribunal has decided against Mr. Lesl
trustees, holding that the building line appl
to them all right, while, on the other hand,
Tribunal has decided in favour of the Ad
and Eve public-house, holding that it
built on old foundations, and is not goverr
by a building line.

The Lord Chief Justice (to Mr. Dald
Why do the County Council object to the th
cases?

Mr. Daldy: The Act of Parliament s
one case is sufficient, and that will be
expensive.

The Lord Chief Justice: The Council w
to take the building line through y
property, Mr. Bethune?

Mr. Bethune: Yes.

His Lordship (to Mr. Daldy): Under w
section of the London Building Act do
argue that only one case is necessary?

Mr. Daldy: Sect. 22.

Continuing, Mr. Daldy said there was
one proceeding before the Tribunal, and
was as to the general line. It was no
matter between parties. If there had bee
number of proceedings between differ
parties and about different sections of a r
things would have been different.

Replying to the Lord Chief Justice,
Daldy said at the present moment the
real appellants were the County Council
Mr. Leslie's trustees, while the London Cou
Council would also be respondents if th
were ultimately other appellants. The sec
of the Act dealing with the matter said
one case should be stated, and that could
be construed to mean that three or more c
could be stated.

Mr. Justice Pickford: If you have only
case, which of the three other parties wo
come to oppose you?

Mr. Daldy: They could all come and ar
against me if necessary.

The Lord Chief Justice said, in his opin
the rule should be discharged, for Mr. D
had not shown the Court any section w
could make them order the Tribunal to s
only one case with three separate matters
appeals. There was, he thought, no powe
this Court to fetter the jurisdiction of
Tribunal as to how many cases it should st

Mr. Justice Pickford agreed. He said
facts showed that there were objections to
building line. There were several of t
objections, but the Court was only asked
deal with three of those, one by the M
politan Railway Company, one by Mr. Le
trustees, and the other by the owners of
Adam and Eve public-house. The first
appealed to the Tribunal, but the owne
the Adam and Eve were only heard as i
ested parties. The Tribunal decided in fa
of the Metropolitan Railway Company,
against Mr. Leslie's trustees, and they
then asked to state a case with regard to
western and eastern ends of the line by
London County Council, and with regard
piece of the middle of the line by Mr. Le
trustees. The Tribunal was willing to
cases with regard to the three different

LAW REPORTS.—*Continued on page*

List of Competitions, Contracts, etc.

For some Contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) are advertised in this number:** Competition, iv.; Contracts, iv. vi. viii. x.; Public Appointments, xiv.; Auction Sales, xx. Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Competitions.

MAY 15.—**Portland.**—COUNCIL OFFICES.—The rtland U.D.C invite competitive designs and ans for Council Offices. See advertisement in ue of March 8 for further particulars.

MAY 18.—**Hastings.**—SUNK ARENA AND BAND-ND.—Cost not to exceed 4,500*l.* Premiums, and 10 guineas. Particulars from the Town rk, Hastings.

MAY 21.—**Middlesex Hospital.**—MURAL CORATIONS THERE AND ELSEWHERE.—Particulars m Crosby Hall, Cheyne-walk, Chelsea.

MAY 22.—**Southend-on-Sea.**—HAMSTEL COUNCIL HOOL.—Architects practising in the borough ly. Premiums, 25*l.*, 15*l.*, and 10*l.* Particulars m the Education Office, Municipal Buildings, uthend-on-Sea.

MAY 25. — **Lymington.** — PUBLIC OFFICES.—irty and fifteen guineas for second and third igns. Assessor, Mr. R. F. Gutteridge, .I.B.A. Particulars from the Town Clerk, mington.

UNE 1.—**Dunfermline.**—INSTITUTE AT NETHER-YN.—Cost not to exceed 7,000*l.* Premiums of 150*l.*, and 100*l.* Assessor, Mr. E. A. Jamieson. rticulars from the Secretary, Carnegie Trust, ot-street, Dunfermline.

UNE 3.—**Sheffield.**—CRIPPLES' HOME.—uited to local architects. Mr. E. M. Gibbs, .I.B.A., and Mr. F. E. P. Edwards, .I.B.A., assessors.

JUNE 14.—**Regent's Quadrant.**—DESIGN FOR ARTMENT.—Premiums, 25 guineas, and 25 neas divided. Adjudicators, Mr. E. A. kards and Mr. Alan E. Munby. See advertise-nt in this issue for further particulars; also ompetition News," issue of April 19 (page 453) May 3 (page 512), and this issue (page 537).

UNE 28.—**Hale, Cheshire.**—TOWN PLANNING EME.—Premiums 50*l.* and 25*l.* Particulars n the Council Offices, Hale.

UNE 30.—**Padiham.**—TOWN HALL, BATHS, ETC. remiums 40*l.* and 20*l.* Particulars from Mr. Gregson, A.M.Inst.C.E., Surveyor's Office, ham (see page 544).

ULY 1.—**Dusseldorf.**—A plan for the nsion of the City of Dusseldorf. Premiums ,000*l.* to 375*l.* Conditions on application to Chief Burgomaster, Dusseldorf. A transla- appeared on page 365, September 29.

ULY 1.—**Port of London.**—NEW OFFICES.—ited to those mentioned in "Competition s," issue of April 12 (page 424).

UGUST 6. — **Cardiff.** — FIRE STATION. — The liff Corporation invite designs and estimates a fire brigade station in Westgate-street. Mr Marshall Mackenzie, assessor. Particulars the Town Clerk, City Hall, Cardiff.

UGUST 30. — SAXON SNELL PRIZE. — Fifty neas; with medal, is offered for essay on a ital subject. Particulars from the Sanitary itute, 90, Buckingham Palace-road, S.W.

CTOBER 1. — **Ottawa.** — MONUMENT TO KING ARD VII.—Sketch models in plaster to be to the Director of National Art Gallery, wa.

DATE.—**Birmingham.**—BATHS.—Twenty and uineas for second and third designs. Appli-ns for conditions to be sent to the Super-ndent Engineer, Kent-street, Birmingham.

DATE.—**Cardiff.**—MODEL COLLIERY TOWN. South Wales colliery company offers a prize 0*l.* for the best scheme for a model colliery . See advertisement in issue of April 26 for er particulars.

DATE.—**Jordanhill, Glasgow.**—PROPOSED WING COLLEGE.—Limited to six firms, named mpetition News, December 1, page 635.

DATE. — **Warrington.** — SCHOOL. — The rington Education Committee invite com-ive plans for the erection of a public ntary school. See advertisement in issue bruary 16 for further particulars.

Contracts.

BUILDING.

date given at the commencement of each raph is the latest date when the tender, or ames of those willing to submit tenders, be sent in.

r 10.—**Newbridge.**—CHAPEL, ETC.—For erec-of a new chapel and school and appurten-at Newbridge, Mon. Drawings and specifi-ns, quantities, and form of tender, on de-of 2*l.* 2s., from Mr. N Gascnius Lewie, .S., architect and surveyor, Abertillery and Vale.

MAY 10. — **Selby.** - RESIDENCE.—Erection of a villa residence on Leeds-road, Selby. Plans seen, and quantities from Mr. W. T. Turner, architect, etc., Market-hill, Barnsley.

MAY 11. — **Abergwynfi.** -BAKERY.—Erection of a bakery for the Avan Vale Hygienic Baking Company, Abergwynfi. Plans and specifications seen, and particulars from Mr. J. L. Williams, Secretary, Liverpool House, Abergwynfi.

MAY 11.—**Camborne.**—REPAIRS, ETC.—Erection of lavatory accommodation and sundry repairs at the headquarters of R. Coy. 4th D.C.L.I., Camborne; also for repairs, etc., to the R.A.M.C. Drill Hall. Plans and specifications from Mr. O. Reginald Caldwell, architect, Penzance.

MAY 11. — **Swinton.** — FILTERS.—For the construction of six percolating filters, etc., at the Swinton Sewage Works. Particulars and form of tender from Mr. Henry Entwisle, Council Offices, Swinton, Manchester.

MAY 12.—**Ballindrait.**—MANSE.—Erection of manse at Ballindrait. Plans and specifications with Mr. W. Stuart, B.E., M.R.S.I., Strabane.

MAY 13.—**Batley.**—HOUSES.—Erection of two dwelling-houses at Knowles-road, Batley. Plans and specifications seen, and quantities from Mr. John H. Brearley, architect, 68, Commercial-street, Batley.

MAY 13.—**Chingford.**—PUMP-HOUSE, ETC.—The Metropolitan Water Board invite tenders for the construction of a pump-house, gas-producer house, and coal bays, two cottages, formation of roads, drainage, and other contingent works on land, near Enfield Lock, at the northern end of the Chingford Reservoir. Drawings, conditions of contract, and specification at the offices of the Board (Chief Engineer's Department), Savoy-court, Strand, W.C. Deposit of 10*l.*

MAY 13.—**Dartford.**—HOUSE, ETC.—The Metropolitan Water Board invite tenders for the construction of an engine-house, cottage, formation of roads, drainage, and other contingent works at Green-street, Green, near Dartford, Kent. Drawings, condition of contract, and specification at the offices of the Board (Chief Engineer's Department), Savoy-court, Strand, W.C., on deposit of 10*l.*

MAY 13. — **Grays.** — EXTENSIONS, ETC.—For extensions and alterations at the Working Men's Club, Grays. Plans and specifications with Messrs. Weymouth, High-street, Grays.

MAY 13.—**Kea.**—COTTAGE, ETC.—For erection of new cottage and making alterations and additions to existing cottage at Trethowell Farm, Kea, near Truro. Plans and specifications with Mr. A. J. Cornelius, architect, Truro.

MAY 13.—**Panteg.**—IMPROVEMENTS.—For alterations and improvements to the Panteg Wern Old Mixed School to convert same into an infants' department, erection of new latrines, etc. Plans and specification seen, and quantities from Mr. John Bain, F.R.I.B.A., County Council Offices, Newport. Deposit of 1*l.* 1s.

MAY 13. — **Skipton.**—SHEDS, ETC.—Erection of stabling, cart-sheds, etc., in the Dockyard, Skipton. Plans seen, and specifications and quantities from Mr. Aldridge, Surveyor to the Council, Town Hall, Skipton, on deposit of 1*l.*

MAY 13. — **Skipton.** — WALL.—For erecting a rubble stone wall at the Recreation Ground. Information from Mr. Aldridge, Surveyor, Town Hall, Skipton.

MAY 14. **Bradford.**—ALTERATIONS.—For alterations to Nos. 29, 31, and 33, White Abbey-road. Drawings and general conditions of contract seen, and quantities and forms of tender from the City Architect, Town Hall, Bradford.

MAY 14.—**Bromsgrove.**—HOUSE.—Erection of a boiler-house. Plan and specification with the Master of the Workhouse.

MAY 14.—**Gateshead-on-Tyne.**—SHOPS, ETC.—The North-Eastern Railway invite tenders for the erection of signalling repair shops and stores at Park-lane, Gateshead-on-Tyne. Plans and specification seen, and quantities and information from Mr. William Bell, the Company's Architect, Westgate-road, Newcastle-on-Tyne.

MAY 14. — **Luddenden Foot.** — VENTILATOR.—Erection of a new exhaust ventilator at the school. Specifications from Mr. F. J. MacDonald, Education Offices, Sowerby Bridge.

MAY 14.—**Murton Colliery.**—HALL.—Erection of a Picture Hall at Murton Colliery. Plans seen, and particulars from Messrs. Joseph Potts & Son, architects and surveyors, 57, John-street, Sunderland. Deposit of 1*l.* 1s. for quantities.

MAY 14.—**Shrewsbury.**—WALL.—For building concrete wall and other work adjoining Colonhill. Specification and drawings seen, and quantities and form of tender, on deposit of 1*l.*, from Mr. W. Chapple Eddowes, Borough Surveyor, Borough Surveyor's Office, The Square, Shrewsbury.

MAY 14. — **Trusham.** — COTTAGE.—The Great Western Railway invite tenders for the erection of a cottage at Trusham Station, Devon. Plans and specification seen, and forms of tender at the office of the Engineer, at the Plymouth North-road Station.

MAY 15.—**Claremount.**—REPAIRS.—For renovation and repairs to St. Thomas' Church. Plans seen, and particulars from Messrs. Jackson & Fox, architects, Rawson-street, Halifax.

MAY 15.—**Fosdyke.**—DOOR.—Construction of a slacker door in the Five Towns Drain, near the outfall in Fosdyke. Plans, specification, conditions of contract, and form of tender with Mr. Frederick Bett, of Kirton.

MAY 15. — **Goole.** — GOODS SHED.—The Lancashire and Yorkshire Railway invite tenders for the construction of a goods shed at Goole Docks. Plans seen, and tender, quantities, and specification from the Engineer, Hunt's Bank, Manchester.

MAY 15.—**Huddersfield.**—SHEDS.—For erection of two sheds at Lowerhead-row. Plans seen, and quantities from Messrs. J. Berry & Sons, architects and surveyors, 3, Market-place, Huddersfield.

MAY 15.—**Kingswell.**—ADDITIONS.—For building additions at Kingswell, Tipperary. Plans and specification with Messrs W. H. Hill & Son, architects, 28, South-mall, Cork.

MAY 15. — **Leeds.** — HOUSE, ETC.—Erection of Vice-Principal's house, swimming-bath, laundry, two lodges, games pavilion, and pump-house at the College. Plans by Mr. G. W. Atkinson, architect, of 1, Mark-lane, Leeds. Deposit of 2*l.* 2s.

MAY 15.—**London.**—RESTORING.—For cleaning down, restoring, and treating with preservative the stonework of the Passmore Edwards Library, Uxbridge-road. Specification, with form of tender, from Mr. H. Mair, Borough Surveyor.

MAY 15. — **Penderyn.** — CHAPEL.—For the rebuilding of "Soar" Welsh Independent Chapel, Penderyn, near Aberdare. Plans and specification with Mr. T. Roderick, architect, Ashbrook House, Aberdare.

MAY 16.—**Ferndale.**—VICARAGE.—Erection of a vicarage. Plans seen, and quantities from Mr. Geo. E. Halliday, F.S.A., Diocesan Surveyor, 19, Castle-street, Cardiff.

MAY 16.—**Hendon.**—SORTING OFFICE.—For erection of the Hyde (Hendon) new Sorting Office. Drawings, specification, and conditions and form of contract with Mr. J. Rutherford, 22, Carlisle-place, London, S.W. Quantities and forms of tender at H.M. Office of Works, Storey's-gate, London, S.W. Deposit of 1*l.* 1s.

MAY 17. — **Athlone.** - ALTERATIONS, ETC.—For alterations, renovation, painting, etc., of St. Peter's (Protestant) Church, Athlone. Particulars from Rev. Gordon J. Walsh, St. Peter's Rectory, Athlone.

★ MAY 17.—**Upper Penn.**—SCHOOL.—The Staffordshire Education Committee invite tenders for the erection of a new Council school at Upper Penn. See advertisement in this issue for further particulars.

MAY 18. - **Cardiff.** -REPAIRS, ETC.—For alterations, repairs, and renovations at 119 and 121, King's-road, Cardiff. Specification, with form of tender, from Mr. Arthur J. Harris, Clerk, Union Offices, Queen's-chambers, Cardiff.

MAY 18. — **Coventry.**—LIBRARIES.—Erection of three branch public libraries at Earlsdon, Foleshill, and Stoke. Drawings, specifications, forms of tender, and quantities from Mr. J. E. Swindlehurst, City Engineer and Surveyor, St. Mary's Hall, Coventry. Deposit of 2*l.* 2s.

MAY 18.—**Roydon.**—REPAIRS, ETC.—For repairs and alterations to the exterior and interior of the school, and a new play-shed. Specification and plan at the school.

MAY 18. — **Talgarth.** — ADDITIONS.—For additions to Penllanafel Farm. Plans and specification with Mr. C. H. Elford, M.S.A., architect, Aberdare.

MAY 20. — **Cwmcarn.**—SCHOOL.—Erection of a chapel school at Cwmcarn, Mon. Plans and specifications with the architect, Mr. R. L. Roberts, M.S.A., Abercarn.

MAY 20.—**Exeter.**—BATH, ETC.—Construction of a swimming-bath and dressing-boxes at the Devon and Exeter Boys' Reformatory. Plans, specification, and quantities on deposit of 3*l.* to Messrs. E. H. Harbottle & Son, architects, County-chambers, Exeter.

MAY 20. — **Leeds.** ENTRANCE, ETC.—Construction of a new central entrance and the execution of alterations to shops and stalls at the Market Hall. Drawings and specifications seen, and form of tender and quantities from Mr. W. T. Lancashire, City Engineer, Municipal Buildings, Leeds.

★ MAY 20.—**London. W.** — ALTERATIONS.—The St. Marylebone Guardians invite tenders for alterations to sanitary fittings, soil and waste pipes, etc., at Workhouse, Northumberland, St. Marylebone, W. See advertisement in this issue for further particulars.

BUILDING—*continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of, those willing to submit tenders, may be sent in.

MAY 20.—**Spital.**—HOUSE, ETC.—Erection of a master's house, children's home block, and alterations and additions to the existing laundry, at Clatterbridge Workhouse, near Spital. Quantities and form of tender from Messrs. John H. Davies & Sons, architects, 14, Newgate-street, Chester. Deposit of 2*l.* 2s.

MAY 21.—**Annfield Plain.**—SCHOOL.—For erection of a new Council school. Plans and specifications seen, and quantities from Mr. W. Rushworth, Shire Hall, Durham

★ MAY 21. **Bromley, E.** ALTERATIONS. The Managers of the Poplar and Stepney Sick Asylum District invite tenders for certain alterations to buildings in connexion with the provision of lifts. See advertisement in this issue for further particulars

MAY 21.—**Chopwell West.** ALTERATIONS, ETC. —For alterations and additions to the Council school. Plans, specifications, and quantities with Mr. W. H. Bendle, 33, Grainger-street West, Newcastle-on Tyne.

MAY 21.—**Crook.**—SCHOOL.—For erection of a new Council school. Plans and specification seen, and quantities with Mr. J. G. Burrell, Market-place-chambers, Durham.

MAY 21.—**Gowerton.**—RE-ERECTION.—For the re-erection of Gospel Temple English Congregational Chapel and Schoolroom. Plans and specifications with Mr. D. L. Jones, architect, 40, Thomas-street, Llanelly.

MAY 21. **Land Bank.** -SCHOOL.—For erection of a new Council school. Plans and specifications seen, and quantities from Mr. Rushworth, Shire Hall, Durham.

MAY 21.—**Lumley.** — ALTERATIONS, ETC. -For alterations and additions to the Council school. Plans, specifications, and quantities with Mr. N. Richley, Shire Hall, Durham

MAY 21. — **Linton.** CENTRE.—For erection of cookery centre, Charles-street. Plans and specifications with the Borough Engineer, Town Hall. Deposit of 10s. 6d.

MAY 21.—**Tursdale.**—SCHOOL. For erection of a new Council school. Plans, specifications, and conditions seen, and quantities from Mr. W. Rushworth, Shire Hall, Durham.

MAY 22.—**Chelmsford.** — CONVENIENCE.—Erection of a public convenience at the corner of Viaduct-road and Duke-street. Forms of tender and full particulars from the Borough Engineer, 16, London-road.

★ MAY 22.—**Dartford.**—CHIMNEY-STACKS.—The Metropolitan Asylums Board invite tenders for taking down and rebuilding certain chimney-stacks at the Darenth Asylum. See advertisement in this issue for further particulars.

MAY 22.—**Stithians.**—HOUSES, ETC.—For erection of two farmhouses, new dairy, alterations and additions to existing farm buildings, new walls and fences, and a water supply at Menerdue Farm, Stithians. Plans, specifications, conditions of contract with the County Land Agent, Public Rooms, Truro.

★ MAY 23.—**London.** — ROOFS.—The Commissioners of H.M. Works and Public Buildings invite tenders for erection of roofs over Egyptian rooms at the British Museum. See advertisement in this issue for further particulars.

MAY 23.—**Rettendon.**—ADDITIONS, ETC.—Alterations and additions at the Rettendon Council School. Names to Mr. F. Whitmore, County Architect, 73, Duke-street, Chelmsford.

★ MAY 24. **Llanelly.**—TWENTY-FOUR HOUSES.—The Llanelly U.D.C. invite tenders for erection of twenty-four houses at Llanelly See advertisement in this issue for further particulars.

MAY 24. — **Retford.** — WATERWORKS.—For the construction of new waterworks for the parishes of East Markham and Tuxford. Plans seen, and specifications, quantities, forms of tender, and particulars, on deposit of 5*l.*, from the Council's Engineer, Mr. E. J. Silcock, M.Inst.C.E., Sanctuary House, Tothill-street, Westminster, and 10, Park-row, Leeds.

★ MAY 29. — **Tidworth.** — COMPLETION OF BARRACKS.—The Secretary of State for War invites tenders for completion of Mooltan Cavalry Barracks, Tidworth, in the Southern Command. See advertisement in this issue for further particulars.

★ MAY 29.—**Tidworth.**—ADDITIONS TO BARRACKS. —The Secretary of State for War invites tenders for remount stables (22 stalls), and additions to officers' quarters and mess quarters for four additional officers at Aliwal Barracks, Tidworth, in the Southern Command. See advertisement in this issue for further particulars.

★ MAY 30. **London, N.**— ALTERATIONS.—The St. Mary Islington Guardians invite tenders for alterations to laundry buildings at St. John's-road Workhouse, Upper Holloway, N. See advertisement in this issue for further particulars.

MAY 31. - **Exmouth.** — SEA WALL, ETC.—For construction of a solid concrete sea wall and timber and concrete groynes upon or adjacent to the foreshore, Maer Rocks, Exmouth. Drawings and specification with Mr E. Chamier, Rolle Estate Office, Exmouth, Devon, or the consulting engineer, Mr. W T. Douglass, M.Inst.C.E., 15, Victoria-street, Westminster, S.W. Quantities, form of tender, and terms on deposit of 1*l.*

JUNE 1.—**Bridgend.**—ALTERATIONS.—For alterations to the gasworks at the Angelton Asylum, near Bridgend. Specifications and forms of tender from Mr. W. E. R. Allen, Clerk to the Committee of Visitors, Glamorgan C.C. Offices. Westgate-street, Cardiff

JUNE 3.—**Church.**—CONVENIENCES. Erection of new public conveniences in Blackburn-road, Church. Plans and elevation seen, and forms of tender, with specification and quantities, from Mr. W. Wood, Surveyor, D.C. Offices, Church.

★ JUNE 4. — **Barnet.** — COTTAGES.—The Barnet U.D.C. invite tenders for twenty-two cottages in Totteridge-lane, Barnet. See advertisement in this issue for further particulars.

JUNE 5. — **London.** — DESTRUCTOR, ETC.—Erection of a refuse destructor and steam-raising plant in connexion with the Electricity Generating Station, Quadrant-street, Canning Town. Plan, specification, form of tender, and particulars from the Borough Engineer, Town Hall, West Ham, E. Deposit of 1*l.*

★ JUNE 17.—**Coventry.** -MUNICIPAL BUILDINGS. —The Coventry Corporation invite tenders for the erection of Municipal Buildings in Earl-street, Coventry. See advertisement in this issue for further particulars.

NO DATE.—**Annfield Plain.**—HOUSE, ETC.—For erection of a house and shop at West-road. Plans and specification with Mr. J E. Parker, architect, Post Office-chambers, Newcastle-on-Tyne.

NO DATE.—**Banbury.** HOUSE. -For erection of a house in Broughton road. Plans and specification, on deposit of 1*l.* 1s., from Mr. F J. Cooke, architect, Banbury.

NO DATE.— **Brixworth.** COTTAGES.—Erection of seven cottages, for the Brixworth Provident Co-operative Society, Ltd. Messrs. Brown & Mayor, architects, 80, Abington-street, Northampton.

NO DATE.—**Budleigh Salterton.** SCHOOLS.— For erection of Church of England public elementary new schools. Mr. H. Reed, F.R.I.B.A., architect, 12, Castle-street, Exeter

NO DATE. **Cardiff.** -VICARAGE.—Erection of a vicarage. Quantities, on deposit of 2*l.* 2s., from Mr. E. C. Morgan Willmott, A.R.I.B.A., 29, St Mary-street, Cardiff.

NO DATE.—**Clayton West.**— HOUSE —For erection of a house at Spring-grove, Clayton West. Messrs. R. & W. Dixon, Lic.R.I.B.A., architects, 5, Eastgate, Barnsley.

NO DATE.—**Elland.**—ALTERATIONS. -For alterations to lodge for the Elland-cum-Greetland Joint Burial Board, Cemetery. Plans seen, and quantities from Mr. F F. Beaumont, Lic.R.I.B.A. architect, Southgate chambers, Halifax.

NO DATE. **Odsal.** — RESIDENCE.—For erection of residence, Halifax-road, Odsal. Plans and quantities with Mr. T. L. Dixon, architect, surveyor, valuer, etc., Bowling Old-lane, Bradford.

NO DATE.—**Packmoor.**—HOUSES.—Erection of six dwelling houses at Thomas-street. Plans and specifications seen, and particulars from Mr W. P. Deane, architect and surveyor, Norton, Stoke-on-Trent.

NO DATE.—**Sharlston.**—HOUSES —Erection of two houses at Sharlston. Messrs. Mussie & Holdsworth, architects, Tetley House, Wakefield.

NO DATE. — **Skegness.** — HOSPITAL —For proposed new cottage hospital for Skegness. Names to the architect, Mr Fred. J. Parkinson, 9, Richmond-terrace, Blackburn, Lancs. Deposit of 1*l.* 1s.

NO DATE. — **Sleights.** - HOUSES. — For two houses at Sleights. Plans, etc., at Messrs Robert Gray & Sons, County Sale Rooms, Whitby.

NO DATE. **South Shields.** -HOME, ETC. -Erection of a new boys' home, new stores at the Superintendent's house, and new laundry at the Cottage Homes, Cleadon. Drawings and specifications by Mr. John Mason, F.R.I.B.A., North-Eastern Bank-chambers, South Shields, and 57, Westgate-road, Newcastle-on-Tyne. Deposit of 1*l.* 1s for quantities.

NO DATE. **Thomastown.** -HOUSES. Erection of 127 houses and five shops at Thomastown, near Bedwas, Mon., for the Tre-Thomas No. 2 Building Club. Deposit of 5*l.* 5s. to Mr. James T. Jenkins, M.S.A., architect and surveyor, Porth, Glam

NO DATE. **Wakefield.** HOUSES.—Erection of two houses, Horn-street, Wakefield. Mr H. Dobson, architect and surveyor, City-chambers, Wakefield.

NO DATE.— **Wolverhampton.**— SCHOOL.—Erection of a Council school in Hordern-road. Forms of tender and quantities, on deposit of 1*l.* 1s., to the Accountant Clerk, Education Offices, Town Hall, Wolverhampton. Drawings and specifications with the architects, Messrs. T. H. Fleeming & Son, 10, Queen-square, Wolverhampton.

ENGINEERING, IRON, AND STEEL.

MAY 13.—**Skipton.**—BRIDGE. -For the mason's work in erection of the abutments and approaches to a steel girder bridge over the canal in Lower Union-street. Plans seen, and specifications and quantities from Mr. Aldridge, Surveyor to the Council, Town Hall, Skipton, on deposit of 1*l.*

MAY 15. **Manchester.**—PIPES, ETC.—Erection at the Stuart-street generating-station of high-pressure steam pipes and supports. Specifications and forms of tender from Mr. F. E. Hughes, Secretary, Electricity Department, Town Hall, Manchester, on deposit of 1*l.* 1s. Particulars from Mr. S. L. Pearce, Chief Electrical Engineer, Dickinson-street, Manchester.

MAY 15.—**Northallerton.** BRIDGE.—For building a stone bridge across the Willow Beck at Romanby Ford, near Northallerton. Plans and specifications with Mr. W. Fowle, Clerk to the Council, Northallerton

MAY 21. — **Bleddfa.** BRIDGE.—Construction of a small bridge over stream crossing main road near Bleddfa Drawings seen, and specification, quantities, and forms of tender, on deposit of 1*l.* 1s., from Mr. T. L. Wishlade, Surveyor, Penybont.

FURNITURE, PAINTING, MATERIALS, etc.

MAY 10.—**Warrington.**—BATHS, ETC —For two sets of douche baths at Evelyn-street Schools, with calorifier and tanks. Drawings, specifications, etc., seen, and form of tender from Mr. Thos. Longdin, Borough Engineer and Surveyor, Borough Engineer and Surveyor's Office.

MAY 11.—**Worcester.** PAINTING.—For painting the street name plates throughout the city. Specification and form of tender from Mr. Thomas Caink, A.M.Inst.C.E., City Engineer, Guildhall, Worcester.

MAY 13.—**Broadstairs.**—PAINTING.—For painting work at the bandstand, shelter seats, garden seats, etc. Specifications seen, and forms of tender from Surveyor, Mr. H. Hurd, C.E., Council Offices, Broadstairs.

MAY 13. — **Halifax.** — FENCING. — For providing and fixing of about 150 yds. of wooden fencing at Shrogg's Park, Halifax. Plans and specifications seen, and forms of tender from Mr. James Lord, M.Inst.C.E., Borough Engineer, Town Hall, Halifax. Deposit of 1*l.*

MAY 13. — **Sedgefield.** PAINTING.—For painting and renovating Norton and High Clarence Council schools. Specification and form of tender from Mr. Jas. Leonard, 16, Grange-terrace, Norton-on-Tees.

MAY 14.—**Bishop Auckland.**—PAINTING.—For the painting and distempering the Council schools. Specifications and forms of tender from Mr. J. T. Rudd, District Clerk, Bedburn House, Cockton-hill, Bishop Auckland.

MAY 14.—**Lancaster.**—PAINTING.—For painting, etc., the infirmary at the Workhouse, Lancaster. Specifications seen, and information from Mr. W. D. Ball, Clerk to the Guardians Union Offices, 5, Dalton-square, Lancaster.

MAY 14. **Warrington.**—PAINTING.—For painting, etc., at Sankey Sanatorium. Specification and forms of tender from Mr. Thos. Longdin, Borough Engineer and Surveyor, Borough Engineer and Surveyor's Office.

MAY 16. **London.** — PAINTING.—For painting work, etc., at the St. John's-hill Infirmary. Forms of specification and tender, on deposit of 1*l.*, to Mr. F. W. Piper, Clerk, Union Offices, St. John's-hill, Wandsworth, S.W.

MAY 17. — **Hull.**—PAINTING.—For painting Victoria Pier. Forms of tender and particulars from Mr. A. E. White, M.Inst.C.E., City Engineer, Town Hall, Hull.

MAY 18. **Buxton.**—PAINTING.—For painting the Town Hall-buildings and fire-station. Particulars from Mr. F. Langley, Engineer and Surveyor, Town Hall, Buxton

★ MAY 21.—**Neasden.**—PAINTING AND CLEANING. — The Willesden D.C. invite tenders for cleansing and painting works at Isolation Hospital See advertisement in this issue for further particulars.

★ MAY 22.—**Tottenham and Dartford.**—CLEANING, PAINTING, ETC.—The Metropolitan Asylum Board invite tenders for cleaning, painting, and repairs at the Fever Hospitals at Tottenham and Dartford, Kent. See advertisement in this issue for further particulars

★ JUNE 10. — **Sonthampton.**— DEALS, ETC.—The Director-General Ordnance Survey invites tenders for supply of deals and matched boarding See advertisement in this issue for further particulars.

NO DATE.—**Whitby.**—PAINTING.—For painting a number of buildings and seats. Mr. Thos. Keat Scott, Surveyor, U.D.C.'s Offices, Whitby

ROADS, SANITARY AND WATER WORKS.

MAY 13. — **Ashington.** — DRAINAGE. — For drainage works at Hirst Park. Names to the Surveyor, Council Chambers, Ashington, with deposit, for specifications and quantities

MAY 13. **Cockermouth.** - REPAIRS.—For repairs to highways in No. 2 Embleton district. Particulars from Mr S. K. Gibson, Greta Villa, Cockermouth.

MAY 13. — **Swansea.** — MAINS.—For the laying of 375 yds. of 3-in. cast-iron water mains in Heol-y-plas, Bwllfa, Clydach, with all necessary sluice valves, hydrants, air valves, etc. Plans, specifications, and conditions of contract at the offices of the Engineer to the Council, Mr. Trevor Williams, District Council Offices, Alexandra-road, Swansea.

MAY 13. **Wrexforest.** - STREETS. For street works near Park Schools Plans and specification seen, and a form of tender and quantities from the Surveyor, Municipal Buildings, Pontypridd, on deposit of 1*l.* 1s.

MAY 13.—**Warrington.** - GRANITE. —For supply of 4-in. granite or whinstone cubes Specifications and forms of tender from Mr. Thos. Longdin, Borough Engineer and Surveyor, Borough Engineer and Surveyor's Office

MAY 14. — **London.** — STONE, ETC.—The London C.C. invite tenders for the supply and delivery of 3,300 tons Guernsey granite paving setts, 3 in. wide by 6 in. deep, for the Tramways Department. Specification, form of tender, etc., with the Chief Officer, London C.C. Tramways, Finsbury-pavement, E.C.

MAY 14.—**Southgate.**—SEWAGE.—For construction of stoneware pipes with patent water-tight joints, also concrete tubes, at Winchmore Hill, N. Plans with the Surveyor, Mr. C. G. Laws, C.E., Council Offices, Palmers Green, N. Specification, conditions of contract, and form of tender deposit of 2*l.*

MAY 15. - **Durham.** — SEWAGE. —For the construction of detritus, storm-water, and sedimentation tanks and filter beds, etc., at sewage outfall works at Sunderland Bridge. Plans and specifications seen, and quantities, with form of tender, from Mr. G. Gregson, surveyor, Saddler-street, Durham, on deposit of 1*l.*

MAY 17.—**Totnes.**—TANK, ETC.—Construction of water mains, intake tank, etc., for the water supply of Holne. Drawings and specification seen, and quantities from the Engineer, Mr. Hansford Worth, M.Inst.C.E., 42, George-street, Plymouth.

ROADS, etc.– *continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

MAY 18. **Bowdon.** - ROAD.—For the making-up of York-road, Bowdon. Plans and specifications at the Council Offices, Richmond-road, Bowdon. Quantities, with specifications, on deposit of 1*l.* 1s. Mr. W. Paterson, Clerk.

MAY 20. — **East Preston.** — GRANITE.—For supply of Guernsey granite. Mr. A. Shelley, Clerk, Littlehampton.

MAY 20. — **Epsom.** ROAD. — For making-up Norman-road. Plans, specification, and form of contract with the Surveyor of Highways, Mr. T. E. Ware, Waterloo-road, Epsom.

MAY 20. **Newport.** - MATERIALS. -For supply of materials for the repair of the main roads. Particulars from Mr. William Tanner, County Surveyor, County Council Offices, Newport, Mon.

* MAY 21. — **Kilburn, N.W.**—ASPHALT PAVING. —The Willesden D.C. invite tenders for providing and laying of 5,294 super. yds. of natural rock asphalt in Malvern-road. See advertisement in this issue for further particulars.

* MAY 21. - **Kingston-on-Thames.** — ROAD-MAKING, ETC - The Kingston Guardians invite tenders for road-making, tar-paving, etc., at Infirmary. See advertisement in this issue for further particulars.

MAY 21. **London.** – STONE. –The Great Western Railway invite tenders for the supply of machine-broken road stone and stone chippings. Conditions of contract and forms of tender from Mr. A. E. Bolter, Secretary, Paddington Station, London.

MAY 21. **Watford.**—DRAINAGE.—Reconstructing private drains to houses Nos. 1 to 19, Carey-place. Plan, specification, and conditions of contract seen, and quantities and form of tender from Mr W. W. Newman, A.M.Inst.C.E., Engineer *pro tem.*, on deposit of 1*l.*

* MAY 21. — **Willesden.** — ROAD-MAKING AND PAVING. The Willesden D.C. invite tenders for road-making and paving works in Newbury and Donnington roads. See advertisement in this issue for further particulars.

* MAY 21.— **Willesden.** — WOOD-PAVING.—The Willesden D.C. invite tenders for laying of 25,580 super. yds. of wood-paving. See advertisement in this issue for further particulars.

* MAY 22. **Hampstead.** — ROAD AND TAR-PAVING REPAIRS. The M.A.B. invite tenders for road repairing and tar-paving at the Fever Hospital, Hampstead. See advertisement in this issue for further particulars.

* MAY 22.—**London, N.E.** –ROAD REPAIRS, ETC. The Metropolitan Asylums Board invite tenders for road repairing and tarring works at Eastern Fever Hospital, Homerton, N.E. See advertisement in this issue for further particulars

* MAY 22. — **Sutton, Surrey.** — ROAD REPAIRS, ETC. – The Metropolitan Asylums Board invite tenders for road repairs and tar-paving work at Downs School, Sutton, Surrey. See advertisement in this issue for further particulars

* MAY 22. **Tottenham and Tooting.**—ROAD-MAKING AND TAR-PAVING.—The M.A.B. invite tenders for wood-block paving and tarring roads at the Tottenham Fever Hospital, and for repairs to roads and tar-paving, etc., at the Fever Hospital, Tooting. See advertisement in this issue for further particulars.

* NO DATE. — **Wimbledon Common.** — PUBLIC CONVENIENCES. — The Wimbledon and Putney Commons Conservators invite tenders for erection of public conveniences near the windmill on Wimbledon Common. See advertisement in this issue for further particulars

NO DATE. — **Wakefield.** –GRANITE.—For supply of 10,000 tons of granite and whinstone setts for the Yorkshire (West Riding) Electric Tramways Company, Ltd. Mr. H. England, General Manager, Belle Isle, Wakefield.

Public Appointment.

Nature of Appointment.	By whom Advertised.	Salary.	Application to be in
CLERK OF WORKS	Walthamstow Higher Edu. C.	3*l.* 3s.	May 17

Auction Sales.

Nature and Place of Sale.	By whom Offered.	Date of Sale.
FREEHOLD BUILDING PLOTS, WIMBLEDON—Prince of Wales Hotel, Wimbledon	Ogden, Sons, & Olley	May 16
FREEHOLD LAND, SUDBURY	Millar, Son, & Co.	May 21
BUILDER AND CONTRACTOR'S PLANT, West-road, Prittlewell	J. T. Skelding & Holland	May 21
FREEHOLD PROPERTY, SWANLEY Lullingstone Castle Hotel, Swanley Junction, Kent	W. G. Burgess	May 21
BUILDING LAND, EPPING -At the Mart	H. Holmes & Co.	May 21
BUILDING SITES, ALEXANDRA PARK ESTATE—At the Mart	Venton, Bull, & Cooper	May 22
PLANT, MACHINERY, AND STOCK -On the Premises	W. G. Burgess	May 22
FREEHOLD BUILDING LAND, TWICKENHAM—At the Mart	Farebrother, Ellis, Egerton, Breach, Galsworthy, & Co.	May 23
		June 11

LAW REPORTS.—*Continued from page 558.*

f the line, and state their reasons for acting s they did in each case; but the County ouncil said that only one case was necessary, nd tried to prohibit the Tribunal from stating ore than one. He did not think it was ecessary to decide whether the cases were eparate or not, for there was no doubt that ie cases were different and distinct, and one ad only to look at the plan of the building ne to see that the statement of the Tribunal s to the necessity for three special cases was ie correct one. Even if only one case were ated, all three of the parties interested would ave to appear before the Court and be heard, nd, therefore, there would be three lots of ntentions and facts. So he thought, when e Tribunal decided to state three cases, they ecided quite properly, for by that means the ppeals would be dealt with more satisfactorily.

Mr. Justice Avory concurred, and the rule as discharged with costs against the London ounty Council.

OBITUARY.

Sir John Taylor.

As we announced last week, the death curred, on April 30, at his residence, Moorld, Surbiton Hill, Surrey, of Sir John aylor, K.C.B., lately of H.M.'s Office of orks, in his seventy-ninth year. Sir John aylor was the son of William Taylor, of arkworth, Co. Northumberland; in 1860 he arried Emma Hamilton, daughter of the late enry Hadland. In 1859 he entered the Office Works; in 1881 he was elected a Fellow of e Royal Institute of British Architects; he rved as member of the Council, and was a ce-President, 1905; in 1902 he joined the chitectural Association. Sir John Taylor as appointed, in 1866, Surveyor of Royal laces, Public Buildings, etc., in H.M.'s Office Works; he held that post until 1898, when was appointed Consulting Surveyor, having en created a K.C.B. in the previous year.

Sir John Taylor's more important architural work, the *Builder* has illustrated the ar Office, Whitehall (January 6, 1906, four-ge perspective drawing, and December 14, 7, the loggia), as carried out by him in njunction with Mr. Francis Clyde Young, er the plans and designs of Mr. Clyde ung's father, the late William Young, ich were illustrated in our issue of March 25, 1899—Messrs. Foster & Dicksee were the contractors, for 447,000*l.*; and Bow-street Police-court and Station (June 21, 1879), built by Messrs. George Smith & Co., at a cost of about 40,000*l.*, and completed in 1881. He was the architect of the Bankruptcy Courts and Offices, Carey-street, W.C., 1890-2, which cost nearly 70,000*l.*; of the adjacent Government Laboratories for the Inland Revenue and Crown Contracts Departments, in the Clare-market area, 1896 7; alterations and extensions of the National Gallery, Trafalgar-square, 1884-7, with the new central rooms, Nos. I.-VI. (as numbered in 1890), the north, east, and west vestibules, and the main staircase, of two flights, which replaced the double staircase by Sir James Pennethorne, the decorations being by Messrs. Crace & Son; additions to Marlborough House; the new buildings for the Record Office, for which were pulled down the Master of the Rolls' House (by Colin Campbell), the Rolls Chapel, and Rolls-yard, to the west of Pennethorne's block, whereof he followed in the main the design—built in 1892-5 by Messrs. Foster & Dicksee, with Parliamentary votes of 65,000*l.* in all; the rebuilding, with large additions, of H.M.'s Patent Office on the Southampton-buildings. Staple Inn, Took's and Quality courts, and Furnival-street sites, with the new library, court-room, and sales-branch, begun in 1891, by Messrs. Perry & Co., and still in progress, for which, in respect of the Staple Inn façade (1894-5), he followed the Jacobean elevation of the terrace block designed by Messrs. Wigg & Pownall, for the adjoining offices (1842-3) of the Taxing Masters in Chancery, incorporated by him in the new range of buildings on the north side; and the South-Western, North London, and St. Marylebone Police-courts. Sir John Taylor was a member of the Constitutional Club, and of the Royal Wimbledon and Home Park Golf Clubs. The funeral took place at Brookwood Cemetery on Saturday last, after a service in St. Mark's, Surbiton.

Mr. James Barbour.

The death of Mr. James Barbour, architect and civil engineer, Dumfries, has just occurred at Harrogate, where he had been staying for the past fortnight. Mr. Barbour was a Fellow of the Scottish Society of Antiquaries, and superintended for that Society excavations at two Roman stations in Dumfriesshire, namely, Birrens and Burnswark. He also carried on similar work, but on a smaller scale, at various places on behalf of the local Antiquarian Society. Mr. Barbour was a Justice of the Peace for Dumfriesshire. He had completed his seventy-eighth year, and is survived by two sons and a daughter.

Mr. Badock.

The death, on April 25, at Hillcrest-parade, Leigh-on-Sea, Essex, is announced of Mr. John Barlow Badock, in his eighty-first year, who, in 1876, was elected a Fellow of the Royal Institute of British Architects.

PATENTS.

APPLICATIONS PUBLISHED.*

8,379 of 1911.—William Arthur Hiscox: Apparatus for drying stone or other similar material.

8,658 of 1911.—Benjamin Willetts-Adshead: Firegrates for domestic or other such purposes.

8,798 of 1911.—Koloman Brüll: Electrically-controlled grab-hoist gear.

8,808 of 1911.—Karl Alt: Cooking-stove.

9,147 of 1911.—Percy Edgar Beaumont: Slung cradles or staging for builders and the like.

9,173 of 1911.—William Henry Haysom and John Alfred Cole: Chimney-pot to prevent down-draught.

9,240 of 1911.—Maxwell Mayhew Upson: Concrete piles.

10,047 of 1911.—John James Davidge Clemenson: Chimney and ventilating-shaft tops.

10,927 of 1911.—John Patrick Tye: Manufacture of tiles and the like.

18,707 of 1911.—Joseph Richard Parker: Knot-holders for the cords of window blinds.

21,353 of 1911.—Joseph Pfarrhofer: Warming-ovens.

22,239 of 1911.—Hedley Button: Roof and wall coverings.

22,313 of 1911.—James Wilson McKinnon: Sanitary siftless boxes.

26,163 of 1911.—Karel Otto Slingervolt Ramondt and Errit Jan Vellema: Revolving doors.

26,269 of 1911.—Antoine Pelsmaekers: Combined gas and coal stove.

26,656 of 1911.—Jean Ribeyron: Stone-crushing machines.

3,621 of 1912. -Edwin Thurnham Palmer and Edwin John Palmer: Suspended scaffold.

4,968 of 1912.—Richard Biel: Sliding windows.

* All these applications are in the stage in which opposition to the grant of Patents upon them can be made.

SOME RECENT SALES OF PROPERTY:

ESTATE EXCHANGE REPORT.

April 3.—By J. & R. EDMISTON.

Glasgow.—29 to 39, Gordon-st., 67 to 101, Mitchell-st., 5 to 17, Melville-la., f. £72,500

April 19.—By ARTHUR BUTTER, SONS, & Co.

Cambridge. 6 to 20 (even), Cowper-rd., f., w.r. 104l. 1,050

April 23.—By MADDISON, MILES, & MADDISON.

Great Yarmouth, Norfolk.—15a, Regent-rd., f. 40, Garfield-rd., u.t. 990 yrs, g.r. 1l 3s., w.r. 19l 13s. 350

126 and 127, Wolseley-rd, f., w.r. 26l. 180

April 25.—By HARLAND & SON.

Potter's Bar, Middlesex. Standwick and Chadhurst, f., y.r. 130l. 2,700

By HENRY HENDRIKS & Co.

Nechells, Warwick.—Scholefield st., f.g. rents 27l. 17s. 9½d., reversion in 47 yrs..... 1,100

Edgbaston, Warwick.—3, Stanmore-rd., u.t. 83 yrs., g.r. 5l. 10s., y.r. 38l. 690

By EDWIN EVANS & SONS.

East Sheen.—Temple Sheen-la., two plots, f.... 350

Battersea.—8,1 Ethelburga-st., u.t. 68 yrs., g.r. 5l. 10s., w.r. 41l. 12s. 360

49 and 55, Sugden-rd., u.t. 73 yrs., g.r. 14s., w.r. 10l. 215

South Lambeth. 5, 7, and 9, Rashleigh-st., u.t. 55 yrs., g r. 10l. 16s., w.r. 97l. 10s. 495

By H. KING & SON.

Belbroughton, Worcs.—Chadwick Estate, 955 acres, f. (including timber)..... 140

By EDWIN, GORE, & MERCER.

Willesden. 64, 66, and 68, Villier's rd., f., w.r. 113l. 2s 18,802

By TOOTELL & GREEN.

Boxley, Kent.—Cossington Fields Farm, 73 acres, f. 735

April 26.—By BRADT & SON.

Cheadle, Cheshire.—Pasture land, 36 acres, f. 1,8 0 845

April 29.—By ANDREWS & HITCH.

Old Kent-rd.—Tustin-st., f.g.r. 12l., reversion in 24 yrs. 1,8 0

Mawbey-rd., f.g.r. 6l. 10s., reversion in 24 yrs 372

Cooper s-rd, f.g.r. 4l. 10s, reversion in 20 yrs 195

Gloucester-rd., f.g. rents 43l. 12s, reversion in 21 yrs..... 100

By ARTHUR BARTON.

Lee. 70, Burnt Ash-hill, u.t. 52 yrs., g.r. 10l. 10s., y.r. 35l. 1,314

By HOBSON, RICHARDS, & Co.

Stroud Green.—5, Ridge-rd., u.t. 67 yrs., g.r. 10l., y.r. 48l. 200

By WILKINSON, SON, & WELCH.

Worthing, Sussex.—Amhurst Nurseries, f., y.r. 50l. 345

April 30.—By DERENHAM, TEWSON, RICHARDSON, & Co.

Notting Hill. Norland-sq., f.g. rents 45l., reversion in 30 yrs £1,135

Wandsworth Common.—87 and 131, St. James's-rd., f., y.r. 79l. 940

Kentish Town.—44, Dartmouth Park-rd., u.t. 50 yrs., g.r. 9l., p. 410

By FAREBROTHER, ELLIS, & Co.

High Ongar, Essex.—Blewgntes cottages, 16 a. 2 r. 14 p., f. 400

Blackmore, Essex.—Amble land, 23a. 3r. 21 p., f. 390

Contractions used in these lists.—F.g.r., for freehold ground-rent; l.g.r. for leasehold ground-rent; i.g.r. for improved ground-rent; g.r. for ground-rent; r. for rent; f. for freehold; c. for copyhold; l. for leasehold; p. for possession; e.r. for estimated rental; w.r. for weekly rental; q.r. for quarterly rental; y.r. for yearly rental; u.t. for unexpired term; p.a. for per annum; yrs. for years; la. for lane; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; cres. for crescent; av. for avenue; gdns. for gardens; yd. for yard; gr. for grove; b.h. for beerhouse; p.h. for public-house; o. for offices; s. for shops; ct. for court.

TO CORRESPONDENTS.

NOTE.—All communications with respect to literary and artistic matters should be addressed to "THE EDITOR" (and not to any person by name); those relating to advertisements and other exclusively business matters should be addressed to "THE PUBLISHER," and not to the Editor.

All communications must be authenticated by the name and address of the sender, whether for publication or not. No notice can be taken of anonymous communications.

The responsibility of signed articles, letters, and papers read at meetings rests, of course, with the authors.

We cannot undertake to return rejected communications; and the Editor cannot be responsible for drawings, photographs, manuscripts, or other documents, or for models or samples, sent to or left at this office, unless he has specially asked for them.

All drawings sent to or left at this office for consideration should bear the owner's name and address on either the face or back of the drawing. Delay and inconvenience may result from inattention to this.

Any commission to a contributor to write an article, or to execute or lend a drawing for publication, is given subject to the approval of the article or drawing, when received, by the Editor, who retains the right to reject it if unsatisfactory. The receipt by the author of a proof of an article in type does not necessarily imply its acceptance.

N.B.—Illustrations of the First Premiated Design in any important architectural competition will always be accepted for publication by the Editor, whether they have been formally asked for or not

PRICES CURRENT OF MATERIAL

**** Our aim in this list is to give, as far as possible, *average* prices of materials, not necessarily the lowe Quality and quantity obviously affect prices—a f which should be remembered by those who make use this information.

BRICKS, &c.

Per 1000 Alongside, in River. £ s.

Best Stocks 1 14
Picked Stocks for Facings 2 10

Per 1000, Delivered at Railway Depôt.

	£ s. d.		£ s.
Flettons	1 13 0	Best Blue Pressed	
Best Fareham Red	3 12 0	Staffordshire...	3 15
Best Red Pressed Ruabon Facing	5 0 0	Do. Bullnose.....	4 0
		Best Stourbridge Fire Bricks ...	4 0

GLAZED BRICKS—

Best White, Ivory, and Salt Glzd. Str'tch'rs	11 7 6	Double Headers	13 17
		One Side and two Ends	17 17
Headers	10 17 6	Two Sides and one End	18 17
Quoins, Bullnose, and 4½ in. Flats	14 17 6	Splays & Squints	16 7
D'ble Stretchers	16 17 6		

Second Quality £1 10s. per 1000 less than best.

	s. d.	
Thames and Pit Sand	6 9	per yard, deliver
Thames Ballast	5 6	" "
Best Portland Cement	31 0	per ton, "
Best Ground Blue Lias Lime	19 0	" "

NOTE—The cement or lime is exclusive of ordinary charge for sacks.

Grey Stone Lime ..... 13s. 0d. per yard deliver
Stourbridge Fireclay in sacks 27s. 0d. per ton at rly d

STONE.

Per Ft. Cube.

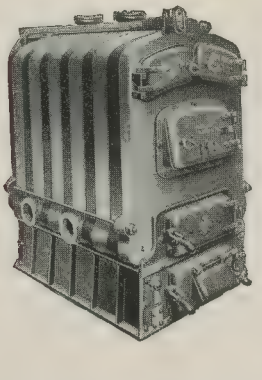
	s.
BATH STONE—delivered on road waggons, Paddington Depôt	1
Do. do. delivered on road waggons, Nine Elms Depôt	1
PORTLAND STONE (20 ft. average)—	
Brown Whitbed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2
White Basebed, delivered on road waggons Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2

Per Ft. Cube, delivered at Railway Depôt.

	s. d.		s.
Ancaster in blocks..	1 10	Closeburn Red Freestone	2
Beer in blocks	1 6		
Greenshill in blocks	1 10	Red Mansfield Freestone	2
Derley Dale in blocks	2 4	Talacre & Gwespyr Stone	2
Red Corsehill in blocks	2 3		

Fuel Cost and Heating Efficiency.

The large increase in the price of fuel greatly accentuates the importance o extracting the full calorific value from the coal or coke used for heating purpose —a matter closely affecting the owners and occupiers of all classes of offic buildings, factories, shop premises, and private houses.



IDEAL & IDEAL RADIATORS BOILERS

For warming houses, flats, hotels shops, public buildings etc. by hot water or steam.

The economy of central heating is now generally admitte but the selection of suitable appliances for the generation an distribution of the heat requires careful consideration if the be results are to be obtained.

The specification by Architects and Engineers of Ide Boilers and Ideal Radiators for Low Pressure Hot Water an Steam Systems ensures the use of a product which is based o scientific knowledge and more than 30 years' experience— product made from the best materials, enjoying a world-wid reputation for reliability, efficiency, adaptability, and simplici of design, construction, and operation.

If you have not our current catalogue we shall be please to send a copy gratis and post free.

NATIONAL RADIATOR COMPANY LIMITED. 439 & 441, Oxford Street, London, W.

WORKS: HULL, Yorks.

Agents carrying Stocks { BAXENDALE & CO., Ltd., Miller Street Works, MANCHESTER. WILLIAM MACLEOD & CO., 60, 62, & 64, Robertson Street, GLASGOW.

STONE (*Continued*).

K STONE—*Robin Hood Quality.*
Per Ft. Cube, Delivered at Railway Depôt. s. d.
pled random blocks 2 10
Per Ft. Super., Delivered at Railway Depôt.
sawn two sides landings to sizes (under
ft. super.) 2 3
rubbed two sides ditto, ditto 2 6
sawn two sides slabs (random sizes) 0 11½
to 2½ in. sawn one side slabs (random sizes) 0 7
. to 2 in. ditto, ditto 0 6

D YORK—
Per Ft. Cube, Delivered at Railway Depôt.
pled random blocks 3 0
Per Ft. Super., Delivered at Railway Depôt.
sawn two sides landing to sizes (under 40 ft.
per.) 2 8
rubbed two sides ditto 3 0
sawn two sides slabs (random sizes) 1 2
self-faced random flags 0 5

SLATES.

Per 1000 of 1200 at Railway Depôt.

	£ s. d.		£ s. d.
In.		In. In.	
10 best blue		20×10 best Eur'kn	
ngor	13 2 6	unfading green	15 17 6
12 ditto	13 17 6	20×12 ditto	18 7 6
10 1st quality		18×10 ditto	13 5 0
itto	13 0 0	16×8 ditto	10 5 0
12 ditto	13 15 0	20×10 permanent	
8 ditto	7 5 0	green	11 12 6
10 best blue		18×10 ditto	9 12 6
rtmadoc	12 12 6	16×8 ditto	6 12 6
3 ditto	6 12 6		

TILES.

At Railway Depôt.

	s. d.		s. d.
plain red roof-		Best "Hartshill"	
g (per 1000)	42 0	brand, plain sand-	
Hip and Valley		faced (per 1000) ...	45 0
(per doz.)	3 7	Do. pressed (per	
Broseley (per		1000)	42 6
00)	50 0	Do. Ornamental (per	
Ornamental (per		1000)	47 6
00)	52 6	Hip (per doz.) ...	4 0
Hip and Valley		Valley (per doz.)	3 6
(per doz.)	4 0	Staffords. (Hanley)	
Bunbon red,		Reds or Brindled	
own, or brindled		(per 1000)	42 6
dw'ds) (per 1000)	57 6	Hand-made sand-	
Ornamental (per		faced (per 1000)	45 0
00)	60 0	Hip (per doz.) ...	4 0
Hip (per doz.) ...	4 0	Valley (per doz.)	3 6
Valley (per doz.)	3 0		

WOOD.

BUILDING WOOD.

	At per standard. £ s. d.		£ s. d.
s: best 3 in. by 11 in. and 4 in.			
by 9 in. and 11 in.	14 0 0 ...	15 10 0	
s: best 3 by 9	13 10 0 ...	14 10 0	
ens: best 2½ in. by 7 in. and			
3 in., and 3 in. by 7 in. and 8 in.	11 10 0 ...	12 10 0	
ens: best 2½ by 6 and 3 by 6...	0 10 0	less than	
		7 in. and 2 in.	
s: seconds	1 0 0	less than best.	
ens: seconds	0 10 0	„ „	
n. by in. and 2 in. by 6 in. ...	9 10 0 ...	10 10 0	
n. by 4½ in. and 2 in. by 5 in.	9 0 0 ...	10 0 0	
ign Sawn Boards—			
n., and 1½ in. by 7 in.	0 10 0	more than	
		battens.	
e	1 0 0	„	
timber: best middling Danzig	At per load of 50 ft.		
Memel (average specification)	5 0 0 ...	5 10 0	
bonds	4 10 0 ...	5 0 0	
mall timber (8 in. to 10 in.) ...	3 17 6 ...	4 0 0	
mall timber (6 in. to 8 in.)	3 5 0 ...	3 10 0	
edish balks	2 12 6 ...	3 0 0	
o-pine timber (30 ft. average)	5 5 0 ...	6 0 0	

JOINERS' WOOD.

	At per standard. £ s. d.		£ s. d.
te Sea: first yellow deals,			
in. by 11 in.	24 10 0 ...	25 10 0	
in. by 9 in.	22 10 0 ...	23 10 0	
Battens, 2½ in. and 3 in. by 7 in.	17 0 0 ...	18 0 0	
cond yellow deals, 3in. by 11 in.	19 0 0 ...	20 0 0	
„ „ 3 in. by 9 in.	18 0 0 ...	19 10 0	
Battens, 2½ in. and 3 in. by 7 in.	14 0 0 ...	15 0 0	
ird yellow deals, 3 in. by			
1 in. and 9 in.	14 0 0 ...	15 0 0	
Battens, 2½ in. and 3 in. by 7 in.	11 10 0 ...	12 10 0	
rsburg: first yellow deals,			
in. by 11 in.	21 10 0 ...	22 10 0	
Do. 3 in. by 9 in.	18 10 0 ...	19 10 0	
Battens	14 0 0 ...	15 0 0	
cond yellow deals, 3 in. by			
1 in	16 10 0 ...	17 10 0	
Do. 3 in. by 9 in.	15 0 0 ...	16 0 0	
Battens	11 10 0 ...	12 10 0	
ird yellow deals, 3in. by 11 in.	13 10 0 ...	14 10 0	
Do. 3 in. by 9 in.	13 0 0 ...	14 0 0	
Battens	10 10 0 ...	11 0 0	
e Sea and Petersburg—			
st white deals, 3 in. by 11 in.	15 0 0 ...	16 0 0	
„ „ 3 in. by 9 in.	14 0 0 ...	14 10 0	
Battens	11 10 0 ...	12 10 0	
cond white deals, 3in. by 11 in.	14 0 0 ...	15 0 0	
„ „ 3 in. by 9 in.	13 0 0 ...	14 0 0	
Battens	10 10 0 ...	11 0 0	
o-pine: deals	19 0 0 ...	21 0 0	
der 2 in. thick extra	0 10 0 ...	1 0 0	
w Pine—First, regular sizes	48 0 0	upwards.	
dments	32 0 0	„	
onds, regular sizes	33 0 0	„	
dments	28 0 0	„	
Pine—Planks per ft. cube.	0 4 6 ...	0 6 0	
g and Stettin Oak Logs—			
ge, per ft. cube	0 3 0 ...	0 3 9	
all „ „	0 2 6 ...	0 2 6	
scot Oak Logs, per ft. cube	0 6 6 ...	0 8 0	
Wainscot Oak, per ft. sup. as			
nch	0 0 10 ...	0 1 0	
„ do. do.	0 0 8½ ...	—	
Mahogany—Honduras, Ta-			
asco, per ft. super. as inch..	0 0 10 ...	0 1 1	
ected, Figury, per ft. super.			
s inch	0 1 6 ...	0 2 6	
Walnut, American, per ft.			
per. as inch	0 0 10 ...	0 1 0	
per load	18 0 0 ...	22 0 0	
ican Whitewood planks,			
er ft. cube	0 5 0 ...	0 6 0	

WOOD (*Continued*).

JOINERS' WOOD (*Continued*)—

Prepared Flooring, etc.—	Per square. £ s. d.		£ s. d.
1 in. by 7 in. yellow, planed and shot	0 13 6 ...	0 17 0	
1 in. by 7 in. yellow, planed and matched	0 14 0 ...	0 18 0	
1¼ in. by 7 in. yellow, planed and matched	0 16 0 ...	1 0 0	
1 in. by 7 in. white, planed and shot	0 12 0 ...	0 14 6	
1 in. by 7 in. white, planed and matched	0 12 6 ...	0 15 0	
1¼ in. by 7 in. white, planed and matched	0 15 0 ...	0 16 6	
¾ in. by 7 in. yellow, matched and beaded or V-jointed brds.	0 11 0 ...	0 13 6	
1 in. by 7 in. „ „	0 14 0 ...	0 18 6	
¾ in. by 7 in. white „ „	0 10 0 ...	0 11 0	
1 in. by 7 in. „ „	0 12 9 ...	0 15 0	

6 in. at 6d. to 9d. per square less than 7 in.

JOISTS, GIRDERS, &c.

	In London, or delivered Railway Vans, per ton. £ s. d.		£ s. d.
Rolled Steel Joists, ordinary sections	7 10 0 ...	8 0 0	
Compound Girders, ordinary sections	9 10 0 ...	10 0 0	
Steel Compound Stanchions	11 0 0 ...	12 0 0	
Angles, Tees, and Channels, ordinary sections	9 10 0 ...	10 0 0	
Flitch Plates	9 10 0 ...	9 10 0	
Cast Iron Columns & Stanchions, including ordinary patterns ...	7 10 0 ...	8 10 0	

METALS.

	Per ton, in London. £ s. d.		£ s. d.
IRON—			
Common Bars	9 0 0 ...	9 10 0	
Staffordshire Crown Bars, good merchant quality	9 5 0 ...	9 15 0	
Staffordshire "Marked Bars"	11 0 0 ...	—	
Mild Steel Bars	9 5 0 ...	9 15 0	
Hoop Iron, basis price	10 0 0 ...	—	
„ „ Galvanised	17 10 0 ...	—	
(*And upwards, according to size and gauge.)			
Sheet Iron Black—			
Ordinary sizes to 20 g.	10 5 0 ...	—	
„ „ 24 g.	11 5 0 ...	—	
„ „ 26 g.	12 15 0 ...	—	
Sheet Iron, Galvanised, flat, ordinary quality—			
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15 10 0 ...	—	
Ordinary sizes to 22 g. and 24 g.	16 0 0 ...	—	
„ „ 26 g.	17 0 0 ...	—	
Sheet Iron, Galvanised, flat, best quality—			
Ordinary sizes to 20 g.	18 10 0 ...	—	
„ „ 22 g. and 24 g.	19 0 0 ...	—	
„ „ 26 g.	20 10 0 ...	—	
Galvanised Corrugated Sheets—			
Ordinary sizes, 6ft. to 8ft. 20 g.	15 0 0 ...	—	
„ „ 22 g. and 24 g.	15 5 0 ...	—	
„ „ 26 g.	16 15 0 ...	—	

METALS (*Continued*).

IRON (*Continued*)—	Per ton, in London. £ s. d.		£ s. d.
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker.....	12 10 0 ...	—	
Best Soft Steel Sheets, 2 g. & 24 g.	13 10 0 ...	—	
„ „ „ 26 g.	15 10 0 ...	—	
Cut Nails, 3 in. to 6 in.	11 0 0 ...	11 10 0	
(Under 3 in., usual trade extras.)			

LEAD, &c.

	£ s. d.		
LEAD—Sheet, English, 4lb. and up	20 7 6 ...	—	
Pipe in coils	20 17 6 ...	—	
Soil pipe	23 17 6 ...	—	
Compo pipe	23 17 6 ...	—	
ZINC—Sheet—	In casks of 10 cwt.		
Vielle Montagne	33 10 0 ...	—	
Silesian	33 5 0 ...	—	
Zinc, in bundles, 1s. per cwt. extra.			
COPPER—			
Strong Sheet .....per lb.	0 1 0 ...	—	
Thin „	0 1 1 ...	—	
Copper nails	„ 0 0 10 ...	—	
Copper wire	„ 0 0 10 ...	—	
BRASS—			
Strong Sheet	„ 0 0 11 ...	—	
Thin	„ 0 1 0 ...	—	
TIN—English Ingots	„ 0 2 0 ...	—	
SOLDER—Plumbers'	„ 0 0 9 ...	—	
Tinmen's	„ 0 1 0 ...	—	
Blowpipe	„ 0 1 2 ...	—	

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

15 oz. thirds	2¼d.	26 oz. fourths	3¾d.
„ fourths	1¾d.	32 oz. thirds.....	5d.
21 oz. thirds.....	3¼d.	„ fourths	4¼d.
„ fourths	2¾d.	Fluted Sheet, 15 oz.	3¼d.
26 oz. thirds.....	4d.	„ 21 oz.	4¼d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

⅛ Rolled plate	2¾d.	Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white.....	3¼d.
⅛ Rough rolled and rough cast plate..	2¾d.		
¼ Rough rolled and rough cast plate..	3d.	Ditto, tinted.....	5d.

* Not less than two crates.

OILS, &c.

	per gallon £ s. d.		£ s. d.
Raw Linseed Oil in pipes			0 3 6
„ „ „ in barrels.....		„	0 3 7
„ „ „ in drums		„	0 3 9
Boiled „ „ in barrels.....		„	0 3 9
„ „ „ in drums		„	0 4 0
Turpentine in barrels		„	0 3 0
„ in drums		„	0 3 2
Genuine Ground English White Lead, per ton			28 0 0
Red Lead, Dry		„	24 0 0
Best Linseed Oil Putty		per cwt.	0 10 6
Stockholm Tar		per barrel	1 12 0



VARNISHES, &c.	Per gallon. £ s. d.
Fine Pale Oak Varnish	0 8 0
Pale Copal Oak	0 10 6
Superfine Pale Elastic Oak	0 12 6
Fine Extra Hard Church Oak	0 10 0
Superfine Hard-drying Oak, for seats of Churches	0 14 6
Fine Elastic Carriage	0 12 0
Superfine Pale Elastic Carriage	0 16 0
Fine Pale Maple	0 10 0
Finest Pale Durable Copal	0 18 0
Extra Pale French Oil	1 1 0
Eggshell Plating Varnish	0 18 0
White Pale Enamel	1 4 0
Extra Pale Paper	0 12 0
Best Japan Gold Size	0 10 6
Best Black Japan	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Knotting	0 10 9
French and Brush Polish	0 10 6

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than 6 p.m. on Wednesday.* [N.B.—We cannot publish Tenders unless authenticated either by the architect or the building owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is stated, nor any list in which the lowest Tender is under 100l., unless in some exceptional cases and for special reasons.]

* Denotes *accepted.* † Denotes *provisionally accepted.*

ABERCARN.—For erection of new premises, for the Abercarn Men's Club. Mr. R. L. Roberts, M.S.A., architect, Abercarn. Quantities by architect

A. Harris	£1,485 5 6		
E. F. King & Co.	1,475 0 0		
Edmunds & Woods, Cwmcarn*	1,466 10 0		
A. J. Colborne	1,454 0 0		
G. F. Leadbeater	1,436 0 0		

ABERYSTWYTH.—For erection of a house at Llanrhystyd-road. Mr. A. M. James, architect and surveyor, Aberystwyth —

C. Davies & Son	£565 0	J. Williams & Son	£439 10
Edwards Bros.	530 0	J. Evans	395 0
J. Jones & Co.	510 0	T. Pugh, Goginan,	
J. L. Stephens	500 0	Aberystwyth*	392 10
J. Jenkins & Sons	480 0	J. Parry	379 0
D. R. Williams	459 10	J. Evans	370 0
D. Williams	446 0	J. James	366 0

BLAINA.—For erection of seventy-four houses at Cwm Celyn. Mr. W. J. Davies, Engineer and Surveyor to the Council:—

Seventy-four Houses.			
Gay & Head	£14,090 0 0	I. Bracey	£13,505 0 0
R. Tudor	13,792 16 10	J. Watkins	12,987 0 0
J. H. Monks & Co.	13,679 12 0	A. J. Colborne, Swindon*	12,499 0 0
R. J. Birch	13,640 0 0		

[Surveyor's estimate, £13,185 10s.]

Roads.			
Gay & Head	£868 12 0	J. H. Monks & Co.	£666 12 6
R. Tudor	714 13 6	A. J. Colborne, Swindon*	502 17 0
J. Watkins	693 4 4		
R. J. Birch	693 15 6		

[Surveyor's estimate, £672 10s. 9d.]

FARRINGDON (Berks).—For erection of villa, for Mrs F. H. Dennys. Messrs Drew & Sons, architects, Swindon:

J. G. Norman* ... £533

[Five tenders received]

LECHLADE (Gloucestershire).—For new shop front, for Mr. C. Chudleigh. Messrs. Drew & Sons, architects, Swindon:—

J. G. Norman* ... £83

[Five tenders received.]

LONDON.—For erecting and completing additions to factory, Hanlon street and Grove-street, Deptford, for Messrs. A. G. Scott & Co., Ltd. Quantities by Mr. Louis Jacob, F.S.I., 32, Theobald's-road, Gray's Inn.—

J. W. Falkner & Sons	£6,183	H. L. Holloway	£5,943
W. E. Blake, Ltd.	6,175	W. Nash	5,897
T. D. Lenz	6,145	Pasterfield & English	5,887
J. Carmichael	6,075	H. H. Hollingsworth	5,783
A. J. Staines	5,977	W. Cubitt & Co.*	5,777

LLANGEFNI.—For additions, alterations, and repairs to the Council School. Mr. Jos. Owen, F.R.I.B.A., County Architect, Menai Bridge:—

Evans & Pritchard	£3,220	O. Thomas & Son, Amlwch, N. Wales*	£2,752
R. & I. Williams	3,028	R. Thomas	2,600
W. H. Jones	2,860		

PORTHCAWL (Glam.).—For the construction of three new streets with sewers, etc., off South-road, for Mr. G. E. Blundell, of Nottage Court. Mr. Fred J. Veall, architect, Cardiff. Quantities supplied:—

C. Sayers	£1,261 9 10	W. A. Jones	£1,051 10 6
R. Lacey	1,226 7 0	T. J. Davies	1,002 5 6
E. J. Coxe, Ltd	1,115 6 3	A. G. Collinges	998 2 1
R. Jones	1,095 15 3	Barnes, Chaplin, & Co., Cardiff*	834 8 9
R. Rankin	1,076 19 8		
M. Scott	1,066 6 3		

[Street No. 1 to proceed at once.]

STOCKPORT.—For erection of a boundary wall, with railings and gates, at Edgeley-road, Cheadle Heath. Mr. John Atkinson, Assoc.M.Inst.C.E., Borough Surveyor:—

H. Bardsley, Booth-street, Stockport* . £322 10

STOWMARKET.—For alterations and additions to the bathing-place, for Stowmarket Swimming Club. Mr. G. W. Lingwood, architect, Stowmarket. Quantities by architect:

J. W. Trudgett	£436 2 0
A. Tayler, Stowmarket*	331 0 2

SWINDON.—For additions to St. Catherine's School, "Corbière," Westlecott-road, for the Perfect Thrift Building Society. Messrs. Drew & Sons, architects, Swindon.

J. G. Norman* ... £185

[Four tenders received.]

TAUNTON. For erection of seven houses in Greenway road, for the Taunton Co-operative Society, Ltd. Messrs. Sprankling & Price, Lics R.I.B.A., architects, Taunton:—

S. B. Blunt	£3,675 0	H. G. Smith	£1,900 0
T. Stockham	3,849 0	T. Manning & Son	1,890 0
T. Rabjohns	2,129 10	J. Maddock, Taunton*	1,847 0
F. W. Gibbs	2,065 0	F. W. Henderson	1,839 0
R. Rendell	2,030 0		
F. Tottle	2,018 7		

WISBECH.—For erection of house on farm at Terrington St. Clement, Norfolk, for Messrs. R. & J. Jakes, of Terrington St. Clement. Messrs. Walker & Walker, architects and surveyors, Wisbech. Quantities by the architects:

Johnson & Son	£300 0	R. Eggleton, Terrington St. Clement*	£246 0
Sparkes & Latten	300 0		
P. Bone	293 10		
H. Rilett	275 0		

THETFORD.—For erection of fifty workmen's dwellings, new roads, and sewers, etc., on Bury-road, for Thetford Town Council. Mr. S. J. Wearing, architect, Norwich. Quantities by architect:—

Kirk & Randall	£9,492 0 0	J. Gutteridge & Son	£7,768
H. C. Tofts	8,388 0 0	A. C. Greengrass	7,447
		W. J. Hammant	7,447
Himnels & Son	8,241 0 0	Holden & Son	7,350
Rodd & Fisher	8,240 0 0	E. J. Smith	7,065
J. W. Neale	8,154 18 0	Sparkes & Latten	6,810
R. Shanks	7,997 0 0	E. Clarke, Melton Mowbray†	6,666
H. J. Luzzell	7,987 0 0		
H. S. Wallis	7,883 14 10		
W. F. Smith	7,779 0 0		

Ham Hill Stone.
Doulting Stone.
Portland Stone.
The Ham Hill and Doulting Stone Co., Limit
(incorporating the Ham Hill Stone Co. and C. Trask & Son The Doulting Stone Co.).
Norton, Stoke-under-Ham, Somerset.
London Agent:—Mr. E. A. Williams
16, Craven-street, Strand.

Asphalte.—The Seyssel and Metallic La
Asphalte Co. (Mr. H. Glenn), Office, 42, Poult
E.C.—The best and cheapest materials for da
courses, railway arches, warehouse floors, f
roofs, stables, cow-sheds and milk-rooms, gra
aries, tun-rooms, and terraces. Asphalte Co
tractors to Forth Bridge Co. T.N. 2644 Central

SPRAGUE & CO., Ltd.,
PHOTOLITHOGRAPHERS,
69 and 70, Dean-street,
Soho, W.

OGILVIE & CO., Telephone: DALSTON
Many years connec
with the late firm
W. H. LASCELLES &
of Bunhill Row.
Amhurst Works, **DALSTON LANE, N.**
EXPERTS IN HIGH-CLASS JOINERY.
ALTERATIONS AND DECORATIONS. ESTIMA
FREE

J. J. ETRIDGE, Jr.
SLATE MERCHANTS. LTD.
EXPERTS IN
SLATING, TILING.
BEST WORK ONLY.
Telephone 2635 Wall, or write—
BETHNAL GREEN SLATE WORKS,
BETHNAL GREEN, LONDON, E.

ASPHALTE
For Horizontal & Vertical Damp Course
For Flat Roofs, Basements, & other Floo
The best materials and workmanship are supplied
THE
French Asphalte C
Whose name and address should be inserted in specifications.
For estimates, quotations, and all information apply at the Offices of the Company,
5, LAURENCE POUNTNEY HILL,
CANNON STREET, E.C.

EWART'S
Cures in 19 cases out of 20.
"EMPEROR"
Write to-day for Illustrated Catalogue Free to
EWART & SON Ltd.,
346-350, Euston Road, London, N.W.
Established 1834.
Telephone: 2570 North.
SMOKE-CURE

THE BUILDER

VOL. CII.—No. 3615. MAY 17, 1912.

CONTENTS.

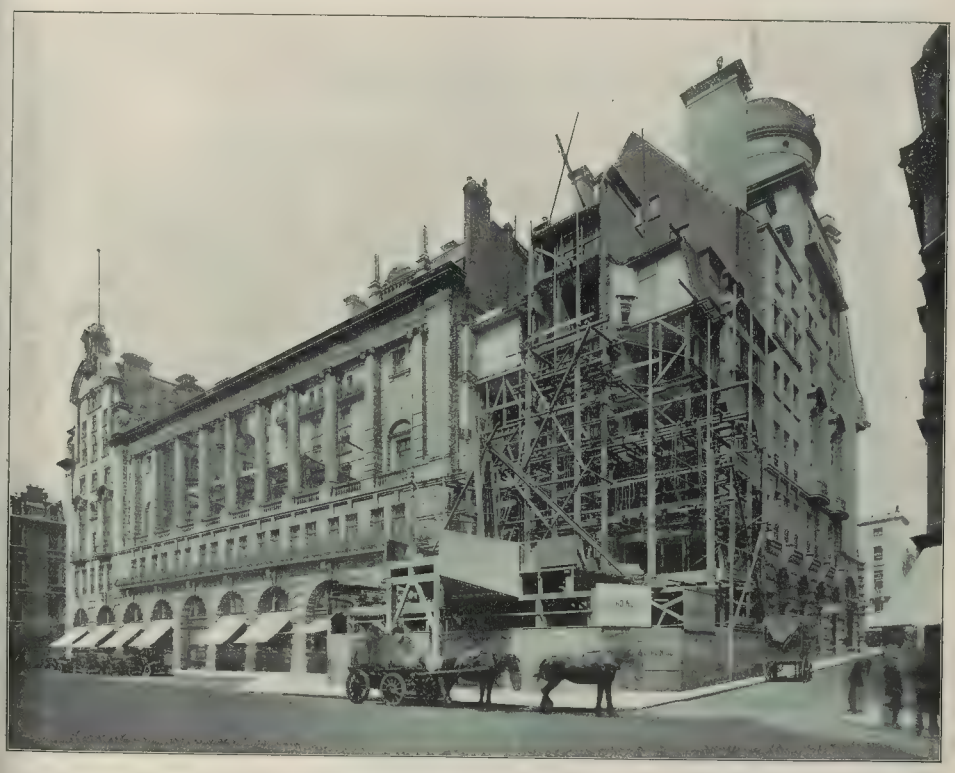
	PAGE
A Piccadilly Blunder (with Illustration)	565
Registration and Personal Qualifications	566
The Royal Academy Exhibition: Ecclesiastical Work	566
Notes	567
Architecture at the Royal Scottish Academy, 1912	568
Renaissance Sculpture at the Burlington Fine Arts Club	568
Designs for Medical Superintendent's House, Greenwich Infirmary	569
Design for a Town House (with Illustrations)	569
A Pioneer in Sanitation	570
Architectural Societies	571
Archæological Societies	571
The Surveyors' Institution	571
Engineering Societies	572
General News	573
Competition News (with Illustrations)	573
Books	574
Correspondence	575
London Councils	575
Editorial Summary	576
Meetings	576
The London County Council	576
Notes to Illustrations	576
Fifty Years Ago	576
Monthly Historical Review:—	
The Architecture of Portugal.—III. (with Illustrations)	577
The History of the Ouse Bridge, York (with Illustration)	579
The Impending Demolition of the Rooms of the Birmingham Royal Society of Artists (with View)	580
Notes	581
The Building Trade:—	
The Land Duties	582
The Mediæval Joiner	582
London Master Builders' Association	582
Bankruptcy Bill	582
Labour in the Building Trade	582
Scottish Building Trades Federation	583
The British Engineers' Association	583
The London Co-operative Union of Builders, Contractors, and Allied Trades	583
General Building News	583
The Building Trade (*contd.*):—	
Applications under London Building Acts, 1894 to 1909	583
Projected New Buildings in the Provinces	584
Westminster City Council	585
Lower Thames Valley District Surveyors' Association	585
Legal Column	585
Law Reports	586
List of Competitions, Contracts, etc., Open	587
Patents	589
Some Recent Sales	589
Prices Current	590
Tenders	591

Illustrations.

"Woodside," Esher, Surrey. Sir Ernest George, A.R.A., & Mr. A. B. Yeates, F.R.I.B.A., Architects.

A Wood-Frame House, British Guiana. Sir Ernest George, A.R.A., & Mr. A. B. Yeates, F.R.I.B.A., Architects.

The History of the Ouse Bridge, York. By Mr D. Morrell.



A PICCADILLY BLUNDER.

THE present condition of the operations rendered necessary by the rebuilding of the frontage of the small building forming one angle of the Piccadilly Hotel block is shown in the view we publish herewith.

It has always been a matter for regret that at the time the hotel was built it was not found possible to acquire this corner and include it in the general scheme, so that the whole block could have been treated as one complete building.

But although an opportunity to obtain a complete architectural composition could not be utilised, it had always been hoped that when this corner was rebuilt and set back to the new frontage line the fresh opportunity thus afforded to obtain at least some general harmony of effect would not again be thrown away.

A twelvemonth ago we referred to this

aspect of the matter; but now we regret to learn that instead of endeavouring to balance the gable at the other end of the hotel it is intended to rebuild the old front exactly as it was before, thus perpetrating what we cannot but feel is a hopeless blunder which will remain an eyesore for years to come.

We understand this decision has been arrived at owing to the fact that the occupier of these corner premises considers that a repeat of the western gable of the hotel would be quite unsuitable for the purposes of his business.

We quite sympathise with his point of view, and if any attempt was made to force an exact repeat of this gable upon him, fenestration and all, we cannot be altogether surprised that he refused, however much we may regret the result of his refusal.

From the architectural point of view, however, it is by no means necessary to repeat a gable feature by feature in order to obtain balance and a general effect of symmetry, and what must, we think, be obvious to anyone is that if the matter had been rightly handled some arrangement could have been arrived at which would have given the occupier a reasonable elevation suitable to his purpose and yet have preserved a sense of architectural unity. It should have been quite possible, we imagine, to balance the mass and general outline of the western gable while varying the window openings and other details to meet the peculiar requirements of the building.

The whole incident is deplorable enough, and no credit to the way such things are managed. Did we possess any reasonable system of architectural control over our streets it is no doubt true that such a ridiculous situation would never in the first instance have been permitted to arise. But we cannot help feeling that with a little intelligence and architectural insight into the possibilities of the situation as it now exists its worst results might have been avoided.

REGISTRATION AND PERSONAL QUALIFICATIONS.

Of all the questions which will be brought to the front as the proposals for Registration take a more definite shape none seem to us of more importance than the method whereby it is, or will be, proposed to ascertain who is fit to be registered and who is not.

Although it is no doubt permissible for any society to set up its own standard of efficiency and to make regulations for admission to its membership solely in accordance with its own ideas, as soon as it is proposed to make these regulations obligatory upon all who wish to enter the profession of architecture the position seems to be somewhat altered. The whole question assumes a wider and more serious aspect, and must be considered from the broadest possible point of view.

If we try to consider it in this way one of the first reflections that must occur to us is that it is advisable to begin at the beginning, and so arrange our methods as to encourage the right type of man to enter the profession and to discourage the wrong type. This appears to be the first essential. We cannot make good architects out of bad material. However good a system of training and of examination may be, it will never produce an architect in the best sense of the word unless we have the right material to work upon. We should view with considerable suspicion any method of Registration or examination which ignored this essential point or relied entirely upon setting up a barrier at the end of the student's career which the unfit would find it extremely difficult to pass without making any effort to discourage them from wasting their time in the endeavour to do so.

Apart from the injustice and waste of energy involved, it seems only reasonable to suppose that if only those who had the necessary personal qualifications were allowed to enter the studentship stage it would be far easier to arrange a satisfactory system of education and to frame a reasonable examination or other method of ascertaining whether they have acquired sufficient technical knowledge and skill to justify their Registration.

It is so much easier to teach or examine in architecture or to discuss it with those who have a natural instinct for it than with those who have not. The whole question is simplified if a barrier beyond which the personally unsuitable cannot pass is erected at the beginning of the student's career rather than at the end.

It should hardly be necessary to insist upon so obvious a truism, yet it appears to be overlooked by our present methods, which permit a student to spend considerable time in the profession before finding out that he has not the special qualifications and aptitudes necessary to genuine success, and which also permit and even tend to encourage the idea that general ability and good education are all that is required.

Neither should it be necessary to dwell on the unfortunate fate of the square peg in the round hole—the man of first-rate ability and high ambition who has been allowed by an inadequate system to drift into a false position and to realise when too late that the real success he might have achieved in some other more suitable profession is beyond his reach in architecture.

From every point of view it appears essential to make more strenuous efforts to obtain the right material from which to fashion the architect of the future. A process of selection should be instituted, and this process, we think, cannot begin at too early a stage in the life of the student. In fact, no student ought to be encouraged or even allowed to propose to be an architect or to present himself for the Institute Preliminary Examination unless he has given proof of special taste and aptitude. That so many without these tastes or aptitudes do present themselves suggests a lack of intelligence or organisation on the part of those responsible for their education up to this point, and the fact that so many are permitted to pass is the defect in our methods to which we draw attention.

We imagine that all headmasters of secondary or public schools would be perfectly competent to give a reliable opinion as to the aptitudes of all boys leaving their schools, and that unofficially a good deal of advice is, as a matter of fact, given by them on the choice of career.

If it would not be possible to insis that every applicant for admission to th profession should produce a certificat from his headmaster or college tutor tha he is a fit and proper person, at leas some definite report or opinion might b asked for which would enable a correc judgment to be formed as to his genera tastes, aptitudes, and type of mind.

In addition to this it might be we if some more definite process of selectio was instituted in the profession itself.

The idea is not a new one. It is, w believe, adopted by the Admiralty wit reference to all candidates for admissio to the Navy, who have to satisfy board of admirals, by personal interview that they are the material out of whic the right type of officer can be mad before they are allowed to take the firs step towards this career.

Although the same method might no be exactly applicable to candidates fo admission to the architectural professio there seems no reason why something o the same lines should not be attempted— possibly a special preliminary schoo from which no student would be allowe to pass without the certificate of a boar of qualified judges that he had th necessary personal qualifications. Th period of observation need not be long and those failing to satisfy the boar within this period would be saved fro wasting further time in an unsuitabl profession.

Although we quite see the desirabilit that every candidate for the professio should have received a good genera education, we think it is of equal or eve greater importance that he should posses the requisite personal qualifications with out which all knowledge and all technica training is a vain thing.

If Registration is going to impos any test of natural ability as a bar to th entrance of the profession—and unless i does so its usefulness might perhaps b questioned—this test should surely, i fairness to the student, be applied at th very beginning of his career, and it shoul not be beyond the scope of professiona ingenuity to discover a satisfactor method of applying it.

THE ROYAL ACADEMY EXHIBITION:

ECCLESIASTICAL WORK.

An exceptionally large proportio of the Architectural Room a the Royal Academy is this yea given up to churches and othe ecclesiastical buildings. A large propor tion of the work reaches a high standard and indicates that the spirit of the Gothi revival still exercises a strong hold o a large section of the architectura profession.

In making this statement we would no wish to be understood that the manner o the XXth century in the handling o Gothic is similar to that of the XIXth The influence of Sedding and Bentley ha made that impossible, and at the presen time we see much less of the rigidl archæological repetition of tradition forms, and much more consideration o the building methods suited to th requirements of the day.

Our architects seem to have recognised that elaborate detail, developing naturally when work was approached in the spirit of religious devotion, is no longer a characteristic mode of expression, and have consequently, while aiming at the effects of quiet dignity and subdued light characteristic of Gothic, made a movement towards simplicity of effect quite in harmony with an attitude of mind more philosophic and less emotional than that of the Middle Ages.

Typical examples of the tendency referred to are the Church of the Annunciation (1671-74), by Mr. Walter Tapper, and the Church at Mitcham, by Mr. H. P. Burke Downing (1678), while the Church of St. Peter, South Wimbledon, by Messrs. Greenaway & Newberry (1682), shows similar characteristics. Mr. Temple Moore's work is this year rather less distinguished than usual, though balance and proportion are carefully studied in his Pusey House, Oxford (1693), and his Hostel of the Resurrection, Leeds (1694). The same architect's design for a Chapel at Mirfield, Yorks (1680), shows the building on high ground firmly strutted from the hillside by a pair of flying buttresses enclosing a stairway. The idea is a striking one, but we cannot help feeling that the long ramps of the buttresses over-emphasise an effect that would be natural and legitimate if carried out with a little more restraint.

Professor Pite's interior of Uganda Cathedral (1687) is a charming drawing, and enables us to realise the effect of his building, the general design of which was exhibited last year. In this case the simplest treatment only was at the architect's disposal, and both plan and detail look almost primitive in their simplicity; yet by a masterly handling of the distribution and treatment of column and pier, the gradation of height and the distribution of lighting, the result promises far better than many a more costly and elaborate work.

A fine drawing (1603) shows us the interior of the new church in Kingsway, by Messrs. Belcher & Joass, rather narrow in its general proportions, covered with a barrel-vault, all severely plain, except for the relief imparted by decorative painting concentrated in the central portion. We confess to a doubt as to whether the somewhat arbitrary distribution of this decoration would impart quite the same charm to the building as it does to the clever water-colour portraying it.

The Byzantine design for St. Joseph's, Aldershot (1656), by Messrs. Poulter, merits attention, and St. Andrew's Church, Frimley (1699), by the same hands, is a pleasantly unassuming piece of work. The Burial Chapel, Falkland (1692), by Mr. Reginald Fairlie, is vigorous and picturesque in treatment, without sacrificing delicacy and refinement in its detail.

Worksop College Chapel (1663), by Sir Aston Webb, is broadly handled, and indicates its purpose at a glance; it is always gratifying to see temptation successfully resisted, as when the large church does not emulate a cathderal or the private chapel the arcades and apse of a church.

Mr. Caröe shows two churches illustrated by rather hard and unsympathetic drawings which deprive them of any chance of sympathetic appreciation; while the designs certainly appear to lack an organic unity of conception, they would certainly gain if the presentment of them took a more gracious form.

Numerous other designs will deserve attention as meritorious in whole or in part, and the few—we may say the very few—that are either definitely bad or merely negligible we may safely leave to the tender mercies of the individual critic.

NOTES.

Southwark and St. Paul's Bridges. We are glad to see that the City Corporation now recognise the claims of architecture in bridge design, and have associated Sir Ernest George with Mr. Basil Mott in the reconstruction of Southwark Bridge, and that the Bridge House Estates Committee has decided that another eminent architect shall be associated with the engineer in the design of St. Paul's Bridge. It is most satisfactory to find the principle established, or rather re-established, that bridges are as much a question of architecture as of engineering, and we sincerely trust that the architects, who have been so long excluded from this branch of their art, will be able to rise to the occasion and justify their restoration to the position from which they should never have been deposed. We fear that the general view of the architect's function in connexion with engineering is that when all practical questions are decided he shall come in to finish off the work by means of minor ameliorations and decorations on a predetermined structure. This is quite a mistaken idea; broadly speaking, the engineer treats his design on a purely economic basis, disregarding any question outside the most efficient method of fulfilling the varied requirements, such as those of water and land traffic, economy in construction, etc.; one of the most important factors in bridge design is that of scale in relation to the surroundings, and this is strictly an architectural question. Thus one may conceive that it would, in some instances, be more convenient to span a river in one leap of 1,000 ft. or more, although such a bridge might unscale and wreck the appearance of a whole city. If such a span had been decided on, of what avail would it be to consult an architect on the curve of the cantilevers or the terminal piers to the gigantic girders?

The L.C.C. Hall. Many of our readers must have been struck by the apparently slow progress of the new London County Hall. We should be the last to advocate an undue hastening of any great work that demands the most careful consideration at the hands of the architect, but, according to Mr. F. L. Dove, who, as one of London's leading contractors, is surely in a position to judge, "the delay is mainly due to the complicated system that has been devised in regard to the selection of architect and design." It is an open secret that the design has been shuttlecocked about between the original designer, the Superintending Architect, and the Establishment Committee, with the result that it has undergone constant change not invariably to the advantage of its architectural effect. Doubtless our readers will remember that at the time the conditions of competition were issued a strong protest was made at the Institute against the system of divided control, when it was predicted that difficulties would arise. It is now becoming evident that these predictions are being fulfilled, and it may be hoped that this example may act as a warning in future cases where such an arrangement may be contemplated.

The London University Site. Incidentally in the discussion at present being carried on of the possibilities of various sites for our hoped-for University of London, visibly and coherently embodied and brought together in one group of buildings, there crops out our English view of the qualities desirable in and proper to an urban park. The latest example is a letter from Mr. James Boyton. As he points out, the upshot of the controversy concerning the position of the King's Memorial was a general decision that the fewer statues there were in our parks the better. The quality of most of our monuments is admittedly poor; but this is merely an adventitious support to the essential view of the matter, which is, briefly, that a park in a town is merely a piece of country left isolated, and should be kept in every respect as nearly as conformable to that ideal as the circumstances of the case will permit. Mr. Boyton points out that the general objection to the proposal of placing the University in the present Botanical Gardens is just another aspect of the same general feeling—which, of course, it is. Useless, we suppose, to point out that an urban park should not try to be rural; that verdure in a town gains immeasurably by contrast with the ordered forms of civilised building. As things are, Regent's Park is, in our view, enhanced by the stately, if rather dull, classic architecture in which it is set. The new Bedford College buildings, we agree with Mr. Boyton, are distressing, but not so much because they are buildings as because, though good enough of their kind, they are of the wrong order here. We think the Botanical Gardens should gain rather than lose by the erection of a dignified group of University buildings of a great classical kind in their midst.

Another Suggested Site. A correspondent to the *Times* makes the suggestion that the Foundling Hospital might be taken over for the purposes of the London University. The entire area of this site is nearly 10 acres, four times that of the detached blocks at the back of the British Museum, and it is moreover open on three sides to public gardens, thus possessing a value in excess of the actual area. The position would be a convenient one, though perhaps a little further east than an unrestricted choice would dictate. From the point of view of the Hospital it

would certainly be desirable to have the opportunity of removal to a more rural position. One note of warning only: if the choice of the University falls on the Foundling Hospital they must be impelled to recognise that the chapel and its immediate surroundings would have to be embodied in its building scheme.

Civic Amenities.

WHILE our American cousins exercise their ingenuity to the extreme of human endurance in the matter of street advertisements, which are illuminated and move in an eye-catching manner almost beyond toleration, the authorities in this country seem disposed to look with increasing disfavour on the too-prominent display of trade announcements. Whether this result is due to such semi-private efforts as those made by Mr. Richardson Evans and at the Institute, or to public opinion, it is a fact which should serve to encourage those who hope that in time all city and urban advertisements may be controlled with an iron hand. It is an old cry that the beauties of the country are seriously threatened by patent medicine and other manufacturers, and the advent of the motor-car has brought new cause for complaint in regard to commercial enterprise. Much remains to be done in the way of protest in country and town, moving and flashing lights being particularly objectionable in London and elsewhere. A definite and desirable check has been given to the progress of the street advertiser by the rejection (by forty-five votes to thirteen) of the recommendation by the Highways Committee that the London County Council should permit an announcement on the railway bridge over Southwark Bridge-road. That so large a majority should have spontaneously realised the objections to the proposal shows that the conscience of the public is awakening to the demand for the preservation of our streets from the blatant enormities of the advertiser.

ARCHITECTURE AT THE ROYAL SCOTTISH ACADEMY, 1912.

THE number of exhibits in the Architectural Room of this year's Royal Scottish Academy is fifty-nine. Of these sixteen, all small, represent contemporary Scottish architecture, whilst seventeen, two of them about 10 ft. square and almost all of large size, are the work of French architects. The remainder are buildings outside Scotland or sketches, none of them of great importance. To the inquirer this state of affairs is disconcerting. Is there, indeed, no Scottish architecture? Buildings of some importance have been begun or completed in Scotland during the year; town-planning schemes are under consideration in many localities; yet no sign appears upon the walls of the Royal Scottish Academy. To this problem we shall return, but first we may consider the few Scottish works which we have.

The only Scottish buildings of any architectural interest are the Perth City Hall and the Catholic Church at Troon, Ayrshire. Neither is large. The former, by Messrs. Clifford & Lunan, is a well-designed, sober building of the type which competitions have made familiar. The Church at Troon, by Mr. Reginald Fairlie, is a typical example of the younger school of domestic and church building. It is based firmly on the local traditions of the XVth and XVIth centuries, but these are treated very freely. The building is well massed and very reticent in ornament. The influence of Sir Robert Lorimer is evident in this, in Mr. F. C. Mears' addition to St. John's Chapel, Canongate, and in Mr. Richardson's angel-screen, St. Baldred's, North Berwick. It is to the work of this school that we may look for the future of Scottish architecture.

The work shown by the more prominent architects is unworthy of their names. Sir Robert Lorimer is represented by a small frame of photographs of the restoration of Pittencrieff House, at Dunfermline, good, but not a work of importance. Messrs. Burnet & Sons show a sketch of a hospital. Mr. A. N. Paterson shows a commercial building, a church and a villa, none of them meriting particular notice. Mr. Tarbolton has a very "Gothic" study; and Messrs. Honeyman, Keppie, & Mackintosh a very "French Renaissance" bandstand, which only attracts attention as bearing the name of an architect whom we had associated with a wilder school of design.

There is nothing else.

Amongst the other works the only building of any importance is Sir Aston Webb's new Royal School of Mines, a dignified if slightly dull building, with a central feature which somewhat recalls the arch of Constantine.

We may now turn to the principal exhibits. Dominating two of the four walls are two immense stretchers of a scheme for the restoration of the Church of St. André at Chartres, by Professor Raoul Brandon. He also shows a large vividly-coloured sketch of the interior. The drawings are executed to a large scale, with extreme care, shaded delicately in water-colour, titled with large illuminated capitals and partly legible Gothic script, and adorned with numerous figures in fancy dress.

The Church of St. André at Chartres is an unimportant building of the XIIth or XIIIth century, to which a choir was added in the XVth and a Lady Chapel in the XVIIth century. The church was destroyed in 1793 and finally desecrated and burnt in 1865.

The choir and Lady Chapel were built on bridges spanning the river. Bridges, choir and chapel have long ago disappeared, and it is this vanished part which Professor Brandon has restored in the semi-Renaissance Gothic of the XVth century. So far as we know there is little historic or archæological proof for the greater part of this restoration. No distinction is made on the drawings between the restored parts and the remains still in existence, and the drawings seem to convey rather the designer's idea of what might now be built than any reasoned statement of what was the original building. The scheme is, in fact, an elaborate student's essay in historic design. As such it is unfortunate that neither plans nor sections are shown, and that, masonically, the stone jointing is anything but mediæval. It is difficult to criticise seriously two elevations and an internal perspective sketch. Or are we only asked to admire their draughtsmanship?

Next in importance is a set of measured drawings, by M. Louis Gautier, of the "Chapelle de Rocamadour-Camaret, Finistère," "relevé avant l'incendie." It is well that even the least important historic monuments should be carefully recorded and fortunate when this is done before they are burnt, and these drawings are marked by great care and completeness. But, careful though the drawings are, it is not necessary that a small and uninteresting French chapel should occupy a space of some 14 ft. by 4 ft. on the walls of the Scottish Academy. In addition to these large works a number of sketches of French domestic work are shown, clever and dashing in their presentation. Of the really great modern French work, the municipal buildings theatres, railway stations, of those buildings from which we have so much to learn, there is nothing.

It is a little difficult to account for this collapse in the Architectural Room. exhibit of the working drawings of Thistle Chapel or of the Usher Hall wo have been of interest to architects. A f town-planning schemes would have terested the public. In place of this we ha academic French draughtsmanship.

Apparently the Scottish architects ha ceased to exhibit in the Scottish Acade If their works are to be pushed into corn in order to accommodate 10-ft. stretchers, t is not surprising, for, in the presence of th stretchers, anything smaller simply vanish The architectural exhibition of the Ro Scottish Academy is a fiasco this year, a it is to be hoped that the archit Academicians, none of whom exhibit. a the architect Associates, of whom th exhibit, will bestir themselves to produ something more worthy next year.

RENAISSANCE SCULPTURE A THE BURLINGTON FIN ARTS CLUB.

HOWEVER much one may be inclined appreciate the art of the Italian Renaissan there are certainly moments when one inclined to regret the dominance of influence. Its authority was so ov powering that if it did not precisely k it, at any rate, retarded the developme or modified the direction of national art many other countries. It had this effe in regard to architecture, if not in regard the type of work with which we now ha to deal. The exhibition at the Burlingt Fine Arts Club presents one of the mo interesting phases—the plastic phase of t art of the Italian Renaissance. At the exhibitions one may be sure of a choi selection, supplemented by a scholar commentary in the shape of catalogu We cannot speak too highly of Mr. Maclagan compilation on the present occasion; h Introduction is as concise a *résumé* as y have seen of the history and process employed in the production of bronzes an other phases of plastic work. The specimen are largely confined to works of a modera or small scale, and include some maste pieces from the collections of Mr. Pierpo Morgan, the Earl of Wemyss, Mr. Heseltin and other collectors. The exhibition is part cularly rich in bronzes, although the varie of materials represented is one of its most i teresting features. The majority of the large works are in relief. The most notable of thes perhaps, from a popular point of view, is th St. Cecilia, usually attributed to Donatell which has been made familiar "in ever conceivable form of reproduction." Th well-known casts and photographs, howeve do not represent the colour of the black ston in which this beautiful profile is modelled Placed, as it is here, in an excellent light, th lines gain something in subtlety and di tinction from the original and darke material. The St. Cecilia is not, it shoul be stated, a definitely authenticated work o Donatello; the catalogue suggests that may be by Desiderio da Settignano. Man of the other works are also attributions, i which there is nearly always risk of error There are numerous reliefs of "The Virgi and Child," and kindred subjects in mar.l stucco, and other materials, achieved wit varying degrees of technical excellence an expressed with a certain formalistic sentimen The mask of a woman by Francesco Lauran possesses a more human touch of beauty its expression is almost as temperament and illusive as that of the lost Mon Lisa. There are numerous works b Michelangelo, or ascribed to him, in cluding a relief in stucco of "Christ take down from the Cross," a group of ninetee figures; two bronzes, "Juno" and "Virtu and Vice," by Benvenuto Cellini, as well some medals; and two characteristic bronze by Giovanni Bologna. The more decorativ aspect of the collection is represented by th

work of Riccio and Caradosso in exquisitely wrought lamps, hand-bells, sword pommels, inkstands, and other objects of the kind. A medal of Bramante, by Caradosso, will be especially interesting to architects. This is mentioned by Vasari, and its date is attributed to 1506, or thereabouts, when Caradosso had recently settled in Rome and Bramante was beginning his work on St. Paul's. Mr. Maclagan's Introduction to the catalogue translates extracts from the Dialogue "De Sculptura" of Pomponius Gauricus, an early XVIth-century authority on artistic processes, from which we make a quotation, as it helps also to explain processes of thought prevailing in Italy at the time:—"And, indeed, I think no reason remains why you should hold that I have failed you, for I have explained the methods not only of the one true art of sculpture, but also of the whole of statuary. For it is to this one art that all others tend, and are related, even as other arts and sciences are related to philosophy itself." The essential unity of the arts was one of the pet theories of the time; the author's inference that this unity existed in an appreciation of plastic form is surely not wide of the mark with regard to the Italian Renaissance. It was indeed the age of the plastic arts, and the enduring vitality of the whole range of artistic expression, including architecture, of this period is obviously in a large measure due to this plastic sense of things.

DESIGNS FOR MEDICAL SUPERINTENDENT'S HOUSE, GREENWICH INFIRMARY.

THE Greenwich Guardians had a limited competition for this house, which was to cost not more than 1,000*l*. The Guardians themselves were the assessors. It is a pity that architects will compete under such conditions, for, as may be expected, the selection the Guardians have made is decidedly open to question. The successful design is just the speculative builder's idea of a house both in plan and elevation; it has the ordinary central passage hall and two rooms on either side, without much consideration as to aspect or prospect. The kitchen, for instance, faces south-west, and the dining-room looks on to the old men's wards of the infirmary when it might just as well have overlooked the garden.

"Kent" has a well-arranged and carefully-thought-out plan—a central hall with the rooms grouped round it, well placed as to aspect and outlook. On the first floor there are five bedrooms and bathroom and water-closet, opening from a spacious central landing. The elevation is in purple bricks, with red-brick dressings to the windows and rusticated quoins to the angles. A wood cornice and green slate roof give a pleasing effect to the whole. This design, in our opinion, should have been placed first.

A design under the device of a green "Witch" comes, in our view, next in order of merit. It is very similar to "Kent" in external design, but the plan is not quite so well managed.

"S. W." (device in a circle) sends a picturesque design which would have been very pleasing in execution, but the plan is spoilt by dark passages. This design was placed second by the Guardians.

Both the premiated designs offend against one of the conditions which alone should have disqualified them from a place. The condition required that the north wall of the house should be 27 ft. from the boundary wall of the site. The plans placed first and second each have a two-story wing within that 27 ft. limit. This is unjust to "Kent" and green "Witch," but they only have themselves to blame for entering a competition without a professional assessor.

DESIGN FOR A TOWN HOUSE.

THIS design is an effort to solve the rather difficult problem of planning a house and lighting it conveniently in a space confined on three sides. An effort was made to get a simple plan, with a minimum amount of dark corridor space. As regards the architectural character of the design, it was kept simple and refined, the ornament being applied in two bands, at the



first-floor level to mark the principal rooms and on the cornice.

Some attempt was made to get an effect of colour into the façade by contrasting the lead of the attic story with the Portland stone of the front, a contrast so well exemplified in many of Wren's buildings.

The design is by Mr. W. J. Roberts, M.A., A.R.I.B.A.

A PIONEER IN SANITATION.

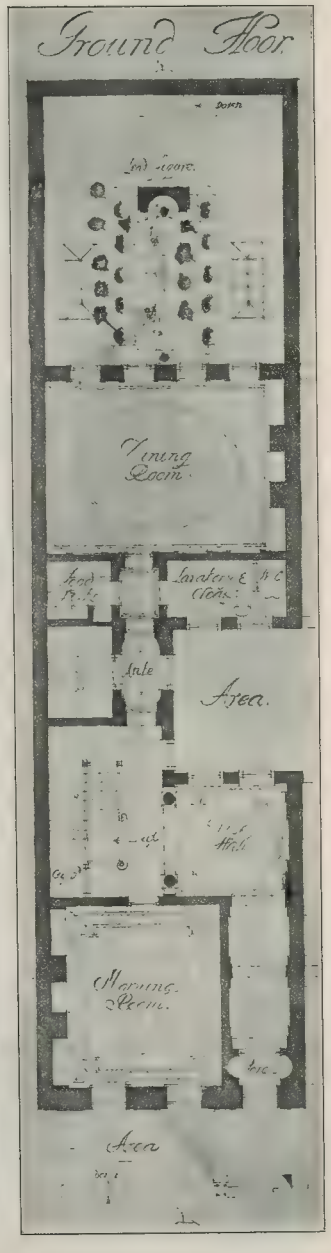
AMONGST the Pepys manuscripts preserved at Magdalene College, Cambridge, and calendared in the latest volume issued by the Historical Manuscripts Commission, there is a remarkable paper on the sanitation of London written in Italian by one Alessandro Riccardy. It is undated, but from the dates of the other documents amongst which it appears must have been composed in the early part of the XVIIth century. As Mr. E. K. Purnell, M.A., who edits the volume, remarks, the paper is obviously "much in advance of the times." The following is a summarised translation of the curious document: -

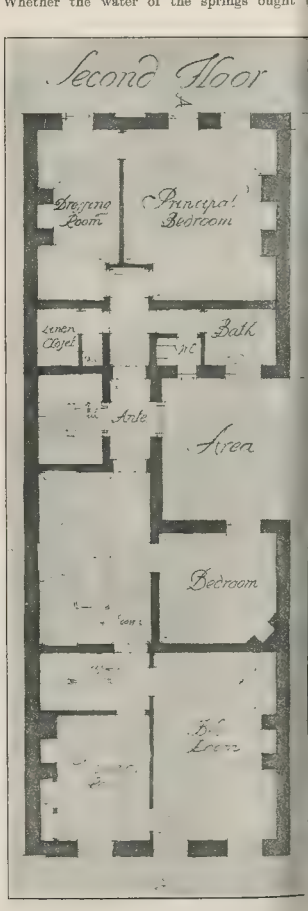
Knowing the importance of good air, and having great affection for London, he wishes to put forward an easy plan for keeping that City free from the filth which affects its air. The Romans took great care in this matter, as do the Venetians now.

The situation of London, especially in the part of the royal palace, makes this easy, but a stop should be put to the washing of clothes and of flesh, and of other businesses of the kitchen.

As is shown by his model, all the aqueducts of the houses, those of the wells and those of the kitchens, terminate in a receptacle in the most convenient part of the courtyard. Rain may be allowed to go uncovered to the said receptacle or through the streets, as is usual, but the water of the wells and that of the kitchen, in order to avoid constant damp and smell in the house, must disappear in the same spot—that is to say, in the kitchen, and at the foot of the wells there will be made a hole into which the water will pour; from this hole a littl underground channel will carry the water, b its own weight, to the receptacle; that thi channel may never be blocked the apertur must be the breadth of four fingers, with small iron grating at the top, having hole the size of a finger and no more, so that th channel cannot fail to carry anything whic passes. Doing the same for the well, th water both of this and of the kitchen will b carried to the receptacle, which will be a ston cistern, 1 ft. underground, more or less, square of 1½ ft. or 2 ft. according to the house It will incline towards the street, with a mout 6 in. square, to which mouth will be joine a channel of the same size, which will go t the street, carrying the water by its weigh The exit of the cistern to the channel will hav an iron grating, as above, and the cistern wi be covered by a stone pierced in the centr with a hole large enough to take a ball c shoemaker's wax, with five or six small holes round it at discretion, to carry the rai water from the house, which will be directe to that place. If the channel, as it leaves th house, is near a neighbour's channel, they ma be joined, to save the expense, from the wa of the house to the stream in the street. A streets will have an underground sewer int which the channels of the houses will go, th said sewers being 18 in. wide and the sam height, more or less. If the channel of on street discharges into that of another, th latter must be larger. Thus will be carrie underground the foul water, instead of bein in the streets, and it will pass into the rive Whether the water of the springs ought







R.A. Schools, 1911: Design for a Town House.

By Mr. W. J. Roberts, A.R.I.B.A.

go underground or be allowed to take their ordinary course is a matter for the physicians.

The water running through the streets will be clear, not mixing with the kitchen water. but this also might go underground at small expense.

In Italy and elsewhere beasts are not slaughtered near the places of sale, but the butchers have fixed slaughter-places, generally on the river and somewhat above it.

At Antwerp house refuse has to be put at street corners or crossways, whence it is removed by carts. It would be better to put it in a corner of the house to await the cart.

The cost of the channels is estimated at 10d. per rod for the house channels and 28d. per rod for the public channel, taking the cost of bricks to be two ducats per 1,000. Existing lead channels can be used for other purposes; existing stone channels will serve the purpose. The expense of the street work should be found by the master of houses contributing to the Chamber of the Commonalty of London, or the latter should borrow at 15 per cent., and assess the total cost proportionately among the householders.

Every summer on a fixed day these channels should be flushed.

Arrangements should also be made to secure enough water in mill ditches; a sluice should control the flow of water into the ditch below the mill, which should be cleaned every five years and kept in repair by the millers. Common ditches also must be repaired every five years. In Tuscany such work is the duty of specially-appointed resident men.

As to the ditch which is situated almost in the middle of London, above the Cathedral Church, towards the Court [the Fleet], this comes from outside London, and has three bridges. If the houses which are upon the ditch have foundations so deep that the water cannot harm them, the ditch may be deep enough for the water of the river to come up to the third bridge. Nothing but water should be thrown into the ditch, and at its mouth should be a lock, without prejudice to the boats, so that the ditch may be flushed. This scheme assumes the houses on the ditch to have deep foundations.

Alternatively, the ditch should be deepened and the dirt thrown aside; then a frame should be made to the ditch, going down deep, the earth being thrown at the side mostly where the houses are, raising a wall of 3 ft. or 4 ft., as at Venice. Thus the adjoining houses might turn their sewers into it, subject to orders given by the City, forbidding any filth to be thrown there, and requiring that it should be kept in order every five years.

If called upon, for the benefit of the City, we will gladly do in her service whatever he can.

ARCHITECTURAL SOCIETIES.

The Society of Architects.

The seventh ordinary meeting of the Society of Architects for the Session 1911–12 was held at 28, Bedford-square, W.C., on May 9.

Mr. Percy B. Tubbs, F.R.I.B.A., Vice-President, having taken the chair.

Twenty-one nominations for membership and four for studentship were announced. The ballot was then taken, and the following candidates were declared to be duly elected:

As members:—R. H. Blackburn, Manningham, Bradford; H. Y. Boreham, London; B. Baikin, London; D. C. Davies, Merthyr Tydfil; W. W. Diggle, West Hampstead, N.W.; T. Dowson, Sandsend, near Whitby; J. Emery, Birmingham; E. Hale, Birmingham; J. R. Hall, Sheffield; A. C. Harbottle, Exeter; E. J. Harbottle, Exeter; H. A. Lane, Mansfield, Notts; H. V. Milles-Diamond, Chandler's Ford, Hants; J. E. S. Pritchard, Kidderminster; N. Richley, Durham; W. F. Ingrisson, Peru, South America; W. Southall, Watford; G. A. Sutherland, Wick; H. G. Walker, Whitby; J. E. Webb, Nottingham.

As students: J. V. Bowring, Eastwood, Essex; R. B. Craize, London; F. F. Hayward, Johannesburg; A. J. Johnson, East Dulwich, S.E.; F. R. Priest, London: T. Rayson, Watford.

Professor W. A. Scott, A.R.I.B.A., A.R.H.A. (member), then gave a lecture on "Grecian Architecture," illustrating his remarks by scans of lantern slides and drawings.

Northern Architectural Association.

From the Report of the Council of this Association for the fifty-third session we take the following information:—

The roll of members is now as follows:—Members, 91; Associates, 88; students, 44; total, 223.

The Corporation of Newcastle-upon-Tyne having asked the Association to appoint two representatives to attend meetings of the Sub-Committee of the Corporation formed for the purposes of Part II. of the Housing and Town Planning Act, your Council asked Mr. F. W. Rich and Mr. J. Oswald, as members of the Association with large and varied experience, to act in this capacity, and they acceded to the request of your Council.

Your Council, acting on the advice of the Practice Committee, have made representations to the Royal Institute on the question of the appointment of clerks of works, and have asked that the following suggestions be adopted as part of the policy of the Royal Institute:—

(1) That such appointments in future be made by the architect; (2) that the power of dismissal should rest with the architect; (3) that the salary be paid through the architect.

The Practice Committee have also given further consideration to the proposed amendment of the Royal Institute Schedule of Professional Charges, and your Council have submitted further suggestions to the Royal Institute on the subject.

Edinburgh Architectural Association.

A small party of the members of the Edinburgh Architectural Association visited Glasgow Cathedral recently, by permission of Mr. Oldrieve, H.M. Office of Works, and the Kirk-session of the Cathedral. Mr. John Watson, F.R.I.B.A., acted as leader, and explained the historical features of the building. The new roof, which is in process of construction, conforms to what is known to have been the original design, and is being carried out under the superintendence of Mr. Oldrieve. The party afterwards proceeded to the new Mitchell Library in North-street, where they were received by Mr. F. T. Barrett, the Librarian. In the absence of Mr. W. B. Whitie, the architect, Mr. Andrew Brown, clerk of the works, conducted the party over the building.

ARCHÆOLOGICAL SOCIETIES.

Sussex Archæological Society.

A special committee has been appointed by the Society and will issue a circular to the local authorities with a view to the protection of the lesser-known objects of antiquarian interest in the county. The Duke of Norfolk has been re-elected President, and Mr. F. B. Stevens, of Lewes, has been appointed Honorary Librarian and Curator of the Museum, for which the Society have acquired Barbican House. Miss Davidson has presented to the Museum a salting-tub of the monks of Lewes Priory. The Society's attention has been directed to the threatened demolition, for the purposes of cement works, of Caburn Mount, near Lewes, on the summit of which, at an altitude of 490 ft. above the sea level, are remains of ancient military earth-works.

THE SURVEYORS' INSTITUTION.

THE following candidates have passed the Final Examination:—

A. H. Abbott, Boscombe
R. G. Anderson, Cirencester
G. A. S. Atack, Preston
C. G. Atkinson, Wimbledon
R. P. Beaumont, Brighton
O. Bell, Streatham
W. A. Bell, Walsall
W. J. Bell, Milford-on-Sea
R. H. W. Bennett, Earl's Court
S. Bennett, Kingston-on-Thames
T. B. Blow, Blackheath
F. H. Bolton, Manchester
H. Booth, Halifax
A. F. Bourdas, Clapham
J. S. Bray, Holsworthy
F. Brown, London
N. E. Brown, London
R. H. Brückmann, Finchley
W. H. Budgen, Croydon
W. H. Budgett, Wood Green
A. Burgess, Liverpool
J. T. Burt, Leicester
*H. G. Bues, Dover
J. Carey, London
B. Chamberlain, Tulse Hill
R. T. Chapman, Lostock Park
E. R. Chilwell, Chiswick
P. L. Clark, Cardiff
F. A. Clarke, Bolton
H. Clegg, Derby
C. J. Coade, London
A. H. Colliver, Boxmoor
F. J. K. Conway, Liverpool
R. Cope, Islington
F. W. Coy, London
A. H. Crabb, Stratford
F. Crook, Stockport
W. H. Crundall, London
A. V. Daborn, New Malden
R. A. Dalby, Boston Spa
R. A. Dalley, Kidderminster
J. A. Dartnall, Leytonstone
L. A. Dashwood, Gnosall
O. F. Davidson, Newcastle-on-Tyne
H. C. Davies, Rock Ferry
W. A. Davis, London
W. Dean, Hucclecote
F. J. Drake, Gloucester
C. A. E. Eachus, Enfield
E. G. Eastman, Anerley Park
L. R. Edwards, Petersfield
A. O Egerton, Aspatria
R. D. Ellis, Lincoln
W. S. Ellis, Leicester
G. M. Emery, Broadstairs
H. E. English, London
E. A. Evans, Haverfordwest
P. Farrant, Taunton
E. G. Fisher, Cambridge
W. A. Foster, Oswaldtwistle
H. W. Froud, Christchurch
W. E. Garnett, Eltham Park
S. V. Gledhill, Colchester
A. C. Goulder, Cricklewood
D. N. Gow, Dollis Hill
J. R. Greenaway, Reading
D. Gregory, Colwyn Bay
F. C. Grimwade, Croydon
R. L. R. Crogan, Kensington
W. J. Hackett, Newcastle-on-Tyne
V. Hailey, Tring
R. G. Hall, Eastbourne
J. Hamill, Oxford
J. M. Hannon, London
A. G. Harding, Forest Hill
E. C. Hardy, Shepherd's Bush
R. W. Hawke, Colchester
E. D. Hine, London
E. O. Hines, Ipswich
R. A. Hobbs, Monmouth
W. G. Hole, Bath
H. T. Hooper, Thornton Heath
F. P. Horne, Hounslow
J. H. Houghton, Teddington
N. Howard, Bolton
A. Hughes, jun., Tipton
G. E. Hughesdon, Balham
E. A. Ireland, Putney
F. O. James, Bath
W. J. Janes, Wandsworth
F. W. Jeffery, Kensington
S. S. Jenkinson, London
D. S. Jennings, Hammersmith
W. H. Jennings, Kingston Hill
L. Jewell, St. Albans
H. T. Johnson, Rugby
F. C. Jones, Oxford
P. E. Jones, Westminster
R. K. Jones, Kensington
T. Jones, Wallasey
T. Jones, Lancaster
H. Kaye, Wakefield
L. Kennard, Redhill
P. E. Kennedy, Northallerton
A. Kirk, Manchester
H. L. Knapman, Southampton
F. C. Lane, Morpeth
T. S. Latham, London
P. J. V. Lavarack, Finchley
N. A. Lee, Wallington
F. J. Line, Harrow
F. H. Lloyd, Oswestry
F. C. Loades, London
A. L. Lucas, Bexley
G. Maddock, Halifax
A. S. Mason, Liverpool
W. S. May, London
F. A. Merrington, Islington
G. R. M. Millen, London
H. L. Moody, Salisbury
E. Morley, Bradford
C. Morris, Welshpool
H. Musgrave, Aspatria
E. R. Nelson, Grimsby
J. Nicholson, jun., Bolton
G. H. R. Oldfield, Taunton
F. M. Panario, Battersea
A. M. Parker, Clapham
C. G. Parker, Belmont
F. G. Parker, Mildenhall
C. C. Parrott, Richmond
L. A. Paterson, Knebworth
T. S. Paterson, jun., Oxton
T. E. Pawley, Maidstone
H. W. Pearce, Wellington
S. B. Perkins, East Stonehouse
C. L. Philcox, Woking
F. R. Phipps, Basingstoke
F. C. Plumb, Romford
A. Pottier, Walthamstow
H. O. Powell, Lewes
A. E. Priest, Halesowen
H. W. Rackham, Harrow Weald
W. Ralphs, Birmingham
W. E. R. Randall, jun., Chatham
W. L. Raymond, Golder's Green
E. D. Reid, Thornhill
D. H. Richards, Liverpool
R. Rigby, Manchester
J. A. Riggall, Grimsby
W. A. Robertson, Nottingham
H. G. Roff, Thornton Heath
F. M. Roome, Chichester
W. Salter, London
E. Sedgwick, Sunderland
A. G. Sheath, Bournemouth
R. J. M. Skarratt, Cheltenham
H. Stiles, East Sheen
H. W. Stott, Huddersfield
R. G. Strachan, Westminster
T. D. Strathern, Kirkby Lonsdale
J. P. Sworder, Cambridge
W. E. Sykes, Cottingham
R. H. Syms, Isleworth
A. C. Taylor, London
H. T. Taylor, Swansea
W. F. Taylor, Norwood
W. L. Taylor, Westcliff-on-Sea
H. F. Thoburn, Anerley
R. R. Thomas, Swansea
A. Tighe, Clacton-on-Sea
M. Tomson, Luton
F. N. Tong, Bolton
B. D. Tracy, Rickmansworth
H. E. Tresidder, Falmouth
R. J. Trollope, London
H. Turner, Preston
G. A. Tyson, London
W. G. Vine, London
R. S. Wade, Dulwich
R. B. Walthew, Liverpool
F. E. Wapshott, Maidenhead
A. H. Ward, Bere Alston
H. A. Watkins, Richmond
R. S. White, Stonehouse
A. F. Wightman, Walsall
H. R. Wilkins, Dover
J. B. Williams, St. Helens
G. M. Winder, Ottery St. Mary
L. Wood, Grimsby
T. S. L. Wootton, Croydon
H. C. Wyley, Bridgnorth
W. H. York, New Barnet

* Galsworthy Prize.
* Crawter Prize.
† Penfold Gold Medal.

Scottish Candidates.

R. S. Aiton, Coldstream
W. Corbett, Glasgow
B. C. Douglas, Broughty Ferry
W. H. Howatt, Glasgow
J. Hume, Edinburgh
L. Jackson, Glasgow
D. M. Laird, Glasgow
J. Macaulay, Glasgow
C. Maclay, Glasgow
W. A. McRobbie, Aberdeen
H. H. McTaggart, Glasgow
J. A. Malcom, Largs
J. B. Morrison, Renfrew
R. D. Reid, West Glasgow
A. Young, Edinburgh

Irish Candidate.

G. D. Taylor, Armagh

The following candidates have passed in the Direct Fellowship Division :

C. A. Aish, London
E. M. Bate, Frinton
G. T. Brown, Sunderland
F. E. Coates, Sunderland
C. Davis, Shepherd's Bush
E. J. Dunn, Harrogate
R. J. Girling, Felixstowe
H. Hines, Newcastle-on-Tyne
G. C. James, London
H. B. Longley, Epsom
J. Mitchell, Carlisle
P. F. Storey, Surbiton
F. W. Turner, West Hartlepool

Irish Candidate.

J. Ferguson, Belfast.

Scottish Candidates.

C. J. B. Bryden, Glasgow
T. W. Hamilton, Greenock
W. Salmond, Dundee.

ENGINEERING SOCIETIES.

The Concrete Institute.

On the 9th inst. the annual general meeting of the Concrete Institute took place in the Institute's Lecture Hall at Denison House, 296, Vauxhall Bridge-road, Westminster, S.W., Sir Henry Tanner, C.B., I.S.O., F.R.I.B.A. presiding.

The following were elected members of the Institute :—Mr. C. W. Ballenden (South Africa), Mr. S. Edwards (Barnstaple), Mr. C. T. Lewis (Ilford), Mr. H. Lingard (India), Mr. J. P. Pike (Southend), Mr. A. R. Sage (Brixton, S.W.), Mr. I. M. Sutherland (Victoria, Australia), and Mr. A. Graham (London).

The annual Report of the Council having been read by the Secretary, Mr. H. Kempton Dyson, its adoption was moved by the Chairman and seconded by Mr. Edwin O. Sachs, Vice-President Concrete Institute. The Report was adopted unanimously.

The Chairman then read the report of the scrutineers on the annual election of members of Council; this resulted as follows :—Mr. H. K. G. Bamber, F.C.S., Mr. H. P. Boulnois, M.Inst.C.E., Mr. Alexander Drew, M.I.Mech.E., Mr. Matt. Garbutt, F.R.I.B.A., Assoc.M.Inst.C.E., Major R. Napier Harvey, Mr. John Munro, Mr. A. Alban H. Scott, M.S.A., Mr. H. D. Searles Wood, F.R.I.B.A., Mr. L. Serraillier, Mr. T. B. Shore, Mr. R. W. Vawdrey, B.A. (Cantab.), Assoc.M.Inst.C.E.

The above form only a portion of the Council of the Institute, the total number of which is thirty-two, only a small number being due to retire each year.

The auditors of the accounts were appointed, and the Chairman then presented the medal which is to be awarded annually for the best paper read in each session. This is the first occasion on which the medal has been awarded, and it was presented to Professor Pite for his paper, entitled "The Æsthetic Treatment of Concrete," which was read in the 1910-11 Session. The paper appeared in the *Builder in extenso*, December 29, 1911.

Sir Henry Tanner, in presenting the medal, said Professor Pite's paper was a most interesting contribution to the literature of the subject treated, and it gave rise to some little discussion. He was glad that the Professor did not altogether object to what had been done and advocate something entirely new, because, he thought, they should have got into very much trouble. Professor Pite said we ought to start from the existing styles of architecture, and that seemed really to be the most satisfactory way of meeting the difficulty. There was no doubt that something would develop shortly, and the Professor had given a start in that direction. Perhaps the Royal Institute of British Architects might develop a discussion itself and so make some greater effort than had been done hitherto. He asked the Professor's acceptance of the small memento of their regard for him and his lecture.

Professor Pite, in reply, said his paper had dealt with an aspect of work in concrete that had not yet captured the imagination of members of the Concrete Institute, and he hoped it would in the future, as one could not but be sure that if the apparent fog that hung over progress in the architectural aspects of concrete construction were dispelled by a little clear light there ought to be a considerable acquisition of width and breadth to the operations of the Institute. So long as that subject remained unexplored and inexperimented with, so long the Institute would be looked upon as merely a body concerned with certain aspects of building only; and concrete construction—especially in its more prominent methods now—would be relegated to the larger, coarser, and greater class of building, when it might, if there were interest and enthusiasm and hope and light, be used for more monumental, more decorative, and more homely, and therefore much wider purposes. It seemed to him that since it was recognised that there was a field—a field for experiment, a field for movement, a field for intellectual thought, a field which connected a decent contract in concrete with an ordinary and regular course of architectural study, æsthetic consideration, then there would be the widened scope which their Special Committee so hoped for, and which they had, in a way, suggested by adding the word "Architects" to the title of the Institute. That widened scope would come, and a very broad and very large, and he would like to say very popular, appreciation of the possibilities of concrete, because the popular aspect of the subject was, of course, one closely allied to the commercial one. The commercial aspect and the popular aspect ought to make the Institute a very wide and a very important public body. He made one suggestion with regard to this which seemed to him was a practical suggestion—a suggestion not at all inappropriate connected with the honour that they have ventured most courageously to bestow, and that suggestion was that the subject should not be dropped, that the attention of architectural students and designers should be drawn to it. The Chairman had indicated that the Institute of British Architects did not pay much attention to it. That was perfectly right. He thought if he had said bluntly that they were prejudiced with regard to the whole subject of concrete he would have only spoken what he felt and what with some delicacy they knew he hesitated to express. The best way to disperse that prejudice would be to show what great and good designs could be perhaps imagined, because every castle had to be built in the air before it could be built on the earth by young and enterprising designers, and the institution by the Concrete Institute of an annual competition in designs would, he imagined, attract, at all events, a certain number of responses; but he was sure it would attract a few intellectual and careful thinkers on the subject of æsthetics. Those students who had little else to think about in their youth but the charm of design would turn with interest to such a competition. If the medal which they had now created and which was such an artistic object were bestowed with such monetary attraction, as either a special fund or some contribution from the Institute as it might be able to afford annually for a design (the subject of any design to deal with the simple architectural aspects, elevation and details suitable for application to or distribution in ferro-concrete, with, if necessary, any descriptive theory as to the method of design) he thought, without expecting too much in the way of hard labour from the competitor, the Institute would be put into possession annually of a large number of interesting artistic essays, that is to say artistic inventions, artistic designs, and would attract to itself the attention of students, and bring them to its meetings. The illustrations of deviations in ferro-concrete design would have a most important influence upon the whole subject. Anyone who took up the *Transactions* would say that was a live aspect of the question—a popular aspect of the question. Such illustrations would attract those of the general public who were very widely interested in the outward aspects of the buildings; they would attract the attention of art critics and others who certainly should be made conscious of the fact that a new effective building material has come into practical use; and the world would move as it always has moved in these artistic matters, slowly but with interest and life and with enthusiasm.

The Chairman, as retiring President, then installed Mr. E. P. Wells, J.P., as President of the Concrete Institute for the ensuing two years of office.

Mr. E. P. Wells accordingly took the chair and expressed his thanks.

Mr. A. Alban H. Scott moved a vote of thanks to Sir Henry Tanner, and Mr. William G. Kirkaldy, Assoc.M.Inst.C.E., M.C.I., seconded the vote, which was carried with acclamation, and Sir Henry Tanner replied.

The meeting then terminated. The annual dinner was held in the evening.

From the Annual Report of the Council we learn that the Institute had on April 30, 1912, 881 members, twenty-four students, and eleven special subscribers. The Council has in the past year been concerned with numerous technical and administrative matters.

One of the principal items occupying the attention of the Council and a Joint Committee of the Science and Reinforced Practice Standing Committees has been the consideration of the proposed regulations made under the provisions of sect. 23 of the London County Council (General Powers) Act, 1909, with respect to the construction of buildings wholly or partly of reinforced concrete. A draft of suggested regulations was submitted by the Superintending Architect of the London County Council to the Institute for its consideration, and the action taken was recorded in the annual Report for the 1910–11 Session. The 1909 Act referred to provides that the Concrete Institute, together with the Institution of Civil Engineers, the Royal Institute of British Architects, and the Surveyors' Institution, shall have notice of the Council's intention to apply to the Local Government Board for the allowance of any regulations as to the use of reinforced concrete in the county of London, and such notice was duly given at the beginning of December, 1911. The Institute's suggestions as to the amendment of these regulations have been sent to the Secretary of the Local Government Board and to the Superintending Architect of the London County Council, and in due course the Council of the Concrete Institute will be able to inform the members as to the outcome of such action.

In October, 1911, a proposal for widening the scope of the Institute was considered by the Council and referred to a Committee, who held a series of meetings and recommended that :—

Scope.

(*a*) Clause 3 (1) of the present rules does not limit the scope of the Institute to concrete and reinforced concrete, but that the clause enables the Institute to deal with iron (including steel), bricks, gravel, sand, cements, and other structural materials and their application.

Definitions.

(*b*) For the purposes of the Institute, structural engineering be defined as that branch of engineering which deals with the scientific design, the construction, and the erection of structures of all kinds in any material.

(*c*) Structures may be defined as those constructions which are subject principally to the laws of statics, as opposed to those constructions which are subject principally to the laws of dynamics and kinematics, such as engines and machines.

Title.

(*d*) After very long discussion, the Committee came to the unanimous decision that the term "The Concrete Institute" should remain in the title, and that it should have the first place in the title and that a sub-title should be added, so that the full title and sub-title should be "The Concrete Institute: an Institution for Structural Engineers, Architects, etc.," and that such description should be added to all documents wherever practicable.

Lectures and Examinations.

(*e*) An annual course of technical lectures on some branch of structural engineering be instituted.

(*f*) Examinations in structural engineering be held by the Institute once a year to test the scientific or technical attainments of applicants for studentship.

Subscriptions.

(*g*) An entrance fee of one guinea be required when the membership reaches 1,000.

Transactions.

(*h*) *Transactions* should be issued quarterly.

(*i*) Members should be requested to return the reports of discussions at meetings not later than seven days after receipt.

(*j*) Members be hereby invited to submit

note as to suggested papers covering all branches of structural engineering.

(*k*) New books received should be reviewed in the *Transactions*.

(*l*) A referendum be employed to ascertain the wishes of the members as to :—

1. The most convenient meeting place.
2. The most suitable hour of meeting.

(*m*) The time is not yet ripe for any change of rules, but that the suggestions in this Report should be worked upon for twelve months as a trial.

The Report of the Committee was approved on March 14, 1912.

The question of awarding a bronze medal for the best paper read in the previous session was decided by ballot among the members of Council, and as a result the medal has been awarded to Professor Beresford Pite, F.R.I.B.A., for his paper, entitled "The Æsthetic Treatment of Concrete."

Sir Henry Tanner has been appointed delegate of the Concrete Institute at the Congress of the Royal Sanitary Institute to be held in June next.

The International Association of Road Congresses have asked the Institute to appoint delegates to the third International Road Congress to be held in London in June, 1913, and delegates will be appointed after the annual general meeting has taken place.

Sir Henry Tanner's term of office as President expiring in May, Mr. E. P. Wells was appointed President for the ensuing two years.

During the present session a larger number of meetings will have been held than in any previous session, and next session it is intended to resume the course of Educational Lectures to Students which were begun last session. The work of the Institute is increasing, and it is hoped to extend the number of meetings next year and that the subjects to be dealt with will be of more general interest by reason of the extension of the scope to cover structural engineering generally.

A library is in process of formation at the Institute, and a number of donations have been received, but the Council would welcome the presentation of books, papers, and other publications on the subject of structural engineering generally, the funds at present precluding any large purchase of such works. A catalogue of works in the library will eventually be published and members will be enabled to borrow books.

As regards the work of the Science Standing Committee, the Institution of Municipal and County Engineers requested the opinion of the Concrete Institute upon a standard specification for concrete flags which they propose issuing, and the Commitee made a number of suggestions which the Institution has intimated will be considered in any revision they may make in the future of their specification. The standard notation for calculations for reinforced concrete which was drafted by the Science Committee and approved by the Council continues to meet with favour and has been adopted by the Joint Committee on Reinforced Concrete appointed by the Royal Institute of British Architects in their second report and by the London County Council in their proposed regulations covering the erection of buildings of reinforced concrete in London. Authors of text-books have also employed it and the American Joint Committee on Concrete and Reinforced Concrete have informed the Science Committee that they have the notation under consideration with a view to its adoption in any further Report they may make. The Committee have the following matters under consideration :—

(1) Reinforced concrete piles.
(2) A chemical test for steel used in reinforced concrete.
(3) The standardisation of attachments or joints in reinforced concrete.
(4) The adhesion of or friction between concrete and steel.
(5) A standard notation for calculations in structural engineering generally.
(6) A standard specification for reinforced concrete work.
(7) The effect of sewage on concrete.
(8) The effect of oils and fats on concrete.

The Tests Standing Committee have issued reports on "The Testing of Concrete, Reinforced Concrete, and Materials Employed therein" and "The Testing of Reinforced Concrete Structures on Completion." These have been discussed at ordinary general meetings of the Institute. The Committee have the following matters under consideration : —

(1) The effect upon steel of the presence of sulphur in aggregates.
(2) The grading of aggregates.
(3) The expansion and deterioration of concrete due to changes of atmospheric temperature.
(4) The effect of the use of sodium silicate on the surface of concrete as affecting reinforcing metal.
(5) The erratic results obtained by the Vicat needle in ascertaining the initial set of cement.

The Reinforced Concrete Practice Standing Committee have drafted reports on the subject of "The Standardisation of Drawings for Reinforced Concrete Work" and "The Consistency of Concrete," which have been discussed at ordinary general meetings of the Institute. The Committee have also had under consideration a reference of the Council for a report as to clauses in contracts for reinforced concrete work, but the Committee recommended the Council that they were of the opinion that the formulation of clauses in contracts was a legal matter, and the Committee did not feel they were capable of formulating such clauses. The Committee are still investigating :

(1) Methods of treating the surface of concrete.
(2) Cracks due to the expansion and contraction of reinforced concrete.

GENERAL NEWS.

Appointments.

Mr. F. H. French, the Sanitary Inspector to the Harwich Town Council, has been appointed by that body to be their Borough Surveyor. Mr. French will take up his duties on June 6.

Mr. R. B. Robertson has been appointed Architect and Surveyor at Windsor Castle, in the place of Mr. A. Y. Nutt, M.V.O., who has retired.

The Royal Institute of British Architects.

The meeting of the R.I.B.A. on Monday, when the well-known American architect, Mr. R. A. Cram, will read a paper on "Recent University Architecture in the United States," is called for 8.30 p.m. The name of the architect and the subject should ensure a good attendance of members.

The Royal Society of Antiquaries of Ireland.

A Charter has been granted, under the Great Seal of Ireland, to the Royal Society of Antiquaries of Ireland, of which Count Plunkett, Hon.A.R.I.B.A., is President.

The London Society.

The first meeting of the London Society will be held on Thursday, May 23, at 7.45 p.m., at the Galleries of the Royal Society of British Artists, Suffolk-street, Pall-mall East, to transact the necessary business and to elect a Council and Executive Committee and officers. The chair will be taken by Sir Aston Webb, R.A. The meeting will be followed by a public meeting at 8.15, when a paper will be read by Mr. T. Raffles Davison on "London : As it is, and as it might be," representing the views of the organising Committee upon the future work of the Society, with lantern illustrations. The chair will be taken by Lord Plymouth.

Home Arts and Industries.

The twenty-eighth annual exhibition of the Home Arts and Industries Association was opened at the Albert Hall on the 15th inst., and will be closed on the 18th. The work collected by the various stallholders is uniformly interesting, and shows that in the revival of home handicrafts the Association is doing excellent work.

Institution of Municipal Engineers.

A discussion on "Water Softening" will be opened by the Chairman of the S.E. District of the Institution in the Council Chamber, 4, Southampton-row, London, W.C., on Wednesday, May 22, at 7.30 p.m.

Bath Memorial to Jane Austen.

A memorial bust of Jane Austen has been set up in the Pump Room at Bath. It was executed and presented by Mr. Percy Fitzgerald, the donor also of the bust of Charles Dickens in the Pump Room.

Bacon Memorial, Gray's Inn.

Mr. F. W. Pomeroy, A.R.A., is the sculptor of the statue of Sir Francis Bacon which will be unveiled in South-square, Gray's Inn, on June 27. Bacon was admitted to the Inn on June 27, 1576 ; he was called to the Bar on June 27, 1582, and was Reader, Dean of the Chapel, and Treasurer of the Inn at successive periods in the interval 1588–1617.

Demolition of Old Buildings.

In the Parliamentary Papers for May 9 Mr. W. Thorne asks the Home Secretary whether he is aware of the statement made by the coroner at the inquest upon the bodies of three workmen who were killed whilst engaged in the demolition of some buildings upon the premises of the Gas Light and Coke Company at King's Cross, to the effect that more inquiries arose from the demolition of old buildings than from the erection of new ones, and that it would be beneficial if there was some law whereby the proposed demolition of buildings should be notified to an officer of the local authority and carried out under his supervision ; whether he is aware that the jury recommended that the local authority should appoint an inspector to represent them during the demolition of buildings ; and if he intends taking any action in the matter.

Mr. McKenna says he had seen a newspaper report of the inquest, but there had not been sufficient time for him to obtain a report from the coroner. The matter was one that could only be dealt with by fresh legislation. The Government already had a Bill in draft to deal with building accidents, and he would consider the present question in connexion with it.

COMPETITION NEWS.

Regent's Quadrant Competition.

As this competition is exciting considerable interest in the architectural profession, we give herewith a letter which we have sent to a large number of architects throughout the country.

"Dear Sir,—You have probably seen the announcement in our columns of the competition which the proprietors of the *Builder* have instituted for a façade for Regent's Quadrant, which, while accepting the present façade as a *fait accompli*, will continue it in such a manner as may not be open to the criticisms of the retail tradesmen for whom the premises are intended.

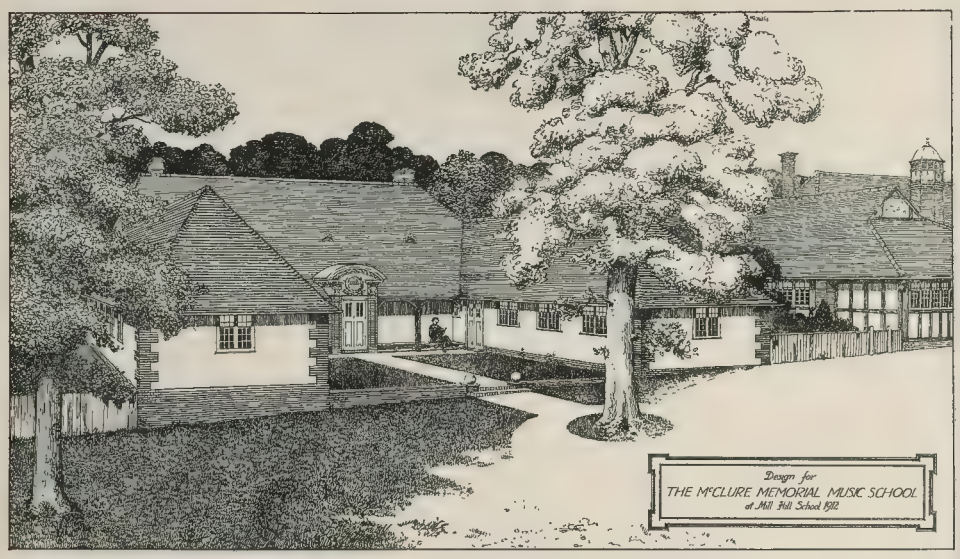
But you may not have seen the further announcement in the *Builder* of May 10 that Messrs. Swan & Edgar, whose premises occupy a large part of the site, are prepared to take an active interest in the matter, either by giving an additional premium to those offered by the proprietors of the *Builder*, or, "if practicable, a professional position which will enable the successful competitor to put his design into material form." The problem, though a difficult one, calls urgently for a solution, reconciling commercial needs and interests with the architectural dignity of a city.

Full particulars are given in our issues for April 19 and May 3, but in view of the widespread interest that the competition has evoked it has been decided to postpone the date for submission of designs to June 28."

McClure Music School, Mill Hill.

The drawings of the McClure Music School, Mill Hill, which we illustrate on the next page, were successful recently in a limited competition promoted by a committee of the Old Millhillians Club. The purpose of the building is to provide improved accommodation for the teaching of vocal and instrumental music and of art, and to commemorate the remarkable growth and prosperity of the school since Dr. McClure became headmaster twenty-one years ago. It is peculiarly appropriate that a music school should form this memorial, as Dr. McClure's own tastes have always inclined in this direction, and during his *régime* the school has provided an increasing number of music pupils. The school buildings occupy one of the finest and most commanding positions near London on the ridge of a hill, with a magnificent view southwards over wooded country to Harrow and even to Windsor.

The schoolhouse itself is the work of Sir William Tite, and was erected nearly a century ago, while other buildings have been added by Mr. Basil Champneys and by Messrs. Collcutt & Hamp.



The music-school site lies at the end of the hockey ground, and adjoins the scriptorium (shown on the perspective), which was built some years ago to honour Dr. Murray's great work on his Dictionary, partly written in a corrugated-iron shed beneath these trees, also the fine library recently presented by Lord Winterstoke, and the school tuck-shop. These three last-named buildings are grouped round a quadrangle, and the author of this design has aimed at following out the same lines in the music-school plan.

For the rest, the drawings are self-explanatory, and we need only add that they are the work of the architect, Mr. Martin S. Briggs, A.R.I.B.A., of 14, North Audley-street, W.

Proposed Extension to Swansea's Central Police and Fire Brigade Station.

The Sub-Committee appointed by the Swansea Town Council to deal with the competition for extensions to the Central Police and Fire Brigade Station reports that six competitors had submitted their schemes and designs. After carefully examining the various details of the designs they unanimously selected No. 5 as the most suitable. The letters of identification were then opened, the names of the competitors being (1) Messrs. Phillips & Vaughan (AA.R.I.B.A.), Newport, estimated cost of extensions, 16,000*l.*; (2) Messrs. Spier & Beavan, Cardiff, 12,000*l.*; (3) Messrs. Davies (A.R.I.B.A.) & Jenkins, Swansea, 15,100*l.*; (4) Messrs. C. S. Thomas (M.S.A.), Meager, & Jones (M.S.A.), Swansea, 14,230*l.*; (5) Mr. Ernest E. Morgan (A.R.I.B.A.), Swansea, 13,455*l.*; (6) Messrs. Popler (F.S.I.) & Allen (A.R.I.B.A.), Swansea, 14,566*l.* The Watch Committee, in accordance with the Sub-Committee's selection, recommended the appointment of Mr. Morgan as architect to carry out his scheme at a cost of 13,455*l.*, also that tenders be invited for carrying out the work.

Knavesmire Elementary School.

A public exhibition of twenty-nine of the designs, selected from the 203 submitted in competition for this school, will be held in the South Galleries of the Exhibition-building, York, from Friday, May 17, to Friday, May 31, between the hours of 10 a.m. and 5 p.m. Messrs. T. Mellard Reade & Son, were the Assessors in the competition, and Mr. J. T. Proffitt, of Walkden, near Manchester, was awarded the first premium.

Birmingham Blue Coat School.

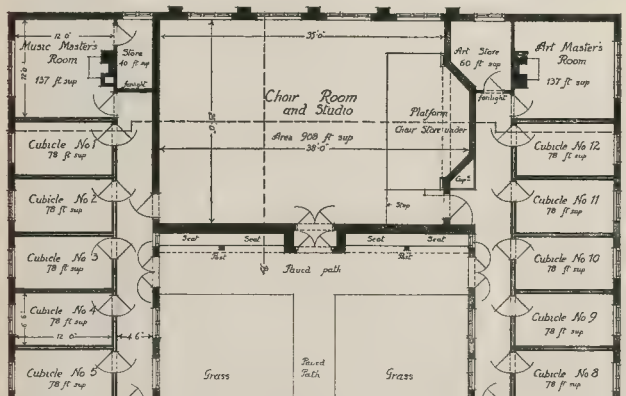
We understand that architects have been asked not to proceed further with the plans for the Birmingham Blue Coat School owing to the probable change of site.

New Municipal Offices for Goole.

Competitive designs are invited by the Goole Urban District Council for the erection of Municipal Offices, suitable for a town of over 20,000 inhabitants, on a large plot of land in front of the Market Hall.

Architectural Association *Journal*.

The Council of the Architectural Association offer prizes of two guineas and one guinea ("although, of course, the honour would in itself be a sufficient reward") for a design for the cover of the *Journal*. Drawings must be sent in by May 25.



Ground Plan

Accepted Design for the McClure Memorial Music School, Mill Hill.

By Mr. Martin S. Briggs, A.R.I.B.A.

BOOKS.

The Construction of Lombard and Gothic Vaults. By ARTHUR KINGSLEY PORTER. (Newhaven: Yale University Press. London: Henry Frowde. Oxford University Press. Price 8s. 6d. net.)

MR. ARTHUR KINGSLEY PORTER'S book, "The Construction of Lombard and Gothic Vaults," adding, as it does, a new word to an old and attractive subject, should find many an appreciative reader without, as well as within, the ranks of the architectural profession.

The history, construction, and architectural charm of Gothic work having been exhaustively treated of by other writers, the reason for the origin of the style remained very largely a matter for speculation, and it is this part of the subject that Mr. Porter so ably elucidates.

Briefly reviewing the practices of Roman and Byzantine architects in the erection of brick and concrete vaults, with a minimum of temporary timber centering, the author proceeds to demonstrate that the essentially Gothic method of vault construction by means of exposed diagonal rib arches thrown across from corner to corner of a compartment had in the first instances a similar purely utilitarian object. He shows us that the diagonal ribs did for Lombard and Gothic masonry what the cunning disposition of brick courses had done in the hands of the ancients as

described by Auguste Choisy. They allowed, in fact, the infilling or covering of the vault to be built up "freehand in the air" instead of being pieced together upon a heavy, close-boarded centre, such as we should employ at the present time. The anxiety on the part of the Lombard builder to dispense with a good timber centering is not easily comprehensible to us at home in England, with a plentiful supply of sound Baltic timber always available, and knowledge of the principle of triangulation to enable us to take full advantage of its strength. It is, however, no difficult matter to understand a builder in a timberless land considering favourably any scheme that would enable him to dispense with the uneconomic collection of props and staves that constitute the supports of a modern Oriental centre, to which those of the Dark Ages might well have been similar. Examples of Lombard vaults mentioned and illustrated in the book clearly show the reluctance of the early Lombard builders to adopt the new principle of exposed diagonal arches. With the universal practice of the Roman world behind him, and with examples on every side of the beautiful suavity of the unbroken surface of Roman and Byzantine vaults, he may well have waited for the spur of necessity to drive him to the use of what must have seemed to him a somewhat barbarous expedient.

The question of stability must also have greatly exercised his mind. Roman and Byzantine vaults he could see about him and could judge of the wonderful tenacity of their concrete-like construction, even when submitted to the severe test of an earthquake.

Would the new form, with its exposed arch ribs, remain as inflexible and coherent? We know, and he must have suspected, that the older form was by far the more stable in proportion to the mass of material employed.

Economy and speed in the process of construction alone impelled the early use of the exposed diagonal ribs. In Lombardy, where the Classic tradition never entirely died out, "Only exceptionally was the rib vault employed except over naves." (The greater height of the nave would present difficulties to the erection of a primitive centre of improperly triangulated poles.) "It was never adopted in those regions of Italy where wood was abundant, and was generally abandoned when other means of erecting nave vaults without centering were discovered."

In France, where Byzantine methods had not gained so great a hold, the diagonal rib system was received with more favour, and soon became the normal and established practice.

Unlike the Italians, the French builders, far from disliking the appearance of the protruding ribs, became eventually so enamoured of them as to subordinate every other detail of architecture to the glorification of these features, originally introduced for purely economic reasons.

Much interesting matter is to be found in the book upon the special features exhibited by early vaulting. The text is ably and lucidly written, and should stimulate further study on the part of the reader rather than provoke the bitter controversy that so usually follows upon a treatise concerning any branch of Gothic art.

A respect for the simple forms and sound construction of the preceding Roman and Byzantine styles, which may be detected in the book, may possibly prove offensive to a small body who consider Gothic work as alone worthy of attention; but, as Mr. Porter presents his fact and draws his conclusions with the modesty of one who has a thorough grasp of his subject, even these will deal leniently with him. The many beautiful illustrations from photographs of well-chosen examples, together with good type and attractive binding, will make the book a pleasant as well as useful addition to an architect's library.

German Varnish-Making. By PROFESSOR MAX BOTTLER. Authorised Translation with Notes on American Varnish and Paint Manufacture, by ALVAH HORTON SABIN. (New York: John Wiley & Sons. London: Chapman & Hall, Ltd. 1912.)

THE American translator of this German book on varnish manufacture has added so many notes of his own that a considerable portion of the book is of American origin. There is, however, no confusion of the work of Professor Bottler with that of the translator, for the translation has been printed in such a manner that it is easily distinguishable from Mr. Sabin's additions. The book has the merit of including information concerning most of the modern resin solvents, such as monochlorobenzol, chlorhydrine, carbon tetrachloride, and terpineol, and describes the latest practices in varnish manufacture. It will interest all engaged in the varnish industry.

At the end of the book the translator has added an interesting chapter on the constitution and nature of paint. Mr. Sabin contends that tests for the durability of paint which are completed in one or two years are of little value, and points out that in 1906 the American Society for Testing Materials applied nineteen kinds of paint to a metal railroad bridge, and that after five years all but one or two were in excellent condition and had preserved the metal perfectly.

BOOKS RECEIVED.

SIXTY YEARS OF PROGRESS AND FISCAL POLICY. By Earl Brassey, G.C.B. (London: The Free Trade Union. 1s. 6d.)

MODERN COTTAGE ARCHITECTURE. By Maurice B. Adams, F.R.I.B.A. (London: B. T. Batsford. 10s. net.)

MODERN PRACTICAL DESIGN. By G. Woolliscroft Rhead, R.E., A.R.C.A. (London: B. T. Batsford. 7s. 6d. net.)

THE PRINCIPLES OF STRUCTURAL MECHANICS. By Percy J. Waldram. (London: B. T. Batsford. 7s. 6d. net.)

CORRESPONDENCE.

Kelling Hall, Norfolk.

SIR,—In the course of your remarks on the drawing of the above in the Academy, you say "* * * But the walls are treated with rough-cast or plaster with horizontal courses and perpendicular streaks of brick cropping through, the reason for which, structural or æsthetic, eludes us." I think that both the difficulties disappear when it is pointed out that the construction in question is neither rough-cast nor plaster, but merely the traditional local treatment of brick and flint. E. B. M.

LONDON COUNCILS.

Barnet.—Plans submitted by the Surveyor have been approved for making-up a portion of Normandy-avenue. Plans have been passed for alterations and additions at St. Mary's Church, East Barnet. Mr. E. T. Bolton has lodged plans for five shops in Alverstone-avenue.

Brentford.—The Guardians have accepted the tender of Messrs. Ernest Hawkins & Co., Ltd., 109, Victoria-street, Westminster, S.W., at 855*l.*, for the construction of subways at the Infirmary.

East Ham.—Sanction has been received from the Local Government Board to borrow 558*l.* for carrying out sewerage works in Langdon-crescent and Sussex-road. Plans have been passed for Mr. F. Hamlett for four houses in Cotswold-gardens, also for Mr. W. J. Cottell for fifteen houses in Shoebury-road. Mr. F. H. Buen has lodged plans for club buildings in High-street South; as has also Mr. F. Hamlett for a warehouse at the rear of No. 18, Barking-road.

Friern Barnet.—At the last meeting of the Council plans were passed for Mr. J. Samms for the erection of three houses in Petworth-road.

Fulham.—A plan prepared by the Borough Surveyor has been approved for making-up and paving part of Crab Tree-lane. The tender of Mr. C. J. Ell has been accepted, at 498*l.*, for sinking a 50-ft. tubbed well, 8 ft. in diameter, in connexion with the air-lift pumping plant at the public baths.

Holborn.—The Public Health Committee have decided to carry out alterations at the Public Mortuary in Goldsmith-street.

Hornsey.—At a special meeting of the Education Committee it was decided to invite Mr. G. E. T. Laurence, Buckingham street, Adelphi, W.C., to prepare the necessary plans for alterations at the North Harringay School, and for the erection of a temporary school at Muswell Hill. The following plans have been passed by the Borough Council:—Mr. T. Kington Smith, Tottenham, alterations and additions to "Southwood Lodge," Southwood-lane; Messrs. Senecal & Co., Hatton-garden, E.C., alterations and additions to No. 11, Victoria parade, Muswell Hill-road, Muswell Hill: Mr. E. A. Lewis, Muswell Hill, N., four houses, Springcroft-avenue and Southern-road, Muswell Hill; Messrs. John Amor & Sons, Highgate-hill, alterations and additions to No. 28, Muswell-rise. The following plans have been lodged:—Mr. Frank Foster, Duke-street, Adelphi, W.C., bakery, Tottenham-lane; Mr. W. L. Burr, Lombard-street, E.C., alterations and additions at London County and Westminster Bank, The Broadway, Crouch End; Mr. Francis Howkins, Golder's Green, five houses, High-street, Hornsey.

Lambeth.—The existing 12-in. pipe sewer in York-road is to be relaid for about 95 ft., at an estimated cost of 85*l.* A plan has been passed for Messrs. Stringer Brothers for the erection of six houses in Claverdale-road, Upper Tulse-hill. Mr. A. F. Briggs, on behalf of Messrs. Schweppes, Ltd., has lodged plans with the London County Council for the erection of a building on the site of Nos. 45-9, Vauxhall-walk.

Leyton.—The following plans have been passed:—Mr. W. H. Franklin, four houses, Essex road; Mr. A. Radcliffe, six houses, Essex-road; Mr. J. A. Hennah, five houses, etc., Farmer-road.

Poplar.—The tender of the Limmer Asphalte Paving Company has been accepted for paving Stebondale street and Cotall street with 3-in. "lithomac," at 5s. per yard, including four years' maintenance; as has also the tender of the Taroads Syndicate, Ltd., for paving part of Stainsby-road with 3-in. bituminous macadam, at 3s. 6d. per yard, including three years' maintenance. The sewer in Guildford-road is to be reconstructed in 9-in. pipes at an estimated cost of 75*l.*

St. Pancras.—Electricity mains are to be extended in various roads at an estimated cost of 155*l.*

Southwark.—A letter has been received by the Borough Council from Mr. M. W. Matts, architect, Birkbeck Bank-chambers, Holborn, W.C., stating that in the event of his clients building upon the site of Stave Wharf, London Bridge, it would be necessary to apply to the London County Council, and that should that authority insist upon the building line being set back, would the Borough Council grant permission to build over Primrose-alley, in which case the owners of the land at the north-west corner might be induced to set back their premises. Mr. Matts is to be informed that no objection will be raised to his scheme, subject to certain conditions.

Watford (Rural).—The tender of Mr. G. R. Mann, Edgware, has been accepted at 740*l.* for making-up Shire-lane, Chorleywood.

West Ham.—Plans have been passed for Mr. J. Fossey for the erection of a bakery at the rear of Bristol-road, Stratford; also for Mr. M. W. Hudson for alterations to factory, Maitland-road, Stratford.

Woolwich.—Tenders are to be invited for the erection of a combined convenience and tramway shelter at the rear of Eltham Cottages, Abbey Wood-road, at an estimated cost of 270*l.* Electricity mains are to be extended at an estimated cost of 115*l.* Plans have been lodged with the London County Council by Messrs. Arundell & Sons, 49, New Cross-road, S.E., for the erection of a cinematograph theatre upon the site of Nos. 93-5, New-road. The following plans have been passed:—Messrs. Burton & de Bertodano, 5, Bloomsbury-square, W.C., drill hall and headquarters, Charles-street, Plumstead, for the County of London Territorial Force Association; Mr. G. B. Dale, 15, Ladysmith-road, Eltham, five houses, Footscray-road, Eltham; Mr. E. H. Kemp, 1A, Eleanor-road, Woolwich, warehouse, Spray-street, Plumstead; Mr. G. T. Arnold, 147, Powis-street, Woolwich, thirty-eight houses, Rochdale-road, Plumstead, for the Royal Arsenal Co-operative Society, Ltd.; Mr. C. H. Jordan, "Luanza," 39, West Mount-road, Eltham; Baptist chapel, etc., Elibank-road, Eltham.

In reference to the paragraph on page 557 of our issue of the 10th inst., relating to the results of tendering for asphalt paving-work under the St. Marylebone Borough Council, we are asked to state that the work in Church and North streets consists of the excavation and removal of the existing macadam road-way, the supplying and laying of a new Portland cement concrete foundation, and 2-in. compressed natural rock asphalt, whereas the work in Bird-street is to take up the existing asphalt paving, make good any defects in the concrete foundation, and lay compressed natural rock asphalt 2 in. in thickness thereon.

EDITORIAL SUMMARY.

"A Piccadilly Blunder" is the title of the leading article.

Our second article is entitled "Regis ratio and Personal Qualifications" (p. 566).

An article on "The Royal Academy Exhibition" (p. 566) deals with ecclesiastical work.

In "Notes" columns (p. 567) will be found observations on: "Southwark and St. Paul's Bridges"; "Civic Amenities"; "The London County Council Hall"; "The London University Site"; "Another Suggested Site."

An article on "Renaissance Sculpture at the Burlington Fine Arts Club" is given on p. 568.

An article on "Architecture at the Royal Scottish Academy, 1912," appears on p. 568.

Architectural Societies (p. 571) include short notices of: "The Society of Architects"; "Northern Architectural Association"; "Edinburgh Architectural Association."

Book notices (p. 574) include: "The Construction of Lombard and Gothic Vaults": "German Varnish-Making."

The Monthly Illustrated Historical Review (p. 577) contains: "The Architecture of Portugal"; "The History of the Ouse Bridge, York"; "The Impending Demolition of the Rooms of the Birmingham Royal Society of Artists"; and Notes.

The Building Trade Section (p. 582) includes: "The Land Duties"; "The Mediæval Joiner"; "The British Engineers' Association"; "Projected New Buildings in the Provinces," etc.

In Law Reports (p. 585) will be found: "Griffith *v.* Richard Clay & Sons, Ltd." —Blackfriars ancient light dispute; "Tottenham Urban District Council *v.* Rowley"—right of way case; "Bromley *v.* Freeman & Co."—Building Act case.

In "Legal Column" (p. 585) are notes on: "Landlord and Tenant"; "The Trade Disputes Act"; "Land Valuation"; "Boundaries to Land."

MEETINGS.

FRIDAY, MAY 17.

Junior Institution of Engineers.—(1) Visit to the works of the Orchestrelle Company at Hayes. 3 p.m. (2) At 39, Victoria-street, Westminster. Mr. G. C. Allingham on "Storage Battery Engineering." 8 p.m.

The Garden Cities and Town Planning Association (3, Gray's Inn-place, W.C.).—Mr. Raymond Unwin on "Garden Cities and Garden Suburbs" 5 p.m.

SATURDAY, MAY 18.

Edinburgh Architectural Association.—Visit to Raith, Kirkcaldy.

Guild of Architects' Assistants.—Visit to Wesleyan Centenary Hall, Westminster, S.W. 3 p.m.

MONDAY, MAY 20.

The Royal Institute of British Architects.—Mr. R. A. Cram on "Recent University Architecture in the United States." 8.30 p.m.

Quantity Surveyors' Association.—Annual dinner, Connaught Rooms, Great Queen-street, Kingsway, W.C. 6.30 p.m.

Royal Society of Arts (Howard Lecture).—Capt. H. R. Sankey, R.E., on "Heavy Oil Engines"—V. 8 p.m.

TUESDAY, MAY 21.

Royal Society of Arts (Colonial Section).—The Hon. J. G. Jenkins on "Australian Railways." 4.30 p.m.

WEDNESDAY, MAY 22.

Institution of Municipal Engineers (Council Chamber, 4, Southampton-row, W.C.).—Discussion on "Water Softening." 7.30 p.m.

THURSDAY, MAY 23.

Society of Antiquaries. 8.30 p.m.

Junior Institution of Engineers.—Visit to the General Post Office Avenue Telephone Exchange, at 22, Cresechurch-lane, E.C. 6 p.m.

Incorporated Church Building Society.—The annual general Court, to be held in the Church House, Dean's-yard, Westminster. The chair will be taken by the Lord Bishop of Chester. 3 p.m.

The London Society (at the Galleries of the Royal Society of British Artists, Suffolk-street, Pall-mall East).—Mr. T. Raffles Davison on "London as It Is and as It Might Be," representing the views of the Committee on the future work of the Society. With lantern illustrations. The Right Hon. the Earl of Plymouth, C.B., will preside. 7.45 p.m.

FRIDAY, MAY 24.

The Royal Sanitary Institute.—Provincial sessional meeting, Blackpool, in the Council Chamber, Town Hall, when discussions will take place on (1) "The Card Index System as Applied to Public Health Work," to be opened by Mr. E. W. Rees Jones, M.D., D.P.H. (Medical Officer of Health, Blackpool), and "A Description of the Joint Scheme of Sewerage for Thornton-le-Fylde, Bispham-with-Norbreck and Carleton," to be opened by Mr. Arthur Hindle, M.Inst.C.E. The chair will be taken at 7.30 p.m. by Colonel J. Lane Notter, R.A.M.C., M.A., M.D.

Junior Institution of Engineers (at the rooms of the Institution, 39, Victoria-street, S.W.).—Mr. S. H. Hole on "Brewery Plant."

THE LONDON COUNTY COUNCIL.

THE usual weekly meeting of the London County Council was held on Tuesday in the County Hall, Spring-gardens, S.W., Lord Cheylesmore, Chairman, presiding.

LOANS.—The Finance Committee recommended and it was agreed that loans should be made to Borough Councils as follows:—Fulham, 3,200*l.* for electricity undertaking; Hackney, 2,630*l.* for street improvements; Kensington, 5,745*l.* towards street improvement; and Stepney, 4,500*l.* for electricity mains.

LONDON COUNTY HALL. In the annual estimates for 1912–13 it was proposed to spend 72,150*l.* upon the building and embankment wall of the new County Hall. A discussion was raised by Mr. J. D. Gilbert, who proposed an amendment for a supplementary vote in order to expedite the work.

Mr. Edward Smith said that when a recent visit to the site was made by a deputation only sixty-two men were at work. This delay was costly, for the London County Council was now housed in thirty-seven different buildings at a rental of 1,000*l.* per week.

Mr. F. L. Dove said that the contractors were not to blame, as they were ahead of their contract time, and the drawings for the superstructure had not yet been passed. The building could be finished before 1916 if the Council, in advertising for tenders for the erection of the superstructure, offered a premium for earlier completion.

Sir Edward White said that when he recently visited the site only thirteen bricklayers were employed, and as a matter of fact there was work for 300 for some months to come.

Mr. I. Salmon stated that the whole of the substructure would be finished in fifteen months' time and a start made with the superstructure, which should be completed in three years.

Mr. Gilbert's amendment was rejected, but the Council requested the Establishment Committee to report on the action it was taking with a view to expedite the work.

THEATRES, ETC.—The following drawings have been passed by the Theatres and Music Halls Committee:—Cinema House, 225, Oxford-street—ventilation of restaurant in basement; Imperial Hotel, Russell-square—automatic opening doors; 134, Streatham High-road (Streatham Picture Theatre)—arrangement of proscenium; Broadway Theatre, Deptford—alterations to lighting arrangements; Eltham Parish Hall, Wellington-road, Eltham—alteration in position of doors from the stage; Empress Theatre of Varieties, Brixton—alterations to electrical installation; Piccadilly Hotel, Piccadilly—provision of a draught screen between the grill-room and cloak-room; Queen's Theatre, Shaftesbury-avenue—provision of a screen in the dress circle; Yiddish Theatre, Commercial-road—formation of doorway between the prompt side of the stall and the dressing-room corridor.

CINEMATOGRAPH HALLS, ETC.—Drawings have also been received for a cinematograph hall proposed to be erected in Brixton-hill, adjoining the Lambeth Town Hall, and also at the junction of Marylebone-road and Edgware-road, and for alterations to the College Park Picture Theatre, Trenmar-gardens, Harrow-road.

ILLUSTRATIONS.

Royal Academy Exhibition.

IN our illustrations this week are the two works shown at the Royal Academy by Sir Ernest George and Mr. A. B. Yeates. These are both water-colour drawings by Sir Ernest George.

One of them, "Woodside," is a house to be built for Mr. A. H. Moreing at Esher. An avenue and forecourt form the approach to the house, not seen in this drawing.

The wise but unusual course has been taken of preparing to receive the house, a high walled garden with its gates, paved paths, and green walks, with the planting being already completed, as also the terracing, road-making, garage, and cottages, so that the house will rise in comely surroundings.

The house provides a large hall in which the billiard table has its own recess. An open loggia is at one end of the hall, while another of apsidal form is against the south wall of the drawing-room.

The materials are grey-brown Sussex bricks with Portland stone dressings, the roofs being stone slated.

The "wood-frame" house, British Guiana, for Messrs. Davson, is built on local methods. Brick piers, or arcades raise it above the rather swampy soil.

The large rooms have wide balconies round them and windows on both sides. The wood framing is of teak, and the weather-boarding of the local mahogany, although it is the custom to paint the latter.

The Ouse Bridge, York.

OUR third plate represents the conjectural appearance of the Ouse Bridge at various periods. The history of the bridge is referred to in the article on page 579.

FIFTY YEARS AGO.

From the *Builder* of May 17, 1862.

The International Exhibition.

WHY were the French so behindhand at last? Here is a Frenchman's explanation. I fell in with him yesterday morning on my road to Brompton—a stout, bustling, burly, little gentleman, who, after inquiring his way, introduced himself as an *exposant*. He admitted, however, that he had hitherto exhibited nothing, and had, at present, nothing to exhibit, stating, at the same time, that he was far in advance of a multitude of other *exposants*—and, with true Parisian volubility, going on to inform me that the fact of his being now before so many others arose from his having been a fortnight or three weeks behind them in sending off his merchandise! At this point of his narration he abruptly ceased, and, wheeling suddenly in front of me, so as to prevent any further progress, forced from me an immediate demand for an explanation of the seeming paradox. "*Voyez vous, monsieur,*" he recommenced, "*Je vais vous donner le mot de l'enigme.*" Some time ago the French were more forward than the English, as you know—their goods were arriving by shiploads at several English ports so fast, and the completion of the building was so slow, that orders were sent down to all ports where French goods were arriving, directing that the cases should be stowed away in the local Custom Houses and not sent on to London till the building was more nearly ready to receive them. In this way the piles of enormous packing-cases rose rapidly in mighty masses, up to the very rafters of the warehouses, insomuch, said my loquacious friend, that those cases which arrived *last*, had to be given out *first*; while the first arrived, which lay buried at the bottom of the vast pile, had to await the slow removal of the whole of the upper strata.

ELEVATION FACING DOWN STREAM AS IN 1660



SCALE FEET 0 10 20 30 40 50







ELEVATION LOOKING UP STREAM AS AT PRESENT

THE HISTORY OF THE OUSE BRIDGE YORK By Mr D Moore



(Royal Academy Exhibition 1912.)

"WOODSIDE, ESHER, SURREY - SIR ERNES



H.H. PHOTO SPRAGUE & Co. LTD 69 & 70 DEAN STREET SOHO W.

AND MR. A. B. YEATES, F.R.I.B.A., ARCHITECTS.



(Royal Academy Exhibition, 1912.)

A WOOD-FRAME HOUSE, BRITISH GUIANA.—Sir



A.R.A AND MR. A. B. YEATES, F.R.I.B.A., ARCHITECTS

MONTHLY HISTORICAL REVIEW.

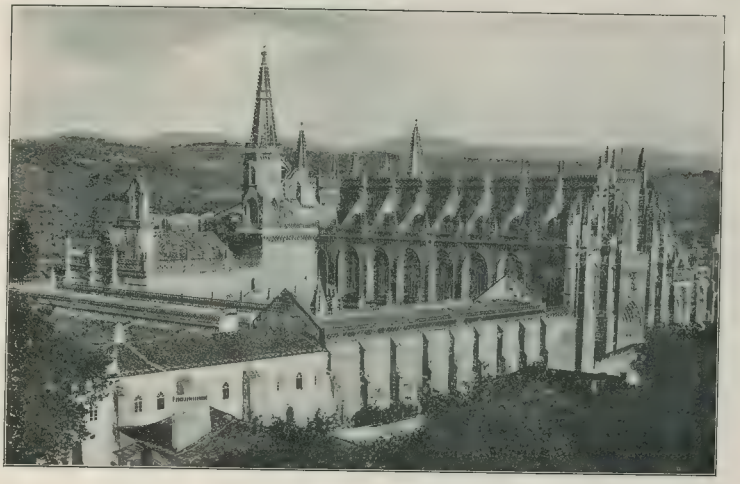


Fig. 1. Abbey of Batalha, Portugal, from the North-West.

THE ARCHITECTURE OF PORTUGAL.—III.

(*Continued from page* 459.)

[HE most perfect specimen of Gothic art of the XIVth century which Portugal can boast is certainly the work of foreigners, probably Frenchmen. It sts of the tombs of Dom Pedro I. and Inez astro, whose tragic story has been the of countless romances and ballads. ffigies of the royal lovers face one another vaulted chapel at Alcobaça. They lie, ed by angels, on tall sarcophagi, decorated the sides with canopy work of indescrib- richness and sculpture of consummate plishment, both of which are unparalleled rtugal at that period. The architectural nent, though extremely intricate and cising some favourite Portuguese motives, oid of the luscious barbarism of the late style and instinct with the austere of Northern art. Their date is about

period under consideration also produced interesting military architecture, as illus-, for instance, in the extraordinarily esque ruined castle of Leiria perched the little town on the top of an almost ssible rock. Its donjon, which is at the t point, was built in 1324 by King Denis abourer, and the rest of the structure, comprises the Great Hall, with pointed and windows, and the chapel already nned, may be a little later. A better ved example of the work of the same tigable royal builder is the castle of whose mighty octagonal keep has a top story with great corbelled balconies angles.

he death of Dom Pedro's son Ferdinand in he Burgundian line was left without a ate male representative, and, in order id absorption into Castile by the marriage daughter, Doña Brites, the Cortes elected gitimate son of Dom Pedro to fill the . John I. thus became the founder of a nasty, that of the House of Aviz, under rule Portugal reached the apogee of and power. The new reign was inau- d by the decisive battle of Aljubarrota, ch the Castilians were defeated and the ndence of Portugal was secured. Dom shortly afterwards strengthened his n by a treaty with Edward III. of d and his marriage with Philippa, er of John of Gaunt and Blanche of ter. Later in the reign the foundations of a world-wide colonial empire were laid under the influence of their second son, Prince Henry the Navigator, and the hereditary war against the Moors was carried into their own country across the water. The most brilliant period in Portuguese architecture coincides with that of the national fortunes. It opens with the erection of one of the most remarkable churches in Europe, Sta Maria da Vittoria, in a hollow among the hills, where the fighting began which ended in the Spanish rout at Aljubarrota, since known as Batalha. This Battle Abbey (Fig. 1), a great collegiate church with extensive dependencies, built of white limestone mellowing to gold, gleams out among the dark pine woods, the groves of cork oak and the olive yards that dot the dark red soil of the rounded hills. It was founded in 1387 and finished, at least as regards the church proper, at Queen Philippa's death in 1415, while the Founder's Chapel, begun later than the church, was finished about fifteen years later.

The scheme includes a church with a mausoleum chapel on the south, and cloisters surrounded by monastic buildings on the north (Fig. 2). The church is planned in native fashion with aisled nave (of eight bays), a transept projecting beyond the aisles, one bay each way and five eastern chapels. Four of these consist each of a rectangular compartment and a three-sided apse, while the central one, which is the width of the nave, has two rectangular compartments and a five-sided apse. The plan is so consonant with Portuguese usage that no further disproof is needed of the tradition that Queen Philippa obtained it ready-made from England. Neither does the old story of an English architect named Stephen Stephenson appear to rest on any solid foundation. It is probably the work of the first architect, Affonso Domingues, who appears to have carried up the work of the east end to a considerable height. The remainder was carried out under one Huet (Huguet or Ouguet), said to have been an Irishman, who succeeded him in 1402. A

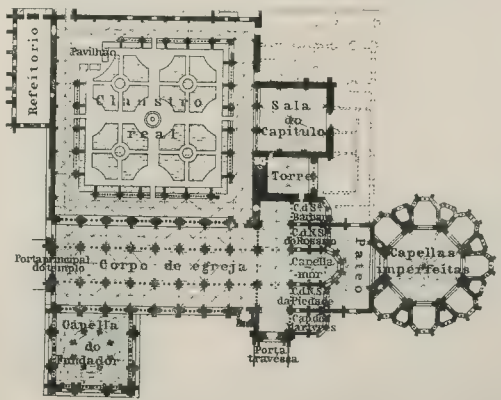


Fig. 2. Plan of the Abbey of Batalha.
(From *Baedeker's Guide.*)



Fig. 3. Abbey of Batalha: East End, and "Capellas Inperfeitas."

number of peculiarities certainly have an English look, though the resemblance in some cases may be accidental, but others suggest French and even German influence, while others again are probably traceable ultimately to Moorish influence. The church, in fact, is a most puzzling problem, which anyone armed only with an acquaintance with Northern Gothic and unaware of the date of construction would be hopelessly at sea in attempting to unravel.

The eastern apses (Fig. 3) have tall buttresses with an unusual number of offsets and tall single lancet lights which, in the higher central chapel, are in two tiers. This is in accordance with Portuguese usage. But there is much in the general appearance of the remainder of the church which gives colour to its alleged English origin. It resembles a Perpendicular church or college chapel in its long lines of flat roof with pierced balustrades and pinnacles, in its ranges of large traceried windows, in the design of the nave and south transept fronts with their large single clearstory windows; while the great doorways below them have in each case a good deal of English-looking late Decorated or early Perpendicular detail and carving, especially in their crockets and pinnacles. The south doorway itself is, it is true, of a Portuguese type, a curious throwback to the work of a hundred years earlier, such as may be seen at Santarem, surmounted by a great heraldic panel, so characteristic of Iberian practice, but the west doorway recalls nothing so much as the same feature at King's College Chapel at Cambridge. The flat roofs are, of course, not necessarily of English origin, but the natural outcome of the native system of paved terrace coverings and the reticulated tracery of the aisle and the clearstory windows is not peculiarly English, while that of the great west window, with its flowing geometrical pattern filling the entire opening, is obviously a native attempt to adapt a northern feature for the purpose of excluding the excess of light, which might have been more easily effected by using smaller openings. Internally the design of the nave (Fig. 4), with its exceedingly lofty arcade and absence of triforium, is of an English type; while the vaulting betrays mixed influence, its great height (106 ft. with a width of only 25 ft.) is French, the presence of a ridge rib English, and the pronounced character of the transverse ribs seems copied from Alcobaça. Again the square abaci and bases are another curious throwback to very early usage.

The Capella do Fundador projecting to the south of the three western bays of the nave is planned as a square with a central octagonal lantern carried on light piers. The tracery of its windows, which is rather better managed than elsewhere, is of a flowing, almost Flamboyant, type, not distinctively either English or French, while the piers, composed of a number of cylindrical shafts with fine leaf capitals and octagonal abaci, might pass for English; not so, however, the stilted arches which they support, and which are fringed with elaborate cusping. This is a feature which occurs elsewhere in the church, and is, indeed, a characteristic one throughout the peninsula, and probably a relic of Moorish taste. The altar of the tomb of the king and queen in the centre and those of their four younger sons in niches along the south wall, though enriched with heraldry and other devices, are plain compared with those at Alcobaça, nor is their sculpture as fine. The cloisters in their original condition were relatively sober and very dignified, and might be classed as Geometrical Decorated, though minor differences from northern work, as, for instance, in the section of the ribs, are not lacking. Another feature of the exterior, which, if not of native invention, would suggest German influence, is the open work spire attached to the north transept, and another said to have stood over the Founder's Chapel before the Great Earthquake.

The explanation of the anomalies met with at Batalha appears to be that the work was carried out largely by Portuguese, who h a fairly free hand as to particular features a details, under the superintendence of a man wh whether himself English or not, was we acquainted with English work, and either ha travelled in France or was assisted by a certa number of Frenchmen. The effect which t splendid abbey produces is as mixed as i origin. Externally the proportions are i posing, and the elevations marked in parts considerable beauty of feature and detail, b the effect is marred, as so often in Portugal, a florid treatment, involving the use of assorted and ill-digested foreign elements.

The disagreeable effect is greatly enhanc by excessive restoration and the mechanical multiplied embellishments which have be showered on the building with an unsparin hand, while the colour of the stone, particular when new, is not altogether agreeable. Inte nally the church is far more successful. Indee few nobler or more impressive interiors th that of Batalha, swept though it is of splendid fittings through the vandalism of t French in 1810, are to be found in the wh of Europe. One of the most remarkab features in its construction is the sudde appearance, without any intermediate ste of a system of vaulting which is bold, not mere in comparison with the timidity of Alcoba but even with northern examples. Not on are the high vaults of unusual loftiness, but t chapter house, which as usual in Portugal quite open to the cloisters, is the largest know room vaulted in one span without centr support, and, what is more, this vault is strongly built that it has stood repeated eart quakes. It is a square of over 60 ft. reduc to an octagon by arches thrown across t angles.

Huet's successes were not at an end on t completion of the Founder's Chapel, for Ki John's eldest son, Dom Duarte, or Edwar so named after his great-grandfathe Edward III. of England, decided to bui himself a yet more magnificent mausoleum, b his reign was brief and unsuccessful, and remains unfinished to this day.

The Capellas Imperfeitas, as they are calle stand to the east of the choir in the axis of t church. The plan is a very beautiful on and would if isolated have consisted of eig



Fig. 4. Abbey of Batalha: Nave, looking East.

psidal chapels radiating from an octagonal hamber and eight smaller pentagonal chapels the angles intervening between them; but vaulted hall which connects the mausoleum ith the choir occupies the space of one of the sidal and two of the pentagonal chapels. ie external treatment resembles that of e choir, many times weathered buttresses ternating with tall and narrow-pointed ndows, but the latter have two lights with acery in the head and under the transom, nich divides them at mid height. The central ult was not carried out. In the succeeding gns a second and almost aridly simple ister was added beyond the first.

The Cathedral of Braga, begun like Batalha King John I., has many points in common th it both as regards plan and elevations. ut it has western towers with the peculiarity at they are set anglewise and become tagonal at a higher level. Unlike Batalha, has preserved much of its elaborate furniture.

THE HISTORY OF THE OUSE BRIDGE, YORK.*

Prior to the advent of the Romans to York e settlement of the Brigantes was most obably confined to the western side of the ver Ouse, and the principal need for the tification of the Romans lay to the east of river, around the Palace of the Emperors, ile the one-time Brigantine colony gave place the villas and cemetery of the Roman stocracy. Hence the need for the first dge, the character and dimensions of which are lost in antiquity. The site was some 300 yds. the north of the present Ouse Bridge.

The importance of the site of the existing dge was recognised before the Conquest, the position was occupied by a bridge of od that came to so untimely an end when chbishop William Fitzherbert entered the y. The people thronged to meet him, thering in great crowds along the route, d especially on the bridge. The weight oved too great for the feeble structure, and people were precipitated into the river. is said that the prelate, by making the sign the cross over the struggling mass, invoked ine intervention and saved the crowd from wning. Attributing their preservation to supernatural, they regarded him as a at and erected a chapel dedicated to him the succeeding structure.

The River Stratford was the first to be spanned a bridge entirely of stone, in the reign of nry I. about 1118, and it was not until e eighty years after the partial destruction the bridge at York that it was replaced a more substantial structure of stone. reasing commerce led to a desire for a more modious erection, and in 1235 Archbishop ter de Grey issued a command for the nstruction of the bridge in stone.

Remembering that Archbishop Grey built transepts of the Cathedral at York and Church of All Saints at Skelton, beautiful mples of Early English Gothic, it is not a ter for marvel that the new bridge con- d of six Gothic arches. Compared with bridges of the present, it was very narrow on both sides of the roadway were business, rial, and legal buildings, which were, it is , built at the same time as the bridge, gh this is conjectural.

o keep the bridge in repair a licence was nted to the Mayor by Edward II. early in XIVth century "to make such purchases would produce one hundred pounds a year, h product was to be applied to support bridges of the Ouse and Foss." It is ved that this led to the erection of the ses on the bridge, and that the increment would accrue therefrom was used for purposes of reparation. The probability of is heightened by the fact that the whole ne property on the bridge was owned by Corporation.

he bridge in the time of the Edwards con- ed buildings fulfilling the uses of the later Guildhall. The City Courts were there, ther with the offices of the officials. In many Superior Courts were moved from don to York, and were held on the bridge. ous local courts had their home here, ding those of the County, Sheriff, Con- ancy, Coroner, and Chamberlains. Rooms ed for purposes other than judicial were e found on the bridge. The "Guild of per Surgeons" met here and was formed of

* See Plate.



Conjectural Restoration of Ouse Bridge, York: Doorway, with Window over, to St. William's Chapel. Details as in 1560.

From a Drawing by Mr. D. Morrell.

those who practised medicine and shaving—a significant combination.

The principal building on the bridge was the chapel, the origin of which is somewhat obscure. Some say it was a memorial to Archbishop William Fitzherbert, while others adhere to the story of the Scotch nobleman whose servants quarrelled with some of the citizens, causing a riot, in which many were killed. The dispute for damages resulted in an appeal to Royalty, which was decided in favour of the nobleman's servants, the citizens agreeing to pay the sum of three hundred pounds for the erection of a chapel and the maintenance of two priests therein.

Little now remains of the chapel but the valuable drawings of Halfpenny and Cave, and fragments of the ornament to be found in the Hospitium of the Abbey of St. Mary's at York. Cave says of the chapel that "one part is of enriched Saxon architecture; the other simply Gothic. . . .; and it is not improbable that the chapel existed at the time of the quarrel, and that the east end was an addition."

The doorway to the chapel was an example of remarkably fine Norman work. It was considerably enriched, yet bore little resemblance to any of the several Norman doorways extant in York and district, and it is interesting to observe the absence of the signs of the Zodiac so frequently used by the Norman builders. The Order, usually enriched by the astrological signs, in this instance bore a peculiar interlacing ornament resembling a chain (see drawing).

A portion of the interior walls was arcaded with a series of flat arches of enriched chevron, a complete bay of which is still preserved in the Museum at York. The east end had a beautifully proportioned three-light window of the Transitional period, while it is conjectured that the windows to the roadway were inserted in the XVth century.

At the Reformation it ceased to be a place of religious worship and became the busy exchange of the city merchants; then in 1555, by grant of the Lord Mayor, a school, subsequently abandoned through lack of scholars; and in its last days fulfilled the purpose of a fire-station.

Beneath the Chapel of St. William was the city prison, known as the "kidcote," and lunatics as well as felons were detained in the cells that overlooked the river and were subject to flood, doubtless rendering them as wretched as any prison of that day.

It is assumed that, owing to the narrowness of the bridge, the houses hung over the river to a considerable extent, and were also carried over the footpath, the upper stories being supported upon posts at intervals; an example of this is still to be seen in the street leading to the bridge. The bridge, with its houses of quaint overhanging stories and gables, must

at this period have presented a most picturesque appearance.

In 1564 a disastrous flood occurred, carrying away the two central arches of the bridge and several houses, thereby causing considerable loss of life. For some two years the bridge remained in a ruinous condition, causing great inconvenience. Vehicular traffic was perforce suspended, but temporary accommodation was made for pedestrians. It was ultimately restored by public subscription, one large central arch taking the place of the two destroyed by the flood. Of this arch it was said that it had the greatest span in existence at the time.

About the middle of the XVIIIth century the property on the bridge was condemned and ordered to be removed, and a parapet and railings took the place of the demolished houses. The end of the century saw further improvements. Coaches now demanded a wider road, and the removal of more houses materially improved both the appearance and utility of the bridge.

The Corporation at this time were concerned with the replacing of the structure, as the bridge, notwithstanding the many improvements, was inadequate to cope with the increasing demands placed upon it. Atkinson, the City Steward, was called upon to draw up plans and estimates, which ultimately resulted in the present bridge. It was recommended that the new bridge should consist of one principal arch of iron, but luckily this project was abandoned.

During the first decade of the XIXth century an Act was obtained from Parliament to proceed with the new bridge, which was to have three elliptical arches, the central arch to have a span of 75 ft., and the side arches 63 ft. 6 in. respectively, and the breadth to be 45 ft. on soffit. The new erection was built in two halves, the old bridge being used during the construction of the first portion, which was completed in 1817, and the other half three years later. The widening of the approaches to the bridge was quickly effected, and a toll was demanded to defray expenses, which was levied until 1829.

Of this bridge one cannot but say that it is an admirable example of modern architecture, at once fulfilling the great essentials recently propounded by Professor R. Blomfield, who wrote that "utility and beauty must be the keynote of all good architecture."

THE IMPENDING DEMOLITION OF THE ROOMS OF THE BIRMINGHAM ROYAL SOCIETY OF ARTISTS.

By WILMOT CORFIELD.

WHILE Manchester is reconciling herself to the loss of a fine Town Hall of earlier days Birmingham is faced with a lesser though similar difficulty. The changes and chances of inexorable time are about to deprive the Midland capital of one of its best known architectural landmarks; the building of the Society of Artists in New-street is marked for early destruction, and with its disappearance will be snapped a link with the pre-Victorian past as irreplaceable as it will be unforgettable.

It was only a few years ago that Christ Church was demolished after standing for about a century at the highest point of New-street, architecturally the culminating crown of an attractive thoroughfare, which even yet the business spirit of modern commercialism has failed to spoil. Ponderous, imposingly ugly, and with a Doric portico characteristic of the Georgian era's sombre taste in the matter of church design, it none the less dominated New-street, its strength and simplicity of outline providing just that touch of distinction without which no leading street of a great town is omplete. One of its catacombs was interesting as the resting-place of John Baskerville, the eminent printer of eccentric political views.

On the north side of New-street going west, a little short of the site of the lost church, and just where a gentle rise in the ground leads up to the stately Town Hall (one of the architects of which was Hansom, who invented a cab), is the classic portico of the Artists upon which sentence has been pronounced. It is a few years older than the hall, to which it bears much the same architectural and topographical relationship that Wren's St. Martin's on Ludgate-hill bears to St. Paul's Cathedral. A new building will arise equipped with XXth-century architectural points plus financial shop-letting certainties, but there will be no portico to obstruct the passageway, no columned foil to the columned hall beyond.

Birmingham as a community first seriously devoted itself to fine art in or about 1807; in that year or a little later Samuel Lines set up a "drawing academy" in Temple-row West, a street bordering on a district of Pickwickian traditions. The Barbers, father and son, were among his pupils, and they, in their turn starting another academic venture, had among their pupils F. H. Henshaw. Success, of a sort, spelt ambition, and ambition progress, and on September 12, 1814, the "Birmingham Academy of Arts," a society of artists and amateurs, opened the first public art exhibition on the town's records in or near Union-street. Among the honorary promoters of the movement were J. M W. Turner, Benjamin West, John Soane, John Flaxman, and Richard Westmacott, while the contributors included Charles Barber, Rowland Hill (afterwards the Postal Reformer, who sent in a picture of an Abbey), H. H. Lines, S. Lines, W. Radclyffe, and J. V. Barber (Hon. Secretary). No second exhibition was held, but these artistic pioneers, evidently encouraged by a semi-success, determined on the acquirement of a permanent building of their own, their appeal for pecuniary aid indulging "a confident expectation that the taste and liberality of the public would enable them to accomplish the full extent of their design." The response, however, apparently proved for some years disappointing, one literary lady celebrity of the period, whom the artists seem to have approached in 1814, writing: "I think the genius of Birmingham is more calculated to paint tea-boards than pictures," and, after predicting probable failure, suggesting that, in the event of the proposed building coming on the market, it might serve for "a Methodist meeting-house, that Society being flourishing enough to take possession of all cast-off public edifices whatsoever." The "people called Methodists" never got the chance, however, of snapping up an unconsidered trifle in the form of an unappreciated home of the arts, for it looks as though the scheme, like many other equally well-intentioned schemes, fell through, for the aspiring "Birmingham Academy of Arts" never actually materialised itself in the medium of bricks and mortar.

A local artistic hiatus followed. Possibly the unsettled political outlook of the closing years of George III. were as little conducive to the advancement of art in the provinces as of eve more pressing reforms in other directions, fo as everyone knows,

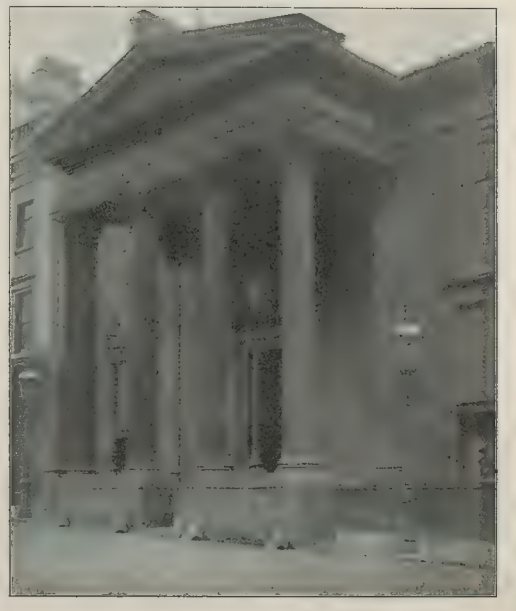
> "Art stopped short
> At the cultivated Court
> Of the Empress Josephine,"

until, with George IV. enthroned, the count was more in a mood for true artistic develo ment. So it came about that with the ye 1821 a fresh body of associated artists a townsmen, working on the foundations laid t the enthusiasm of devoted predecessors, esta lished the "Birmingham Society of Arts," t continuing nucleus of the Birmingham "Roy Society of Artists" of to-day, the rightful heir Birmingham's artistic ages now on the point consigning its central shrine to the pick a spade.

Casting about for a site for building, the ne pioneers of 1821 came upon a derelict circul erection in the rear of the then new church wit a frontage to New-street. It had previous housed "panoramas," and had also bee occupied by auctioneers. A still extan picturesque landscape painting of the perio by Samuel Lines, shows it as a prominent featu to the south-west of fields bounded by Ne street, Ann-street (Colmore-row), and the pr sent Temple-row West; Bennett's-hill (whe Burne-Jones was born) had not then been ma and Waterloo-street was also a thing of t future.

The present structure replaced the ricket receptacle of the departed panoramas in 182 the architects being Messrs. Rickman Hutchinson, and the cost about 4,000*l*. It of Bath stone, and externally of the Corinthia Order; the lines of the composition, though n lacking defects, are of monumental dignit adapted, though "not servilely copied," fro "one of the most chaste and exquisite remains of classic splendour, the Roman Temple Jupiter Statue. The shafts of the colum supporting the cornice are of noble proportion and it is interesting to note that one at least their capitals was carved by a young workma afterwards famous as J. H. Foley, R.A.

The grateful refuge afforded by the transitio from glare or rain to the protection of the kindl portico of subtle depths of shade is a luxur bustling Birmingham finds itself no longer ab to afford. The city is out for money, not fo sentiment; the way is narrowed where th pillars are, and the crowd a pressing crowd of th insistent kind. And so the soot-logged vene able portico, with all its ghosts of memorie must go, and lovers of the old order of Birmin ham things are desolated.



Portico of the Birmingham R.S.A. Building.

And yet the city is not without high ideals. his year of the opening of its new Art Gallery es also the destruction of Chantrey's and oley's portico; while in this same period of race Birmingham's supreme art treasures onspicuously adorn, with only too passing a rilliance, London's Gallery of British Art at illbank. A city of amorphous aim, not njustly considered symbolical of the Philistine man, Birmingham, with its musical festivals nd superb art collections, has set an example to ondon itself. And yet—and yet! But why oralise? Some clue may perhaps be found to ne solving of a perplexing problem in a speech y Mr. Whitworth Wallis, reported in the *Builder* March 8. Speaking of the new bridge span- ng Edmund-street and connecting the Art allery with its new extension, the official rector of the city's art proclivities is said to ave remarked that "personally he did not re at all what the bridge was outside so long it was beautiful within." Mr. Wallis may ve been wrongly reported. This public nunciation of his acceptance of a reversal of the eory associated with the "whited sepulchre" etaphor is unconsoling; but may not much at is repellent in the architecture of our great odern centres of industry be due to the too neral acquiescence in the idea that nothing chitecturally matters to the man in the street long as he stays there?

In a loss of this kind the mind lingers on the e of the passing pile. Those New-street lars are part and parcel of the youth of many Birmingham man, the doomed pediment and rnice his lifelong friends. What of the ure? Temple Bar, spirited away into ivacy, was dead to London before London oke to a sense of its loss. On the other nd, Crosby Hall, clipped and shorn, it is te, but still Crosby Hall, lives again at Chelsea; nile the main portico of the National Gallery s formerly a feature of old Carlton House. ere is no delicate filigree work about the rmingham portico. It is easily susceptible bodily transplantation. The Edmund-street ade of the reference library is a deplorable ort in masonry. At the time of its erection wise intention of continuing Barry's fine ign round the corner from Ratcliff-place was andoned, and an elevation by "another nd" approved. It is true that the Artists tico would not be quite in keeping with rry's work, but it would be something nitely better than the existing Edmund- eet architectural fiasco. It is known that dical developments in the internal con- uctional arrangements of the Midland titute and Corporation Library are in con- mplation. "The Commissioners of the eets" in 1829 gave special permission for projection of the condemned Artists portico oss the New-street footpath in the days when mingham men were seriously pondering the nging into being of their beautiful civic hall. give history an opportunity of repeating self, a similar act of grace on the part of the poration of Greater Birmingham in 1912 rying permission for an extension over the mund-street pavement for the purpose of nsferring the portico of the Royal Society of ists to become the entrance to the vestibule replanned library building would meet with e appreciation.

HISTORICAL NOTES.

Pierre Puget. In his paper read recently before the Royal Institute of British Architects (see our e of April 26) Mr. Townsend said, "This versal genius" (Pierre Puget) "during his in England designed Walpole House in omsbury on the site on which the British seum now stands." Professor Blomfield es to the *Journal* of the Institute as follows: he house on the site of which the British seum now stands was not Walpole House 'Montagu House,' which was rebuilt after re in 1678 by Louis XIV. for the French bassador, the Duc de Montagu, on condition the artists employed were Frenchmen. architect was a certain Pouget or Poughet. re is no foundation at all for the statement Puget, the sculptor, designed this house, ept a guess of Mariette's that Pouget and et might possibly be the same. But in 8 Puget was hard at work on his Milo and relief of Alexander and Diogenes, and there o authority for supposing that he was ever gland at all."

Records of Old Buildings. The Records Committee of the Royal Institute of British Architects are compiling a list of interesting houses and other buildings in London, particularly such as are likely to be pulled down. The Hon. Secretary of the Committee, Mr. W. Curtis Green, will be glad to hear of any threatened buildings of which records ought to be obtained before they are destroyed. Students who wish for subjects to measure may communicate with Mr. Rudolf Dircks, at 9, Conduit-street, W.

Historical Places, Twickenham. In response to an inquiry instituted by the Middlesex County Council, the Twickenham District Council have framed a schedule of "ancient monuments" in the parish which should be preserved. The list includes the houses of Turner and Tennyson; Saville House, for many years occupied by Lady Mary Wortley Montagu; the tombs of Pope and Kitty Clive; and Pope's Grotto. Of the last named an account was lately given in our columns at the time of the proposed sale of "Pope's Villa," the home of the late Mr. H. Labouchere, M.P., and built in 1809 by Sophia, Baroness Howe, eldest daughter of the famous Admiral, on the site of Pope's house. In Kensington Palace (London Museum) is a picture, with figures, of the grotto, ttributed to Hogarth.

West Horsley Church. The ancient Parish Church of West Horsley, Surrey, is in need of restoration, and an influential Committee has been formed; 400*l.* has already been promised locally. The central portion of the old structure has stood on the present site for upwards of ten centuries, and can claim association with royalty and nobility during the ages. The north aisle and chancel are Early English, the remainder of the building belonging to the Perpendicular period. The old tower, with its shingled spire, presents a picturesque appearance with the antique wooden porch projecting from it, overgrown with ivy.

Parish Church of Tunstall. During the recent restoration of the old parish church of Tunstall, near Kirkby Lonsdale, an inscribed slab of stone was found built into the rubble of the third light window in the north-east corner of the edifice. Mr. Moorhouse, of Kirkby Lonsdale, one of the contractors and an antiquarian himself, formed the opinion that the lettering was part of a Latin inscription. The relic was eventually submitted to Professor Haverfield, of Oxford, who described the stone as part of a Roman altar, and that the inscription on being translated read, "To the Holy God Asclepius and to Hygeia. Julius Saturninus set this Altar up." It is interesting to note that Asclepius and Hygeia were the God and Goddess of Health. Tunstall Church is not only famous for its antiquities, of which there are many, but it has also been immortalised by "George Eliot" in "Jane Eyre."

Priory Ruins at Colchester. At a recent vestry meeting for the parish of St. Botolph, Colchester, an interesting statement was made regarding the picturesque old priory ruins. The Rector, the Rev. W. E. Spencer, said that he had approached the Charity Commissioners with a view to having the property put in better order. An inspector of ancient buildings had been down and had gone carefully over the ruins, with the result that he said he was prepared to recommend the Government to repair the priory at the public cost.

Croxden Abbey. We referred last week (p. 545) to Mr. Charles Lynam's interesting work on St. Mary's Abbey, Croxden. The church is a plain structure, a circumstance in keeping with an order that made altar crosses of wood, and used but iron for candlesticks. The nave is long, the transept short, while the choir consists of one bay only, culminating in an apse surrounded by five circular chapels. The Cistercians were wont to divide their side chapels by solid walls rather than by screens, and the excavations clearly indicate a solid wall having existed between the chapels of the north transept as well as between those round the apse.

Port of London Authority: Site of New Offices. An unusually extensive clearance will shortly be made for the offices of the Port of London Authority. With the exception of the General Steam Navigation Company's premises, designed by Mr. E. B. I'Anson, in Great Tower-street, and Mark-lane Railway-station, there will be pulled down more than sixty houses in the area on the west side of Samuel Wyatt's Trinity House and Trinity-square. Nearly 1,000 tenants will be dispossessed, and the cost of acquiring the properties is estimated to be little less than one million sterling. The space to be cleared lies just within the line of the (second) Wall of London and next south to Fenchurch-street Railway-station. It covers the site (in the north-west corner) of the Navy Office of Pepys's and the Earl of Sandwich's time, and of the religious house dedicated to the Holy Cross of the Crutched or Crouched Friars, who were established there in the close of the XIIIth century. The Friars' Hall was converted, 1557, into a glass factory—one of the earliest in England—and consumed by fire twenty years afterwards. Of the old Navy Office, which was sold for 11,500*l.* in 1788, a vestige has remained to our day, the gateway forming the entrance to the London and India Docks warehouse.

Ancient Remains at Charing Cross. Amongst the objects that have been found in course of the excavations for joining the District and the Hampstead Railways are a stag's horn and a huge oak-tree, in the sand at a depth of 40 ft. below the surface. The tree, more than 2 ft. in diameter, is black with age, but the wood has retained its texture and solidity. The trunk had to be sawn from the roots and base before the mass could be lifted to the mouth of the shaft. It is conjectured that the tree—it is perhaps a relic of the great oak forest that skirted the lagoons of the Thames on the north—was undermined and carried away by flood and then deposited on a sandbank, which afterwards became covered with silt and alluvial soil. Thirty years ago, during the rebuilding of Messrs. Drummond's bank at Charing Cross, were discovered, in the recent deposits, bones of the horse, sheep, and the Celtic short-horned ox (*Bos longifrons*); and in the lower pleistocene gravels remains of rhinoceros, extinct ox (*Bos primigenius*), and red and fallow deer (*Cervus Brownii*), Irish deer (*Cervus megaceros*), tusks and bones of the elephant (*Elephas antiquus* and *Elephas primigenius*) and mammoth, and bones of the cave lion (*Felis leo spelæa*). Vestiges of the forest and of water beaches have been found along the confines of Regent's Park between York and Clarence Gates.

Restoration of Astley Church, Nuneaton. Considerable interest attaches to the restoration of this ancient structure, for it has been immortalised in the writings of "George Eliot," besides standing adjacent to the moated manor-house of Astley Castle, a circumstance giving it a close connexion with the history of England. Dedicated to St. Mary the Virgin, the church comprises a lofty nave and embattled western tower with eight pinnacles, and is a good specimen of the Decorated style of architecture, although now deprived of half its original extent. Formerly it was a cruciform building with several chapels, and a lofty spire which was so conspicuous from a distance as to earn for itself the title of "The Lantern of Arden." The present building is a plain square block with heavy crenellated parapet along the top, and with heavy mullioned windows. It dates from the time of Queen Mary.

Archæological Discovery in Corfu. Early in May in the garden of King George's villa, "Mon Repos," Corfu, the foundations and a considerable portion of the superstructure of an ancient temple were brought to light, writes a correspondent to the *Times*. Some few remains were discovered there in 1822, but the greater part of the structure has now been laid bare. The temple, which is of small dimensions, dates from the Vth or VIth century B.C. It is of the Doric Order, without triglyphs, and presents certain features of the Ionic style.

THE BUILDING TRADE.

THE LAND DUTIES.

THE recent debate on the land duties has once again drawn public attention to what is a serious clog on certain industries. It is important to note that, in answer to a question in Parliament, the net amounts raised from increment value duty and undeveloped land duty since they came into operation down to March 31 last have been elicited. Increment value duty has produced 6,251*l.*, and undeveloped land duty 31,293*l.* The valuation in the same period has cost the Government 688,000*l.*, and, although appended to the answer was a statement that the cost of valuation was a capital and non-recurring charge, and that the indirect effect of the valuation had been to increase the amounts received in death duties, it can no longer be denied that neither of the above taxes has accomplished what the Chancellor of the Exchequer, in introducing the Finance Act, 1909-10, claimed for them; whilst it must be admitted that their imposition has depreciated the value of land and buildings to a very serious extent, and that far from encouraging building, as the Chancellor stated they would do, they have seriously hindered activity in building enterprise.

The chief point made in the recent debate was that the increment duty, in violation of a pledge given by the Government, was being levied on occasional profits and on the value of buildings instead of being confined to an additional value accruing on the land. No one who remembers the debates on the Act when a Bill, and in especial Mr. Lloyd George's exposition of his Budget, can doubt that the impression given was that the increased value of land, which it was stated was created by the community, was to be the sole subject of taxation for the community. How little this limitation has been observed in practice is apparent from those cases which have received publicity; the value placed upon property as a purely hypothetical value—the value of the land as apart from the buildings upon it, and its natural amenities—can never be fairly ascertained for the purposes of taxation. The very fact that minus values have been given is sufficient to condemn the principle from a practical point of view, and no satisfactory assurance was obtained from the Government. Indeed, Mr. Masterman, who spoke for the Government, besides failing to show that the value of buildings was not taxed, even hinted that if the House of Lords upheld the decision of the Scotch Courts (to which we referred April 26 last) negativing the possibility of a minus assessable value, legislation would be resorted to to overrule such a decision. An inquiry has been promised into the working of the Finance Act, but no prospect is held out of its early fulfilment. Such an inquiry is urgently needed if the duties are to be continued. It was stated in the debate that there were few appeals, and that less friction was being experienced in obtaining valuations; but we venture to think that this is to some extent due to the fact that the public are under the impression that these unremunerative taxes are likely soon to be abandoned altogether.

It is to be observed that the advocates of the taxes now hardly defend the taxes themselves, but point to the value of the Doomsday Book, which is in creation, and the effect the valuation is having on other taxes. As regards the Doomsday Book, as the valuation proceeds on an entirely hypothetical basis, it is useless from any practical point of view, and certainly can be of no genuine value by the time it is completed, three or four years hence; whilst it is no justification for the land duties themselves that the machinery set up for their exaction has increased the returns from other duties. If this had been the only argument put forward when they were imposed, they never would have found a place in the Statute Book.

PARISH HALL, PORTCHESTER.

The foundation-stone of this hall was laid recently, and the building is to be erected from the designs of Mr. E. Douglas Hoyland, architect, of London. The hall will hold 250 persons, and there will be two classrooms and a kitchen. The builder is Mr. John Croad, of Portsmouth.

THE MEDIÆVAL JOINER.

THE joiner held no very conspicuous position in the Middle Ages. A certain number of references to him and his work occur in the account books of mediæval builders, but such references are very few in comparison with the constantly recurring entries referring to carpenters. From these facts we may very safely draw the conclusion that no very great number of joiners were employed in the Middle Ages, the work proper to the joiner being then commonly executed by the carpenter.

In a manuscript in the Record Office (Exch. Acc. 474-12) some particulars of work done by joiners at the Tower of London in the time of Henry VIII. are set down. Amongst other details we read of work having been done on "dyuers pressys which Master lieutenant hathe to ley his harneys in . . . More wrought by the said Joynours, lxxviii. monyalles (mullions for windows) of tymber in the Kynges gallery and in the counsell chambre, redy wrought, as also the mendyng of the rabettes of the wyndowes."

The joiner sometimes executed work in "fretyng and panelyng" (MS. 465-20). Sometimes, as in MS. 474-5, he was called in to work on "losyng the bed," which perhaps may have been a readjustment of mortise and tenon. Bedsteads were commonly made by carpenters. Instances of joiners working on the wooden framework of the ceiling may be seen in MSS. 474-12 and 499-19. In the former we read, "Taken downe by the saide joynours, the olde selynges of my lady the Kynges grandmother"; in the latter a "joynour" is paid for "selyng" a small chamber.

The wage commonly paid to the mediæval joiner we are unable to discover, the references to his labours consisting for the most part of entries of the payment of a lump sum for the execution of a specified job.

In "The Records of a London City Church," published by the Early English Text Society, we read of a joiner in 1483 occupying a house at a rent of 20s. a year, the house being situated in the churchyard of St. Mary-at-Hill, near London Bridge.

Two curious notes referring to somewhat too exuberant London joiners may be seen in the Acts of the Privy Council, 1543 (Roll Series). The notes are of sufficient interest to warrant insertion in this little notice. The joiners seem to have been acting in some play, and may perhaps have been apprehended in the dress of their respective parts. On April 10, 1543, "Certayne joyners to the number of XX. having made a disguising upon the Sonday morning without respect ether off the day or the ordre whiche was known openlye the Kinges Highness intended to take for the repressing off playes, wer therfore committed to warde and bestowed, summe in the Tower, summe in Neugate, and summe in the Gatehowa."

On April 13 the joiners were set at liberty:

"Certayne joyners which wer committed to warde for theyre unlawfull disguising upon the Sonday before, wer this day, after a good lesson restored to theyre libertie."

LONDON MASTER BUILDERS' ASSOCIATION.

THE Council of the London Master Builders' Association met on May 9, when there was a large and influential attendance. The chair was occupied by the President, Mr. James S. Holliday.

The Special Committee, which was appointed to confer with the representatives of the Carpenters and Joiners *re* Working Rule Agreement, submitted its report of the Conference held on the 1st inst., which was unanimously adopted.

The operation of the National Insurance Act (1911) was considered, and the Council decided to formulate instructions to be sent to the members of this Association for their guidance in carrying out the requirements of the Act.

Various correspondence was read relating to trade matters, including the Railways Bill.

The following were elected members of Association:—(1) Ordinary members, Me H. J. Carter, Ltd., London and Grays, Essex, (2) Messrs. Bovis, Ltd., Upper Berkeley-st W.: (3) Associate member, Mr. J. B. Smith, Hampstead-road, N.W.

BANKRUPTCY BILL.

THE Parliamentary Committee of the Cou of the Society of Incorporated Accountants Auditors have issued their observations recommendations on this Bill, which was in duced into the House of Lords by the Gov ment just before the close of last Session.

The Committee are of opinion that Clau of the Bill, which proposes to punish bankr who have been twice adjudicated and who h twice failed to keep proper accounts, fail meet the needs of the situation. The C mittee point out that there is no hardshi requiring all traders to keep specific book account, as it is the custom of account k manufacturers to issue inexpensive books able to the requirements of those in a s way of business.

On Part 2 of the Bill, which deals deeds of arrangement, the Committee obs that whereas 2,300 estates are annually minsistered in bankruptcy, 3,400 are wound each year under deeds of arrangement, whereas the percentage of assets to liabil in bankruptcy is only 38·4, under deeds arrangement it is 53·3. The Committee that if Clause 25 of the Bill becomes law consider it will legislate deeds of arrangen out of existence by the imposition of condit which, in most cases, it will be impossibl comply with. The Committee make cer recommendations in order to obviate difficulty. The Committee express approva the proposal that all trustees under deeds arrangement should be required to security, but, on the other hand, they p out that the penalty proposed to be put u a trustee acting under a deed of arrangem which becomes void is such that, unless clause (27) be struck out of the Bill or gre modified, persons of credit or repute will venture to act as trustees.

LABOUR IN THE BUILDIN TRADE.

DETAILS are now available of the agreem between the Manchester, Salford, and Dist Building Trades Employers' Association the Joint Committee of the Carpenters Joiners of the district.

For March, April, May, June, July, Aug September, and October the hours will forty-nine and a half per week; in Decem and January, forty-one and a half hours the week. It is stipulated that the wages will be 10d. per hour both summer and win

Overtime is to commence at the times sta for leaving off work, and to be paid at rate of time and a quarter for the first hours; then until ten o'clock at time an half, and from ten o'clock until starting-t next morning at double time. From until four o'clock on Saturdays the overt charge will be time and a half, and fr four o'clock until starting-time on Mon double time.

Where a day's notice has not been given the necessity to work overtime, sixpence be paid as tea-money.

Night gangs (made up of men who h not been employed during the day) are to be inaugurated for less than a week; in these cases the rate of pay will be 1s. 0 per hour.

The boundary within which these rules ap is stipulated to be a radius of 2 miles fr Albert-square as a centre. Travelling expen are allowed in certain circumstances.

Where men have to lodge away from ho they will be allowed 4s. 6d. per week lodging-money and travelling expenses and in once a week. When suitable lodgi cannot be obtained for 4s. 6d., such furt sum will be allowed as is necessary.

In the event of a dispute it is agreed no strike or lock-out shall take place until question has been referred to a local Jo Committee of not more than six employers six operatives. Where there is failure to ag the point of difference will be submitted an umpire mutually agreed on by Committee.

The dispute in the Cardiff building trade is been settled. The men asked for an rease in wages of 1d. per hour, and the djustment of working hours. A Concilin- n Board representing the various trades was ointed, and as the result of their deliberaons the masters offered an increase of ½d. per ir, advance to come into operation when men's short time commences. This was animously accepted by the men's representaes, and an alteration in working hours eptable to both parties was also agreed on.

SCOTTISH BUILDING TRADES FEDERATION.

THE half-yearly meeting of the Executive mmittee of the Scottish Building Trades deration was held in the premises of Edinrgh, Leith, and District Building Trades sociation, 61, Lothian-road, on the 3rd inst. . James Farquharson, Aberdeen, President, upied the chair. Reports from the various tres showed that trade was still very quiet, h no immediate prospects of expansion. twithstanding the state of trade, wages were lined to rise, due to the general unrest and the increase in the cost of living. It was orted that Mr. Farquharson, the President, d been appointed upon the Advisory Comittee in connexion with the National Inance Act, both for Great Britain and ytland. A report upon the working of the was submitted, and consideration was also en to the effect of the Trades Disputes Act, d proposed amendments thereon were con- ered, and strenuous support of the memorial the Employers' Parliamentary Council was ocated. Notwithstanding the depression in trade during the last few years, the deration was reported to be in a united and urishing condition, and the finances were ed to be in a healthy state. It was decided hold the annual meeting in Inverness in tember. The members thereafter, through courtesy of Mr. John MacLeod and Mr. rge, inspected the building of the Usher ll.

THE BRITISH ENGINEERS' ASSOCIATION.

THIS new Association, which was incorated on April 26, is an organisation formed promoting and protecting the interests of itish manufacturing engineers abroad, and cially in China. To that country its mediate attention will be exclusively deed. The objects for which the Association stablished are: -

(1) To promote and protect the general interests of British manufacturing engineers.

(2) To consider all questions connected with such interests.

(3) To promote or oppose legislation and other measures affecting such interests.

(4) To collect and circulate statistics and other information affecting the general interests of British engineers and to diffuse amongst its members information on all matters affecting such interests.

(5) To support the British Government, bankers, financial corporations, shipping and railway companies, and any other organisation in promoting the general interests of British manufacturing engineers.

(6) To watch and report upon the methods and progress of foreign competitors in Asiatic and other markets and to suggest methods of counteracting foreign influences.

(7) To encourage the predominance of British technical instructors in Asiatic and other schools.

(8) To encourage technical colleges and schools in Great Britain to give facilities for Oriental and other students, and to establish or aid in the establishment of technical schools abroad for the furtherance of the objects of this Association.

(9) To aid by advice, co-operation, donations, or otherwise, any individual or concern who is able to promote the objects of this Association.

(10) To invite members of the Association to give facilities for the introduction into their works for varying periods of Oriental and other engineers or engineering students.

(11) To endeavour to make the English language the recognised medium for the transaction of all engineering business.

The funds of the Association are derived from the subscriptions of members and ance fees. The first 200 members will be itted without an entrance fee. The annual cription for the time being has been fixed en guineas.

the first applicants for membership, two lred "original members," taken in the order of the priority of their application, will have the advantage of securing full membership from the date of election until December 31, 1914, by a subscription of 25*l*.

The benefits which members will derive from the Association forthwith may be summarised as follows:—

(1) They will be in receipt at frequent intervals of reports on matters which affect their business interests in China. These reports will be issued without the delay which is incurred in the issuing of Government information, and they will be untrammelled by those restricting influences which rob Government reports of their practical value. They will also be issued only to members.

(2) Members will be able to apply to the Association in London for information on specific subjects, and for advice on matters relating to China.

(3) Members who may be sending representatives to China will be able to obtain for them introductions and advice on the spot from the Association's Commissioner in China.

(4) Members will have the opportunity of exchanging views with each other, and thus will have facilities for collaborating in a business policy for China.

(5) Members will be warned of undesirable business connexions in China.

(6) Members will be notified of any important Chinese who may be in Europe in connexion with engineering contracts.

(7) Members will be notified of useful prospective Chinese engineering students, should they wish to introduce them into their works.

The temporary offices of the Association are Nos. 38, 39, 55, and 54 (first floor), Queen Anne's-chambers, Westminster, S.W. We may mention that some well-known firms have already joined the Association.

THE LONDON CO-OPERATIVE UNION OF BUILDERS, CONTRACTORS, AND ALLIED TRADES.

A GENERAL meeting of the London Co-operative Union of Builders, Contractors, and Allied Trades, Ltd., took place at the registered offices, 45 and 46, Lower Marsh. The appointment of Mr. Josephson as Secretary was confirmed by the general body. Mr. Atkinson, Mr. Eslenham, Mr. Taylor, Mr. Ockenden, Mr. Small, have been elected as Committeemen, and Mr. J. Atkinson, of Gerrard-street, W., has been elected Chairman.

In the course of some remarks, Mr. Josephson gave a brief history of the Union. He pointed out the advantages of the Union, *i.e.* :—(a) No rich man can buy shares in the Union. (b) No member can belong to the Union unless he subscribes for fifty shares. (c) No workman, no matter how poor, is to be debarred from becoming a member, because every man can well afford to pay sixpence out of a pound earned towards the fifty shares, which he is obliged to subscribe.

The founders have agreed to give their services (including the Secretary) until the Union has work in hand and actually starts business, and it is not burdened with any preliminary expenses. It appears that a contract for 2,600*l*. has been secured, which will give forty men employment for from three to four months.

GENERAL BUILDING NEWS.

CHESSINGTON CHURCH, SURREY.

This little church, situate upon the Ewell-road, and owing its existence to its founder, Roger de Merton, of Merton Abbey (in later years occupied by Nelson), has been enlarged, a vestry and organ chamber having been added and other works approved by the I.C.B.S executed. The exterior is faced in flint with stone dressing. The work was dedicated on the 1st inst. by the Bishop of Southwark, and has been designed by Mr. A. H. Ryan Tenison, F.R.I.B.A., the contractor being Mr. Hobbs, of Thames Ditton.

NEW GUILDHALL, MIDDLESEX.

The foundation-stone of the Guildhall was laid on the 9th inst., and the building is being erected at a cost of about 85,000*l*. On the ground floor will be the public hall, two Quarter Sessions courts, and various offices Committee-rooms and offices will be accommodated on the first floor, and the Council chamber will be on the second floor. The contract is being carried out by Mr. James Carmichael, and the architects are Messrs. J. S. Gibson, Skipwith, & Gordon. The building was illustrated in our issue for March 3, 1911.

TRADE NEWS.

Referring to our article on "Ottawa" in our issue for May 3, the Leeds Fireclay Company, Ltd., inform us that the whole of the front of the Canadian Life Building, Ottawa, is in "Burmantofts Marmo" terra-cotta, supplied by them.

Under the direction of Mr. Arthur P. Harrison, architect, High Cross, Keighley, Boyle's latest patent "air-pump" ventilators have been supplied to Highfield School, Keighley.

Boyle's latest patent "air-pump" ventilators have also been supplied to the Grammar School, Horsham.

In our issue for the 3rd inst., under "Trade Catalogues," we stated that the Armorduct also manufacture the now well-known "Holophane" glass reflectors. We are informed that this is incorrect, and that the sole manufacturers of "Holophane" glassware are Messrs. Holophane, Ltd., and the Armorduct Manufacturing Company, Ltd., only list and sell these goods in the ordinary way of business.

The new Catholic Schools, Caterham, are being supplied with Shorland's patent Manchester grates and patent concealed extract ventilators, by Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester.

St. John's Schools, Cardiff, are being supplied with the firm's warm-air ventilating patent Manchester grates.

APPLICATIONS UNDER LONDON BUILDING ACTS, 1894 to 1909.

AT Tuesday's meeting of the London County Council the following applications under the London Building Acts were dealt with. (The names of the applicants are given in parentheses):—

Width of Way.

Bethnal Green, North-East.—Erection of a building to abut upon the southern side of Green-street, the western side of Baker-street, and the northern side of Digby-walk, Bethnal Green (Mr. F. E. Harris).—Consent.

Uniting of Buildings.

City of London.—Uniting of Nos. 66 and 67, Cornhill, and No. 4, Sun-court, City (Messrs. Dunn & Watson).—Consent.

Islington, North.—Uniting of Nos. 544 and 546, and Nos. 548 and 550, Holloway-road, Islington, by means of an opening at the ground-floor level (Mr. A. Monk).—Consent.

Kensington, South.—Retention of an opening between Nos. 58 and 59, Holland Park-mews, Kensington (Messrs. B. Colley & Sons, Ltd., for Mr. R. B. Carpenter).—Consent.

Lines of Frontage and Projections.

City of London.—Two balconies in front of No. 15, King-street, Cheapside (Mr. A. Blomfield).—Refused.

Dulwich.—One-story addition to an existing office building adjoining West Dulwich Railway-station, Thurlow Park-road, Dulwich (Mr. A. E. Mullins).—Consent.

Finsbury, Central.—Erection of a building at the corner of Goswell-road and Upper Charles-street, Finsbury (Mr. H. Y. Boreham for the London Joint Stock Bank, Ltd.).—Consent.

Hampstead.—Addition, with bay-windows, at No. 23, Hilgrove-road, Hampstead (Mr. C. S. Barker for Dr. Barnett).—Consent.

Hampstead. — Addition at the London Society's Blind School, Avenue-road and Eton-avenue, Hampstead, to abut upon Eton-avenue (Mr. R. C. Edwards).—Consent.

Lewisham.—Porches and bay-windows to proposed houses on the northern side of Brownhill-road and the eastern side of Stainton road, Lewisham (Mr. J. Hughes).—Consent.

Marylebone, West.—New shop front at No. 326, Edgware-road, St. Marylebone (Messrs. Harris & Sheldon, Ltd., for the Maypole Dairy Company, Ltd.).—Consent.

Newington, West.—Houses on the north-western side of De Laune-street, Kennington (Messrs. Briant & Son).—Consent.

Norwood.—Building upon the site of Nos. 335 and 337, Norwood-road, Norwood, abutting upon the southern side of Thurlow Park-road (Mr. C. G. Miller for the London and South-Western Bank, Ltd.).—Consent.

Norwood. — Porches, oriel-windows, and barge-boards to Nos. 36 to 58 (even numbers only), inclusive, Sudbourne-road, Brixton (Messrs. E. Evans & Sons for Messrs. Rowland & Son).—Consent.

Norwood. — Porches and one-story bay-windows to six houses on the western side of Halliwell-road, Brixton (Messrs. E. Evans & Sons for Messrs. Leeks & Blake).—Consent.

Norwood.—Porches, bay-windows, gables, and barge-boards to nine houses on the western

side of Rosendale-road, Dulwich (Mr. A. H. Williams).—Consent.

Paddington, South.—Shed upon a site on the south-western side of Hormead-road, Paddington (Mr. F. C. Spiller for Messrs. Salter, Edwards, & Co.).—Refused.

St. Pancras, South.—Signs at the Scala Theatre, Charlotte-street and Tottenham-street, St. Pancras (Messrs. Duncan Watson & Co.).—Refused.

St. Pancras, West.—Shop front adjoining No. 336, Euston-road, St. Pancras (Messrs. Macey & Sons, Ltd.).—Refused.

Strand.—Two projecting pilasters at Nos. 1 and 2, Coventry-street and No. 1, Wardour street, Strand (Messrs. Emden, Egan, & Co., for Mr. H. Appenrodt).—Refused.

Wandsworth.—Bay-windows, porches, and bargeboards to houses on the northern and southern sides of Montana-road, Upper Tooting (Messrs. Swain & Selley).—Consent.

Wandsworth.—Porches, bay windows, half-timber work and barge-boards to four houses on the eastern side of Sutherland-avenue, Southfields (Mr. C. S. Banks for Mr. F. W. Hatman).—Consent.

Width of Way and Lines of Frontage.

Hampstead.—Re-erection of Lower Lodge, Branch-hill, Hampstead (Mr. J. Hudson for Mr. H. C. Braun).—Refused.

Kennington.—One-story shops in front of Nos. 2 and 4, Jonathan-street, Lambeth (Messrs J. A. J. Woodward & Sons for Mr. J. Wilson).—Refused.

Rotherhithe.—Cinematograph building upon a site abutting upon the eastern side of Lower-road, Rotherhithe, and the southern side of Irwell-place (Mr. W. G. R. Sprague for Mr. W. J. Paverley).—Refused.

Strand.†—Nos. 1 and 2, Clare-market, Strand, with projecting oriel-windows (Messrs. Metcalf & Greig).—Consent.

Strand.—Projecting sign at Milford House, Milford-lane, Strand (Anglo Engraving Company, Ltd.).—Consent.

Lines of Frontage and Construction.

Hampstead.—Temporary coal shed at the rear of No. 1, Akenside-road, Hampstead, abutting upon Lyndhurst-road.—Consent

Strand.—Iron and glass shelter at the Royal Adelaide Galleries, No. 436, Strand, next to King William-street (Messrs. Strode & Co.).—Consent.

Strand.—Iron and glass shelter in front of the Mont Blanc Restaurant, No. 16, Gerrard-street, Soho (Mr. H. M. Wakley for Mr. A. Pasquier).—Consent.

Line of Frontage, Space at Rear, and Alteration of Building.

Wandsworth.—Addition at Nos. 221 and 223, Wimbledon Park-road, Wandsworth (Mr. F. L. Poole).—Refused.

Space at Rear.

St. Pancras, South.—Erection of a block of five shops with dwellings over at the corner of Leigh-street and Sandwich-street, St. Pancras (Mr. T. W. Smith for Mr. A. Davis).—Consent.

St. Pancras, South.—Erection of a block of working class dwellings on the northern side of Compton-street, St. Pancras (Mr. A. Davis).—Consent.

St. Pancras, South. Building upon the site of Nos. 30 and 31, Tottenham-court-road, St. Pancras (Mr. P. Dollar for the Rohy Syndicate, Ltd.).—Refused.

Space at Rear and Height of Building.

Westminster.—Building on the northern side of Matthew Parker-street, Westminster (Mr. H. Chatfeild Clarke).—Consent.

Space at Rear and Alteration of Buildings.

Strand.—Water-closet addition at the rear of No. 53, St. Martin's-lane, at the third-floor level (Messrs. Harrison & Sons).—Consent.

Deviation from Certified Plans.

Marylebone, East.—Building upon the site of Nos. 40 and 41, High-street, St. Marylebone (Mr. R. A. Hinds for Mr. H. Rickards).—Consent.

Working-class Dwellings.

Wandsworth.—Houses upon a site abutting upon the western side of a way leading from Mitcham-lane to Eardley-road, Streatham (Mr. J. Harding).—Refused.

Formation of Streets.

Wandsworth.—Adaptation as a street of a way or part of a way leading from Mitcham-lane to Eardley-road, Streatham (Mr. J. Harding).—Refused.

Wandsworth.—New streets for carriage traffic on the Elmwood House estate on the south-eastern side of Upper Tooting-road, Upper Tooting (Messrs. Swain & Selley).—Refused.

Timber in External Walls and Construction.

Clapham.—Ladies' convenience on Clapham-common, next to the southern side of The Pavement, Clapham (Messrs. Dowsett & Jenkins for the Wandsworth Metropolitan Borough Council).—Consent.

Cubical Extent.

Bow and Bromley.—Retention of a building abutting upon Hawgood-street and Gale-street, Limehouse, exceeding 250,000 cubic ft. in extent (Messrs. Fuller, Horsey, Sons, & Cassell).—Consent.

Cubical Extent and Construction.

Kensington, South.—Additional cubical extent, in respect of, *inter alia*, additions on the second, third, and fourth floors, of a division at the rear of Block 2 of Harrod's Stores, Brompton-road (Mr. C. W. Stephens for Harrod's Stores, Ltd.).—Consent. Construction of an iron and glass enclosure to the lift in the area on the southern side of the division at the rear of Block 2 of Harrod's Stores, Brompton-road (Mr. C. W. Stephens).—Consent.

The recommendation marked † is contrary to the views of the Metropolitan Borough Council concerned

PROJECTED NEW BUILDINGS IN THE PROVINCES.*

ABERDEEN. — Extensions to fish market (4,000*l.*); Mr. W. Dyack, Surveyor, Town Hall Aberdeen.

Barnstaple. — Gymnasium; Secretary, Y.M.C.A., Barnstaple.

Baxenden.—Alterations at works for the Nichols Chemical Company, Ltd.

Birmingham. — Proposed additions at Victoria Law Courts, Corporation-street, also fire-station at Aston Manor (7,000*l.*); Mr. H. E. Stilgoe, Surveyor, Town Hall, Birmingham.

Birtley.—Enlargement of school, George-street (1,220*l.*); Mr. William Crozier, Surveyor, Shire Hall, Durham.

Blackland (Paisley).—Additions to club-house for the Paisley Golf Club.

Brentford.—Plans have been passed for re-building 406-7, High-street, for Messrs. Dorey & Co., Ltd., and three houses, Albany-road, for Messrs. Saunders & Taylor.

Bromley (Kent).—Alterations and additions to workhouse (14,000*l.*); Mr. John S. Woodhams, builder, Napier-road, Bromley.

Burnley.—Weaving shed, near Coalclough-lane, for the Habergham Mill Company.

Burton-on-Trent.—Erection of offices and economiser house at Electricity Works (1,345*l.*); Messrs. R. Kershaw & Sons, builders, 90, Princess-street, Burton.

Cardiff. Technical institute, Cathays Park; Messrs. Ivor Jones and Percy Thomas, architects, 18, St. Mary-street, Cardiff.

Cathcart. Additions to Millholm Paper Mills for Messrs. Wiggins, Teape, & Co.

Cheltenham.—Three domestic science centres; Mr. W. Preston, Secretary, Education Committee, Town Hall, Cheltenham.

Chertsey.—Proposed additions at work house; Mr. H. E. Paine, Clerk, Guardians' Offices, Chertsey.

Cleaton Moor.—Labour Exchange; Mr. H. Doloughan, builder, Cleaton Moor.

Coventry. — Technical institute, Pool Meadow; Mr. J. E. Swindlehurst, Surveyor, Town Hall, Coventry.

Danbury.—Six houses; Mr. J. Dewhurst, Surveyor, Rural District Council Offices, Chelmsford.

Dewsbury.—Additions to Spring Foundry for Messrs. W. James & Son, Ltd. Extensions to Excelsior Confectionary Works for Messrs. Slade & Bullock, Ltd.

Doncaster.—School (12,355*l.*); Mr. Unwin, builder, Sheffield.

Durham.—School (12,090*l.*); Mr. W. B. Cooper, builder, Sans-street South, Sunderland

Eastbourne.—Primitive Methodist Church, Seaside; Messrs. G. Baines & Son, architects, 5, Clement's-inn, W.C.

East Retford.—School (6,650*l.*); Messrs. Bosworth & Lowe, builders, Nottingham.

Eavesbottom.—Dyeworks for Messrs. W. Clay, Son, & Co.

Erdington.—Fire-station (5,000*l.*), Mason-road; Mr. H. H. Humphries, Surveyor, Urban District Council Offices, Erdington.

Farnworth.—Weaving shed for Messrs. Horrockses, Crewdson, & Co., Ltd., Moses-gate.

Folkestone.—A plan has been passed for a cinematograph theatre, George-lane, for Mr. H. Videan, architect, on behalf of the Central Picture Theatre Company, Ltd. A plan has been lodged for alterations to Railway Hotel, Coolinge-lane, for Messrs. Bromley Dahl, architects, on behalf of Messrs. Nalde Collyer, Ltd.

Gedling.—School (3,966*l.*); Mr. T. B builder, 2, Lamartine-street, St. Ann's W road, Nottingham.

Goole.—Municipal buildings; Mr. C. Bradley, Surveyor, Urban District Cou Offices, Goole; architect to be appointed competition.

Gourock. — Cottage hospital (17,000 Trustees of late Captain Duncan M'Phers Mavisbank, Gourock

Graianrhyd.—School (730*l.*); Mr. R. Robe builder, Coedpoeth.

Gwersyllt.—School and instruction cen (2,230*l.*); Messrs. Treasure & Sons, build Chester-street, Shrewsbury.

Highbridge (Somersetshire). — Buildin Cornhill; Mr. George Cox, Burnham, Som setshire.

Hindley.—Billiard hall, Market-street. Messrs. Holt, Ltd., Burnley; Mr. J. P. Ea shaw, architect, 56, Railway-street, Nels Lancs.

Irvine. Proposed club buildings, site of 152, High-street (2,000*l.*); Secretary, Irv Unionist Club.

Kingstown.—Forty-six houses, Lower Geor street (6,698*l.*); Mr. J. O'Brien, build Summerhill.

Leyland.—Extensions to Earnshaw Bric Mill for Messrs. John Pilkington, Ltd.

Lichfield.—School, Frog-lane (3,225*l.*); F. T. Beck, architect, Wolverhampton; Mess Thorneloe & Sons, builders, Lichfield.

Macclesfield.—Additions and alterations gasworks (2,850*l.*); Mr. W. Newbigging, Engineer, Town Hall, Macclesfield.

Newcastle-on-Tyne.—School (2,000*l.*); Car Hamer, Vicar, St. Paul's Church, Newcastle

Newlands (Renfrewshire). — Eight hous Carnwath-avenue; Messrs. G. Anderson, L builders, 41, Earlspark-avenue, Newlands.

Northwich.—Extensions to Mount Tab United Methodist Church (2,000*l.*); Trustees.

Nottinghamshire.—Schools, Underwood places), Walkeringham (140 places), Wars (620 places), and West Bridgford (420 place Mr. C. J. Bristowe, Secretary, Education Co mittee, Shire Hall, Nottingham.

Oldham.—Cinematograph hall, Featherst road North, for the Imperial Picture Pal Company, Ltd

Radcliffe.—Extensions to asylum (22,165 Mr. F. Evans, builder, Bulwell, Nottingha Twelve houses; Mr. E. P. Hooley, Survey Shire Hall, Nottingham.

Rochdale.—Alterations to St. Peter's Chur School (2,000*l.*); the Trustees.

Royton. — Cotton-spinning mill (100, spindles) for the Park Mill, Ltd., Royton.

Sandon.—Four houses; Mr. J. Dewhur Surveyor, Rural District Council Offic Chelmsford.

Sheffield.—Enlargement of Greystones Sch (400 extra places); Mr. G. S. Baxter, Sec tary, Education Committee, Town Ha Sheffield.

Shotton.—Proposed club premises; Secreta Shotton and District Albion Workmen's Clu

Smeaton. — School (3,000*l.*); Mr. A. Hardie, architect, 20, George-street, Ed burgh.

Spittal.—Additions and alterations to Clatt bridge Workhouse; Mr. J. E. S. Ollive, Cle Wirral Guardians, Birkenhead.

Stockport.—School; Mr. A. Lawton, Sec tary, Education Committee, Town Hall, Sto port.

Stoke-on-Trent.—Alterations at infectio diseases hospital; Mr. R. Arrowsmith, S veyor, Rural District Council Offices, Stoke.

Tanyfron.—House (710*l.*); Messrs. Roberts Owen, builders, Llansarnau.

Totnes.—Bacon factory; Mr. T. Bro builder, Totnes.

Twickenham.—The following plans have be passed:—Cinematograph theatre, Richmo road, for Mr. R. B. Rowell; four hous Whitton-road, for Mr. H. G. Alaway; ad tion to laundry, Whitton Dean-road, for M J. Mann; addition to Messrs. Loveless & Co offices, Amyand Park-road, for Messrs. Brew Smith, & Brewer.

Walsall. — Plans have been passed follows: — Alterations and additions premises, 18, Junction-street, for Messrs. sells Brewery Company; electric theatre, Hi street, Bloxwich, for Mr. R. Mountjoy; offic Hatherton street, for Mr. T. L. Hale; fo houses, Green-lane, Leamore, for Mr. Wilkes; curriers' works, off Marsh-street, Messrs. Middlemore & Lamplugh.

Woolley.—Club premises; Secretary, Wo ing Men's Club, Darton.

Yarm. — Alterations and additions grammar school; Mr. E. G. Fletcher, arc rect, Prince Regent-street, Durham.

* See also our list of Competitions, Contracts, etc., on another page.

WESTMINSTER CITY COUNCIL.

At the fortnightly sitting of the Westminster City Council on May 8 the following matters were dealt with:—

Gifts.—The thanks of the Council were presented to Alderman Emden for his gift of books and of views of London, by Messrs. Pugin & Rowlandson.

Building in Tufton-street.—Permission was given to Messrs. A. E. Hughes & Son to take up and remove the old paving-stones in connexion with the clearing of the site of Tripp's Buildings, and 87-91, Tufton-street, preparatory to erecting new buildings.

Improvement of Tufton-road and Horseferry-road.—It was decided that the London County Council be informed that the City Council are willing to contribute a sum not exceeding one-fourth of the net cost of a widening of Horseferry road, between Carpenter street and Tufton-street, to 50 ft., and a widening of Tufton street, between Horseferry-road and Romney-street, to about 33 ft., such contribution not to exceed the sum of 1,088*l.*

Paving Works.—The Contracts Committee reported that in preparing the form of contract for paving work this year, on recommendations of the City Engineer, they had advised the specification by providing for 9 in. Portland cement concrete to be laid instead of 7 in. formerly specified, and by redrafting the clause relating to the laying of combined "strip" pavement so as to make it clear that the pavement shall consist of alternate rows of Jarrah and pine blocks.

LOWER THAMES VALLEY DISTRICT SURVEYORS' ASSOCIATION.

The annual dinner and visits of inspection of the Association were held on the 4th inst. About thirty members and friends were present at the visits. A start was made at 2.5 from Turnham-green Station, from whence the party proceeded to the Metropolitan Electric Supply Company's generating-station at Willesden, where the party was conducted over the works by Mr. Markby, the engineer of the works, and by Mr. Chapman. Upon leaving the generating-station the party proceeded to the Willesden Isolation Hospital, where, by permission of the Willesden Council and of the Medical Superintendent, Dr. Stewart, they made an inspection of the administrative block and the laundry, which is believed to be one of the best equipped laundries in the country. Next, by permission of the Willesden Council and Mr. O. Claude Jebson, the Engineer and Surveyor, the party stopped to inspect a sewage recorder, which registers the Willesden sewage as it enters the London County Council's sewer. The working of the recorder was explained to members of the party by Mr. Cole.

The party then proceeded to the Brentford Gas Company's works, where tea was provided by Mr. A. A. Johnston, the engineer and manager to the company. After tea, by permission of the company, the party was conducted in three sections over the gasworks, where the process of emptying and recharging of retorts was viewed, after which an inspection was made of the water gas, stove cleaning, and smiths' departments. After the visit to the Brentford Gas Company's works had been concluded the party proceeded to the Chiswick Town Hall, where the annual dinner was held. The following gentlemen were present:—The President; Messrs. H. T. Wakeley, County Surveyor, Middlesex; A. A. Johnston, engineer and manager Brentford Gas works; E. F. Collins, R. H. Jeffes, H. V. Lobjoit, S. H. Chambers, A. H. Vanner, M. Ainsworth King, Powell Thomas Cole, W. F. Coales, J. G. Carey, T. W. Pearce, Percy Stevenson, F. C. Fread, Chambers-Smith, H. Cooper, T. Cook, J. H. Abbott, S. Eyden, A. G. Davies, J. H. Chapman, J. H. Berley, C. Willis, T. Cole, jun., A. Gladwell, W. Manning, J. A. Webb, R. J. Thomas, Miss Leith, and the Hon. Secretary.

LEGAL COLUMN.

Land Valuation.

The President of the Land Union, in a recent letter to the *Times*, draws attention to the decision of one of the Referees under the Finance Act in what is known as the Liverpool case. The facts are very shortly stated, but apparently a property valued by the official Referee at 750*l.* was sold for 1,000*l.*, and the Referee decided that the price obtained was to be regarded, both on the original valuation and on "the occasion." We cannot but regret that the Land Union did not publish further particulars, as a good deal depends upon when the land was sold and how long an interval elapsed between the sale and the original valuation, the deductions made, etc.

The case, however, serves one purpose, as it affords one more example of a reversal of the original valuation on appeal. The time for taking steps to appeal is extremely short—sixty days—and many persons, as was the case in the Richmond case, hardly grasp the importance of appealing until the time has expired; others also shrink from the expense of an appeal, and if an appeal be made to a Referee his decision is not published, and is not binding on the valuers or of any public significance. We thus have one of the most intricate statutes of modern times administered in a happy-go-lucky manner, whilst access to the Court is made a luxury which only the wealthy can afford. Yet when questions are asked in the House of Commons the absence of appeals is the one fact which the Government rely upon as proving the equitable working of the Act. In face of the assertions that were made when the Act was passed, that it was calculated to bring large properties into the market and to stimulate building enterprise, it surely is a significant fact that most of the cases to which publicity has been given have been cases where the properties have been valued at under 1,000*l.* Certainty and uniformity in the administration of the Act are urgently called for, and this can only be attained by a ready access to the Courts of Law whose decisions are binding upon all valuers, and enables an injunction to be applied for where the principle of the decisions is departed from.

Boundaries to Land.

All builders have had some experience of the difficulties which may arise in connexion with the boundaries of properties, and this is equally the case where land is left unbounded or where a wall or other erection has been erected which is within the owned territory, leaving an unenclosed strip outside.

A case, Kynoch, Ltd. *v.* Rowlands (current "Law Reports"), turned on the latter state of affairs. The plaintiffs had erected a wall enclosing their works, and at the eastern side these works were divided from the defendant's property by a ditch or dry channel of an ancient watercourse. There had, in 1894, been litigation between the two parties, and in that action it had been determined that the boundary line between the two properties was the middle of this channel. That left a strip of land in the plaintiffs' possession averaging 18 in. outside the face of the wall, and extending further than the footings. The present action was brought to prevent the defendant from topping refuse against the wall. The defendant contended that by the erection of the wall the plaintiffs had abandoned this strip of land, and that the defendant had acquired a right to it by prescription.

The grounds upon which a prescriptive right was alleged to have been acquired were that cattle had been allowed to graze right up to the wall.

The Court of Appeal, affirming the Court below, held that there had been no abandonment of this strip of land by the plaintiffs, nor had the defendant acquired it, and an injunction and damages were decreed against the defendant.

It should be especially noted that in this case, during the erection of the wall, there had been litigation between the parties, and that in that litigation the boundary line between the two properties had been absolutely determined. It was not, therefore, a case where the existence of a wall erected by the plaintiffs could be used as a presumption that the wall marked the actual boundary. Even had that been the case, Lord Justice Fletcher Moulton intimated that it would be improper to infer from the mere fact of the building of the wall an intention on the part of the owner to abandon all lying outside it. One word may be added upon the point of prescription. To gain a prescriptive right it was held that the person acquiring the property must take actual possession, as, for instance, by cultivation, building, paving, etc. The mere straying of cattle upon the property did not amount to an act of possession, whilst in this case the plaintiffs had exercised acts of ownership by using the strip of land occasionally when the wall required repairing.

Landlord and Tenant.

No class of agreements or contracts are often entered into with less formality than are agreements relating to house property. Often a house agent's printed form is accepted by both parties, or they are even satisfied with a document of their own drafting, yet such agreements are subject to technical rules of construction which cannot be appreciated by laymen. If a lease be drawn, for instance, "for the term of two years certain, and thereafter from year to year, until either party shall give to the other three calendar months' notice of his determination to terminate the tenancy," all laymen, and even some lawyers, might be inclined to think that at the end of the second year the lease could be determined; but in the case in *re* Searle (current "Law Reports") this has been decided not to be the case, but to be a lease for three years at least, and then only determinable by three months' (calendar months) notice, expiring at the end of the third or any subsequent year. We may remind our readers that "calendar months" means calendar months, and a quarter's notice may not suffice (see the *Builder*, June 25, 1910).

The Trade Disputes Act.

A case recently tried before Mr. Justice Coleridge—Scruttons, Ltd., *v.* Lewis—turned to some extent upon the Trade Disputes Act. The plaintiffs were suing a delegate of the Transport Union for having wrongfully and maliciously induced the plaintiffs' servants to break their contracts, and for an injunction. The defendant set up sect. 3 of the Trade Disputes Act. There was naturally some conflict of evidence in the case, but it appeared that certain men were employed in loading a vessel, that on one day a delegate of the union, according to the rules of the society, went round to inquire whether the men had union tickets, that one of the masters of the barges had no ticket and declined to take one out, and that in consequence the men working with him ceased work, this fact having been communicated to their foreman. The learned Judge entered judgment for the defendant, apparently upon two grounds—the first that no actionable interference with the plaintiffs' servants had taken place. This would seem a ground easily understood, even apart from the Trade Disputes Act; but his Lordship further found that even had there been actionable interference with the plaintiffs' servants, a trade dispute existed between the men—the stevedores and lightermen—and therefore sect. 3 of the Act would apply.

We, of course, in no way question this finding, and we only refer to the case as illustrating the difficulty of administrating the Trade Disputes Act. From the evidence as reported there appears to have been no active antagonism between the men beforehand. But the unions discourage their men from working with non-union men, and the revelation of the fact that one of the men was a non-union man led to a suspension of work. Lord Coleridge observed that the Act must not be whittled away, but under the Act it seems clear that there must be an antecedent dispute for the section to apply, and that the act complained of cannot be relied upon as the dispute. This was carefully considered by the House of Lords in Conway *v.* Wade (see the *Builder*, August 7, 1909), and it was held that the dispute must be imminent or existing, a grumbling or agitation would not suffice.

The case raises an important point, because it is not on all fours with the facts in Conway *v.* Wade, where the matter in issue was only the non-payment of an old fine to the union; in fact, a dispute between a trade union delegate and a workman. There is a rule in all unions that non-union men shall not be employed; if, therefore, a non-union man is employed, does this *ipso facto* create a dispute among the men? In the interests of trade generally it is to be hoped that this question can be answered in the negative, for it places employers and non-union men in the hands of the unions if, owing to the employment of a non-union man, illegal interference with employers can be exerted and the protection of the Trade Disputes Act can be invoked without any warning or the previous existence of any grounds for dispute.

LAW REPORTS.

COURT OF APPEAL.

(Before the MASTER OF THE ROLLS and Lords Justices BUCKLEY and KENNEDY.)

Blackfriars Ancient Light Dispute: Griffith *v.* Richard Clay & Sons, Ltd.

THIS case came on for hearing on the 8th inst., upon the appeal of the defendants from a judgment of Mr. Justice Neville, in the Chancery Division.

Mr. C. E. Jenkins, K.C., and Mr. Vernon appeared for the appellants; and Mr. Peterson, K.C., and Mr. Gover for the respondent upon the appeal (the plaintiff).

Mr. Jenkins said it was the appeal of the defendants from a judgment of the learned Judge in favour of the plaintiff for 200*l.*

damages for the obstruction by the defendants of his ancient lights. In the Court below there was a considerable dispute as to the facts, but in that Court he did not think there would be any dispute of fact upon any material point, the point raised upon the appeal being one of law of the greatest importance to persons engaged in the building trade. Plaintiff was the owner in fee simple of two small houses known as Nos. 62 and 63 on the east side of Brunswick street, near Stamford-street, Blackfriars. Defendants, the well-known firm of printers, were the lessees for a long term of a large new building opposite the plaintiff's premises on the west side of Brunswick-street. The buildings which formerly stood on the site of the defendants' new building were much lower than the new one. Defendants erected their new building without any objection by the plaintiff, but when the building had got substantially to its full height the plaintiff brought his action for damages for the obstruction of his ancient lights.

The Master of the Rolls: Obscuration was admitted?

Mr. Jenkins: Oh, yes!

The Master of the Rolls: Then we have nothing to do with the Colls case?

Mr. Jenkins thought not. He said that, although the plaintiff by his statement of claim asked for an injunction, it was admitted that in the circumstances he could not get it. Defendants admitted that there had been an actionable interference with the plaintiff's lights. Their surveyors told them that the damage to the plaintiff caused by the interference was about 75*l*., but in order to be on the safe side defendants paid 150*l*. into Court. The only dispute at the trial was as to the amount. At the trial the learned Judge said that if he looked at the plaintiff's position as the owner of Nos. 62 and 63, Brunswick street, and considered the case from the point of view of the letting or selling value of the premises, the 150*l*. paid into Court was more than enough to compensate the plaintiff for the damage he had suffered. It appeared, however, that the plaintiff in addition to being the owner of Nos. 62 and 63, Brunswick-street, was also the owner of another building behind Nos. 62 and 63, known as No. 63A, the latter building being separately rated from the others, and the plaintiff's expert witnesses presented this theory to the Court. They said that the houses, Nos. 62 and 63, were old, small, narrow, dilapidated houses, and which did not themselves represent much value; but they said that if they put the three houses together and pulled them down they would get a site of sufficient size or depth to erect a warehouse upon it.

The Master of the Rolls: Are all the houses subject to one title?

Mr. Jenkins thought not.

Mr. Peterson thought they were.

Mr. Jenkins would admit that at one time there was a common owner. No. 63A, he said, was a warehouse. No. 62, although rather deeper than No. 63, was a good deal narrower and smaller. It had a little window, which was below the level of the pavement. That was one of the windows the defendants were alleged to have blocked, as also a window on the gound floor and two on the first floor No. 63 had three windows in the basement, the tops of which slightly protruded above the pavement level, and three windows on the ground floor and three windows on the first floor, the light to which the defendants were said to have interfered with. The depth of No. 63 was approximately from 18 ft. to 19 ft., and the depth of No. 62 was something over 20 ft. The total surface area of the two houses was about 1,000 sq. ft. The total surface area of No. 63A was about 1,050 sq. ft., and in that building there were no windows looking towards the defendants. Defendants admitted that so far as the dominant tenement was concerned there had been a nuisance, and that they had to pay for that; but the point was whether the plaintiff was entitled as against the tort feasors to have the damages assessed upon the footing that what they had done made the whole site less valuable if the houses were pulled down, or, in other words, was the plaintiff entitled to get 200*l*. for the loss he had suffered? The learned Judge had said he was.

In reply to the Master of the Rolls, Mr. Peterson said that No. 63A was let on a monthly tenancy.

The Master of the Rolls said that if the plaintiff was minded to enter into an arrangement to pull down his three premises, and for the erection of one building over the whole site, the obstruction of light would interfere with that. He could not see why that fact should not be taken into consideration.

Mr. Jenkins contended that it ought not. So far as his research went, he could not find a similar claim put forward by a plaintiff before. Mr. Justice Neville had measured the damages by saying that a man would probably pay 200*l*. more for the three sites combined than he would pay for them separately. He submitted that this was simply a common law action for damages, and that fact was not altered because the action happened to be tried in the Chancery Division. He contended that the damages in the present case must be confined to the injury to the dominant tenement. It was clear that No. 63A was not the dominant tenement or part of it. He submitted that damage arrived at in that way could not be charged against the defendants.

Mr. Vernon followed on the same side, contending that the Judge had assessed the damages on the wrong basis. All that the plaintiff had a right to was to have the damages assessed for the damages to the light coming to his two dwelling-houses.

Lord Justice Kennedy thought that they ought to look at the premises as a whole as a marketable commodity.

The Master of the Rolls said that they had not to take into consideration the *quantum* of damages at all, if the Judge had properly taken into consideration the site of No. 63A.

Mr. Vernon contended that the Judge had no right to take into consideration the site of No. 63A, which was not the site of the dominant tenement at all. He contended that the only right which the plaintiff had was to have light through the apertures of the dominant tenement actually existing.

Counsel for the respondent were not called upon.

The Master of the Rolls, in the course of his judgment, said it was apparent that eventually No. 63A was a property which must be taken down and the site used for another building. It was also apparent that the neighbourhood was one which was being now covered by large buildings in the nature of factories and warehouses, and the point they had to consider was the measure of damages, and what they were entitled to take into consideration in assessing the damages for the wrong which it was admitted the plaintiff had suffered. In the first place the plaintiff had not, by reason of delay in commencing proceedings, been able to obtain an injunction. It was clear that if he had commenced the proceedings in time he could have obtained an injunction which would have prevented the defendants from building any part of that which was opposite Brunswick-street beyond the line shown on the model, which, he supposed, was the 45 degrees angle, that protection would have enured for the benefit of the whole site, and the plaintiff would have had the right to treat it as a whole. To suggest that anybody could rebuild the two buildings upon the foundations of their own site was absurd and impossible. It was said by the defendants that that might have been so in the case of an injunction, but that it was not so in a case where no injunction was asked, and that it had no application at all where damages only were asked. His Lordship asked himself, why not? A wrongful act had been committed by the defendants. What damage had the plaintiff suffered? It had been argued that if there was a house with a garden on one side of it or in the rear, the only thing you could do in such a case was to say what damage had accrued to the plaintiff with reference only to the actual building in which there were ancient lights. It was said that you must disregard altogether that it was a house with a garden at the back or side, and that all you were entitled to consider was the value of the rays of light which had been prevented from coming into the apertures of the house. He failed to see that the Colls case had any bearing on a question of damages. He failed to see why in a case like the present they should not consider the damage done to the plaintiff's whole site. He thought this was a case in which they were not merely to consider what damage the plaintiff had suffered by reason of the wrongful act of the defendants in interfering with the plaintiff's ancient lights. He thought that the learned Judge was quite right in the view he took, and that the appeal should be dismissed with costs.

The Lords Justices delivered judgments to the same effect.

HIGH COURT OF JUSTICE, CHANCERY DIVISION.

(Before Mr. Justice JOYCE.)

Tottenham Right of Way Case: Tottenham Urban District Council *v.* Rowley.

JUDGMENT was delivered in this case on the 11th inst. upon a claim by the plaintiffs for the alleged trespass by the defendant upon their land known as Downhills Park, Keston-road, Tottenham, and for damages for nuisance caused by the defendant erecting an obstruction on the land or alternately upon Keston-road, in such a way as to prevent a impede the plaintiffs from entering upon th land from Keston-road, and for a declarati that the defendant was not entitled to er or maintain any obstruction, either up plaintiffs' land or on Keston-road, or in a other manner to prevent or impede plaintiffs from entering upon their land fr Keston-road; and for an injunction to restra the defendant from erecting or maintaini any obstruction upon the plaintiffs' land, upon Keston-road, and from in any manr preventing or impeding the plaintiffs fr entering upon their land from Keston-road.

It appeared that the land north of Keston-road belonged to the plaintiffs, a was used as a public park, and was separat from Keston-road by a wooden pale fer erected some years ago by the plaintiffs the edge of their land. Some time ago th removed a part of the fence so as to allow ingress and egress through the opening th made to and from their land, for the purp of conveying materials in connexion with t building by them of a new school on th land at some little distance from the ro The defendant, who had some time bef purchased the tract of land south of and to the fence, put up a wire fence in front the opening made by the plaintiffs, his jus fication for doing so being the allegation th the Keston road was a private road, and th he owned the narrow strip of land betwe the road and the plaintiffs' fence. Defends had laid out his land as a building estate, a it was now practically all built upon, exc what had been appropriated for roads streets on the south side of Keston-road, portion in question being built upon, leavi roadway between the houses and the fen The real question in the case was whether, the circumstances, there had been a dedicati by the defendant of Keston-road as a highw for public use.

Mr. Justice Joyce held upon the evider that the defendant intended to dedicate whole width to the public as a highway, s the user by the public had been sufficient complete such dedication. He held, the fore, that the defence failed, and that plaintiffs were entitled to succeed.

Judgment accordingly.

Mr. Macmorran, K.C., and Mr. C. Shar appeared for the plaintiffs; and Mr. Young K.C., and Mr. J. Scholefield for defendant.

Case under the London Building Act, 1894: Neglect to Give Notice.

ON May 7, at the South-Western Police-cou before the Hon. de Grey, Messrs. S. B. F man & Co., shop-front builders, of Westga street, The Triangle, Hackney, were summo by Mr. H. T. Bromley, District Surveyor Wandsworth East, for neglecting to give not to the District Surveyor, as required by sect. of the London Building Act of 1894, of construction of a new shop front at No. Balham High-road.

Evidence was given that when the Distr Surveyor discovered the work he found t large blocks of granite, forming the plinth the recessed entrance to the shop, had be laid upon the wooden floor joists of the sh below which there is a basement story.

Those joists were in a decayed conditi and the District Surveyor found it necessa in order to prevent an accident, to have floor temporarily shored up and brick pi built to support the blocks of granite.

The defendants urged in defence that t had given notice, because they had obtained licence from the Wandsworth Borough Cour to erect a hoarding on the pavement.

It was pointed out that the District Surve was an entirely different authority, and t the fact of the defendants having obtaine licence to erect a hoarding on the pavement not relieve them from their obligation to se the statutory notice upon the District Surve as required by the London Building Act, 1

The magistrate fined the defendants 1*l*. 1*l*. 3*s*. costs.

PARISH CHURCH, SALL, NORFOLK.

The fine cruciform church, with lofty battled tower, of SS. Peter and Paul, of S near Aylsham, has been reopened, after restoration, under the directions and supe tendence of Mr. J. A. Reeve, for the nave south aisle, and of Mr. W. Weir, architect the Society for the Protection of Anc Buildings, for the north transept and res the fabric, at the charges, amounting to s 3,000*l*., of Sir Alfred Jodrell and Mr. Wool White, of Sall Park. The new church fu ture and organ-case were designed by E. W. Gimson, of Cirencester.

List of Competitions, Contracts, etc.

For some Contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) are advertised in this number:** Competitions, iv.; Contracts, iv. vi. viii. x.; Public Appointments,]—; Auction Sales, xxii. Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Competitions.

AY 18.—**Hastings.**—SUNK ARENA AND BAND-ND.—Cost not to exceed 4,500*l.* Premiums, and 10 guineas. Particulars from the Town rk, Hastings.

AY 21.—**Middlesex Hospital.** MURAL ORATIONS THERE AND ELSEWHERE.—Particulars n Crosby Hall, Cheyne-walk, Chelsea.

AY 22.—**Southend-on-Sea.**—HAMSTEL COUNCIL HOOL. Architects practising in the borough y. Premiums, 25*l.*, 15*l.*, and 10*l.* Particulars m the Education Office, Municipal Buildings, thend-on-Sea.

AY 25.—**A.A. Journal.**—DESIGN FOR COVER. e "Competition News" (page 574).

AY 25. — **Lymington.** — PUBLIC OFFICES.— rty and fifteen guineas for second and third gns. Assessor, Mr. R. J. Gutteridge, .I.B.A. Particulars from the Town Clerk, nington.

NE 1.—**Dunfermline.**—INSTITUTE AT NETHER-N.—Cost not to exceed 7,000*l.* Premiums of 15*l.*, and 10*l.* Assessor, Mr. E. A. Jamieson, rticulars from the Secretary, Carnegie Trust, ot-street, Dunfermline.

NE 3.—**Sheffield.** — CRIPPLES' HOME.— ited to local architects. Mr. E. M. Gibbs, .I.B.A., and Mr. F. E. P. Edwards, .I.B.A., assessors.

JUNE 14.—**Conisbrough.** — ADDITIONS TO PITAL. The Doncaster and Mexbrough Joint pital Board invite competitive plans for additi to Isolation Hospital. See advertisement his issue for further particulars

NE 28.—**Hale, Cheshire.** -TOWN PLANNING EME.—Premiums 50*l.* and 25*l.* Particulars the Council Offices, Hale.

NE 28.—**Regent's Quadrant.** DESIGN FOR ATMENT.—Premiums, 25 guineas, and 25 eas divided. Adjudicators, Mr. E. A. ards and Mr. Alan E. Munby. See advertise-t in this issue for further particulars; also "Competition News," issue of April 19 (page 453), 3 (page 512), May 10 (page 537), and this (page 573).

NE 30.—**Padiham.**—TOWN HALL, BATHS, ETC. emiums 40*l.* and 20*l.* Particulars from Mr. Gregson, A.M.Inst.C.E., Surveyor's Office, ham.

LY 1.—**Dusseldorf.**—A plan for the nsion of the City of Dusseldorf. Premiums 9,000*l.* to 375*l.* Conditions on application to Chief Burgomaster, Dusseldorf. A transla- appeared on page 365, September 29.

LY 1.—**Port of London.**—NEW OFFICES.— ted to those mentioned in "Competition s," issue of April 12 (page 424).

GUST 6.—**Cardiff.** — FIRE-STATION. — The iff Corporation invite designs and estimates fire brigade station in Westgate-street. Mr Marshall Mackenzie, assessor. Particulars the Town Clerk, City Hall, Cardiff.

GUST 30. — SAXON SNELL PRIZE. Fifty eas; with medal, is offered for essay on a ital subject. Particulars from the Sanitary tute, 90, Buckingham Palace-road, S.W.

TOBER 1. — **Ottawa.** - MONUMENT TO KING ARD VII.—Sketch models in plaster to be to the Director of National Art Gallery, wa.

DATE.—**Birmingham.**—BATHS.—Twenty and linéas for second and third designs. Appli-ns for conditions to be sent to the Super-dent Engineer, Kent-street, Birmingham

DATE.—**Cardiff.** MODEL COLLIERY TOWN. South Wales colliery company offers a prize 1*l.* for the best scheme for a model colliery See advertisement in issue of April 26 for er particulars.

DATE.—**Jordanhill, Glasgow.**—PROPOSED NING COLLEGE.—Limited to six firms, named mpetition News, December 1, page 635.

DATE. — **Warrington.** — SCHOOL. — The rrington Education Committee invite com-ive plans for the erection of a public ntary school. See advertisement in issue bruary 16 for further particulars.

Contracts.

BUILDING.

date given at the commencement of each raph is the latest date when the tender, or ames of those willing to submit tenders, be sent in.

17.—**Hirwain.** HOUSE.—Erection of a adjoining Cross Bychan Inn, near Hirwain. ings and specifications with Mr. J. Llewellin , M.S.A., Aberdare.

17.—**Northampton.**—SHEDS, ETC.—Erec-of wooden dressing-sheds, corrugated-iron fencing, etc., at Kingsthorpe bathing-place. Specifications, quantities, and forms of tender from Mr. Alfred Fidler, M.Inst.C.E., Borough Engineer, Guildhall.

MAY 18.—**Ballyclough.**—OFFICE.—For erecting an office building. Plan and specification with Mr. J. M'Aleenan, C.E., Castlewellan.

MAY 18.—**Batley.**—FOUNDRY, ETC.—Erection of brass foundry and workshop, Jack-lane, Batley Carr. Plans and specifications seen, and quantities from Mr. John H. Brearley, architect, 68, Commercial-street, Batley.

MAY 18.—**Bedwas.**—COTTAGES. -Erection of about thirty cottages, for the Bedwas Glebe No. 1 Building Club. Plans and specifications seen, and particulars from the architect, Church-street, Pontypridd.

MAY 18.—**Belfast.** -REPAIRS.—For reslating and general repairs of Gargory R.C. Church, near Ballyward Station. Specification with Messrs. Hobart & Heron, architects, Scottish Provident-buildings, Belfast.

MAY 18.—**Bridgend.** ALTERATIONS.—For converting the schoolroom at the Cottage Homes into an isolation hospital. Plans, etc., seen, and particulars from Mr. P. J. Thomas, architect, Bridgend.

MAY 18.—**Charleville.**—ROOM.—For the building of a churning-room. Plans and specifications by Mr. J. Fant, I.A.O.S. Mr. J. O'Leary, Secretary, Ballygran Co-operative Creamery, Ltd., Ballygran, Charleville.

MAY 18.—**Christchurch.** -WALL, ETC -Erection of a wall and construction of a concrete floor at the Workhouse, Fairmile. Plan and specification at the Workhouse.

MAY 18.—**Hemsby.** -HOUSE.—For erection of a house. Plans and specification seen, and quantities from Messrs. A. F. Scott & Son, architects and surveyors, 24, Castle-meadow, Norwich, and 12, Holborn-hall, London, W.C.

MAY 18. **Llangorse.**—ADDITIONS.—For additions to Penllanafol Farm. Plans and specification with Mr. C. H. Elford, M.S.A., architect, Aberdare.

MAY 18.—**Selby.**—ALTERATIONS.—For alterations at the Board-room, Workhouse, Selby. Plans and specifications with Mr. J. Townend, Clerk, Poor Law Offices, 1, Abbey-place, Selby.

MAY 18.—**Skerries.** -SCHOOLS.—Erection of new National Schools of St. Patrick. Plans and specification with Messrs. Anthony Scott & Son, architects, 49, Upper O'Connell-street, Dublin. Quantities by Mr. James Mackey, J.P., 58, Dame-street, Dublin.

MAY 18.—**Stonehouse.** -CENTRE.—Erection of a handicraft and cookery centre at Stonehouse Council School. Drawings and specification, on deposit of 1*l.* 1s., from Mr. R. S. Phillips, architect, Shire Hall, Gloucester.

MAY 18.—**West Thurrock.**—HOUSE.—For the construction of a house. Specifications and plans with Mr. W. T. Clapton, architect, 28, Bushwood-road Leytonstone.

MAY 20. **Bradfield.**—WALLS, ETC.—For erection of boundary walls, conveniences, etc., at the Bradfield Midhope Stones Council School. Plans seen, and specifications with quantities from the Education Architect, County Hall, Wakefield.

MAY 20.—**Bramley.** HOUSE. For erection of a head teacher's house at Bramley and Wickersley Council School. Plans seen, and specifications, with quantities, from the Education Architect, County Hall, Wakefield. Deposit of 1*l.*

MAY 20.—**Cardiff.**—ADDITIONS, ETC -For alterations and additions to No. 51, Mountstuart-square. Messrs. I. Jones & P. Thomas, architects, 18, St Mary street, Cardiff. Deposit of 2*l.* 2s. for quantities.

MAY 20. **Tain.** POST OFFICE.—Erection of a new post office. Plans and specifications with Messrs. A. Maitland & Sons, Tain.

MAY 21.—**Cardiff.** STATION, ETC. Erection of a disinfecting station, etc., Crawshay-lane, Cardiff. Drawings and specification seen, and quantities at the City Engineer's Office, City Hall, Cardiff.

MAY 21.—**Cork.**—IMPROVEMENTS.—For improvements at Messrs. Suttons, 1, South-mall, Cork. Plans and specification with the architect, Mr. Samuel F. Hynes, F.R.I.B.A., 5, South-mall, Cork.

MAY 21.—**Newbury.**—ADDITION.—For addition to the Isolation Hospital. Plans and particulars from Mr. S. J. L. Vincent, Borough Surveyor.

MAY 21.—**Paddock.** HOUSES, ETC. Erection of two semi-detached houses, also additions to workshop, Paddock. Plans seen, and quantities from Messrs. Lunn & Kaye, architects and surveyors, Milnsbridge.

MAY 22. **Fazakerley.**—ADDITIONS, ETC.—For proposed additions and alterations to Infirmary building, Cottage Homes, Fazakerley. Quantities on deposit of 2*l.* 2s. Drawings with architect, Mr. C. H. Lancaster, Brougham-terrace, West Derby-road, Liverpool.

MAY 22.—**Harwich.**—CONVENIENCE.—For erection of a convenience in the grounds of Cliffe Park. Plans and specification at 41, Church-street.

MAY 22.—**London.**—WALL.—For repairs to the boundary wall at Infirmary, Hoxton-street, N. Specification, with forms of tender, from the Guardians' Architect, Mr. F. J. Smith, F.R.I.B.A., Parliament-mansions, Victoria-street, S.W.

MAY 22.—**Manchester.**—FLATS.—For the erection of ninety cottage flats at Barracks-street, Hulme. Drawings seen, and specification and quantities from the City Architect, Town Hall. Deposit of 2*l.* 2s.

MAY 22. -**Oswestry.** -LODGE.—For erection of a park-keeper's lodge at Cae Glas Park. Plans, specification, and conditions seen, and quantities and form of tender, on deposit of 10s. 6d., from Mr. G. William Lacey, M.Inst.M.C.E., Borough Engineer and Surveyor, Guildhall, Oswestry.

MAY 22.—**Pontardawe.**—OFFICES.—For erection of union offices in Holly-street, Pontardawe. Plans seen, and specification, quantities, and form of tender from Mr. J. Morgan, architect, Herbert-chambers, Pontardawe. Deposit of 5*l.*

* MAY 22.—**Poplar.**—GUTTERING REPAIRS.—The Poplar Guardians invite tenders for works to the gutters at Workhouse. See advertisement in this issue for further particulars.

* MAY 22. — **Ware.** — BOILER-HOUSE, ETC.—The Guardians of Ware Union invite tenders for erection of a boiler-house and other alterations at the Workhouse at Ware, Herts. See advertisement in this issue for further particulars.

MAY 23.—**Abercrch.** -ADDITIONS, ETC.—For alterations and additions to Ebenezer Independent Chapel, Abercrch, near Pwllheli. Plans, specifications, and general conditions at Brynynys, Abercrch. Secretary, Mr. J. Owen, Brynynys.

MAY 23. — **Cwmgwrach.** — ADDITIONS. — For alterations and additions at shop adjoining Cefn Gelli cottages, Cwmgwrach. Drawings and specifications with Mr. J. Llewellin Smith, M.S.A., Aberdare.

MAY 23.—**Newbottle.**—SHOPS.—The Newbottle and District Co-operative Society, Ltd., Back-lane, Newbottle, invite tenders for the erection of drapery and millinery shops and stables at central premises in Newbottle. Drawings, specifications, and quantities at the Society's Office, Newbottle.

MAY 23. — **Yeovil.** — HOUSES. — Erection of twelve houses. Plans and specification with the architects, Messrs Petter & Warren, Church-street, Yeovil. Deposit of 1*l.* 1s.

MAY 24.—**Llanelly.**—HOUSES.—Erection of twenty-four houses. Plans and specification from the Surveyor, Town Hall, Llanelly.

MAY 24.—**Methlick.**—ADDITIONS, ETC.—Additions and alterations to Cairnorrie Public School, Methlick. Plans and specifications with the architect, Mr. George Moir, jun., Methlick.

MAY 24.—**Soyland.**—ADDITIONS, ETC.—Erection of organ-chamber and vestry additions to Lightazles Chapel, Soyland. Plans and specifications seen, and quantities from Messrs. Sutcliffe & Sutcliffe, F.S.I., architects, New-road, Hebden Bridge.

MAY 25.—**Brynmawr.**—ROOM.—For extending Tabor Chapel schoolroom. Plans and particulars with Mr. Hy. Waters, M.S.A., architect, Ebbw Vale.

MAY 25. — **Pegswood.**—CEMETERY.—Formation of a cemetery at Pegswood, including the building of boundary walls, chapel, and lodge, etc. Plans and specifications with Mr. J. S. Clark, Bothal, Morpeth. Quantities on deposit of 1*l.* 1s.

MAY 28.—**Carlisle.**—HOUSE.—Erection of a new stone dwelling-house. Mr. D. Baxter, Hallseven, Roweltown, Carlisle.

MAY 28.—**Magherafelt.**—SCHOOL.—For building proposed technical school at Magherafelt. Drawings, specifications, and conditions of contract seen, and quantities, on deposit of 1*l.* 1s., from the architects, Messrs. Hobart & Heron, 120, Scottish Provident-buildings, Donegall-square West, Belfast, or at the County Technical Office, Courthouse, Coleraine.

MAY 28.—**Montrose.**—QUAY.—For the reconstruction in ferro-concrete of the fish quay. General plans, specifications, and quantities, on deposit of 2*l.* 2s., from Mr W. P Martin, Harbour Clerk, Harbour Clerk's Office, Montrose.

MAY 28.—**Tonyrefail.**—HOTEL.—Erection of a large hotel on the Castell y Mynach Estate, Tonyrefail. Deposit of 2*l.* 2s. for quantities. Plans and specifications with Messrs. Arthur Ll. Thomas & Gomer S. Morgan, engineers and architects, Pontypridd.

MAY 28.—**Upper Beeding.**—ADDITIONS, ETC.—For additions and alterations to the Upper Beeding Council School. Plans, specification, and

BUILDING—*continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

conditions of contract seen, and quantities and forms of tender from Mr. Haydn P. Roberts, A.R.I.B.A., County Education Architect, Thurloe House, High-street, Worthing, on deposit of 1*l.* 1s.

MAY 29.—**Saron.**—CHAPEL.—Erection of a new Baptist chapel at Saron, Ammanford. Plans and specification with Mr. W. Beddoe Rees, architect, 3, Dumfries-place, Cardiff.

MAY 30.—**Aldershot.**—HOUSES.—Erection of three houses, Holly-road, Aldershot. Plans and specifications seen, and any information from Messrs. Friend & Lloyd, architects, Aldershot.

★ MAY 30. **London, N.** ALTERATIONS.—The St. Mary Islington Guardians invite tenders for alterations to laundry buildings at St. John's-road Workhouse, Upper Holloway, N. See advertisement in this issue for further particulars.

★ MAY 31.—**Kingswood, Bristol.**—SUNDAY-SCHOOLS.—Tenders are invited for new Sunday-schools, etc., at Zion U.M. Church, Kingswood, Bristol. See advertisement in this issue for further particulars.

JUNE 1.—**Abercynon.**—PREMISES.—Erection of club premises at Abercynon, for the Lindsay Constitutional Club Company. Plans and specifications with Messrs. Morgan & Elford, of 1, Jeffry-street, Mountain Ash. Deposit of 1*l.* 1s.

★ JUNE 1 **Rochford.** ADDITIONS, ETC. The Rochford Guardians invite tenders for alterations and additions to Infirmary, Central Block and Male Infirmary Extension at Workhouse. See advertisement in this issue for further particulars.

JUNE 1. **Stafford.**—CONVENIENCE.—Construction of an underground convenience in the Market-square, Stafford. Plans seen, and specification and quantities from Mr. W. Plant, A.M.Inst.C.E., Engineer and Surveyor, Borough Hall, Stafford. Deposit of 2*l.* 2s.

JUNE 3. **Blaby.**—ALTERATIONS, ETC.—For new sanitary annexes, laundry, and other works at the Workhouse, near the Narborough Cross-roads, Enderby. Quantities and forms of tender from the architect, Mr. W. M. Cowdell, F.R.I.B.A., 12, Grey-friars, Leicester. Deposit of 2*l.* 2s.

JUNE 3.—**Galway.** LABORATORIES.—Erection and completion of new laboratories within the College grounds. Plans and specifications at the College. Mr. J. P. Pye, M.D., Registrar, University College, Galway.

JUNE 3.—**Stoneyholme.**—ALTERATIONS.—For alterations to Stoneyholme Council School. Specifications, etc., from the Borough Engineer, Town Hall, Burnley.

★ JUNE 4.—**Barnet.**—COTTAGES.—The Barnet U.D.C. invite tenders for twenty-two cottages in Totteridge-lane, Barnet. See advertisement in this issue for further particulars.

JUNE 4.—**Bebington.**—URINAL, ETC.—For erection of urinal and water-closets at the Bebington Cemetery, Town-lane, Rock Ferry. Plans and specification with the Registrar, at the Cemetery.

★ JUNE 4.—**Canning Town, E.**—EXTENSIONS.—The West Ham B.C. invite tenders for (1) building of extension to electricity generating-station, Quadrant-street, and (2) coal bunkers (steelwork) in connexion therewith. See advertisement in this issue for further particulars.

JUNE 5.—**Barningham.**—OFFICES, ETC.—Erection of new cloakroom and additional offices at Barningham School, and for the enlargement, etc., of Cley School. Quantities on deposit of 1*l.* 1s., from Mr. Thos. A. Cox, Secretary, Education Office, Shirehall, Norwich.

JUNE 5.—**Briston.**—SCHOOL.—Erection of the Briston and Melton Constable School and cookery and handicraft rooms. Architects, Messrs. Olley & Haward, 5, Queen-street, Great Yarmouth. Quantities on deposit of 1*l.* 1s.

JUNE 5.—**Heacham.**—ENLARGEMENT, ETC.—For the enlargement and heating of Heacham School. Architect, Mr. H. J. Green, Castle Meadow, Norwich, and Paradise-chambers, King's Lynn. Quantities on deposit of 1*l.* 1s.

★ JUNE 5. **Hornsey Rise, N.**—REPOINTING, ETC.—The Shoreditch Guardians invite tenders for reinstating defective copings and repointing gables and dormers of portions of their Additional Workhouse. See advertisement in this issue for further particulars.

JUNE 5.—**London.**—DESTRUCTOR, ETC.—Erection of a refuse destructor and steam-raising plant in connexion with the Electricity Generating Station, Quadrant-street, Canning Town. Plan, specification, form of tender, and particulars from the Borough Engineer, Town Hall, West Ham, E. Deposit of 1*l.*

JUNE 10.—**Merthyr Tydfil.**—DWELLINGS.—Erection of forty-eight workmen's dwellings on the Court Estate, near the Caemarydwn Farm. Plans, specification, and forms of tender from the Borough Architect, Town Hall, Merthyr Tydfil. Deposit of 2*l.* 2s.

JUNE 11.—**Crumlin.**—BUILDINGS.—Erection of station buildings at Hafodyrynys, near Crumlin. Plans and specification seen, and forms of tender and quantities from the Engineer at Newport Station, Great Western Railway

JUNE 17.—**Parkfield.**—SCHOOL.—Erection of a new Council school at Parkfield. Plans, etc., with the architects, Messrs. Ewen Harper & Bro., Ruskin-chambers, Corporation-street, Birmingham. Quantities on deposit of 1*l.* 1s.

NO DATE.—**Brynmawr.**—OFFICES.—Erection of back kitchens and offices to premises at Boundary-street, Brynmawr. Plans and specifications with Mr. Hy. Waters, M.S.A., architect, Ebbw Vale.

NO DATE.—**Carlisle.**—BAKERY.—Erection of a new bakery at Junction-street for the Carlisle South-End Co-operative Society, Ltd. Messrs. S. W. B. & D. H. Jack, architects and surveyors, 19, Lowther-street, Carlisle.

NO DATE.—**Clayton.**—HOUSE.—Erection of a house at Spring-grove, Clayton West. Messrs. R. & W. Dixon, Lics.R.I.B.A., architects, 5, Eastgate, Barnsley.

NO DATE.—**Glyncorrwg.**—CHURCH.—Erection of United Methodist church at Glyncorrwg, R.S.O., near Port Talbot. Plans, specifications, and quantities with Mr. Thomas Gibb, M.S.A., architect and surveyor, Port Talbot. Deposit of 2*l.* 2s.

NO DATE.—**Hull.**—WORKSHOP.—Erection of a new workshop in North-street, Hull. Messrs. Wellsted, Dossor, & Wellsted.

NO DATE.—**Lincoln.**—EXTENSION.—For extending the casualty department at the Lincoln County Hospital. Architect, Mr. W. G. Watkins, Silver-street, Lincoln. Quantities on deposit of 1*l.*

NO DATE. **London.**—CONVENIENCES.—Erection of public conveniences, near the Windmill on Wimbledon Common. Plans, sections, and specifications with Messrs. P. H. Clarke & Son, 2, Lancaster-place, Strand, W.C. Deposit of 10s. 6d

NO DATE.—**Plymouth.**—HOUSES.—Erection of Almshouses at Prince Rock. Plans and specifications by Mr. F. A. Wiblin, M.S.A., architect and surveyor, 92, Old Town-street, Plymouth. Deposit of 2*l.* 2s. for quantities.

NO DATE.—**Pontypool.**—CHURCH.—For the first part of the Church of St. John the Divine, Pontypool. Names to Mr. J. Coates Carter, architect, Bank-buildings, Cardiff, or Manor House, Prestbury, Cheltenham.

NO DATE.—**Stoke-on-Trent.**—HOME.—Erection of a medical and surgical home in connexion with the Staffordshire Institution for Nurses, Hartshill, Stoke-on-Trent. Messrs. R. Scrivener & Sons, Howard-place, Hanley.

NO DATE. **Wakefield.** HOUSE.—Erection of a dwelling-house at Ouchthorpe Farm, Stanley Lane End. Messrs. C. W. Richardson, Son, & Will Bell, A.R.I.B.A., architects, 62, Westgate, Wakefield.

NO DATE.—**Ware.** HOUSE.—Erection of a boiler-house and other alterations at the Workhouse, Ware, Herts. Plans and specifications, with general conditions, with the Master of the Workhouse. Quantities from Mr. Farley, of Hertford. Deposit of 1*l.* 1s.

NO DATE. **Wethersfield.**—HOUSE.—Erection of a detached house. Quantities from Mr. H. Higginson, Lic.R.I.B.A., architect, 4, Lonsdale-street, Carlisle.

ENGINEERING, IRON, AND STEEL.

MAY 20.—**Huddersfield.**—METERS.—For supply of 1,000 single-phase meters. Specifications and forms of tender from the Borough Electrical Engineer, St. Andrew's-road, Huddersfield.

MAY 21.—**Bleddfa.** BRIDGE.—For the construction of a small bridge over stream, the main road near the village of Bleddfa. Drawings seen, and specification, quantities, and forms of tender on deposit of 1*l.* 1s. to the Clerk to the County Council, County Buildings, Llandrindod Wells.

MAY 21.—**Poole.**—WALL.—For the repairing, etc., of the stone quay wall at Lower Hamworthy. Plans and specifications with Mr. J. Elford, F.S.I., Estate Surveyor, Municipal Buildings.

MAY 22.—**Dublin.** LIGHTING.—For installing electric light at the dispensary buildings. Specification with Mr. J. P. Condon, Clerk, James's-street, Dublin.

MAY 27.—**Croydon.** BOILER.—Erection of one Cornish boiler at the Croydon Union Infirmary, Mayday-road, Thornton Heath, Surrey. Specification from Mr. J. F. L. Cressland, the Vulcan Boiler and General Insurance Company, Ltd., 67, King-street, Manchester.

MAY 30.—**London.**—MACHINERY.—For additional laundry machinery and repair of existing plant in the laundry at the St. John's-road Workhouse, Upper Holloway, N. Specifications and plans, prepared by Mr. H. A. Lay, consulting engineer, on deposit of 2*l.* from Mr. G. Carter, 513, Holloway road, N.

★ MAY 31. **Bournemouth.**—HEATING, ETC.—The Bournemouth B.C. invite tenders for heating, etc. (low-pressure hot-water system) at new Law Courts. See advertisement in this issue for further particulars.

JUNE 10.—**Hanwell.**—DESTRUCTOR.—For the construction of a refuse destructor. Particulars from the Surveyor, Mr. S. W. Barnes, A.M.Inst.C.E., Council Offices, Cherington-road, Hanwell, W.

FURNITURE, PAINTING, MATERIALS, etc.

MAY 17.—**Hull.**—PAINTING.—For painting at Victoria Pier. Forms of tender and particulars from Mr. A. E. White, M.Inst.C.E., City Engineer, Town Hall, Hull.

MAY 17. — **Winchester.** — PAINTING. — For painters' work at Nos. 1 and 2, The Square. Specifications at the City Surveyor's Office.

MAY 18.—**Buxton.**—PAINTING.—For painting at the Town Hall-buildings and fire-station. Particulars from Mr. F. Langley, Engineer and Surveyor, Town Hall, Buxton

MAY 18. **Halifax.**—SHOP FRONTS.—For joiner's and glazier's work in making of shop fronts at No. 2, Wards End. Plans and specifications seen, and forms of tender from Mr. James Lord, M.Inst.C.E., Borough Engineer, Town Hall, Halifax. Deposit of 1*l.*

MAY 18. **Hove.**—PAINTING.—For painting the external wood and ironwork of the Public Library. Particulars from the Borough Surveyor, Town Hall, Hove

MAY 20.—**Norwich.**—PAINTING.—For painting (externally) various schools. Form of tender, specification, and quantities from Mr. Chas. J. Brown, architect and surveyor, Cathedral Offices, The Close, Norwich

★ MAY 21. **Neasden.**—PAINTING AND CLEANING. The Willesden D.C. invite tenders for cleansing and painting works at Isolation Hospital See advertisement in this issue for further particulars.

MAY 22.—**Acklington.**—PAINTING.—For cleaning, painting, and decorating of the mission chapel, Togston-terrace. Specifications seen, particulars from Mr. W. A. Strong, 2, Queen's terrace, Togston, Acklington.

MAY 22.—**Oxford.**—PAINTING.—For painting and other works at the Poor Law School, Cowley, Oxon. Specification seen, and form of tender at the school.

★ MAY 23.—**Forest Gate, E.**—PAINTING, ETC. The West Ham Guardians invite tenders for painting, cleaning, and sundry works at Forest Gate Sick Home. See advertisement in this issue for further particulars.

MAY 23.—**Ormskirk.**—PAINTING.—For the outside painting of separate schools in Diccon-street. Mr. Alfred Dickinson, Clerk, Ormskirk.

MAY 25. **Cornwall.**—PAINTING.—For outside and inside painters' work on various wards, offices, steel stack, fire-escapes, railings, etc., at the Cornwall County Asylum. Forms of tender from Mr. A. F. Hughes, Clerk of the Asylum.

MAY 25.—**Littlemore.**—PAINTING. For pulling back portion of the old buildings of the Littlemore Lunatic Asylum. Full particulars from the Engineer.

★ MAY 29.—**East Dulwich, S.E.** PAINTING, ETC.—The Southwark Guardians invite tenders for painting, repairs, etc., at Infirmary. See advertisement in this issue for further particulars.

MAY 30. **Uxbridge.** PAINTING, ETC.—For interior decoration and other work in new scarlet fever and observation blocks at Hospital, Kingston-lane, Hillingdon, near Uxbridge. Specification with the Surveyor, Mr. William L. Bell, 54, High-street Uxbridge.

★ JUNE 10.—**Southampton.**—DEALS, ETC.—The Director-General Ordnance Survey invites tenders for supply of deals and matched boarding. See advertisement in this issue for further particulars.

NO DATE. **Burnley.**—PAINTING.—For painting of the coal elevator plant, etc. James E. Starkie, Borough Electrical Engineer and Manager, Electricity Works, Aqueduct street.

NO DATE.—**Lancaster.**—PAINTING.—For painting twenty-four houses in Lancaster. Particulars from Mr. J. Thompson, land agent, 3, Sun-street, Lancaster.

NO DATE.—**Swansea.**—PAINTING.—For painting and cleaning at the Hospital. Particulars from Mr. D. W. Hughes, Secretary.

ROADS, SANITARY AND WATER WORKS.

MAY 20. **Blaby.**—SEWAGE.—Construction of new stoneware pipe sewer and two new manholes in the parish of Kirby Muxloe. Plans seen, specifications, quantities, with form of tender from Mr. T. Betts, Sanitary Inspector, Blaby.

MAY 20.—**Stevenage.**—GRANITE.—For supply of 1,000 tons of broken Guernsey, Leicester, or Syenite granite. Mr. J. Timms, Clerk, Council Offices, Orchard-road, Stevenage.

MAY 20. — **Whetstone, etc.** — SEWERS.—For construction of stoneware and cast-iron pipe sewers with Shone's ejectors, manholes, flushing chambers, and ventilators, for the parishes of Whetstone and Blaby. Plans with the engineers, Messrs. Everard, Pick, & Pick, 6, Millstone-lane, Leicester. Specification, quantities, and form of tender on deposit of 2*l.* 2s.

MAY 21.—**Belfast.**—SEWAGE.—Construction of brick and pipe sewers. Drawings and specification seen, and form of tender and particulars from City Surveyor, on deposit of 1*l.* 1s.

MAY 21. **Irchester.**—MAINS.—For laying 6-in. cast-iron main in the parish of Rushden from the Oakley Inn to the parish boundary at Knuston Spinney, and laying of mains in the parish of Irchester. Drawings and specification with Messrs. Charman & Archer, engineers, Sheep-street, Wellingborough.

★ MAY 21.—**Kilburn, N.W.** ASPHALT PAVING. —The Willesden D.C invite tenders for paving and laying of 5,294 super. yds. of natural rock asphalt in Malvern-road. See advertisement in this issue for further particulars.

MAY 21. **Watford.** DRAINAGE. Reconstructing private drains to houses Nos. 1 to 19, Cassiobury place. Plan, specification, and conditions of contract seen, and quantities and form of tender from Mr W. W. Newman, A.M.Inst.C.E., Engineer, on deposit of 1*l.*

★ MAY 21. — **Willesden.** ROAD-MAKING AND PAVING.—The Willesden D.C. invite tenders for road-making and paving works in Newbury-park, Donnington roads. See advertisement in this issue for further particulars.

★ MAY 21.—**Willesden.** — WOOD-PAVING.—The Willesden D.C. invite tenders for laying 25,580 super. yds. of wood-paving. See advertisement in this issue for further particulars.

MAY 22.—**Bournemouth.**—ROADS.—For making up Roslin-road, Oban-road and Calvin-road. Forms of tender, specification, and schedule from Mr. F. W. Lacey, M.Inst.C.E., Borough Engineer and Surveyor Municipal Offices, Bournemouth. Deposit of 1*l.* 1s.

MAY 22.—**Cowfold.** DRAINS.—For laying 9-in. face-water drains. Plans and sections, with conditions of contract, with Mr. H. W. Burstow, A.M.Inst.C.E., County Surveyor, North-street, Horsham

MAY 22.—**London.**—ROADWORK, ETC.—The Metropolitan Asylums Board invite tenders for road repairing and tarring works at the Eastern

ROADS, etc.—*continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

Yer Hospital, Homerton-grove, Homerton, E. Drawing, specification, and form of tender at the Office of the Board, Embankment. Deposit of 1*l.*

MAY 22.—**Macclesfield.**—SEWERAGE.—For the sewerage of a portion of Oxford-road and Chesterfield. Plans and details with Mr. Chas. W. Hibbs, Borough Engineer.

MAY 23.—**Saffron Walden.** ROADS.—For making roads and putting in sewers, etc., on the Summerhill and Springhill roads estate, Saffron Walden, for Messrs. A. Midgley and A. G. Seward. Plans and specification with Mr. A. G. Seward, 51, High-street, Saffron Walden.

MAY 24.—**Uxbridge.**—TANKS, ETC.—For the construction of settling tanks and bacteria beds at the Harefield Sewage Outfall Works. Plan and sections seen, and specification from Mr. John Wm. Harrison, Engineer and Surveyor to the Council, Corn Exchange, Uxbridge.

MAY 27.—**York.**—STREETS. For the sewering, rolling, paving, channelling, etc., of all private streets. Specification and form of tender on deposit of 1*l.* 1*s.* from Mr. F. W. Spurr, City Engineer, Guildhall, York.

MAY 28.—**Belfast.**—STREETS.—For the sewering, paving, etc., of new streets. Specification and form of tender from the City Surveyor on deposit of 1*l.* 1*s.*

MAY 29. — **Llantrisant.** — ROAD.—For completion of New Ely Valley-road and branch roads. Plans and specification seen, and quantities and forms of tenders, on deposit of 5*l.*, from Messrs. Gomer S. Morgan and Thomas Saunders, Engineers, School-street, Pontyclun, Glam.

MAY 29.—**Middleton.**—STREETS.—For private street works in Market-street. Particulars and form of tender from Mr. W. Welburn, M.I.Mech. and C.E., Borough Surveyor, Town Hall, Middleton. Deposit of 10*s.* 6*d.*

MAY 30.—**Ashford.**—GRANITE.—For 2-in. gauge broken granite. Mr. W. Terrill, Surveyor, 5, North-street, Ashford, **Kent.**

MAY 30. **Widnes.** ROADS.—For the making of Appleton-road and Regent-road, and portions of Fairfield-road and Park-avenue. Forms of tender, specification, and quantities from Mr. John S. Sinclair, A.M.Inst.C.E., Borough Surveyor, Town Hall. Deposit of 1*l.* 1*s.*

JUNE 1.—**Croston.**—CHIPPINGS. Supply of slag and limestone chippings. Mr. Harry Riding, Engineer and Surveyor, Council Office, Croston.

JUNE 3.—**Bilston.**—SEWAGE.—For laying pipe sewers and manholes in various streets. Plans seen, and specification, quantities, and form of tender from Mr. V. Turner, A.M.Inst.C.E., Surveyor's Office, Town Hall, Bilston. Deposit of 2*l.* 2*s.*

JUNE 7.—**Enfield.**—CONDUITS.—The Metropolitan Water Board invite tenders for the laying of cast-iron and steel conduits and other works in the parishes of Cheshunt and Enfield. Drawings, conditions of contract, and specification at the offices of the Board (Chief Engineer's Department), Savoy-court, Strand, W.C. Forms of tender, conditions of contract, specification, list of drawings, and quantities from the Chief Engineer on deposit of 10*l.*

JUNE 11.—**Colchester.**—ROADS.—For sewering, kerbing, channelling, paving and making good road at Priory-grove. Plans seen, and specifications, quantities, etc., from Mr. H. Goodyear, A.M.Inst.C.E., Borough Engineer and Surveyor, Town Hall, Colchester.

NO DATE.—**Bradford.** STREETS. For new streets and sewers at Laisterdyke. Mr. E. L. Gaunt, A.R.I.B.A., architect and surveyor, 24, Charles-street, Bradford.

NO DATE.—**Treorky.**—STREETS.—For carrying out of the private street works at Clare-road, Chepstow-road, Castle-road, Clifton-road, and Conway-road on the estate. 2*l.* 2*s.* deposit for quantities to Mr. W. D. Morgan, M.S.A., architect and surveyor, 194, Ystrad-road, Pentre Rhondda.

Auction Sales.

Nature and Place of Sale.	By whom Offered.	Date of Sale.
EEHOLD LAND, SUDBURY	Millar, Son, & Co.	May 21
EEHOLD PROPERTY, SWANLEY Lullingstone Castle Hotel, Swanley Junction, Kent	W. G. Burgess	May 21
OPFITTER'S, ETC., STOCK —On the Premises	Hamilton, Palmer, & Co.	May 21
ILDER'S PLANT AND EFFECTS, SOUTHEND On land in West-road, Prittlewell	J. T. Skelding & Holland	May 21
ALS, BATTENS, BOARDS, TIMBER, ETC.—Great Hall, Winchester House, E.C.	Churchill & Sim	May 22
ANT, MACHINERY, AND STOCK—On the Premises	W. G. Burgess	May 23
OCK OF PAPERHANGINGS & B. DR'S MERCHTS., WINCHESTER—On the Premises	H. W. Smith	May 29
EEH OLD BUILDING EST TES, ENFIELD, FONDERS END, ETC. —At the Mart	Stanley Parkes & Brown	June 4
ILDERS', CONTRACTORS' PLANT & EFFECTS.—In rear of the White Hart, Tottenham	J. T. Skelding & Holland	June 4
EEHOLD BUILDER'S WORKS AND GOODWILL, CRANLEIGH—At the Mart	J. T. Skelding & Hol and	June 10
EEHOLD SHOP FRONTAGE, FINCHLEY—At the Mart	Handman Bros.	June 11
EEH OLD AND COPYHOLD LAND, ENFIELD—At the Mart	Jenkinson, Brunsley, & Jenkinson	June 11
EEHOLD BUILDING LAND, TWICKENHAM—At the Mart	Farebrother, Ellis, Egerton, Breach, Galsworthy, & Co.	June 11
EEHOLD BUILDING LAND—At the Mart	D. Watney & Sons	June 20

PATENTS.

APPLICATIONS PUBLISHED.*

026 of 1911.—Richard Gasterstadt: Reinforced concrete flooring and the like.

272 of 1911.—Charles William Julians and British Stone and Marble Company, Ltd.: Manufacture of artificial stone.

418 of 1911.—George Thomas Richardson: Construction of casements, window-sashes, etc. and the like.

,415 of 1911.—John Edwin Smith: Steam hot-water boilers.

,026 of 1911.—Great Central Co-operative Engineering and Ship Repairing Company, Ltd., and Edwin Efford: Pulley-blocks or the like.

,137 of 1911.—Henrich Mummert: Locks.

907 of 1911.—Karl Strohmann and Hans Ludwig Schindler: Hangers for sliding doors.

,15 of 1912.—Arthur Lloyd Gibson (the Gibson Manufacturing Company): Fireproof sliding doors, shutters, and the like.

TO CORRESPONDENTS.

NOTE.—All communications with respect to literary or artistic matters should be addressed to "THE EDITOR" (and not to any person by name); those relating to advertisements and other exclusively business matters should be addressed to "THE PUBLISHER," and not to the Editor.

All communications must be authenticated by the name and address of the sender, whether for publication or not. No notice can be taken of anonymous communications.

The responsibility of signed articles, letters, and reports read at meetings rests, of course, with the writers.

We cannot undertake to return rejected communications; and the Editor cannot be responsible for drawings, photographs, manuscripts, or other documents, or for models or samples sent to or left at this office, unless he has specially asked for them.

Any drawings sent to or left at this office for consideration should bear the owner's name and address either the face or back of the drawing. Delay and inconvenience may result from inattention to this.

No communication to a contributor to write an article, or to execute or lend a drawing for publication, is given but to the approval of the article or drawing, when offered, by the Editor, who retains the right to reject on unsatisfactory. The receipt by the author of a price of an article in type does not necessarily imply its acceptance.

The Illustrations of the First Premiated Design in important architectural competition will always be selected for publication by the Editor, whether they have been formally asked for or not.

All these applications are in the stage in which opposition to the grant of Patents upon them can be made.

SOME RECENT SALES OF PROPERTY:

ESTATE EXCHANGE REPORT.

April 30.—By ANSTEY, SONS, & DORLING.

East Ham.—Ranelagh-rd., f.g. rents 28*l.*, reversion in 69 yrs. £580

Ilford.—St. Mary's-rd., plot of land, f. 125

By MAY & PHILPOT.

Clapham.—100, Park-hill, u.t. 29 yrs., g.r. 15*l.*, p. 350

By FREDERICK WARMAN.

Holloway.—58, 60, and 62, Drayton-park (s.), u.t. 64 yrs., g.r. 30*l.*, y. and w.r. 262*l.* 18*s.*... 1,250

Stoke Newington.—25, Heathland-rd., u.t. 63 yrs., g.r. 9*l.*, y.r. 46*l.* 385

By F. E. WIDDOWSON.

Holloway.—115, Drayton-pk., u.t. 64 yrs., g.r. 9*l.* 10*s.*, y.r. 42*l.* 10*s.* 310

May 1.—By REYNOLDS & EASON.

East Sheen.—55, 57, 59, and 63, Church-av., u.t 91 yrs., g.r. 22*l.*, w.r. 139*l.* 2*s.* 785

3 and 5, Oaklands-rd., u.t. 91 yrs., g.r. 11*l.*, y.r. 56*l.* 345

Putney. 11, Landford-rd., u.t. 93 yrs., g.r. 7*l.*, y.r. 45*l.* 400

Bethnal Green.—40, Usk-st., f., w.r. 18*l.* 4*s.* ... 100

By ROGERS, CHAPMAN, & THOMAS.

Herne Hill.—32, Stradella-rd., u.t. 65½ yrs., g.r. 11*l.*, p. 460

By S. WALLROCK & Co.

Upton Park.—Waghorn-rd., f.g. rents 20*l.*, reversion in 86 yrs. 400

By T. B. WESTACOTT & SONS.

Camden Town.—155, Camden-rd., u.t. 30¼ yrs., g.r. 14*l.*, y.r. 60*l.* 300

By STANFORD & BROOM.

Broome, Norfolk.—Priory Meadows, 33 a. 2 r. 6 p., f. 1,180

Harleston, Norfolk.—Rose Cottage, 9 a. 0 r. 10 p., f. 730

Weybread, Suffolk. — Viponds Farm and cottage, 52 a. 1 r. 21 p., f. 635

May 2.—By GREATOREX & Co.

St. Pancras.—7, Thurlow-ter., u.t. 53 yrs., g.r. 5*l.*, w.r. 45*l.* 10*s.* 185

By HUNTER & HUNTER.

Brixton.—68 and 70, Bonham-rd., u.t. 61 yrs., g.r. 16*l.* 19*s.*, y.r. 85*l.* 500

8, Lambert-rd., u.t. 39 yrs., g.r. 9*l.*, y.r. 48*l.*... 290

30, Lambert-rd., u.t. 61¼ yrs., g.r. 11*l.*, y.r. 50*l.* 330

By WM. WESTON.

Shepherd's Bush.—29, Caxton-rd., f., y.r. 39*l.*... 310

By STIMSON & SONS.

Greenwich.—Burney-st., f.g.r. 8*l.*, reversion in 12½ yrs. 220

Camberwell.—Grove-la., f.g.r. 6*l.*, reversion in 56 yrs. 140

Bermondsey.—Credon-rd., f.g.r. 6*l.* 6*s.*, reversion in 65 yrs. 150

Battersea.—Culvert-rd., f.g.r. 7*l.*, reversion in 67 yrs. 160

2 and 4, Mundella-rd., u.t. 60 yrs., g.r. 10*l.*, w.r. 52*l.* 230

Walworth.—26 to 32 (even), Runham-st, u.t. 47 yrs., g.r. 18*l.*, w.r. 143*l.* 595

40, Kingston-st., u.t. 49½ yrs., g.r. 3*l.* 10*s.*, w.r. 33*l.* 16*s.* 105

74, South-st. (s), u.t. 49½ yrs., g.r. 3*l.* 10*s.*, w.r. 41*l.* 12*s.* 150

12, 14a, and 18, Aylifte-st., f., w.r. 83*l.* 4*s.* 55

Camberwell.—47, Kimpton-rd., u.t. 52 yrs., g.r. 8*l.*, w.r. 41*l.* 12*s.* £200

Blackheath.—32 to 38 (even), 40 and 44, Glenluce-rd., f., y.r. 208*l.* 1,925

Lee.—27, Glenton-rd., u.t. 45 yrs., g.r. 6*l.* 6*s.*, y.r. 32*l.* 205

Old Kent-rd.—3, 5, and 25, Brymer-rd., u.t. 69 yrs., g.r. 24*l.*, w.r. 157*l.* 6*s.* 440

Wandsworth.—56, Pirbright-rd., u.t 62 yrs., g.r. 6*l.*, w.r. 35*l.* 2*s.* 175

By WALLER & KING.

Lyndhurst, Hants.—Gosport-la., Clarendon Villa, f., y.r. 40*l.* 700

Two cottages and smithy, f., y.r. 47*l.* 930

May 3.—By WILTSHIER & Co.

Lee.—Ailsibie-rd., f.g. rents 16*l.* 16*s.*, reversion in 78 yrs. 384

May 6.—By ALEX. MOSSMAN.

Chalfront St. Giles, Bucks.—Bowles Farm, 64 acres, f. 4,475

By MORRIS, MARSHALL, & POOLE.

Meifod, Montgy.—Part of Penylan Estate, 276 a. 2 r. 29 p., f. 6,428

May 7.—By WALTON & LEE.

Kensington.—24, Kensington Palace-gdns., and 6, Palace-gdn. mews, u.t. 30 yrs., g.r. 75*l.* 8*s.*, p. 9,000

Pinner, Middlesex. Four Oaks and 2½ acres, f., p. 3,200

By ALEX PHILLIPS.

Kilburn.—33, Streatley-rd., u.t. 77 yrs., g.r. 8*l.* 8*s.*, y.r. 45*l.* 400

17, Plympton-rd., u.t. 77 yrs., g.r. 9*l.* 9*s.*, y.r. 43*l.* 275

By KNIGHT, FRANK, & RUTLEY.

Highcliffe, Hants. Hubhorn House estate, 183 a. 3 r. 36 p., f. 16,000

By MADDISON, MILES, & MADDISON.

Yarmouth, Norfolk. — Wellesley-rd., The Lodge, u.t. 975 yrs., g.r. 6*l.* 8*s.*, p. 850

May 8.—By EDWIN FOX, BOUSFIELD, BURNETTS, & BADDELEY.

West, Croydon.—Handcroft-rd., f.g. rents 16*l.*, reversions in 20 and 39 yrs 530

Derby-rd., f.g.r. 6*l.*, reversion in 14 yrs. 210

Walworth.—Mann-st., l.g. rents 27*l.* 6*s.*, u.t 39 yrs., g.r. 18*l.* 8*s.* 120

Lambeth.—28, Vauxhall-walk, f., y.r. 70*l.* 1,180

Battersea.—9 to 19 (odd), Usk-rd., u.t. 45 yrs., g.r. 14*l.*, w.r. 13*l.* 600

Clapham.—8, Silverthorne-rd. (s.), f., w.r. 52*l.* 310

6, Belmont-rd., u.t. 54 yrs., g.r. 7*l.*, y.r. 36*l.* . 225

Teddington.—88, Waldegrave-rd., f., o.r. 55*l.*... 600

Norwood. 206, Portland-rd., f., y.r. 36*l.* 180

By RUSHWORTH & BROWN.

Holloway.—3, Galverley-gr., u.t. 67¼ yrs., g.r. 6*l.* 6*s.*, w.r. 37*l.* 14*s.* 100

By J. & R. ROLFE.

Beaconsfield, Bucks. High-st., The Ferns and 3 acres, f., o.r. 70*l.* 1,425

Lakes-la., 18 cottages and plot, f., w.r. 234*l.*.. 3,555

By JOHN SHAKESPEAR.

Quenborough, Leics.—Woodcock's Lodge Farm, 68 acres, f. 3,937

Hope Cottage, house and two plots, f. 535

May 9.—By W. A. HEAD.

Thornton Heath. 19 and 21, Milner-rd., f., gross rental 62*l.* 8*s.* 51

Kennington.—2, Methley-st, u.t. 19 yrs., g.r. 5l., g.r. 47l. £215
Pimlico.—61, Grosvenor rd , u.t. 16 yrs., g.r. 10l., y.r. 60l. 215

By MARTEN & CARNABY.

Beckenham. 2, 4, 6, and 8, Colesburg-rd., u.t. 87 yrs., g.r. 18l., w.r. 132l. 500
Dulwich. 51, Rosendale-rd., u.t. 80 yrs., g.r. 8l., y.r. 42l. 300
7, Birkbeck pl., u.t. 50 yrs , g.r. 6l. 15s., y.r. 28l. 180

By C. C. & T MOORE.

Aldgate. 13, Middlesex-st. (s.), u.t. 21 yrs., g.r. 10l., y.r 70l. 300
Mile End. 83, 85, and 87, Coutts-rd., u.t. 67¼ yrs., g.r. 15l. 15s , w.r. 74l. 2s 220
37 and 39, Nicholas-st., u.t. 18¼ yrs., g.r. 6l., y.r. 52l. 200

By NEWTON & SHEPHARDS.

Islington. Bingfield-st., l.g. rents 67l. 10s., u.t. 29 yrs., g.r. 4l. 805
Holloway. Parkhurst rd., f.g. rents 16l., reversion in 33 yrs 420
Finsbury Park.—32, 34, 60, 62, 68, and 70, Charteris rd , u.t. 14¾ yrs., g.r. 25l. 4s., w.r. 214l. 12s. 320
Pentonville.—98, 100, 102, S uthampton-st., u.t. 12 yrs., g r. 12l. 5s., w.r. 158l. 12s 170
Canonbury. 53 and 88, Canonsbury-rd , u.t. 64 yrs., g r. 8l., y.r. 78l. 105
Paddington. 22, Cambridge ter. and 2, Cambridge-mews, u.t. 18 yrs., g.r. 17l., y. and e.r. 130l. 375
Harrow.—Marlborough Hill, f.g. rents 13l. 6s. 8d., reversion in 58 yrs. 320

By WOTTON & SONS.

Soho.—27 and 28, Poland st. (s), f., y r. 220l .. 6,650

By STIMSON & SONS.

Southwark. 35, Lant st., f , p 305
Lambeth.—199 and 207, Lambeth-walk (s.), f., y.r. 130l. 1,300

By H. J. BLISS & SONS.

Islington. 28, Halliford-st., u t. 33¾ yrs., g.r. 5l , y.r. 40l 205
Bethnal Green. 5, 7, 10, 13 to 43 (odd), St Jude-st., f., w.r. 652l. 12s..... 5,260
Middleton-st., Wheatsheaf p.h., f., y.r. 50l.. 1,000
29 to 37, 41 to 47 (odd), Middleton-st., f , w.r. 322l 8s. 2,260
240 to 246 (even), Vallance-rd., f , w.r. 132l. 12s..... 1,060
4, 6, 8, and 30, Pollard-row, f., w.r. 165l. 16s. 1,160
37 and 39, Florida-st., f., w.r. 65l. 18s 520
57 and 59, Mansford-st., f., w.r. 67l. 12s..... 630
258, Bethnal Green-rd. (s.), f., e.r. 60l. 750
Hackney.—Holcroft-rd., f.g. rents 33l., reversion in 31 yrs... 885
Lauriston-rd., f.g.r. 8l., reversion in 53½ yrs. 210
Balcorne-st., Clarendon Arms, p.h., f., y.r. 60l. 1,190
Well-st., etc., c.g.r. 50l., reversion in 58 yrs. 1,830
Percy-st., c.g.r. 16l., reversion in 29 yrs. 400
May 10.—By ST QUINTY, SON, & STANLEY.
City.—41, Eastcheap, 16 and 18, Rood-la. (offices), u.t. 41 yrs., g.r. 750l., gross rental 5,225l. 34,000

By E. & S. SMITH.

Deptford.—134, High-st. (s.), f., e.r. 45l. 265

Contractions used in these lists.—F.g.r. for freehold ground-rent; l.g.r. for leasehold ground-rent; l.g.r. for improved ground-rent; f. for ground-rent; r. for rent; f. for freehold; c. for copyhold; l. for leasehold; p. for possession; e.r. for estimated rental; w.r. for weekly rental; q.r. for quarterly rental; y.r. for yearly rental; u.t. for unexpired term; p.a. for per annum; yrs. for years; rd. for road; st. or street; rd. for road; sq. for square; pl. for place; ter. for terrace; cres. for crescent; av. for avenue; gdns. for gardens; yd. for yard; gr. for grove; b.h. for beerhouse; p.h. for public-house; o. for offices; s. for shops; ct. for court.

PUBLISHER'S NOTICES.

Tel., 6112 Gerrard. Telegrams, "The Builder, London."

CHARGES FOR ADVERTISEMENTS.

COMPETITIONS, CONTRACTS, ALL NOTICES ISSUED BY CORPORATE BODIES, COUNTY AND OTHER COUNCILS, PROSPECTUSES OF PUBLIC COMPANIES, SALES BY TENDER, LEGAL ANNOUNCEMENTS, etc., etc.

Six lines or under ..... 6s. 0d.
Each additional line ..... 1s. 0d.

SITUATIONS VACANT, PARTNERSHIPS, APPRENTICESHIPS, TRADE AND GENERAL ADVERTISEMENTS.

Six lines (about fifty words) or under ..... 4s. 6d.
Each additional line (about ten words) ..... 0s. 9d.

Terms for series of Trade advertisements, and for front page and other special positions, on application to the Publisher.

SITUATIONS WANTED (Single-handed—Labour only).

Four lines (about thirty words) or under..... 2s. 6d.
Each additional line (about ten words)..... 0s. 6d.

PREPAYMENT IS ABSOLUTELY NECESSARY.

*** Stamps *must not* be sent; but all sums should be remitted by Postal Orders, payable to J. MORGAN, and addressed to the Publisher of "THE BUILDER," 4, Catherine Street, W.C.

Advertisements for the current week's issue are received up to ONE p.m. on THURSDAY, but Classification is impossible in the case of any which may reach the Office after TWELVE NOON on that day. Those intended for the Outside Wrapper should be in by TWELVE NOON on WEDNESDAY.

ALTERATIONS IN STANDING ADVERTISEMENTS or ORDERS TO DISCONTINUE same must reach the Office before TEN o'clock on WEDNESDAY MORNING.

The Publisher cannot be responsible for DRAWINGS, TESTIMONIALS, etc., left at the Office in reply to advertisements, and strongly recommends that of the latter COPIES ONLY should be sent.

ADVERTISERS in "THE BUILDER" may have *Replies addressed to the Office*, 4, Catharine Street, Strand, W.C., *free of charge*. Letters will be forwarded if addressed envelopes are sent, together with sufficient stamps to cover the postage. Unused stamps are returned to advertisers the week after publication.

N.B. The Reply Boxes are not intended for trade lists, circulars, and the like, should these be received, they cannot (if noticed) be forwarded.

AN EDITION Printed on THIN PAPER, for FOREIGN and COLONIAL CIRCULATION, is issued every week.

READING CASES { NINEPENCE EACH. (By post carefully packed), 1s.

PRICES CURRENT OF MATERIALS.

*** Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

BRICKS, &c.

Per 1000 Alongside, in River.

	£	s.	d.
Best Stocks	1	14	0
Picked Stocks for Facings	2	10	0

Per 1000, Delivered at Railway Depôt.

	£	s.	d.		£	s.	d.
Flettons	1	13	0	Best Blue Pressed Staffordshire...	3	15	0
Best Fareham Red	3	12	0	Do. Bullnose.....	4	0	0
Best Red Pressed Ruabon Facing	5	0	0	Best Stourbridge Fire Bricks ...	4	0	0

GLAZED BRICKS—

Best White, Ivory, and Salt Glzd. Str'tch'rs	11	7	6	Double Headers	13	17	6
				One Side and two Ends	17	17	6
Headers	10	17	6	Two Sides and one End	18	17	6
Quoins, Bullnose, and 4½ in. Flats	14	17	6	Splays & Squints	16	7	6
D'ble Stretchers	16	17	6				

Second Quality £1 10s. per 1000 less than best.

	s.	d.	
Thames and Pit Sand	6	9	per yard, delivered.
Thames Ballast	5	6	" "
Best Portland Cement	21	0	per ton, "
Best Ground Blue Lias Lime	19	0	" "

NOTE—The cement or lime is exclusive of the ordinary charge for sacks.

Grey Stone Lime ..... 13s. 0d. per yard delivered. Stourbridge Fireclay in sacks 27s. 0d. per ton at rly dpt.

STONE.

Per Ft. Cube.

	s.	d.
BATH STONE — delivered on road waggons, Paddington Depôt	1	6½
Do. do. delivered on road waggons, Nine Elms Depôt	1	8½
PORTLAND STONE (20 ft. average)—		
Brown Whitbed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2	3
White Basebed, delivered on road waggons Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2	4½

Per Ft. Cube, delivered at Railway Depôt.

	s.	d.		s.	d.
Ancaster in blocks..	1	10	Closeburn Red Freestone	2	0
Beer in blocks	1	6			
Greenshill in blocks	1	10	Red Mansfield Freestone	2	4
Darley Dale in blocks	2	4	Talacre & Gwespyr Stone	2	4
Red Corsehill in blocks	2	3			

YORK STONE—*Robin Hood Quality.*

Per Ft. Cube, Delivered at Railway Depôt.

	s.	d.
Scappled random blocks	2	10

Per Ft. Super., Delivered at Railway Depôt.

6 in. sawn two sides landings to sizes (under 40 ft. super.).....	2	3	
6 in. rubbed two sides ditto, ditto	2	6	
3 in. sawn two sides slabs (random sizes).....	0	11½	
2 in. to 2½ in. sawn one side slabs (random sizes)	0	7	
1½ in. to 2 in. ditto, ditto.....	0	6	

HARD YORK—

Per Ft. Cube, Delivered at Railway Depôt.

Scappled random blocks	3	0	

Per Ft. Super., Delivered at Railway Depôt.

6 in. sawn two sides landing to sizes (under 40 ft. super.)	2	8	
6 in. rubbed two sides ditto	3	0	
3 in. sawn two sides slabs (random sizes)	1	2	
2 in. self-faced random flags	0	5	

SLATES.

Per 1000 of 1200 at Railway Depôt.

In. In.	£	s.	d.	In. In.	£	s.	d.
20×10 best blue Bangor	13	2	6	20×10 best Eur'ka unfading green	15	17	6
20×12 ditto	13	17	6	20×12 ditto	18	7	6
20×10 1st quality ditto.....	13	0	0	18×10 ditto	13	5	0
20×12 ditto	13	15	0	16×8 ditto	10	5	0
16×8 ditto	7	5	0	20×10 permanent green	11	12	6
22×10 best blue Portmadoc.....	12	12	6	18×10 ditto	9	12	6
16×8 ditto	6	12	6	16×8 ditto	6	12	6

TILES.

At Railway Depôt.

	s.	d.		s.	d.
Best plain red roofing (per 1000)	42	0	Best "Hartshill" brand, plain sand-faced (per 1000) ...	45	0
Hip and Valley (per doz.).....	3	7	Do. pressed (per 1000)	42	6
Best Broseley (per 1000)	50	0	Do. Ornamental (per 1000)	47	6
Do. Ornamental (per 1000)	52	6	Hip (per doz.)...	4	0
Hip and Valley (per doz.).....	4	0	Valley (per doz.)	3	6
Best Ruabon red, brown, or brindled (Edw'ds) (per 1000)	57	6	Staffords. (Hanley) Reds or Brindled (per 1000)	42	6
Do. Ornamental (per 1000)	60	0	Hand-made sand-faced (per 1000)	45	0
Hip (per doz.)...	4	0	Hip (per doz.)...	4	0
Valley (per doz.)	3	0	Valley (per doz.)	3	6

WOOD.

BUILDING WOOD. At per standard.

	£	s.	d.	£	s.
Deals: best 3 in. by 11 in. and 4 in. by 9 in. and 11 in.....	14	0	0	...	15
Deals: best 3 by 9	13	10	0	...	14
Battens: best 2½ in. by 7 in. and 8in., and 3 in. by 7 in. and 8 in.	11	10	0	...	12
Battens: best 2½ by 6 and 3 by 6...	0	10	0	...	less t 7 in. and 8
Deals: seconds	1	0	0	less thn	
Battens: seconds	0	10	0	"	
2 in. by in. and 2 in. by 6 in. ..	9	10	0	...	10
2 in. by 4½ in. and 2 in. by 5 in.	9	0	0	...	10
Foreign Sawn Boards—					
1 in. and 1¼ in. by 7 in.	0	10	0	more t	batten
¾ in.	1	0	0	"	
Fir timber: best middling Danzig or Memel (average specification)	At per load of 50				
	5	0	0	...	5
Seconds	4	10	0	...	5
Small timber (8 in. to 10 in.) ...	3	17	6	...	4
Small timber (6 in. to 8 in.).....	3	5	0	...	3
Swedish balks	2	12	6	...	3
Pitch-pine timber (30 ft. average)	5	5	0	...	6

JOINERS' WOOD. At per standard.

White Sea: first yellow deals, 3 in. by 11 in.....	24	10	0	...	25
3 in. by 9 in.	22	10	0	...	23
Battens, 2½ in. and 3 in. by 7 in.	17	0	0	...	18
Second yellow deals, 3in. by 11in.	19	0	0	...	20
" " 3 in. by 9 in.	18	0	0	...	19
Battens, 2½ in. and 3in. by 7 in.	14	0	0	...	15
Third yellow deals, 3 in. by 11 in. and 9 in.	14	0	0	...	15
Battens, 2½ in. and 3 in. by 7 in.	11	10	0	...	12
Petersburg: first yellow deals, 3 in. by 11 in.	21	10	0	...	22
Do. 3 in. by 9 in.....	18	10	0	...	19
Battens	14	0	0	...	15
Second yellow deals, 3 in. by 11 in	16	10	0	...	17
Do. 3 in. by 9 in.	15	0	0	...	16
Battens	11	10	0	...	12
Third yellow deals, 3in. by 11 in.	13	10	0	...	14
Do. 3 in. by 9 in.....	13	0	0	...	14
Battens	10	10	0	...	11
White Sea and Petersburg—					
First white deals, 3 in. by 11 in.	15	0	0	...	16
" " 3 in. by 9 in.	14	0	0	...	14
Battens	11	10	0	...	12
Second white deals, 3in. by 11in.	14	0	0	...	15
" " 3 in. by 9 in.	13	0	0	...	14
Battens	10	10	0	...	11
Pitch-pine: deals	19	0	0	...	21
Under 2 in. thick extra.....	0	10	0	...	1
Yellow Pine—First, regular sizes	48	0	0	upwards	
Oddments	32	0	0	"	
Seconds, regular sizes	33	0	0	"	
Oddments	28	0	0	"	
Kauri Pine—Planks per ft. cube.	0	4	6	...	0
Danzig and Stettin Oak Logs— Large, per ft. cube.....	0	3	0	...	0
Small " "	0	2	6	...	0
Wainscot Oak Logs, per ft. cube	0	6	6	...	0
Dry Wainscot Oak, per ft. sup. as inch	0	0	10	...	0
¾ in. do. do.	0	0	8½	...	
Dry Mahogany—Houndras, Tabasco, per ft. super. as inch..	0	0	10	...	0
Selected, Figury, per ft. super. as inch	0	1	6	...	0
Dry Walnut, American, per ft. super. as inch	0	0	10	...	0
Teak, per load	18	0	0	...	22
American Whitewood planks, per ft. cube	0	5	0	...	

Prepared Flooring, etc.— Per square.

1 in. by 7 in. yellow, planed and shot	0	13	6	... 0
1 in. by 7 in. yellow, planed and matched	0	14	0	... 0
1¼ in. by 7 in. yellow, planed and matched	0	16	0	... 1
1 in. by 7 in. white, planed and shot	0	12	0	... 0
1 in. by 7 in. white, planed and matched.....	0	12	6	... 0
1¼ in. by 7 in. white, planed and matched.....	0	15	0	... 0
¾ in. by 7 in. yellow, matched and beaded or V-jointed brds.	0	11	0	... 0
1 in. by 7 in. " "	0	14	0	... 0
¾ in. by 7 in. white " "	0	10	0	... 0
1 in. by 7 in. " "	0	12	9	... 0

6 in. at 6d. to 9d. per square less than 7 in.

JOISTS, GIRDERS, &c.

	In London, or deliv Railway Vans, per			
Rolled Steel Joists, ordinary sections	£	s.	d.	£
	7	10	0	... 8
Compound Girders, ordinary sections	9	10	0	... 10
Steel Compound Stanchions	11	0	0	... 12
Angles, Tees, and Channels, ordinary sections	9	10	0	... 10
Flitch Plates	9	10	0	... 0
Cast Iron Columns & Stanchions, including ordinary patterns ...	7	10	0	... 8

METALS.

	Per ton, in Lon			
IRON—	£	s.	d.	£
Common Bars	9	0	0	... 9
Staffordshire Crown Bars, good merchant quality	9	5	0	...
Staffordshire "Marked Bars"	11	0	0	...
Mild Steel Bars	9	5	0	... 9
Hoop Iron, basis price	10	0	0	...
" " Galvanised.....	17	10	0	...

(*And upwards, according to size and gauge.)

Sheet Iron Black—

Ordinary sizes to 20 g.	10	5	0	...
" " 24 g.	11	5	0	...
" " 26 g.	12	15	0	...

METALS (*Continued*).

IRON (*Continued*)—	Per ton, in London. £ s. d.	£ s. d.
et Iron, Galvanised, flat, ordinary quality—		
rdinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15 10 0 ...	—
rdinary sizes to 22 g. and 24 g.	16 0 0 ...	—
" " 26 g.	17 0 0 ...	—
et Iron, Galvanised, flat, best quality—		
rdinary sizes to 20 g.	18 10 0 ...	—
" " 22 g. and 24 g.	19 0 0 ...	—
" " 26 g.	20 10 0 ...	—
vanised Corrugated Sheets—		
rdinary sizes, 6ft. to 8ft. 20 g.	15 0 0 ...	—
" " 22 g. and 24 g.	15 5 0 ...	—
" " 26 g.	16 15 0 ...	—
t Soft Steel Sheets, 6 ft. by 2 ft.		
3 ft. to 20 g. and thicker	12 10 0 ...	—
t Soft Steel Sheets, 2 g. & 24 g.	13 10 0 ...	—
" " " 26 g.	15 10 0 ...	—
Nails, 3 in. to 6 in.	11 0 0 ...	11 10 0
(Under 3 in., usual trade extras.)		

LEAD, &c.

	£ s. d.	
D—Sheet, English, 4lb. and up	20 7 6 ...	—
pe in coils	20 17 6 ...	—
il pipe	23 17 6 ...	—
mpo pipe	23 17 6 ...	—
P—Sheet—	In casks of 10 cwt.	
elle Montagne	33 10 0 ...	—
lesian	33 5 0 ...	—
Zinc, in bundles, 1s. per cwt. extra.		
PER—		
rong Sheet ... per lb.	0 1 0 ...	—
ain " ...	0 1 1 ...	—
opper nails ... "	0 0 10 ...	—
opper wire ... "	0 0 10 ...	—
SS—		
rong Sheet ... "	0 0 11 ...	—
ain ... "	0 1 0 ...	—
—English Ingots ... "	0 2 0 ...	—
DER—Plumbers' ... "	0 0 9 ...	—
mmen's ... "	0 1 0 ...	—
owpipe ... "	0 1 2 ...	—

NGLISH SHEET GLASS IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.			
s. thirds ... 21d.	26 oz. fourths ...	3½d.	
fourths ... 1½d.	32 oz. thirds ...	5d.	
thirds ... 3½d.	" fourths ...	4½d.	
fourths ... 2½d.	Fluted Sheet, 15 oz.	3½d.	
thirds ... 4d.	" 21 oz.	4½d.	

NGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.			
olled plate ... 2½d.	Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white ...	3½d.	
ough rolled and ough cast plate .. 2½d.			
ough rolled and ough cast plate .. 3d.	Ditto, tinted ...	5d.	

* Not less than two crates.

OILS, &c.

	£ s. d.
Raw Linseed Oil in pipes ... per gallon	0 3 6
" " " in barrels ... "	0 3 7
" " " in drums ... "	0 3 9
Boiled " " in barrels ... "	0 3 9
" " in drums ... "	0 4 0
Turpentine in barrels ... "	0 3 0
" in drums ... "	0 3 2
Genuine Ground English White Lead, per ton	28 0 0
Red Lead, Dry ... "	24 0 0
Best Linseed Oil Putty ... per cwt.	0 10 6
Stockholm Tar ... per barrel	1 12 0

VARNISHES, &c. Per gallon.

	£ s. d.
Fine Pale Oak Varnish	0 8 0
Pale Copal Oak	0 10 6
Superfine Pale Elastic Oak	0 12 6
Fine Extra Hard Church Oak	0 10 0
Superfine Hard-drying Oak, for seats of Churches	0 14 6
Fine Elastic Carriage	0 13 0
Superfine Pale Elastic Carriage	0 16 0
Fine Pale Maple	0 10 0
Finest Pale Durable Copal	0 18 0
Extra Pale French Oil	1 1 0
Eggshell Flating Varnish	0 18 0
White Pale Enamel	1 4 0
Extra Pale Paper	0 12 0
Best Japan Gold Size	0 10 6
Best Black Japan	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Knotting	0 10 9
French and Brush Polish	0 10 6

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than* 6 *p.m. on Wednesday.* [N.B.—We cannot publish Tenders unless authenticated either by the architect or the building owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is stated, nor any list in which the lowest Tender is under 100*l.* unless in some exceptional cases and for special reasons.]

*Denotes *accepted.* †Denotes *provisionally accepted.*

ABERGWYNFI.—For erection of a bakery, for Avandile Hygienic Baking Company. Mr. E. Thomas, Cynmer:—

E. Davies, Blaengwynfi* £198 15

ANSTEY.—For handicraft centre, for Leicestershire County Council Education Committee. Mr. Ernest G. Fowler, Architect and Surveyor to the Committee:—

Chitham & Co.	£497 12	H. Toone & Warrington	£397 0
W. Potter	490 0	J. C. Kellett & Son, 40, Southgate-street, Leicester*	395 0
E. Fox	420 0		
J. Chapman & Sons, Ltd.	406 0		

BLYTH (Northumberland).—For the addition of a classroom to Newsham Infants' School. Mr. Robert Grieves, Architect and Surveyor to Blyth Education Committee:—

Cook Bros.	£335 0 0	Kelsey & Dover	£290 0 0
R. Baxter	320 0 0	R. H. Hogg	290 0 0
J. & W. Simpson	294 2 3	Robson & Waddle*	254 14 8
A. Best	291 1 7		

[All of Blyth.]

BLYTH (Northumberland).—For making-up Dalmatia-terrace, Arcadia-terrace, Columbia-terrace, Bohemia-terrace, and the back streets in connexion therewith, for the Urban District Council. Mr. Robert Grieves, Surveyor, Seaforth-street:—

T. C. Usher & Co.	£4,576 14 9	G. E. Simpson, Newcastle-on-Tyne*	£3,174 5 1
J. McLaren	3,475 13 9		
J. Robson	3,194 7 9		

CARDIFF.—For erection of stores at the Trade-street Depôt. Mr. C. H. Priestley, M.I.C.E., City Hall, Cardiff:—

Gough Bros.	£346 0 0	W. Watts	£750 0 0
D. Davies & Son	780 0 0	J. Bond	695 0 0
W. Symonds & Sons, Ltd.	777 0 0	E. Turner & Sons	678 0 0
G. Griffiths & Sons	771 11 0	Knox & Wells	675 0 0
J. Allan, Ltd	757 12 3	F. Britton, Partridge-road, Cardiff*	645 5 9
J. Gibson	752 0 0		

[All of Cardiff.]

CHUDLEIGH.—For erection of a farmhouse at Northwood. Mr. S. Segar, architect, Newton Abbot:—

W. Perkins & Co.	£723	Pratt & Sons	£675
F. J. Badcock	700	F. Pearce, Chudleigh†	645

CROYDON.—For the erection of a secondary school for boys, Selhurst, for the Education Committee. Mr. H. Carter Pegg, F.R.I.B.A., architect, Thornton Heath:—

S. E. Moss	£18,985	W. Moss & Sons, Ltd.	£16,154
Fasterfield & English	18,789	Cropley Bros., Ltd.	15,983
G. E. Everitt & Sons, Ltd.	16,957	J. Smith & Sons, Ltd	15,800
A. G. Crisp	16,850	E. J. Saunders	14,850
Appleby & Sons	16,363	Grace & Marsh	14,750
J. E. Whiter & Co.	16,209	W. Smith & Sons, Croydon*	14,493

GRIFFITHSTOWN.—For alterations and additions to St. Hilda's School, for the Building Committee in connexion with St. Hilda's Church. Mr. Harold Griffiths, architect:—

R. W. Moon	£1,849 0	J. Lowe	£1,523 0
Poulton & Whiting	1,710 0	J. H. Williams	1,487 0
J. J. Partridge	1,695 0	W. Watkins, Llangynidle, Crickhowell*	1,385 14
E. C. Jordan & Son	1,695 0	Leadbeter & Co.†	1,297 0
H. Thomas & Son	1,661 0		
G. F. Leadbeter	1,587 0		
J. Jenkins, Ltd.	1,575 0		

‡ Withdrawn.

THE CATHEDRALS OF ENGLAND & WALES.

LIBRARY EDITION.
(Limited to 250 Copies.)

: Unbound (in Portfolio), £3 13 6; Bound (in Whole Buckram), £4 4 0

Printed on Plate and India Paper (Sheet Demy), containing Sixty-two Plates (Views and Plans), with descriptive letterpress, republished from "The Builder," revised and partly re-written.

ME SETS OF THE ABOVE STILL IN HAND.

London: Publisher of "The Builder," 4, Catherine-street, W.C.

PERFECTION IN FANLIGHT OPENERS.

The "DON" Fanlight Opener.

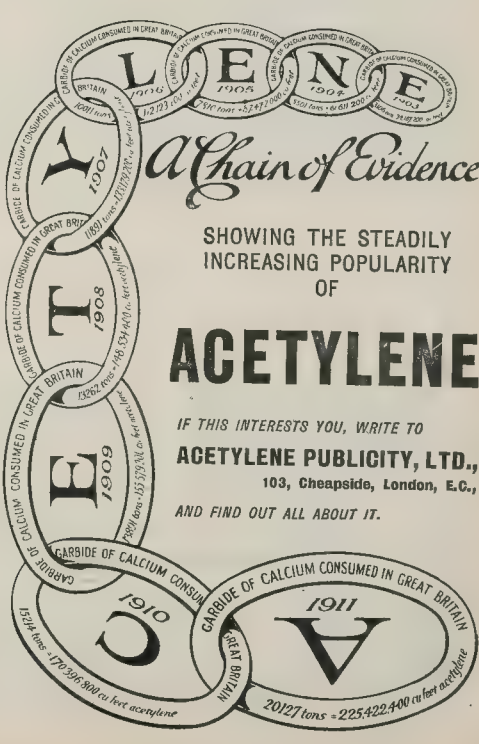
is supplied to H.M. Office of Works, General Post Office, &c., &c.

SIMPLEST AND MOST EFFICIENT ON THE MARKET. NO CORDS. EASILY FITTED. QUADRANT FALLS, ALLOWING BLIND TO PASS. OPENS ANY DISTANCE. LOCKS IN ANY POSITION.

For Prices and Full Particulars apply to

The "DON" Fanlight Opener Co.,
101, LEADENHALL ST., LONDON, E.C.

Telephone No.: 944 London Wall. *AGENTS WANTED.* Telegrams: "Bimarginal, London."



HENDON.—For sewerage work, storm-water sewer, and road-widening works, Green-lane, Hendon, N.W., for the Urban District Council. Mr. S. Slater Grimley, M.Inst.C.E., Engineer and Surveyor:

—	Green-lane Sewer and Storm-Water Drain	Improvement Corner Green-lane and Brent street.	Total.
	£ s. d.	£ s. d.	£ s. d.
J. Mowlem & Co.	7 9 12 8	240 18 9	950 11 5
R. Ballard	693 5 6	230 4 4	928 0 10
F. G. Trummell	645 1 0	221 4 5	866 5 5
H. Farrow	651 12 3	2.6 9 4	858 1 7
H. Elliott & Co., Ealing, W.*	580 18 9	225 16 6	806 15 3

HITCHIN. — For the erection of a bacon factory, Nightingale-road, Hitchin, Herts, for the Herts and Beds Co-operative Bacon Factory, Ltd., to the design of Mr. Loudon M. Douglas, F.R.S.E., Technical Adviser, 3, Lauder-road, Edinburgh. Quantities by Mr. A. E. McEwan-Waghorn, M.Q.S.A., surveyor, 8, King William-street, Charing Cross, W.C.:—

D. G. Somerville & Co.	£8,450	W. Moss & Sons, Ltd.	£6,910
Porter	7,989	W. S. Barton & Co.	6,892
Treadwell	7,850	Bailey	6,800
Dawson	7,724	Redding	6,775
Fassnidge	7,445	Corah	6,647
Drever	7,333	Tutteridge	6,647
Newton	7,309	C. Miskin & Sons, Ltd.	6,578
Fryers, Ltd.	7,298	Willmott & Sons	6,562
Powers & Co.	7,125	S. Redhouse & Son, Stotfold‡	5,502
Raban	7,050		
Jones	6,940		

‡ Accepted after making reductions.

LONDON.—Repairing and painting works at the urinals and conveniences, for the Westminster City Council:

	Public Urinals.	Underground Public Conveniences.
Burton Bros.	£120 0 0	£500 10
T. Coulthard	89 6 8	446 0
Love & Co.*	84 6 8	413 0
J. E. Sims	112 0 0	471 8
W. Wright & Son	105 15 0	489 10

LONDON. For repairs to roofs, chimney-stacks, parapets, party walls, and gutters of sixteen houses in Ladies' Wing of the Licensed Victuallers' Asylum, Old Kent-road, London, S.E. Mr. W. F. Potter, architect:—

N. Clark & Co.	£68 15	W. Garner & Co.*	£44 0
H. King & Sons	48 0		

[All of Peckham.]

LONDON. — For reconstruction of tramways in Dalston-lane and Graham-road, Hackney, for the London County Council:—

—	Tramway and Bridges Works.	Paving Works.	Total.
	£ s. d.	£ s. d.	£ s. d.
A. N. Coles	37,347 17 10	3,603 13 8	40,951 11 6
Kirk & Randall	34,758 18 6	3,667 12 0	38,436 10 6
J. Mowlem & Co., Ltd.	34,547 1 2	3,610 18 9	38,158 0 11
Dick, Kerr, & Co., Ltd., Aldwych	33,637 11 4	3,473 5 5	37,110 16 9

[The Chief Engineer's estimates comparable with the tenders are £33,959 9s. 6d. for the tramway works and £3,515 5s. 10d. for the paving works, a total of £37,474 15s. 4d.]

LONDON. For erection of a school for physically defective children on the Plassy-road site, Lewisham, for the London County Council:—

G. Parker & Sons	£6,119 0 0
W. Downs	6,080 0 0
R. Cook & Sons	6,029 0 0
Kirk & Randall	5,960 0 0
J. Smith & Sons, Ltd	5,950 0 0
W. Akers & Co., Ltd	5,907 0 0
J. & C. Bowyer, Ltd.	5,770 0 0
Courtney & Fairbairn, Ltd	5,672 0 0
R. A. Lowe & Co	5,383 0 0
Galbraith Bros., Ltd	5,335 4 5
F. & H. F. Higgs	5,481 0 0
T. D. Leng	5,452 0 0
J. & M. Patrick	5,375 0 0
W. Johnson & Co, Ltd.	5,351 0 0
F. & T. Thorne	5,220 0 0
H. L. Holloway	5,216 0 0
J. Appleby & Sons	5,034 0 0

[Architect's estimate comparable with the tenders is £5,350.]

LONDON.—For the supply of electric wiring material required for the Vauxhall sub-station, for the London County Council:—

Pinching & Walton	£65 8 3
Armorduct Manufacturing Co., Ltd.	158 9 4
General Electric Co., Ltd.	154 2 9
Edison & Swan United Electric Light Co., Ltd., Queen-street, E.C.*	153 7 10

‡ Less 2½ per cent. discount.

LONDON.—For the enlargement of the Pocock-street School, Southwark, for the London County Council:—

F. W. Fletcher & H. H. Hollingsworth	£3,452 0 0	C. P. Roberts & Co., Ltd.	£3,143 0 0
Courtney & Fairbairn, Ltd.	3,327 0 0	E. A. Roome & Co.	3,103 0 0
Triggs & Co.	3,293 0 0	Rice & Son	3,043 0 0
J. Marsland & Sons	3,266 6 5	Lole & Co.	2,970 0 0
	3,183 0 0	J. Appleby & Sons	2,891 0 0
		Lathey Bros.	2,179 0 0

[The Architect's estimate comparable with the tenders is £3,107.]

LONDON.—For erection of a lodge at Brockwell Park, for the London County Council:

W. J. Mitchell & Son	£760 0	W. Johnson & Co., Ltd.	£615 0
J. Garrett & Son	750 0	J. & C. Bowyer, Ltd.	593 0
G. Godson & Sons	722 0	F. W. Fletcher, Tooting, S.W.*	448 10
H. Lunn	649 0		
Thomas & Edge	630 0		
Rowley Bros.	628 0		

LONDON.—For converting a three-roomed tenement on the ground floor of Baffin-buildings, on the Preston's road Estate, Poplar, into five bathrooms, for the London County Council:

Vigor & Co.	£245	F. & T. Thorne	£22
J. Marsland & Sons	240	J. & C. Bowyer, Ltd.	22
H. L. Holloway	231		

NOTTINGHAM.—For new premises in Camington-street. Mr. W. R. Gleave, A.R.I.B.A., 8, St. Peter's Church-walk, Nottingham:—

W. Crane, Ltd.	£1,235

[Lowest of thirteen tenders received.]

NOTTINGHAM.—For new premises in Arkwright-street. Mr. W. R. Gleave, A.R.I.B.A., Nottingham:—

Gilbert & Hall	£1,245

[Lowest of fourteen tenders received.]

NOTTINGHAM.—For new premises in Bottle-lane Mr. W. R. Gleave, A.R.I.B.A., Nottingham:—

T. Long & Son	£954

[Lowest of twelve tenders received.]

STAVELY.—For erection of new schoolrooms. Mr Frank Windle, architect, Chesterfield

Spiby & Booth	£1,245 0	S. Stone & Sons, Stavely*	£1,100
G. F. Kirk	1,229 0	G. Hayles	1,080
R. Holmes & Sons	1,200 0		
J. Crosby	1,165 0		

Ham Hill Stone.
Doulting Stone.
Portland Stone.

The Ham Hill and Doulting Stone Co., Limited (incorporating the Ham Hill Stone Co. and C. Trask & Son, The Doulting Stone Co.).

Norton, Stoke-under-Ham, Somerset.
London Agent:—Mr. E. A. Williams, 16, Craven-street, Strand.

Asphalte.—The Seyssel and Metallic Lava Asphalte Co. (Mr. H. Glenn), Office, 42, Poultry E.C.—The best and cheapest material for damp courses, railway arches, warehouse floors, flat roofs, stables, cow-sheds and milk-rooms, granaries, tun-rooms, and terraces. Asphalte Contractors to Forth Bridge Co. T.N. 2644 Central.

SPRAGUE & CO., Ltd.,
LITHOGRAPHERS,
Employ a large and efficient Staff especially for Bills of Quantities, &c.
69 & 70, Dean-street, Soho, W.

J. J. ETRIDGE, Jr.
SLATE MERCHANTS. LTD.
EXPERTS IN
SLATING, TILING.
BEST WORK ONLY.
Telephone 2685 Wall, or write—
BETHNAL GREEN SLATE WORKS,
BETHNAL GREEN, LONDON, E.

PILKINGTON & CO.
(ESTABLISHED 1838),
DEPTFORD WHARF,
190 & 192, CREEK ROAD, DEPTFORD, S.E.
Telephone No.: New Cross 1102 (two lines).
Registered Trade Mark.
Polonceau Asphalte.
PATENT ASPHALTE AND FELT ROOFING.
ACID-RESISTING ASPHALTE.
WHITE SILICA PAVING
SEYSSEL ASPHALTE (*Direct from the Mines*).

"Drop Dry" Glazing
ECONOMICAL, EFFECTIVE. THE PERFECT SELF-SUSTAINING BAR.
Copper & Zinc Roofing.
The most Efficient and Economical System in the Kingdom.
Designs and Estimates Free on Application.
Telegraphic Address: "COURTEOUS, LONDON."
F. BRABY & CO., LTD.
Telephone: North 3032 (4 lines).
Chief Offices: 352-364, EUSTON ROAD, LONDON, N.W.
Works: LONDON, LIVERPOOL, BRISTOL, GLASGOW, FALKIRK.

THE BUILDER

VOL. CII. -No. 3816. MAY 24, 1912.

CONTENTS.

	PAGE
Message from America	593
Paintings at the Royal Academy	594
Notes	594
The Royal Institute of British Architects (with Illustrations)	595
The Old General Post Office: A New Suggestion	599
Architectural Assistants of the Office of Works	600
The Architectural Association: First Summer Visit	600
Architectural Societies	600
Archæological Societies	601
Engineering Societies	601
General News	601
Competition News	601
Books	602
Correspondence	602
Fifty Years Ago	603
Editorial Summary	604
Meetings	604
Notes to Illustrations	604
Monthly Review of Engineering:—	
Lighting by Acetylene Gas (with Illustration)	605
Reinforced Concrete in Great Britain.—VI. (with Diagrams)	606
Ozonair System of Air Purification	608
Notes	608
The Building Trade:—	
Trade Disputes and Building Contracts	609
The Trade Union Bill	609
Labour in the Building Trade	610
Government Contracts	610
General Building News	610
Applications under London Building Acts, 1894 to 1909	610
Projected New Buildings in the Provinces	611
Metropolitan Asylums Board	611
Metropolitan Water Board	611
London Councils	611
The Quantity Surveyors' Association: Annual Dinner	612
Lightning Conductors	613
Magazines and Reviews	613
The London County Council	613
Legal Column	613
Law Reports	614
Foreign and Colonial	614
List of Competitions, Contracts, etc., Open	615
Obituary	617
Patents	617
Some Recent Sales	617
Prices Current	617
Tenders	619

Illustrations.

Worksop College, Notts: Interior of New Chapel. Sir Aston Webb, R.A., Architect.

The North-Western Polytechnic, Kentish Town-road. Mr. Arnold Mitchell, F.R.I.B.A., Architect.

Business Premises, High-street, Doncaster Mr. Sydney D. Kitson, F.R.I.B.A., Architect.

New Buildings, Queens' College, Cambridge. Mr. Cecil G. Hare, Architect.



University of Pennsylvania, Philadelphia. Archæological Museum: Front Elevation. (*See page* 595.)

Messrs. Day Brothers & Klauder, Wilson Eyre, and Cope & Stewardson, Joint Architects.

A MESSAGE FROM AMERICA.

It is not often that we have the pleasure of listening to a paper which conveys the sensation of personal vitality to such an extent as that read by Mr. R. A. Cram at the Royal Institute of British Architects on Monday night. Mr. Cram holds strong opinions, and is not afraid of expressing them, and, whether we are inclined to agree or not, definite opinions clearly expressed have always an invigorating influence.

To borrow a much misused term, we may describe the meeting as a "Revivalist" one, and indeed it was this in two senses. Both the revival of the older ideals in education and the revival of the traditional forms of architecture as expressing and enhancing these ideals came under review. In regard to the first of these, Mr. Cram insisted firmly on the value of educational methods building up character as against those aiming primarily at imparting highly specialised knowledge.

In his view personality comes first and efficiency second. Doubtless the firm hold that this view is establishing for itself in the United States has only been secured by intense activity in its supporters, and we get hints of the stress of the battle when Mr. Cram slips into his Crusader mood.

With regard to the architectural question, we cannot feel so sure that the right lead is being given. If America is as our brilliant *confrère* pictures it, it is once more fighting over the old ground made historic by the labours of Pugin and Ruskin, and we could almost feel that we were transported back to those early Victorian days when the battle of the styles exercised such an exciting influence on architectural discussions. Is this the America of to-day? We confess we can hardly credit it. If not, though, how comes it that we see on the screen before us an amount of work—and so much of it really fine work—that almost enforces the imagination to believe in the domination of the British tradition in contemporary American architecture? The truth is that America is vastly bigger and vastly more active than the untravelled Briton can easily realise, and that the selection of even a single phase of its activity suffices for the moment to throw the others into the background.

Mr. Cram and his fellow-workers would, if we concentrated our attention on them alone, give us the firm conviction of an absolute unity of architectural ideals in Britain and the United States of America; but, desirable as such a consummation may be, we do not think that it may yet be regarded as having actually taken place. The influence of the Beaux-Arts

in the States predominates architectural design there to a far greater extent than Mr. Cram would like us to believe. For our part, we feel this influence to be beneficial, and as architecture on both sides of the Atlantic draws closer together we do not think that the logical element as represented by the methods of the Beaux-Arts will drop out in favour of the romanticism so attractively advocated by Mr. Cram and those who sympathise with him.

The future looms but vaguely before us; an ultimate harmonising of all the conflicting ideals of our own day is suggested, but the discovery of the means by which this will be effected is beyond our powers of philosophic deduction. The arts are not amenable to such methods of investigation, and the artist can only follow the highest light that is in him, leaving to fate the ultimate outcome of his efforts.

PAINTINGS AT THE ROYAL ACADEMY.

WE are so accustomed to be told year after year by those whose business it is to tell us that the Academy Exhibition is worse than usual that at least we cease to be alarmed. The country, as we all know, has been going to the dogs from time immemorial. The truth is, probably, that any exhibition arranged on these lines is bound to be somewhat tiresome and provocative of headaches at the best of times. In any year's output—when so many mediocrities are encouraged to produce paintings—the works of actual distinction must, we suppose, be relatively few, although no doubt they vary in number from year to year. Their effect on the general tone of the exhibition, or even their discovery by the critics, must depend to a great extent on their arrangement by the hanging committee, and that it is generally understood depends a great deal too much on circumstances which have no relation to the intrinsic merits of the works. If, however, an exhibition should—like an artist—be judged by its best works, this year can hold its own. Mr. Sargent's works are as amazing as ever. Not great pictures, perhaps, in every sense of the word, but achievements which in their way are unapproachable. Mr. Arnesby Brown's "Norfolk Landscape," which has been acclaimed as the picture of the year, certainly shows no falling away from previous standards; although we cannot help wondering whether human figures instead of cattle in the foreground would not have struck a higher note. But such works as these, or the pictures by Mr. Charles Sims, Professor George Clausen, and others, would give interest and distinction to any exhibition.

Although the usual crowd of uninteresting portraits of uninteresting people is relieved here and there by such distinguished works as Mr. George Henry's portrait of Leonard B. Schlesinger, Esq., we are none the less grateful to Mr. G. Spencer Watson for his two picture-portraits, with their fine colour schemes and rich decorative treatment—the more perhaps that decorative work is not well represented this year.

Mr. John Crealoch certainly has two pictures called "The Red Sofa" and "The Yellow Sofa," in which the evident intention is to design a pattern, and there are other pictures in which the same feature is present; but the only piece of pure decoration that we noticed is "The Bathers," contributed by Professor Gerald Moira. This is an interesting composition, treated in a light key of colour, but it is hung too high to be properly appreciated, and is so out of harmony with its surroundings as to suggest that a room should be set apart for such work, when no doubt enough would be forthcoming to fill it. It really does seem a pity that decorative works are treated in this way, and that definite steps are not taken to afford more encouragement to this important branch of painting.

Architecture as the subject-matter for pictures is well in evidence. There are the usual number of views of Della Salute, St. Mark's, and other Venetian scenes. In the Water-Colour Room we notice the Mosque of Abou l'Agag at Luxor and the leaning column at Karnak, by Mr. R. Phené Spiers; the Roman Theatre at Timgad, by Sir Ernest George; the Market Place, Taormina, a vigorous sketch by Sir Alfred East; and a careful and sympathetic study of the entrance to the Temple, Medinet Habu, Egypt, by Mr. Lancelot Crane.

Mr. H. E. Tidmarsh sends two panoramic views of London, one from the Tower Bridge looking west and the other from St. Mary-le-Strand looking east. They are carried out in a most thorough and painstaking way, and, whatever their artistic merits may be, they should certainly have much topographical and historical interest. An interesting piece of architecture in Gallery IX., the Yee Fung Mun Gate, Nanking, by Mr. Montagu Smyth, should not be overlooked.

Of the numerous examples of the interiors of buildings, with or without figures, probably the most notable is a Kensington Interior, by Mr. Frank L. Emanuel, a delightful rendering of a delightful subject.

It is inevitable, perhaps, that so much of the wall space should be taken up by "command" pictures relating to the Coronation. Mr. Bacon's picture of the ceremony in Westminster Abbey may be a success from the point of view from which it was commissioned, but somehow it entirely fails to give the atmosphere and general effect of the Abbey interior, which, after all, in a work of this historical interest is a matter of some importance.

NOTES.

Tattershall Castle. THROUGH the public-spirited action of Lord Curzon and his friends the lamentable incident of Tattershall Castle has at last been brought to a satisfactory conclusion. Lord Curzon, who bought the castle after its mantelpieces had been removed, has now recovered them, and after their reinstatement intends to throw the Castle open to the public. It is to be hoped that the feeling aroused over this matter will strengthen the hands of the Government and tend to convince them that there is a very large and influenti body of opinion in this country su porting their proposals for the protecti of ancient monuments, and that th may venture to go a step or two furth in the direction of stringency than th have hitherto intended. Except for t damage which must have been inflict on the mantelpieces by their remov we suppose that no harm has been do in this case, but we cannot always re upon a Lord Curzon to step in and sa the country from the results of its ow lack of interest and good management.

Competition Publicity. IT will be remember that on April 19 v published a letter fro Mr. C. H. B. Quennell advocating t exhibition of the Port of London Co petition Preliminary Designs; also "Note" upon it, in which we express our willingness to do what we could to gi effect to this suggestion in our column This week we print a letter from Mess A. E. Maxwell and C. Orlando Law support of what we gather from these a other sources to be a general consens of opinion upon the matter. From ma points of view, greater publicity in co petitions which go through two stag is desirable. There is the educati aspect, upon which we laid stress. cannot be overrated. And there is t whole group of reasons for publici which operate in all competitions in t final stage, and make it a matter of cour that all the designs may be seen at lea by the competitors. These consider tions are directed, of course, chiefly the maintenance of that fair field and favour upon which we pride ourselv in our public competitions. To this e alone, if to no others, all the desig should be seen at least by the co petitors; and if it cannot be arrange officially it had better be done as best can by other agency.

Assessing the Assessor. THAT aspect of the matte of course, is relevant t the personal honour the assessor, and in this country ther is, in our larger competitions at any rat little need of vigilance in that direction though it should not be neglected Professional integrity can seldom b questioned. But what may be criticised what in conversation among architects i criticised, more outspokenly than in th Press, and what should be criticised i the Press more searchingly than persona considerations perhaps seem to permit is not the honour but the intelligenc of the gentlemen concerned. As w look over successive groups of the three o four premiated designs in competitio after competition we find ourselve wondering again and again whether th assessor in each case had in his mind an conception of what was the right an what consequently was the wrong thin to do in the given case. For the design chosen seem to be the embodiment o no one principle, right or wrong, but t represent severally the various group of possible solutions. If one design o those chosen is the best of them that wen for the right method, all the others must b attempts to go for a wrong one. The may be very creditable in themselves but they do not on that account deserv

place. If the assessor in each case really had some guiding principle firmly in his mind, all the premiated designs would be variations of the same solution of the problem in hand. Too often, however, we are forced to the conclusion that the assessor acted from the empirical standpoint—that fatal attitude which in varying degrees so vitiates all our efforts to-day.

Nationalisation of Railways.

THIS subject is continually cropping up, and is one in which the trader has a double interest as compared with the mere passenger or the man in the street. There has been much wild and unreasoning talk about it, and the attitude of Mr. Asquith, at his meeting with the Parliamentary Committee of the Trades Union Congress on Monday, is worthy of notice. The deputation had alluded to the advantage the railway companies are beginning to derive from their efforts to eliminate undue competition; rather unfairly belittling the many voluntary increases of the wages bill by which these advantages were shared by their employees. "The notion," remarked Mr. Asquith, "that you can reduce fares and rates, shorten hours of labour, and raise wages by paying, for the total capital value of the undertaking, a very small number of years' purchase is, I think, an illusory notion." The Prime Minister frankly stated that he did not think the burden of proof—which he places on those who are in favour of the nationalisation of railways —has been satisfied. "The State keeps a tight grip over the railways," he reminded them. Railway managers will feelingly endorse this, and perhaps it is better so than if the State had the sole control and direction of the railways.

Regent's Quadrant Competition.

THE response to our invitation to architects to design a façade for the Regent's Quadrant shows that the subject has attracted many members of the profession with established reputations. We have thought it desirable, therefore, to strengthen the Jury of Assessors by the addition of Mr. William Flockhart, F.R.I.B.A., who has expressed his willingness to co-operate with Mr. Rickards and Mr. Munby. The wide experience of Mr. Flockhart in important street architecture will be well known to competitors, and his presence on the jury will doubtless be appreciated.

MARCONI HOUSE, STRAND.

The premises until recently occupied as the Gaiety Restaurant have been speedily converted for purposes of the Marconi Wireless Telegraph Company. The ground-floor bar is altered into the telegraph office, the old ballroom into the accountant's department; the main restaurant, on the ground level, is modified to accommodate the transfer branch. A wireless installation will be erected upon the roof. The restaurant (upon a site of 10,500 sq. ft.) and the adjoining theatre and Messrs. Short's premises were erected from the plans of Messrs. Ernest Runtz & Ford, the design of the elevation being based upon a sketch design made by Mr. R. Norman Shaw, R.A. The structural alterations throughout the building have been made by Messrs. Trollope & Colls, under the superintendence of Messrs. Dunn & Watson, the electrical light installation being by Messrs. F. Geere Howard, and the telephones and fire-alarms by Messrs. W. G. Hodgson & Co. The Masonic Hall (now the board-room) was decorated by Mr. W. J. Neatby.

THE usual fortnightly meeting of the Royal Institute of British Architects was held on Monday at No. 9, Conduit-street, Mr. Leonard Stokes (President) in the chair.

Mr. H. T. Hare announced the decease of Mr. Peter Kerr, the well-known Melbourne architect, who was for many years a Fellow of the Institute, but resigned a few years ago on retiring from practice; also of Mr. Henry Shackleton, Associate, elected 1906, and Mr. Ernest Theodore Felgate, Licentiate.

Mr. R. A. Cram then read an interesting paper on

RECENT UNIVERSITY ARCHITECTURE IN THE UNITED STATES.

In the course of his remarks Mr. Cram said:—"The foundations of sane and sound and wholesome society are neither industrial supremacy, nor world-wide trade, nor hoarded wealth; they are personal honour, clean living, fearlessness in action, self-reliance, generosity of impulse, good-fellowship, obedience to law, reverence, and the fear of God—all these elements which are implied in the word "Character," which is the end of education and which is the proudest product of the old English residential college, and the old English educational idea that brought it into being, maintained it for centuries, and holds it now a bulwark against the tides of anarchy and materialism that threaten the very endurance of civilisation itself.

From time to time we have yielded more or less to novel impulses, coquetting with that questionable lady sometimes known as the Spirit of the Age, accepting even her insidious doctrine that, after all, the object of education is not the building of character, but the breeding of intensive specialists, or the turning of a boy at the earliest possible moment into a wage-earning animal. When we stop doing things long enough to think, we all realise that, as the Dean of St. Paul's has recently said, "The real test of progress is the kind of people that a country turns out," and the product of secularised and intensive education is not of a quality that develops a sense either of covetousness or emulation in sane and healthy minds.

We are returning, step by step, to the old ideals and sound methods of English colleges, returning to the mother that bore us, just as we return year after year to our old home for refreshment and inspiration; return even in a wider sense to those eternally battered but eternally enduring principles in life and thought and aspiration which make up the great Anglo-Saxon heritage of which we proudly claim to be joint heirs with yourselves. And in this return we find ourselves recurring once more to the very forms of the architecture—or rather, we hope, to its underlying spirit—through which this great tradition has manifested itself.

In America practically all the XVIIth-century work and nine-tenths of that of the XVIIIth is gone, including much of the best, and we



Washington University, St. Louis, Mo.
Messrs. Cope & Stewardson, Architects.

must recreate our vision of the past from shreds and patches, but fortunately at Harvard there remains a notable group that has yielded neither to vandalism nor conflagration.

The first evidence of decadence appears, I think, in the advent of that more pompous style Jefferson did so much to advance. Hitherto what had been done was done simply and unaffectedly; now came the conscious desire for architecture, which is a dangerous ambition at best. At the University of Virginia we have the original setting out, almost intact, and if we deplore the unnecessarily unreasonable classical porticoes with columns, entablatures, and pediments complete—and all built of pine boards framed up in the semblance of a newly-discovered paganism—we must admit the great dignity of the plan and the singular charm of the ensemble.

This "Jeffersonian" style rapidly took the place of the old Georgian, but its day was brief, and somewhere between 1820 and 1830 occurred that ominous point when the last flickering tradition of good taste and the last weak impulse of instinctive art vanished.

Fortunately there was little collegiate building with us during this dismal second quarter of the XIXth century, or, rather, and also fortunately, little of it has survived, and when first the architect appears on the scene as the mentor rather than the exemplar of public opinion it is in novel guise; nothing less, indeed, than as the protagonist of Gothic. He was not very Gothic, I must admit, and in the beginning he contented himself with a few apologetic and quite casual buttresses, pointed arches over his door and window openings, an octagonal turret or two, and, of course, battlements, usually of 2-in. deal neatly painted, and sometimes sprinkled with sand as a concession to appearances.

It was all a "false dawn," however, and ceased almost in a moment (though for a brief period only, as we shall see) when that great genius and greater personality, Richardson, flashed like an unpredicted comet across the sky. He did great work, some of it immortal work, in his powerful mode, but he died before his mission was accomplished, and though he killed the "French roof style" and the futile Gothic, and all the other absurdities, he left behind no one of his own calibre to carry on the crusade.

It may be well to examine a typical American University, in its setting out, in its component parts, and in its organisation. I will choose for this purpose Princeton, of which I am a member by adoption, and where I have the honour to act as Supervising Architect. The title itself will indicate at once one of the many points of divergence between the English and American systems, for I fancy there is no University in the United Kingdom where one man is given almost complete authority over all matters of the choice of architects, supervision of their work both in design and execution, acceptance or rejection of gifts, and their placing if accepted, the development of roads and paths, and the planting of trees and shrubs. Until recently such an office was unknown in America, but since Princeton took the lead some five or six years ago others have followed rapidly, and the practice has now become an established custom.

It was time, too, that something should be done; as I have already indicated, our colleges are like Topsy, they "just growed," without rhyme or reason, subject to the most vacillating fashion and the quaint whims of emancipated individuals, and the results were generally shocking. At Princeton this growth had been quite lawless, and conditions were even worse at Harvard and Yale. The wide spacing and the lack of co-ordination marks another point of difference; with us almost every college has begun in open country, as an original foundation. We have nothing like Oxford and Cambridge, partly because of this fact, and partly because each college is with us a unit; we have no gathering together of many and independent foundations, loosely knit together for administrative purposes; we have, instead, self-contained units, sometimes of enormous size, and each new benefactor founds not a new college, but a dormitory, a library, a school of law or medicine or forestry or—journalism.



University of Pennsylvania, Philadelphia: Terrace Dormitories.

Messrs. Cope & Stewardson, Architects.

Personally, I think this plan must be abandoned, and a breaking up into more manageable units take place. In the new plan of Princeton the tendency is towards the standard type; here the dormitories are assuming quadrangular form, and in time may become full residential colleges, each with its common-room and great hall, and, when times have still further changed, its chapel.

Another thing that will strike you is the magnificence of our gymnasiums and the dominating quality of our schools of science. Then we have general physical directors, as well as special trainers for the varied forms of athletics, and in many colleges regular and searching examinations of the men for physical and functional weaknesses, and as a result the health of our schools is well above normal. As for our science buildings, you know, as we know, only too well, how almost unbalanced we have become in our devotion to practical and "vocational" training, and how obsessed we have become with the mania for natural science. Here at Princeton there is less of this than elsewhere, but two of our newest and most magnificent buildings are devoted, the one to biology, the other to physics, though as yet we have no schools of mechanical and electrical and mining engineering, as happens so often elsewhere.

One novelty you will not notice at Princeton, and that is the clubs and fraternities. We have as many "Greek Letter Societies" (which are very awful and very secret organisations) as we have colleges, and there are some institutions in America where these fraternity houses almost outnumber the academic buildings themselves. At Princeton no Greek Letter Societies are allowed, but there are two old secret organisations, the Whig and the Clio, whose white marble mausoleums form the very centre of the campus, while to the east stretches a great street absolutely lined with the private clubs which grew up when the fraternities were taboo. These clubs take in only a certain number of new members each year, they are distinctly aristocratic in their tone, though aristocratic of a sound and healthy type, and they generally follow the lines of an old and palatial country house.

From all these points of difference you will see then that our American University is a very different matter in its architectural form to those in this country. Our newest Graduate Colleges come nearer, as the now rising buildings for Princeton testify.

In the meantime let us examine the beginnings of what has been a notable Gothic Renaissance amongst our colleges. Cope and Stewardson's work at Princeton set the pace, however, and so beautiful was it, so convincing as to the possibilities of adapting this perfect style to all modern scholastic requirements, the University authorities, with a wisdom beyond their generation, passed a law that for the future every building erected at Princeton should follow the same general style.

Columbia University in New York—the old King's College of Colonial days—stands, of course, as the noblest type of the pure classical idea, and its majestical Library will always remain a national monument. Unfortunately,



Chapel: U.S. Military Academy, West Point, New York.

Messrs. Cram, Goodhue, & Ferguson Architects.



Post Headquarters: U.S. Military Academy, West Point, New York.
Messrs. Cram, Goodhue, & Ferguson, Architects.

the site is crowded and fatally restricted; the mistake was made of fixing this—when the change was necessary a generation ago—too near the outposts of the advancing city, which, like a conquering army, has already swept up to its gates and miles beyond.

There is little else that is purely classical amongst our Universities, though Carrère & Hastings have built a most engagingly Parisian Alumnæ Hall at Yale, the Naval Academy at Annapolis is strictly French, and the University of California is growing on scrupulously Beaux-Arts lines afar on the Pacific Coast. Harvard is conscientiously following the Georgian manner, and so is Williams, where we ourselves are trying to show we have no hard feelings by building a Commencement Hall, and a new quadrangle, in this quite characteristically American style. Georgian also, with rather quaint Roman elements, has been used by McKim, Mead, & White for the vast War College at Washington, and altogether it is, as we say in our colloquial way, giving Gothic "a run for its money."

The University of Pennsylvania shows still more of Cope & Stewardson's wonderful work, though here it is couched in an extremely rich Elizabethan vernacular. Bryn Mawr is built of the wonderful stone that underlies all Pennsylvania and New Jersey, putting a premium on good architecture. Here in England all building stone is finely dressed, but in America we have adopted the practice of using "ledge stone" for our ashlar, our trimmings only being tooled. Fortunately, we have a wide variety of singularly beautiful stones, ranging in colour through all shades of grey, brown, purple, and tawny, easily obtained, inexpensive, and durable. In a way, I think we gain a richness in colour and texture that is obtainable in no other way, while we also acquire something of that effect of age, which is, after all, so essential a part of architecture.

Good Gothic is encroaching steadily on the preserves of Classicist, Boulevardier, and Colonial, and this in spite of the fact that, with the single exception of Harvard, every one of our schools of architecture absolutely disregards every type and phase of Gothic, both in design and in theory. Of course, it can't quite be suppressed in history and archæology, but it is treated rather as the madcap escapade of a callow youth, and passed over as lightly as possible. In spite of this, architects do appear

who love Gothic, and what is more, know about it also. Religion clamours for it, education annexes it, and at West Point the Government of the United States itself accepted it with alacrity, and has found it not half as bad as it looked. I cannot begin to give you any idea of the extravagant beauty of the site of West Point. It is like the loveliest part of the Rhine, only bolder and more dramatic. Mountains rise from the river on either hand, deeply forested —Storm-King and Dunderberg lifting highest of all—and on a narrow plateau, 150 ft. above the river, stands the Academy, its buildings forming a rampart along the cliff, and creeping up the mountain sides all around. Of course, there wasn't anything one could do there except Gothic—of sorts—though others had thought differently, as one who built there a lovely pagan fane like a dream of Imperial Rome. Moreover, most of the old work was pseudo-Gothic, and it had made a tradition, so it was not startling, after all, that our classical Government should have endorsed a Gothic school.

I am not sure they got it. I think the chapel on its crag, dominating the whole group, would pass, though it surely is not archæological; the site is compelling, however, and really what we tried to do was to translate the rocks and trees and ribbed cliffs into architectural form. Just what the cavalry and artillery buildings may be I don't know, nor does it much matter; they are an attempt to express outwardly their function, and in the simplest terms; the stables sweep in an enormous arc around one side of the cavalry plain, and at the back, against the towering hills, are the barracks, one for each branch of the service. The riding-hall is no more architecturally than a rampart of rock, heavily buttressed, and 300 ft. in length.

I think of the finished buildings the post headquarters is not the least interesting. It is built on the edge of the cliff, and the entrance by the base gate is four stories below the main court, which is entered from the upper level. It is a pretty big building, but it is wholly occupied by the administration of the Academy. Not only the buildings at West Point, but practically all the other works I have shown you as well, are all real masonry; no steel frame skeleton clothed indifferently with a veneering of masonry. We do, indeed, indulge in skeleton construction, and reinforced concrete and other structural expedients and substitutes, but deep in our racial consciousness, as in that of all other Anglo-Saxon peoples, is the solid conviction that, after all, there are but three real things in the world—the home, the school, and the church—and that when we are dealing with eternal verities honest and enduring construction alone admissible. And it is to the same consciousness I think that we may attribute the very universal return to Gothic of some form for our churches and our colleges and our schools. We have not hammered out our own intimate style, or national and contemporary architecture, any more than have any other modern races and peoples, but this will come by-and-by. At present we architects are, I conceive, no longer as in the past the mouthpiece of a people, creating the visible form for a great dominating social impulse that is the mark of supreme civilisation; rather are we the voices crying in the wilderness, the pioneers of the vanguard of the new life, the men who recreate from antiquity the beauty that is primarily educational, that so it may work subtly through the consciousness of those who come under its influence, slowly building up a new civilisation that, when it has come full side, will burst the shell of archæological forms, and come forth in its new and significant and splendid shape.

We have not now, nor have had for three centuries, a civilisation that demanded or could create such artistic expression, but the light is already on the edges of the high hills, and we know that a new dawn is at hand. In the meantime, like the monks in the dim monasteries of the Dark Ages, we cherish and preserve all that was great in our greatest past, building as well as we may new Oxfords and new Westminster Abbeys, new Lincolns, new Richmond Castles, new Haddon Halls, not as the last new word in architectural expression, but as schoolmasters and as prophets, content with the educational work we are accomplishing, leaving to our successors the equal but not more honourable task of voicing in novel and adequate form the new civilisation we are helping to create."

Mr. E. Warren

said it was always a pleasure to meet an architect who came from a friendly country to instruct them, and as in this instance when a gentleman came from America, which he refused to regard as foreign, the pleasure was doubled. He presumed that he was honoured by being asked to propose a vote of thanks to the author, because a little while ago he tried to interest them in the evolution and development of collegiate architecture in England. It seemed a far cry from the old brown buildings of Oxford and Cambridge to the new examples scintillating under the American light which Mr. Cram had shown them, and at first they felt a little bit bewildered by the flights of fancy in a scholastic direction which they had seen; but it was with a certain sense of "titivation" to their insular pride and satisfaction that they had seen the English idea of the quadrangle and the sense of antiquity predominating in these examples. They congratulated Mr. Cram on a brilliant and interesting paper and on the treatment of magnificent opportunities. Anything more superb than the site he had had to deal with at West Point it would be difficult to imagine, and they congratulated Mr. Cram on the way he had handled that opportunity. But the opportunity did not make the man; it was the man who made the opportunity. Mr. Cram would not mind if he said that cherishing the ancient things they possessed in this country they were interested to observe a reflex of the various forms so familiar to them in the unaccustomed surroundings and light of America. He had never had the opportunity of making acquaintance with these buildings except by seeing photographs and by hearsay, and at such a late hour he would confine himself to merely proposing the vote of thanks.

Sir Aston Webb,

in seconding the motion, said it was impossible to exaggerate the debt they owed to Mr. Cram for coming to England and bringing such a splendid enthusiasm and showing them what they were doing in the way of building Universities in the United States. He endorsed what Mr. Warren had said as to the splendid way in which Mr. Cram had dealt with the opportunities he had had. They were all immensely struck with his magnificent building at West Point. The author had brought with him a certain amount of Gothic enthusiasm which reminded some of them of many years ago when they were Gothic enthusiasts themselves. He was not sure that he was not so still. It made them still feel young. At the same time, they had tried to think that "styles" did not matter, and that "style" was the only thing which did matter, and one was inclined to think with Ruskin when he said that it did not matter whether a man took three months to paint a single petal of a flower or whether he covered a palace front with colour in a single day so long as he did it with sincerity and whole-heartedness. One was inclined to think perhaps with regard to these University buildings that the style did not matter so much as long as the man who built them did so with sincerity and wholeheartedness and with the enthusiasm which Mr. Cram had and thought they should all have. Oxford and Cambridge were full of other things than Gothic. Perhaps there was more "other" than Gothic, but the whole effect was satisfying. They would ask Mr. Cram to take over to America their best wishes and their belief that when these Universities had been touched by the hand of time they would vie with those of this country.

The Chairman,

in putting the vote of thanks, said he would like to add a personal word of thanks. He had recently been to the States, and the kindness which was heaped upon him was almost overwhelming. He went more or less as their President, and, at any rate, their colleagues in America would not let him go anywhere except as President of the Royal Institute of British Architects. They showered honours on him as the representative of the Institute, and he would like the members to show how much they appreciated the kindness shown to him as their representative in a semi-official capacity. He had had the advantage of seeing some of the buildings which had been reproduced on the screen, and particularly those at West Point, but he felt that the photographs did not adequately represent either the beauties of the site or of the buildings. The situation at West Point was superb and the buildings added to the natural beauty. Mr. Cram had been somewhat hampered by the buildings already existing, some of which were good and others not so good; but the work his firm had done was really splendid, and they were bringing the whole composition together in a magnificent way.

The motion having been carried,

Mr. Cram

said he was unable to express either his appreciation of the privilege they had granted him in asking him to come and talk about some of the work they were doing in America or his even deeper appreciation of the unfailing kindness and consideration which had been shown his compatriots and himself whenever any of them were fortunate to be able to cross the Atlantic, which, after all, was a mere geographical expression separating two peoples who were essentially in all their principles of the past, the present, and the future absolutely one people.

The President announced that the next meeting would be an extra one on June 3, when Mr. W. Woodward would read a paper on "The Newer Responsibilities of Architects."

THE BOARD OF ARCHITECTURAL EDUCATION.

The Board of Architectural Education of the Royal Institute of British Architects announce that the designs submitted by the following students, who are qualifying for the Final Examination, have been approved :—

Subject I. (*a*)—A large Monument to Commemorate King Alfred's Refounding of London: Messrs. H. A. Dod, Hal Harper, Ernest Prestwich, and H. C. Bradshaw.

Subject I. (*b*)—A Terrace of Five Houses: Messrs. R. F. Dodd, Walter E. Woodin, S. Stevenson Jones, and W. Harding Thompson.

Subject II. (*a*)—A large Monument to an Explorer: Messrs. H. Lidbetter, R. S. Dixon, F. O. Laurence, F. A. Broadhead, R. Duckett, E. F. Bothwell, C. M. McLachlan, W. E. Woodin, R. A. Barber, and J. O. Cheadle.

Subject II. (*b*)—A Cloister with External Entrance Gateway or Tower to a Collegiate Building: Messrs. H. A. Dod, H. C. Bradshaw, and E. Prestwich.

THE OLD GENERAL POST OFFICE:

A NEW SUGGESTION.

By Wilmot Corfield.

It comes as a shock to Londoners to learn, through Mr. W. W. Benn, representing the First Commissioner of Works, that the old General Post Office buildings in Aldersgate-street are doomed to early demolition, and that, according to his announcement made recently in the House of Commons, a contract for clearing the site is now under consideration. The *Daily Telegraph* of the 9th inst. (the day that it published this statement) contained also a well-reasoned appeal for the establishment in London of a public postal and philatelic museum on the lines of those already existing in Berlin, Stockholm, and Washington. This appeal was made in the course of a lengthy reference to the annual National Philatelic Congress, recently held at Margate, where the suggestion was made in the course of an address by the present writer for the adaptation of the old Post Office buildings, the historic pile in St. Martin's-le-Grand, so as to serve as the home for the museum, and also, if the terms of the late Mr. Tapling's will permitted it, of the national stamp collection.

In the muniment-room at the General Post Office there already exists the nucleus for a postal museum of unique interest; in the King's Library at Bloomsbury a priceless philatelic collection, the finest in the world. The muniment-room is a *terra incognita* to the general public, the truncated stamp collection is derelict and lifeless. And now the very building of all others which circumstances point to as the ideal one for museum and collection alike is about to pass into the hands of the house-breaker.

The official reason given for the destruction of the St. Martin's-le-Grand edifice is its "prodigality of space." A "new block" is to be erected, and a blow dealt to the architectural charm of the City to be regretted not only by us, but, when we of to-day are gone, by all future historians and students of prints and

other pictures. We know these "new blocks," earth-devouring and stupendous, but lacking in soul, devoid of inspiration, masses of masonry deadening to civic pride in the external aspect of London's thoroughfares.

Both historically and architecturally the old Post Office is worthy of preservation. Its fine halls, its lofty, well-lighted corridors, its generous and gracious air of high ideals and restrained but imposing effect in the massive and cultured design of its main façade are scarcely of the sort which a city and country should willingly consign to oblivion.

The museum must arrive. Its nucleus already occupies much of the cubic space of some "block" somewhere or other to which Londoners have no access. It is actually intended to destroy the ideally spacious in order to erect the cleverly cramped, and then to pour out libations to the Goddess of Economy, while encircling her brows with bays representative of unpoetical utility.

The Guildhall, the Mansion House, and the Bank are left. But Old Newgate is down, Christ's Hospital gone, and now Smirke's Post Office is under sentence of demolition. It was begun in 1824, superseding a previous building used for postal purposes off Lombard-street at the King William-street end, of which nothing remains, which had been the official headquarters of what system existed since the fire of 1666.

The long and splendid tale of the rise and development of the Post Office may not, however, be recapitulated in these pages, and this note of urgent appeal is now sounded in the hope that before it is too late the heavy hand of the destroyer may not descend upon what should be, and might be, the recognised gathering centre for all relics and records of unique interest historically bearing upon the progress of that great department that has so strikingly and pre-eminently made for the betterment of both our domestic and international relations and for the commerce and peace of the world.

ARCHITECTURAL ASSISTANTS OF THE OFFICE OF WORKS.

MR. PHILIP SNOWDEN had no fewer than five questions down on the paper in the House of Commons on Monday night with reference to the Architectural Assistants of the Office of Works. They were all addressed to Mr. Wedgwood Benn, as the representative of the First Commissioner of Works. The first was as to whether it is his intention to see that the desires of all of the class termed Architectural Assistants should be ascertained with a view to placing them upon the established list; and to this Mr. Benn referred the Hon. Member to the reply given on May 6, and which was published in the *Builder* of May 10.

Mr. Snowden then asked whether he is aware that up to and including the year 1903 the class termed Architectural Assistants, formerly Senior Draughtsmen, engaged in his department, performed all the professional duties, and with the ability now expected, of the Assistant Architects, consisting of the charge of one or more contracts, with the preparation of all the design and construction plans directly under the architects; or if he would say what class did perform these duties at this period, seeing that the total number of the class termed Assistant Architects numbered only eight, who were engaged in nearly every instance upon official routine, and that the amount of the architectural work in the department was within 80 per cent. of the total amount at present, but that the total number now is forty-six; whether he is prepared to aver that the professional abilities exhibited in the exercise of these duties by the Architectural Assistants were not equal to those exhibited now by the class termed Assistant Architects; and will he say why since that period numbers of Junior Draughtsmen have been established to take over these duties formerly satisfactorily performed, thus causing grave dissatisfaction to the Architectural Assistants.

Mr. Benn replied that the answer to the first part of the question is in the negative. In reply to the second part, there were thirty-one Assistant Architects in 1903, and now there are forty-nine. Of temporary men there were about 120 in 1903 and now about 216. As regards the third point, the Architectural Assistants have in the majority of cases had the opportunity of competing for permanent posts and have either not availed themselves of it or have failed. With respect to the last point, the establishment has since 1902 been recruited by competitive examination of members of the unestablished staff.

Mr. Snowden's third question was whether Mr. Benn was aware that the titles of the two classes engaged in his department, Architectural Assistants and Assistant Architects, are upon professional grounds one and the same; that the professional diplomas held by both classes are equally distributed, the number of Associates and Licentiates of the Royal Institute of British Architects in the Architectural Assistants class being twenty out of a total of fifty, and that of the Assistant Architect class eighteen out of a total of forty-six; whether he is aware that the services rendered by both these classes are one and the same; and that both these classes are equally certificated, the one class holding the technical certificate of the Commissioners of the Board of Works and the other class that of the Commissioners of the Civil Service; and will he therefore see that the Civil Service rule of equal reward for equal class conditions is in this case observed by establishment and remuneration.

Mr. Benn answered that there are nineteen Associates of the Royal Institute of British Architects among the Assistant Architects and eleven amongst the Architectural Assistants. There are also two Licentiates among the former and twelve among the latter. The Associates and Licentiates were not, of course, upon the same footing. The answer to the third question was in the negative, and to the fourth that the two certificates are not in any way equivalent.

Mr. Snowden inquired if the necessary steps will be taken to prevent the present established architects' staff, termed Assistant Architects, from being increased by the present method by members of the junior unestablished staff, termed Draughtsmen, by examination or otherwise, until the services of every member of the present certificated senior unestablished staff, termed Architectural Assistants, has been fully utilised by establishment and remuneration as those in a similar professional position, classed as Assistant Architects.

To this Mr. Benn regretted that he was unable to give such an undertaking.

Finally, Mr. Snowden asked whether he is aware that the designs and the necessary constructive documents constituting the basis of the building contracts formerly in the sole charge of the class termed Architectural Assistants directly under the chief of the branch is being now taken from them, thus reducing their positions to a subordinate one, and handed over to a class junior to them in age and service, and termed Assistant Architects of the second class; that the resulting friction occasioned by this action is hampering the progress of the work of the department; and will he give instructions that the original express conditions of service in this and other respects of the Architectural Assistants be reverted to.

Mr. Benn said that the question of work has rendered necessary the increase of the permanent staff in order to relieve the architects by devolving a certain amount of the work on the Assistant Architects. No instance of friction hampering the progress of the work of the department has been brought to the notice of the First Commissioner and no instructions are needed for any change in the current procedure.

THE ARCHITECTURAL ASSOCIATION:

FIRST SUMMER VISIT.

PLEASANT conditions favoured the visit, on May 18, to Ottershaw Park, near Woking, a large house by Messrs. Niven & Wigglesworth, situated some twenty-five minutes' drive from Woking Station. The building occupies an old site surrounded by fine park lands and gardens, and so escapes that rawness usual in new creations. The evolution of the present building has followed a course not uncommon in the circumstances. First commenced as an addition of two wings to an existing house, it has ended by the sweeping away of the original building with the exception of a few basement offices and foundations, retaining, however, the general shape and disposition of its rooms, and expanding beyond the first-intended wings on either side as well as upward in the form of a mansard roof not originally intended. A knowledge of these facts of growth is necessary to a right appreciation and judgment of the architects' efforts and their result.

As now completed the house consists of a squarely-proportioned centre block of three stories and a mansard, wings to east and west of lesser height, and single-story extensions beyond these, that to the west being a winter garden and on the east a covered loggia for meals, open only to the south, and easily reached from the dining-room or service-room. The external treatment is a rather severe type of Renaissance, without an Order, emphasis coming from quoins and window-dressings. All the buildings are faced with Bath stone, and there is a freedom from tricks and affectations of detail; the house will gain in effect as it weathers.

The plan is a fine and dignified one and appears also to be excellently arranged for smooth working. Entering beneath a central *porte cochère* on the north front, a broad flight of internal steps conducts the visitor directly to the hall, which is centrally situated on the south front overlooking the terrace gardens. To right and left of the hall are the library and study, both pleasantly-proportioned rooms (about 30 ft. by 20 ft.), with well-studied lighting. A broad corridor on the long axis divides library and study from main and service stairs on either side of the entrance vestibule, and leads to the dining-room at the south-east (with loggia beyond), and the drawing-room at the south-west, parallel with the billiard-room facing northward, both these rooms communicating with the winter garden at a lower level by an ante-room and steps.

The kitchen and offices are on the lower ground floor, and are admirably spacious and well fitted. Beneath the south terrace is a large private swimming-bath, and there is extensive provision for heating and fuel storage.

The first floor has a well-devised plan. Above the hall is the boudoir, on either side of which, facing south, are the bedroom suites for members of the family, each with its bath-room and wardrobe-rooms, the remainder of this floor being devoted to guest-rooms, similarly provided; the upper floors contain further guest-rooms and accommodation for servants.

Excellent design and workmanship are shown in the interior finishings, the dining-room in particular being beautifully panelled in oak with some very fine carving in the Grinling Gibbons manner, and a fibrous plaster ceiling toned with gilding and scumble stain to a most harmonious effect. A fine vista is obtainable through the length of the house—some 190 ft.—terminating in the dining-room fireplace.

The troublesome necessity of external sun-blinds appears to have been very ingeniously solved by Mr. Niven, who was kind enough to attend with the plans and explain the problems and difficulties of the work, and both to him and to Mr. Eckstein for permitting this very instructive visit the members were much indebted.

ARCHITECTURAL SOCIETIES.

The Society of Architects.

The Easter Examinations were held on April 2, 3, and 4, in London, Manchester, Leeds, Cardiff, Birmingham, Oxford, and Dublin, the latter being a new centre. The Council have appointed Mr. A. Alban H. Scott, M.R.San.Inst., Examiner in Section IV., Sanitary Science, in the place of Mr. C. H. Mead, M.R.San.Inst., who has been compelled, owing to continued ill-health, to relinquish the duties. Mr. R. Willock, F.R.I.B.A., Examiner in Section IIIA., was prevented by a serious illness from completing his duties, which were undertaken by the Chairman of the Board of Examiners, Professor Henry Adams, M.Inst.C.E.

The following have satisfied the Examiners:—E. R. Bill, Shrewsbury; W. Bradley, Great Lever, Bolton; S. F. Evershed, Northampton; W. J. Hadley, Carmarthen; H. Lyons, Dublin; H. E. Matthews, Yeovil; D. J. Moss, Peckham Rye, S.E.; H. Phayre, Egremont; G. H. Russell, Hitchin; E. D. Sherlock, Fallowfield, Manchester; R. H. Syms, Isleworth; R. Thompson, Catshill, Bromsgrove; H. A. Wilkinson, Wood Green, N.

The following students of the Society have obtained Sectional Certificates:—Section I. (Architecture)—F. Clemes, Weston-super-Mare; C. Ford Reading; W. J. Isaac, Warrington;

A. B. Johnson, Croydon; P. Morris, Nelson. Section II. (Building)—W. J. Isaac, Warrington; W. E. Kelly, London; L. A. Reynolds, Hull; F. J. Taylor, London. Section III. (Practice)—H. Best, Whitworth; H. J. Lurcock, London; J. Slater, Blackburn; E. J. Williams, Leicester. Section IV. (Sanitation)—J. A. Grimshaw, Accrington; H. J. Lurcock, London; P. Morris, Nelson; C. F. Overy, Weston-super-Mare; J. E. Sanders, Liverpool; J. Slater, Blackburn; F. J. Taylor, London; E. J. Williams, Leicester.

Devon and Exeter Architectural Society.

From the *Proceedings* of the Devon and Exeter Architectural Society we notice that the President, Mr. James Jerman, in the course of his address, said:—

From the widely-spread area of our Society's district it is difficult to bring together, except on very special occasions, a large body of members; much, therefore, must be left to the work of the elected Council. It may, however, be possible in time, and in conjunction with the other allied societies, to issue to every member a journal or report of our proceedings, say quarterly, in order that even the most distantly placed member of the Society may be kept in touch with matters affecting the profession. Probably the Royal Institute may see its way to consider the desirability of promoting the issue of such a publication for circulation between the allied societies on some general basis, and adapted to each locality. It may be said that the Royal Institute of British Architects' *Transactions*, issued fortnightly during the Sessions, include all matters of professional interest. This, however, cannot, and does not, provide a sufficient vehicle of inter-communication to enable the now numerous allied societies to fully publish their doings and set forth their aspirations.

ARCHÆOLOGICAL SOCIETIES.

Royal Archæological Institute.

The summer meeting of the Royal Archæological Institute of Great Britain and Ireland will be held at Northampton from July 23 to 31. On the first date, after a reception by the Mayor and Corporation of Northampton, the Society will visit the churches of St. Sepulchre, St. Peter, St. Giles, and Eleanor Cross at Hardingstone. On the following days visits will be made to Montague's Hospital, Weekley; Broughton House, Jesus Hospital, Lyde House, Rockingham Castle, Kirby Hall, Lamport, Ashby, and various churches in the County. The headquarters of the Institute will be at the Grand Hotel, Northampton.

The British Archæological Association.

The Council of the British Archæological Association has decided to hold the annual Congress in Gloucester from June 24 to 29. On the first afternoon a visit will be paid to Gloucester Cathedral, where an address will be delivered by the Dean, and in the evening there will be a reception by the Mayor of Gloucester at the Guildhall, and the delivery of the Presidential Address by Mr. Charles E. Keyser. The following days will be spent in the inspection of places of historic interest in Gloucester City and in visits to such places as Berkeley Church and Castle, the Saxon Church and the Chapel of Odda at Deerhurst, Thornbury Church and Castle, and Winchcombe Abbey.

ENGINEERING SOCIETIES.

The Society of Engineers (Incorporated).

The third annual dinner of the Society of Engineers (Incorporated) was held at the Criterion Restaurant on May 11, Mr. John Kennedy, the President, being in the chair. The company included Sir Maurice Fitzmaurice, K.C.M.G., Chief Engineer to the London County Council; Mr. Alexander Siemens, Past-President Inst.C.E.; Mr. H. P. Boulnois, Past-President Inst.C.E., Chairman of the Royal Sanitary Institute; Mr. William Clarke, M.Inst.C.E.; Mr. J. W. Wilson, M.Inst.C.E., M.I.Mech.E.; Mr. Arthur Valon, A.M.Inst.C.E., Vice-President; Mr. D. B. Butler, A.M.Inst.C.E., Hon. Secretary and Treasurer; Mr. A. S. E. Ackermann, B.Sc. (Engineering), A.C.G.I., A.M.Inst.C.E., Secretary. The loyal toasts, proposed by the President, having been honoured, Sir David Gill proposed "The Society," to which the Vice-President responded. The toast of "The Ladies" was proposed by Mr. J. W. Wilson, and acknowledged by Miss Siemens.

GENERAL NEWS.

The Royal Institute of British Architects.

The photographs and drawings brought over by Mr. R. A. Cram, the eminent American architect, to illustrate his paper on "Recent University Architecture in the United States," read before the Royal Institute of British Architects last Monday, will be on view in the Galleries of the Royal Institute, 9, Conduit-street, W., until Saturday, June 1. Admission on presentation of visiting-card.

Board of Architectural Studies, Cambridge University.

The general Board of Studies recommend the establishment in the University of a Board of Architectural Studies with the objects of organising the teaching of architectural subjects in the University, framing lecture lists for inclusion in the lists of lectures published by the General Board of Studies, and admitting students to courses of research in architecture. The new Board will include the Disney Professor of Archæology, the Slade Professor of Fine Art, the Professor of Mechanism and Applied Mechanics, the Reader in Classical Archæology, four members of the Senate, and two members nominated annually by the Board.

Royal Academy of Arts.

Mr. William Llewellyn, who has just been elected an Associate of the Royal Academy, was born in 1863, and has been a regular exhibitor in the Royal Academy rooms, mainly of portraits, during twenty-five years past. He entered the Kensington Training School in 1881, when Sir Edward Poynter, P.R.A., was Principal, and then studied at Paris, in the ateliers of Julien and Ferdinand Cormon. He is a member of the Society of Twenty-Five Painters and the Royal Society of Portrait Painters.

London Institution.

In furtherance of the scheme already adverted to in our columns the Board of Education have framed a Bill, to be introduced in the current session of Parliament, for vesting in H.M.'s Commissioners of Works the property and buildings of the London Institution, Finsbury-circus, E.C., as incorporated by Royal Charter of January 21, 1807, and for their use for purposes of the contemplated School of Oriental Languages. The Government will make compensation to the present proprietors, and will give a grant of from 20,000*l.* to 25,000*l.* for alterations of the premises and an annual subsidy of 4,000*l.* for maintenance.

"Shakespeare's England," Earl's Court.

For the exhibition that was opened last week at Earl's Court some models of old buildings have been made by Mr. E. Lutyens. Amongst the typical buildings represented are—in the Ducal Hall—Shakespeare's house; St. Mary's Church and Ford's Hospital, Coventry; the Windsor Cloisters; Ledbury Hall; and the old house, *temp.* the Commonwealth, of Dixter. There are also reproductions of the Fortune Theatre, London; Queens' College, Cambridge, and St. John's College, Oxford; Rushton and Compton Wynyates; Ockwells; Salisbury Cross; and some of the houses in Stamford. In the lake is a model of the *Revenge*, built under the superintendence of Mr. Seymour Lucas, R.A.

Spitalfields Market Improvements.

A Committee of the House of Lords, under the presidency of Lord Bristol, have found the preamble as proved and have ordered to be reported to the House for Third Reading the Bill promoted by the Stepney Borough Council in respect of the Spitalfields Market area. The Bill requires the Corporation of the City of London to carry out certain improvements in and about the market area whereof, in pursuance of an Act of 1902, the Corporation acquired the freehold; that Act also empowered the Corporation to acquire within ten years the leasehold interests in the market held by Mr. R. Horner. The Corporation had neither obtained possession nor proceeded with the improvements; the Borough Council contend that the obligation to make the improvements is distinct from the acquisition of the market for its transfer to the Borough Council.

The Wertheimer Art Sale.

The collections of the late Mr. Charles J. Wertheimer, of Norfolk-street, Park-lane, W., who died on April 25 last year, have just been dispersed at Messrs. Christie's rooms. The principal lots included several old French clocks, of which two—a Louis XIV. clock, 32 in. high, in a drum case of tortoiseshell, with bronze figures of Venus and Cupid, and a Louis XVI. clock, 22 in. high, in a case in the fashion of a celestial sphere, overlaid with lapis-lazuli plaques—were bought by Mr. Asher Wertheimer for 2,700 guineas and 2,500 guineas respectively. M. Jacques Seligmann, of Paris, purchased, for 13,000 guineas, the suite of gilt carved wood settee, bergère, and six fauteuils, having their seats, backs, and arms upholstered in old Beauvais tapestry with Boucher designs, and a Savonnerie carpet, 25½ ft. long by 16½ ft. wide, woven with a floral pattern in polychrome upon a black ground, was sold for 2,600 guineas (Lenygon). The two days' sale of 164 lots realised 92,463*l.*

Israels at the French Gallery.

Messrs. Wallis & Son, who, by the way, are plaintiffs against the United Service Club in an ancient lights action, have opened a Memorial Exhibition of the pictures of Joseph Israels, Hon. R.A., who died at The Hague last year. Some of the paintings are old favourites, such as the eloquent "Grace Before Meal" and the realistic "Scribe." One is struck by the likeness of such early works as "The Bather" and "Meditation" to the ideals of Etty, while the dignity and technique of "Après la Messe," a portrait of great intensity, reveals the origin of the designation of Israels as "the Jewish Rembrandt."

COMPETITION NEWS.

Hale Town-Planning Competition.

The Council of the Manchester Society of Architects have been informed that the District Council of Hale have reconsidered their decision, and have agreed to revise the conditions in respect to the points alluded to in our issue of May 3 (p. 513), namely, to issue a plan of the district for the competitors, with particulars up to date of houses, sewers, and main levels; to delete the clause in their conditions asking for the architect's inclusive fee for subsequent work; to appoint a competent advisor, to be approved by the Council of the Manchester Society of Architects, to assist the Committee; an extension of time for sending in plans will be given. The Council of the Manchester Society have intimated to their members that these conditions, as revised, are satisfactory. The restriction issued previously therefore has been withdrawn.

Model Colliery Village, Glamorgan.

The idea of promoting a competition for a model village in the Ely Valley, between Llantrisant and Tonyrefail, was excellent, but we fear the result will not fulfil the expectations of those concerned. This is a pity, for the competition, under good conditions, might have produced interesting suggestions for dealing with a topical problem. Briefly, the Welsh Navigation Steam Coal Company ask for a scheme for a model colliery town and offer a premium of 20*l.* But as the adjudicator (whose decision is final) is the Chairman of the company, unsupported, it seems, by any professional advice, and as "all the plans, estimates, etc., forwarded to the company will become its property," no architects of repute are likely to respond to the invitation to compete.

School at Greenock.

For the new school in the West-end of Greenock Mr. William R. Glen, of Glasgow, has been appointed architect. The design of Mr. Peter Caldwell, of Paisley, was placed second (40 guineas premium), and that by Mr. James Rome, of Kilmarnock, third (30 guineas premium).

Baptist Chapel, Bedford.

In a recent competition, for the Russel Park Baptist Chapel, Bedford, the designs submitted by Messrs. George Baines & Son, 5, Clement's-inn, Strand, W.C., were placed first, and the firm have been appointed architects for the scheme.

Church, Schools, etc., Mansfield.

The limited competition recently held for U.M. church, schools, institute, and caretaker's house, in Nottingham-road, Mansfield, has been settled in favour of Messrs. George Baines & Son, 5, Clement's-inn, Strand, W.C., and the first section of the scheme, estimated to cost about 4,700*l.*, is to be proceeded with at once.

Art Gallery and Museum, Belfast.

The Belfast Corporation have decided to erect an Art Gallery and Museum on a site in the Botanic Gardens Park, which is a public park situated in the southern district of the city, and adjoins the grounds of the Queen's University. The Local Government Board have made an order authorising the appropriation of the portion of the park for the purpose indicated. The Corporation have acquired an additional 6 acres of ground adjoining for park extension purposes. The site for the proposed Art Gallery and Museum is 1 acre and 14 perches in extent. It has a frontage of 170 ft. to the Stranmillis-road, which bounds the park on the eastern side. The matter is in the hands of the Library and Technical Instruction Committee, who purpose inviting competitive designs, but their arrangements are not yet sufficiently advanced to be made public.

BOOKS.

Columns and Struts: Theory and Practical Design. By WILLIAM ALEXANDER, M.Inst.C.E. 101 illustrations. (London: E. & F. N. Spon, Ltd. 1912. Pp. 267. 10s. 6d. net.)

THIS treatise deserves more than ordinary attention because it is written by an engineer of considerable practical experience in the design of large struts, and who is consequently able to deal with various practical matters which cannot be discussed with like authority by a purely theoretical writer.

For columns, struts, or stanchions of small dimensions employed in building construction refinements in theoretical calculations are unimportant, as members of the kind usually consist of rolled sections, the safe loads for which have been ascertained by actual tests.

In built-up columns, however, the theoretical section can be more closely attained by the selection and combination of different bars. The larger the member the more closely can theoretical requirements be approached and the more necessary it is to inquire into the reliability of theories or formulæ.

Chapter II. is an analysis of various existing formulæ and is welcome as an additional reminder of the limitations attaching to the many empirical or semi-empirical formulæ that have been put forward for the design of columns and struts.

In succeeding chapters the author investigates the mechanics of column and strut phenomena on lines somewhat different from those usually followed. The true relations between load and deflection are demonstrated and the resulting equations are based upon the permissible amount of deflection, which in turn is determined from the permissible fibre stress intensity.

Comformably with this treatment the character of the web stresses is shown, and their values are determined directly from the equations to the curves of deflection, instead of being computed from an imaginary transverse load, in accordance with customary practice.

The author deals later with the influence exercised by the form of the cross-section of a strut on its strength, and discusses in detail the efficiency of various familiar sections from the same standpoint. The practical equations derived from this investigation make due allowance for sectional form in a manner that obviates the need for the usual empirical constants.

Chapter XI. includes the discussion of columns, the section of which is not uniform from end to end, but tapered continuously or reduced in steps. The general effect of tapering is indicated, and a number of practical matters are discussed.

Chapter XII. is devoted to a detailed consideration of the struts which were the first to fail in the Quebec Bridge, a part of the book that will thoroughly repay perusal.

In the final chapter we have a summary of the equations required for practical design and a number of problems worked out so as to illustrate the correct application of the formulæ.

As may be judged from what we have said, this work is by no means a primer for the student, but rather a treatise for the practical structural engineer, who will find it a serviceable addition to previous writings on the same important subject.

Engineering Work in Public Buildings. By R. OWEN ALLSOP, architect. Seventy-five illustrations. (London: E. & F. N. Spon, Ltd. 1912. Pp. 158. 12s. 6d. net.)

THIS book deals with power, lighting, heating, ventilation, and water supply installations in public institutions and other large buildings, and should be appreciated by architects who may have occasion to deal with such matters. It would be impossible to discuss these subjects in a manner satisfactory from the engineer's standpoint within the limits of the present volume, but Mr. Allsop, as an architect himself, has shown just appreciation of the kind of information required by members of his profession. The volume is written on broad lines, is well illustrated by line drawings, and has a useful index.

The Theory and Practice of Heating and Ventilation. By A. H. BARKER, B.Sc., B.A. (Lond.). (London: The Caxton Press. 1912. Pp., text, 740; appendix, lxxvi.)

SINCE the historic treatise of Hood was gradually rendered obsolete by modern developments in the practice of heating and ventilation, there has existed in the United Kingdom much need for a really comprehensive work on that branch of engineering.

We gladly welcome the enclopædic volume written and compiled by Mr. Barker, who possesses the special qualifications given by practical experience as a heating and ventilating engineer, in addition to those afforded by scientific training.

The object of the work is to give a detailed explanation of the application of scientific principles to the problems with which the heating and ventilating engineer is confronted, and to point out the limits within which these principles can be practically applied.

Apparent discrepancies between theory and practice are more noticeable and more difficult to account for in heating and ventilating than in most other branches of engineering. For this reason a full recognition of the limitations affecting the application of theory is almost as necessary to thorough understanding of the subject as knowledge of the principles involved.

Instead of blindly accepting the conclusions drawn from experimental and theoretical investigation as directly applicable to the solution of problems, the author has critically examined the applicability of scientific principles in the light of practical experience.

Those who have had experience are fully aware that the problems arising in heating and ventilation practice are as elusive and difficult of accurate solution as any with which an engineer may be confronted. It is scarcely possible to explain intelligibly and correctly the application of fundamental principles to the solution of such problems except in a manner which assumes that the reader possesses a certain amount of scientific knowledge.

Therefore, in the earlier part of this book, Mr. Barker gives a *résumé* of the principles with which the reader is supposed to be familiar, and this serves the part of an introduction to the chapters devoted to applications of the principles. It may be remarked here that the author has not attempted to describe practical details of construction or the mechanical work involved in the installation of apparatus.

To convey in a few words the scope of the treatise, we give the following brief survey of its contents.

In Chapters I. to IV. are discussed the properties of matter, motion, energy, heat, air, water, and steam. Then, after a chapter on the flow of liquids and gases, come six chapters on ventilation, the first of the series dealing with hygienic considerations and the others with the movement of air and the calculation of quantities in ventilation. Next we have six other chapters, constituting a group devoted to heat transmission, methods of supplying and distributing heat, the emission of heat from radiating surfaces, and the temperature maintained in a building. After these chapters the subjects taken up include boilers and chimneys, methods of heating and humidifying air, the design of pipe installations, various systems of heating buildings, and the testing of heating and ventilating plant.

At the end of the volume is an appendix containing a large collection of useful tables and memoranda.

The general conception of this work and the manner in which the idea has been realised leave nothing to be desired. It fills a long-felt gap in technical literature, and will undoubtedly be accepted with gratitude by the professional and commercial classes who are directly interested in the theory and practice of heating and ventilation. The labour involved in the preparation of the text and the numerous tables and diagrams by which this is accompanied has obviously been very great, and we cannot help wondering that a man full of professional and commercial business should have been able to spare the time for undertaking so heavy a task, upon the completion of which the author is to be congratulated most heartily.

BOOKS RECEIVED.

THE LAW OF BUILDING, ENGINEERING, AND SHIP-BUILDING CONTRACTS. By Alfred A. Hudson, K.C. (London: Sweet & Maxwell, Ltd. 5s. net.)

SILVERWORK AND JEWELLERY. By H. Wilson. (London: John Hogg. 6s. 6d. net.)

THE MECHANICS OF BUILDING CONSTRUCTION. By Henry Adams, M.Inst.C.E., etc. (London: Longmans, Green, & Co. 6s. net.)

RAMBLES IN THE PYRENEES AND THE ADJACENT DISTRICTS. By F. Hamilton Jackson. (London: John Murray. 21s. net.)

CORRESPONDENCE.

Exhibition of Port of London Competition Designs.

SIR,—With reference to Mr. Quennell's letter, published in your issue of April 19, we notice that no further remarks have been called forth from other competitors. We now beg to suggest that, in face of the difficulty of getting together the majority of the designs submitted, owing to the extensive area from which the designs have been sent, at any rate an exhibition might be organised to show those designs sent in by London and district competitors.

Of course, your correspondents do not suggest that such an exhibition should be held until after the final decision of the assessor.

Premises for the accommodation of such an exhibition could, we feel sure, be secured with comparative facility—possibly the galleries of the Royal Institute of British Architects or those of the Architectural Association, or, if neither are obtainable, there is a chance that the lately re-erected Crosby Hall (Chelsea) might be available for this purpose.

We believe that the governing bodies of either of these institutions and building would be likely to give their aid to encourage a movement the sole aim of which would be to benefit the profession in general.

ARTHUR E. MAXWELL.
C. ORLANDO LAW (Lic.).

The R.I.B.A. Elections.

SIR,—Regularly with the advent of the Royal Institute of British Architects' Council and Committees' election each year there appear in the columns of the professional Press pathetic letters from gentlemen asking for instruction and help in filling up their papers. Such a one has appeared within the last fortnight, reiterating the same old complaint in the following terms:—

"The time will soon arrive again when the members of the Institute will have to elect their representatives on the Council and various Committees for the coming year, and, bearing in mind the difficulty the average member has in deciding for whom to vote, I venture to inquire if something cannot be done to assist him in his selection.

I think I am safe in saying that to most members many of the candidates—particularly new ones—are comparatively, if not quite, unknown, or, if known, their ability, experience and work are not. It must be remembered that the architect gains his knowledge of his professional fellows chiefly by means of the building journals and the various particulars of buildings they publish; now there are many men of large practice whose names never seem to get into print, and whose drawings are never published; it follows, then, that these men are probably unknown to their brother architects, and when, as sometimes happens, they are listed among the candidates, they invariably fail to receive sufficient support for election, notwithstanding that their experience is far greater than many of those who do manage to gain a seat."

May I, Sir, offer the suggestion to distressed voters that the careful and regular perusal of the accounts of the business meetings published in the Royal Institute of British Architects' *Journal* would prove a much greater help in selecting candidates than the mere haphazard

voting for a member because he happens to have a penchant for seeing his work continuously illustrated in the professional journals?

I think that many, both on the Council and off, must agree with the entire truthfulness of the statement above quoted, and I am convinced it is a matter which should be inquired into with a view to adopting some procedure more satisfactorily to meet the needs of these progressive days. I believe there exists an almost unanimous feeling against individual canvassing in a body such as ours, but this does not prove the case pro or contra. In the case of Parliamentary candidates (I think I am right in saying in other of the professions, closed and otherwise) canvassing is adopted as a matter of course, without—where everyone is on the same footing—any great harm ensuing.

The writer of this letter is also a candidate, but in this case he desires carefully to retain his anonymity, and therefore signs himself

MEMBER, R.I.B.A.

"A Piccadilly Blunder."

SIR,—Under this heading in the leading article of the *Builder* of May 17 you publish a statement concerning the occupier of the corner premises, next to the Piccadilly Hotel, which tends to seriously aggravate the annoyance to which Messrs. Denman, the building owners, and myself, whilst acting for them, are subjected, by reason of the unavoidable necessity on their part of reinstating their premises, which you think right to describe as a hopeless blunder and an eyesore.

You state that you understand the decision to rebuild the old front has been arrived at owing to the fact that the occupier considers a repeat of the hotel gable would be quite unsuitable for the purposes of his business, and you further state that had the matter been rightly handled some arrangement could have been arrived at which would have given the occupier a reasonable elevation suitable to his purpose.

Messrs. Denman have not refused to repeat the hotel gable; on the contrary, they agreed to the completion of the hotel being carried out by the hotel company, and they permitted their own building to remain at a standstill in a half-demolished state for eleven months to enable arrangements between the Crown authorities and the hotel company to be completed. Such arrangements however failed.

Messrs. Denman then offered to erect a new building for themselves designed with a slight modification of the hotel architecture; this design was acceptable to the Crown authorities, but could not be carried into execution on account of certain concessions having been granted by the Crown to the hotel company, whereby the consent of that company became necessary, and which consent the Crown were not able to obtain.

These facts should show that Messrs. Denman have done all that they possibly could to avoid leaking up the continuity of the desired architectural treatment of this part of Piccadilly. Their efforts have resulted in nothing but delay with their own building, and heavy costs to themselves for useless negotiations which were beyond their power to conclude successfully.

As this matter has attracted so much public notice, particularly in the West-end of London, I think you will agree that you cannot do otherwise than publish this letter in fairness to my clients and to myself.

WILLIAM A. HASKINS.

Lighting by Air-Gas.

SIR,—I had my attention drawn to your article on the above subject in your issue of April 26, and I should have written at once to protest against some of the statements made in that article, particularly to the table of comparative costs, wherein acetylene is put down at 1s. 3d. and air-gas at 1½d. I was, however, informed that others were writing to, and so I waited to see what might be said by others.

In your issue of May 10 you have published an extremely moderate letter from the Acetylene Publicity, Ltd., who have, in my opinion, underrated the case for acetylene.

You state in your original article was supplied by a named firm, and you practically suggest that in such cases tables of costs must be taken with a grain of salt. That is what we have always done and what we have believed the public have done with regard to the wild statements which have recently been made as to the cost of air-gas. You, however, in your footnote contradict the statement made by the Publicity Company as to the price of carbide. The Publicity Company tell you in their letter that carbide costs 1½d. a pound, and you for some reason say that it costs double that sum.

Now, Sir, this Corporation imports and sells between 4,000 and 5,000 tons of carbide per annum, and I have to inform you that carbide at the present moment is at a higher price than it has been for several years, and yet we sell in 1 cwt. lots at 14s. per hundredweight, and when purchased in 4 cwt. lots and upwards—as is always the case where a house of even twenty lights has to be lit—the price is 13s. 6d. per hundredweight. This price, you can readily see for yourself, works out at less than 1¼d. per pound. Further, the carbide is sold to the small trader at a price which enables him also to supply his local customer at the prices I have named.

Therefore, in obtaining the data upon which you base your statement that carbide is 3d. per pound, I can only assume that you must have bought a pound tin of some specially doctored carbide used for some patent cycle lamp, which, of course, is not the carbide which is used for serious lighting schemes.

The figure, therefore, at which acetylene must be taken is 6d. and not 1s. 3d., and this 6d. represents acetylene burnt in a flat flame. Now, Sir, in your table of costs, coal-gas burnt as a flat flame is put down at 1s.; coal-gas burnt in an incandescent mantle is put down at 2½d. If the figure were 3d., we could say your article shows that the cost of using coal-gas with a mantle is one-quarter the cost of using coal-gas in a flat flame, and, Sir, the proportion of cost between using acetylene as a flat flame and using acetylene with a mantle is the same as for coal-gas. Therefore, if we use a mantle with acetylene, the 6d. is turned into 1½d., which is exactly the same as the figure given by the particular firm in your article for their own light, which figure, as you will readily admit, has to be taken with a grain of salt. In fact, your table of figures should be as follows:—

	s.	d.
Acetylene, flat flame		6
Acetylene with a mantle		1½
Electric—incandescent	1	2
Flat flame coal-gas	1	"
Duplex oil lamp		7½
Incandescent coal-gas		2½
Air-gas		1½

I do not propose to criticise the air-gas 1½d., but I could prove beyond all question that it is at least 3d. However, all we have ever claimed is that acetylene is equal in price to air-gas—carbide as against petrol and mantles. Where an acetylene plant is installed no repairs or renewals are required for years. Where air-gas is installed the mantles have to be changed very frequently, and it is also necessary to contemplate a new hot-air engine occasionally, and in some makes we have known a hot-air engine to be worn out and require renewal inside the first twelve months. We do not very extensively use the mantle with acetylene for domestic purposes, because we find that a 100-candle-power light, such as the air-gas people give as the standard of comparison, is never required in domestic lighting, and herein lies one of the chief advantages of acetylene as against air-gas. The air-gas light is a fixed standard light, and, even if it is a small passage or a lavatory which is being lit, one of these powerful lights has to be employed, whereas with acetylene we have a range of burners from 3-candle-power upwards, each burning an exact proportion of gas to the candle-power given. Consequently we can make the definite statement that, apart from comparing high candle-powers, which is entirely misleading (but in which we do not, after all, show very badly), when house lighting is being considered, we can guarantee all comers, and we do guarantee all comers, that:—

1. Acetylene costs less to instal than air-gas.
2. Acetylene for lighting any given house properly costs no more than air-gas, and in many cases less.

If any of your readers are in doubt as to comparative costs, let them get an estimate from one of the firms who advertises that air-gas costs one-third the amount to instal which acetylene does, and we will undertake that we will supply a first-class acetylene installation at something less than the air-gas installation, and so prove that acetylene does not cost three times as much as air-gas to instal. The same firms will doubtless tell your readers that acetylene costs six times as much as air-gas to maintain. Therefore, with the estimate for the installation your readers should insist upon getting a price to maintain the lighting and the plant for one or more years. We will undertake to maintain the acetylene lighting at the same price, and thus prove that acetylene does not cost six times as much as air-gas. We have done this in many cases, and this, indeed, is the only method now left open to us to refute the extravagant statements which are being made by some of the air-gas companies.

Where an actual owner of an air-gas plant has given figures which would substantiate air-gas firms' claims that air-gas costs practically nothing to maintain, and we have had an opportunity of investigating the case, we have usually found that the petrol has been purchased and booked down to the motor-cars, nothing being charged against the air-gas plant, and where an owner of an acetylene installation has had any real grievance about cost it has usually turned out that the carbide, having naturally been bought for lighting the house, has been regarded as used entirely for that purpose, whereas it has been used by the chauffeur in motor car lamps and by the gardener for various purposes.

In conclusion, I venture to point out to you that I have been engaged in the acetylene lighting business for sixteen years and in the air-gas lighting business for seven years. Consequently I may, perhaps, be given credit for speaking fairly.

There is an enormous field for both acetylene and air-gas, and in a way they do not even compete with each other, their fields lying in different directions; but neither the one nor the other can expect any permanent success based on original misstatements in obtaining business.

H. E. BAKER, Managing Director of THE ACETYLENE CORPORATION OF GREAT BRITAIN, LTD.,

SIR,—In your issue of May 10 you very kindly published a letter from me drawing attention to inaccurate statements in your journal as to the relative cost of lighting by acetylene and petrol air-gas.

In a footnote to my letter you say:—"The discrepancy complained of seems to be based on the price quoted for carbide, which is given by our correspondent at half that at which it is offered to the ordinary purchaser." In reply to this assertion I can only repeat that the market price of carbide to the consumer is not 28s. per hundredweight, but 14s., and for quantities exceeding 4 cwt. the price is 13s. 6d. per hundredweight.

ACETYLENE PUBLICITY, LTD.
VICTOR D. DUVAL (Manager).

FIFTY YEARS AGO.

From the *Builder* of May 24, 1862.

The Monument of the Emperor Nicholas I., St. Petersburg.

THE question of right principles of design for memorials of individuals the most eminent the several questions rather of nature of the testimonial and realisation of the idea of the *monument*, and all those which relate to the art-treatment of "public statues"—must shortly claim elucidation at our hands, or a restatement of views that long since we put forth. Pending the interval of the accomplishment of our duty, progress in the division last referred to, of the subject, will be induced by the publication that we make this week, of one of the most recently-achieved examples of the form of memorial on the Continent, which is commonly, and with a sort of logic which is productive of bad result, with us called *statue*. Seldom, indeed, do we find the intention which is that expressed by the term *monument*, along with the perception of the principles of collective art, which we have claimed as common with perception of what is architecture, and as perhaps best to be acquired through medium of an architect's education properly conducted—pursued and made apparent with the success that characterises the work which is now, probably for the first time, brought to the notice of British artists. The monument is that at St. Petersburg, just completed, of the Emperor Nicholas, which is due, so far as the main design, to an architect, and as regards the general execution and details to sculptors, individuals of different professions nominally, but who appear in this instance to have co-operated to produce the work which might appear that of one artist—architect capable of moulding the figure and feeling that *sculpture* should be predominant in such a monument, and a representation of the deceased be the end and keynote, or sculptor practised in the details of architectural mouldings and ornaments, and conversant with the æsthetics of our art and the principles of grouping and composition.

EDITORIAL SUMMARY.

"A Message from America" is the title of the leading article, dealing with the lecture of Mr. R. A. Cram at the meeting of the Royal Institute of British Architects on Monday.

The second article deals with the paintings at the Royal Academy Exhibition (p. 594).

"Notes" (p. 594) comprise: "The Nationalisation of Railways"; "Tattershall Castle"; "Regent's Quadrant Competition"; "Competition Publicity"; "Assessing the Assessor."

A meeting of the Royal Institute of British Architects was held on Monday, when Mr. R. A. Cram delivered a lecture on "Recent University Architecture in the United States" (p. 595).

A short article on the old General Post Office will be found on p. 599.

For some Parliamentary questions on Architectural Assistants and the Office of Works see p. 600.

The first summer visit of the Architectural Association took place on May 18 to Woking (p. 600).

In Architectural Societies (p. 600) will be found short notices of: "Devon and Exeter Architectural Society"; "The Society of Architects."

Book notices (p. 602) include: "Columns and Struts"; "The Theory and Practice of Heating and Ventilation"; "Engineering Work in Public Buildings."

In Correspondence columns (p. 602) will be found letters on: "The R.I.B.A. Elections"; "Exhibition of Port of London Competition Designs"; "A Piccadilly Blunder"; "Lighting by Air-Gas."

The Monthly Illustrated Review of Engineering (p. 605) includes: "Lighting by Acetylene Gas"; "Reinforced Concrete in Great Britain," etc.

The Building Trade Section (p. 609) contains: "Trade Disputes and Building Contracts"; "The Trade Union Bill"; "Government Contracts"; "Projected New Buildings in the Provinces," etc.

The annual dinner of the Quantity Surveyors' Association took place on Monday, see p. 612.

Legal Column (p. 613) includes notes on "London Building Act"; "The Right to Light."

In Law Reports (p. 614) are short reports of the following cases: "Minturn *v.* Barry" case under the London Building Act; "Greig *v.* Robertson"—case under the London Building Act.

MEETINGS.

FRIDAY, MAY 24.

The Royal Sanitary Institute.—Provincial sessional meeting, Blackpool, in the Council Chamber, Town Hall, when discussions will take place on (1) "The Card Index System as Applied to Public Health Work," to be opened by Mr. E. W. Rees-Jones, M.D., D.P.H. (Medical Officer of Health, Blackpool), and "A Description of the Joint Scheme of Sewerage for Thornton-le-Fylde, Bispham-with-Norbreck and Carleton," to be opened by Mr. Arthur Hindle, M.Inst.C.E. The chair will be taken at 7.30 p.m. by Colonel J. Lane Notter, R.A.M.C., M.A., M.D.

Junior Institution of Engineers (at the rooms of the Institution, 39, Victoria-street, S.W.).—Mr. S. H. Hole on "Brewery Plant."

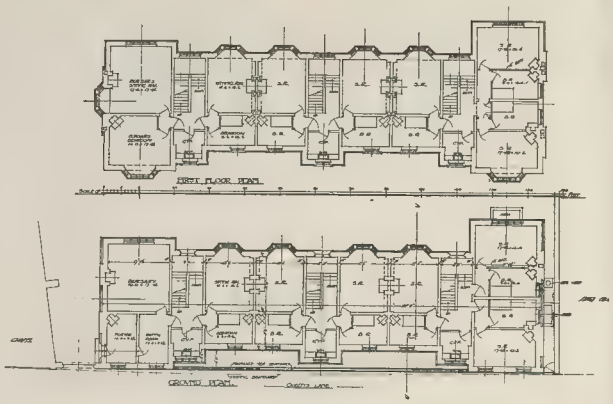
FRIDAY, MAY 31.

Junior Institution of Engineers.—Mr. Arthur Bourne on "Standardisation of Engineering Catalogues."

ILLUSTRATIONS.

Worksop College Chapel.

THIS College of St. Cuthbert's, Worksop, is one of the group of Woodard Schools scattered over the country and founded by Canon Woodard, the chapel forming the principal feature in each block of schools, that of Lancing being the best known. Messrs. Carpenter & Ingelow were the architects employed for the foundation of the schools



New Buildings, Queens' College, Cambridge.
Mr. Cecil G. Hare, Architect.

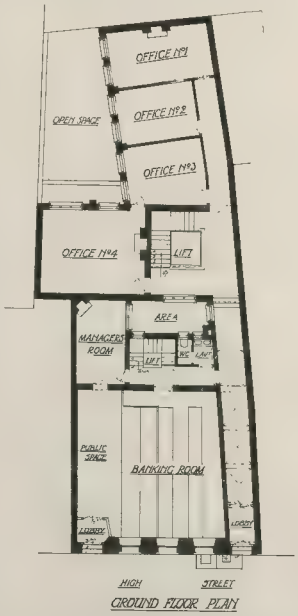
The Worksop School has for long used a temporary chapel until Lord Mountgarret came forward and offered to erect a permanent chapel at his own cost. This has now been done, and the chapel, an interior view of which we publish to-day, was opened on October 31 last.

The chapel is connected to the school buildings by an ante-chapel, and is 120 ft. long, 36 ft. wide, and 56 ft. to the centre of the ceiling, and seats 450 persons.

The builders were Messrs. Lowe & Sons, of Burton-on-Trent; the decoration of the ceiling was executed by Mr. F. A. Jackson; the sculpture and carving was executed by Mr. Paul Montford, R.B.A.; the clerk of works was Mr. F. Walker; and, since the retirement of Mr. Ingelow, the architect to the School has been Sir Aston Webb, R.A.

North-Western Polytechnic.

A LIMITED competition was held early in the present year for the North-Western Polytechnic, and the assessor, Mr. W. Flockhart, F.R.I.B.A., awarded the first place to Mr. Arnold Mitchell, F.R.I.B.A. The drawing now reproduced is exhibited at the Royal Academy.



GROUND FLOOR PLAN

Business Premises, Doncaster.
Mr. Sydney D. Kitson, F.R.I.B.A., Architect.

The site of the building is at the corner of Prince of Wales-road and Kentish Town-road, N.W. The main entrance is from Prince of Wales-road, and leads directly to the entrance hall, with main staircase opposite. The rooms are conveniently arranged as classrooms, laboratories, and workshops, and are designed for instruction of a nature to meet the growing requirements of the district. The exterior is of brick and stone, simple in treatment, consistent with a rigid limit of cost.

Business Premises, Doncaster.

THIS building, situated in the centre of Doncaster, is now in course of erection for Colonel Somerville, to take the place of an old house and garden.

The front of the ground floor will be occupied by a bank, while the rear portion of the ground floor and the whole of the upper stories are intended for offices.

The front is being built of Portland stone with steel window frames. The whole of the floors are of concrete construction reinforced with steel joists and expanded metal.

Mr. Sydney D. Kitson, F.R.I.B.A., is the architect, and Messrs. Harold Arnold & Sons, of Doncaster, are the contractors.

Queens' College, Cambridge.

THESE new buildings are to be erected on the site of some old almshouses, and will form the third side of an incomplete quadrangle. The chapel is to the north and Fawcett's Buildings to the south.

The east side of the new block abuts directly on to Queens'-lane, and this elevation forms the subject of the illustration, the original of which was shown in the Royal Academy Exhibition last year.

The buildings provide accommodation for twenty-six undergraduates, with rooms also for the bursar and occasional guests, and have been planned in the traditional manner.

The materials proposed are small red brick with Clipsham stone dressings and red-tiled roof, in harmony with existing buildings, and the buildings are arranged with fireproof floors and staircases throughout. Bathrooms and lavatories have been arranged in the basement.

The late Mr. G. F. Bodley was responsible for the chapel, while the new buildings which adjoin it have been designed by Mr. Cecil G. Hare.

INTERNATIONAL FIRE SERVICE COUNCIL.

This year's general meeting of the International Fire Service Council has been postponed to Wednesday, June 5, which is the last day of the International Conference on Fire Prevention. Fire Service, and Fire Insurance Questions, to be held under the auspices of the Council on June 2 and subsequent days, instead of the previously announced May 25. The Council's temporary headquarters are at the Hôtel de l'Europe, St. Petersburg.



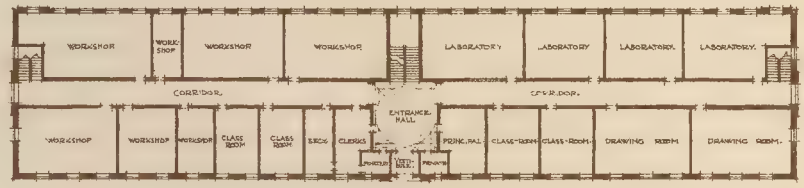
BUSINESS PREMISES, HIGH STREET, DONCASTER. Mr. Sydney D. Kitson F.R.I.B.A., Architect.

Royal Academy Exhibition 1912.

THE NORTH-WESTERN POLYTECHNIC.
KENTISH TOWN. N.W.



FRONT



PLAN OF GROUND FLOOR.

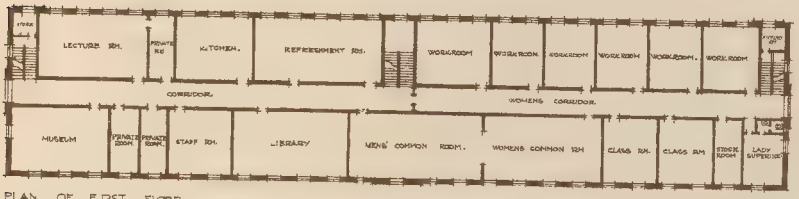
Scale of [illegible]

Scale of [illegible]

(Royal Academy Exhibition, 1912.)



WALES' ROAD.



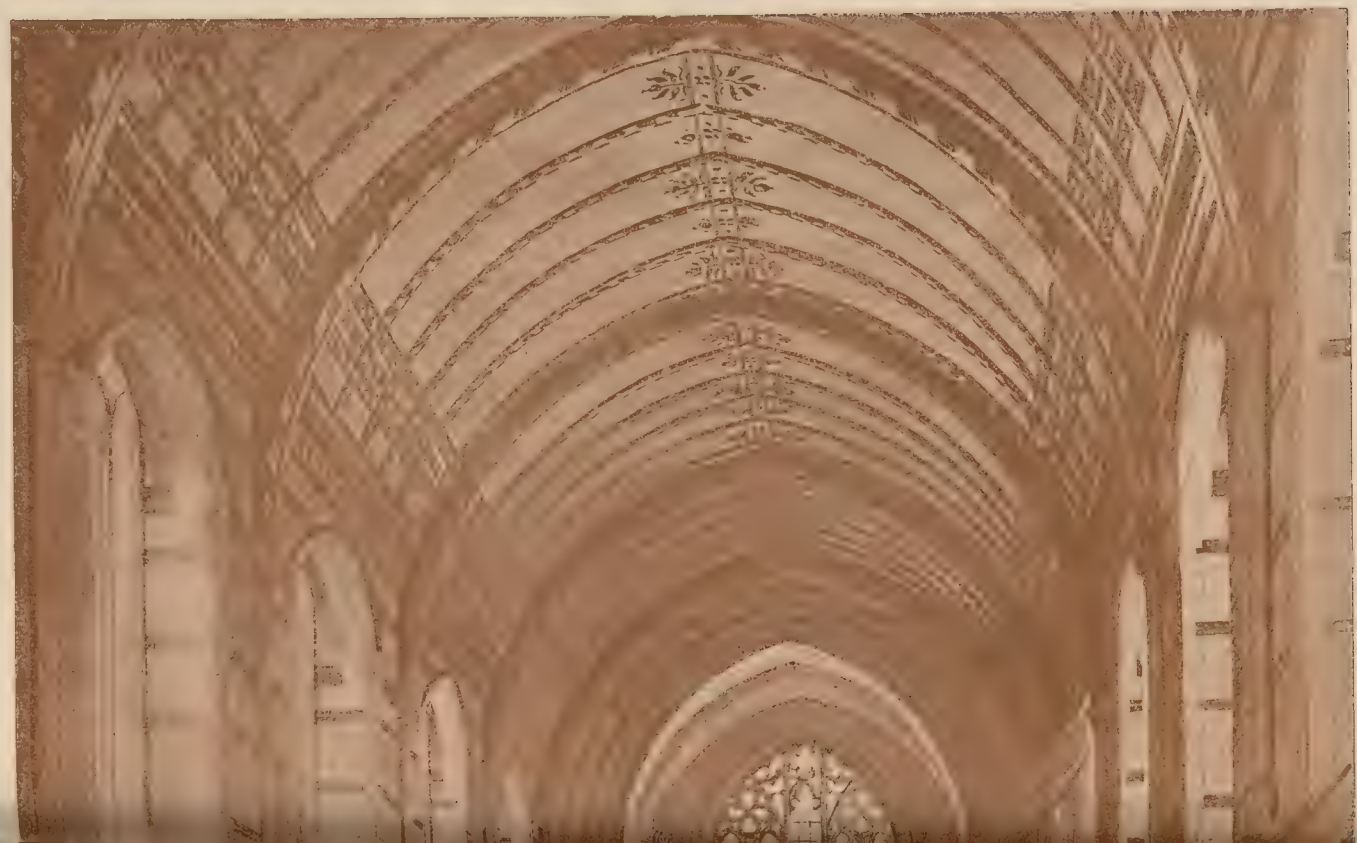
PLAN OF FIRST FLOOR

FEET (FOR ELEVATION)
FEET (FOR PLANS)

ARNOLD MITCHELL ARCHT
FRIBA
7 HANOVER SQUARE
LONDON W

"NK-PHOTO" SPRAGUE & Co 70 & 72, DEAN STREET, SOHO, W

AD.—Mr. Arnold Mitchell, F.R.I.B.A., Architect.





WORKSOP COLLEGE, NOTTS. INTERIOR OF NEW CHAPEL.—Sir Aston Webb, R.A., Architect.

(*Royal Academy Exhibition 1912.*)



NEW BUILDINGS, QUEEN'S COLLEGE, CAMBRIDGE. Mr Cecil G Hare Architect

(Royal Academy Exhibition, 1911.)

MONTHLY REVIEW · *of* · ENGINEERING.

LIGHTING BY ACETYLENE GAS.

LAST century might be said to have commenced a new era so far as lighting is concerned. In 1836 the great chemist Davy found that the residue obtained the extraction of potassium evolved an l-smelling combustible gas when brought o contact with water, and in 1862 Wöhler ually produced calcium carbide and from acetylene, which compound (calcium carbide) s decomposed by water and formed lime, ing off at the same time acetylene. Thus first steps were taken which of late years ve led to the useful manufacture of a duct and gas which have become of great to the public in general. Other gases were sely investigated, with the result that we v have a choice of several effective means lighting for various purposes.

The material from which the gas is primarily de must be one that can be readily obtained mmercially at a low rate. Calcium carbide, m which acetylene gas is produced, is now ell-known commodity, and its adaptability been effectively demonstrated by cyclists motorists.

The manufacture of the gas must be done in imple a way as possible; the plant must not complicated, but should be of such simple gn that a stable-boy can attend to it. tylene is made in the plant by bringing er and calcium carbide into contact, their mical combination producing the gas. chemical action is shown by the following ation, $CaC_2 + H_2O = C_2H_2 + CaO$. That say, the carbon of the calcium carbide and hydrogen of the water unite, forming ylene (C_2H_2) and lime.

alcium carbide is a hard greyish crystalline d, staple in dry air, but decomposed by the llest quantity of water. It must therefore tored in air-tight bins. It is manufactured fusing a pure form of coke or powdered lon and well-burnt lime in an electric ace. Thus can be briefly described the ufacture of acetylene gas. Regarding its perties, acetylene is a colourless gas with a penetrating smell—by which means a age is readily detected—but giving no smell ng combustion, and taking but little oxygen the air in this process. It has poisonous perties, as also have other gases which times occur in it, but these are removed in various gas plants by washing the gas making it pass through a purifier containing emical substance. The light is a pure e light, a very near approach to sunlight.

ne following particulars are taken from pp's "Year-Book," and show the various perties of acetylene or C_2H_2.

sity = 13 (hydrogen = 1). Molecular weight, 26.
unds per foot cube = ·07267. Cubic feet per = 13·756
ammes per litre = 1·180. Litres per gramme, ·840

REQUIRED TO BURN ONE UNIT.

Weight.		Volume.	
Air.	Oxygen.	Air.	Oxygen.
2·378	3·077	11·93	2·500

MINAL TEMPERATURE OF COMBUSTION.

Air.		Oxygen.	
°.	C°.	F°.	C°.
20	3400	20340	11300

T GENERATED BY COMBUSTION OF ONE POUND.

d.	Cubefeet.	Gramme.	Litre.	Molecule.
r.	B.T.U.	Cal.	Cal.	Cal.
3	1624·1	12·142	14·46	315·7

t of formation at 15° C. per molecule = −58·1.

SPECIFIC HEAT.
(Water = 1.)

Liquid.	Constant Pressure.	Constant Volume.
	·373	—

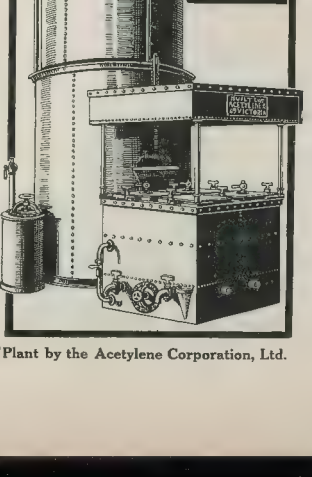
Generating Plants.

The plants employed may be classed generally under two heads, viz., water to carbide or water-fed and (2) carbide to water or carbide-fed.

In the first the water is added generally in small quantities to the carbide, which is placed in suitable trays, etc., whilst in the second the carbide is placed directly into a receptacle containing water. Two general types of both these classes are employed, viz., the automatic and non-automatic plants. The automatic plant is one in which the acetylene is produced as required, the machine working according to the demand; the non-automatic is one in which the supply is stored in a gas-holder and generally made some time before it is actually required. It must be clearly understood that these notes but briefly describe various makes of machines, and are simply to illustrate some of the types. As improvements are from time to time being made by each manufacturer in the matter of detail as a result of experiment and experience, the construction and arrangements vary accordingly.

As examples of the water-fed automatic plant and the carbide-fed non-automatic plant, the machines manufactured by the Imperial Light, Ltd., may be described.

In the water-fed machine the trays in the generators (there may be two or more generators) are filled with carbide. The washer, the holder, and the water-tank are filled with water to a certain level and the purifier is charged with purifying material. To make acetylene, turn on one of the taps, and water will flow from the tank into the generator. Acetylene will then be given off by the carbide and, passing through the holder, will cause the bell to rise until the water control tap is automatically shut off. No more acetylene will be made until the gas in the bell is drawn off through the purifier, when on the fall of the bell more water is admitted. This automatic action continues until the first generator is exhausted, upon which the water automatically flows to the second generator. This continues until all the generators have become exhausted. The generators which have become exhausted can be recharged whilst the plant is working.



Plant by the Acetylene Corporation, Ltd.

The carbide-fed non-automatic plant works as follows:—Water is admitted to the generator, washer, and holder, and the purifier is charged with purifying material. Lumps of carbide are thrown into the generator through the valve, which, on coming into contact with the water, immediately begin to give off acetylene gas. The gas passes down through the washer, into the holder, where it is stored until required. The lime sludge which is formed in the generator is emptied by opening the sludge tap, and can be used for the garden, etc. Such is the general line upon which these plants work, but, of course, each make has slight differences of detail.

In the "Luby" Improved Generator, five to 1,000 lights, manufactured by Messrs. George Adlam & Sons, Ltd., the carbide to water principle is employed. The carbide is placed in a series of buckets, each holding about 1 lb. of carbide, and each bucket automatically discharges in turn into the shute communicating with the water in the bottom of the generator. The generation of gas causes the gasometer to rise, and as gas is taken from the gasometer for lighting this vessel falls and another bucketful of carbide is discharged into the shute. When the lights are not in use the "Automatic Generator" (another machine made by the same firm) which works on the water to carbide principle, ceases operation. This machine is suitable for small installations of five to twenty lights.

The A1 plant of the Acetylene Corporation, Ltd., is illustrated herewith. It consists of one or more generators, gas-holder, water-supply tank, washer, purifier, and water-trough. In the rectangular generators circular pans containing carbide are placed. In this plant the washer is a warm washer. A separate water-tank supplies the water for generation, just sufficient water for one charge being supplied at one time. The gas, having been washed in the warm washer, and dust and ammonia removed, it is conveyed through a cold-water jacketed pipe into the gas-holder, any condensation falling back into the washer. On leaving the gas-holder and before entering the service pipe, the gas is passed through the purifier, where any traces of phosphorus and sulphur remaining in the gas are removed.

The Dargue patent generator, manufactured by the Dargue Acetylene Gas Company, Ltd., may be described briefly as follows:—There is a water-tank and a gas-holder, while two cylinders pass through the water-tank and contain the carbide, etc. The water supply to the carbide is obtained from the water-tank and the quantity regulated by means of automatic valves operated by the rising and falling of the gas-holder. The continuity of the gas supply is maintained by having two or more carbide containers, which, coming automatically in action in turn, accomplish this. The carbide containers are surrounded by water to ensure a low temperature of generation. Before the gas flows into the gas-holder it is passed in a fine spray through part of the water in the gas-holder tank. A chemical purifier is made to suit the various sizes of the machines for the final cleansing of the gas.

Messrs. F. Braby & Co., Ltd., also manufacture various types of machine the working of which can be gathered by the remarks relating to other machines.

In the machine made by the Thorn & Hoddle Acetylene Company, Ltd., instead of the water falling in drops on to the carbide, the mechanical arrangements are such that the water gradually rises to surround the carbide. The gas after passing into the bell flows through the chemical purifier before it reaches the gas main, the whole contrivance being so arranged that the gas finally issues at the gas jets free from all impurities and in a cool, dry state.

The price of the chemical "curaze," sold by them for use in the purifier, is 6d. per pound, and chemically pure cotton wool is also supplied at 2s. a pound. The amount of chemical required varies with the number of lights. For four 20-candle-power lights 1½ lb. are required, whilst for 200 lights 30 lb. are necessary. One charge of chemical purifier lasts

from two to four months according to season. Suitable dimensions of the gas-house are given as 5 ft. × 6 ft. × 7 ft. 6 in. high for a small machine, and 7 ft. 6 in. × 9 ft. × 11 ft. high for a large plant.

Professor Vivian B. Lewis tested one of the machines mentioned, and found that the yield of gas was from 95 to 99 per cent. of that possible to be obtained from the carbide tested. There was a constant 3-in. pressure of gas at the burners, whilst in the generator the pressure did not exceed 11 in.

The general desirable points to be gained in gas production and supply might be tabulated as follows:—(1) A pure gas; (2) regular pressure at the burners; (3) no waste of carbide; (4) ample supply to suit the demand; (5) re-charging of plant without disturbance of lights; (6) gas-holder large enough to take any after-math of acetylene; (7) machine to be strong, of material unaffected by the gas, well constructed to prevent leakage, and as little complicated as possible; (8) small cost of up-keep.

There are other points, but perhaps these may be considered the most important. For instance, local considerations might limit the type of machine, such as scarcity of water.

Cost of Gas.

The cost of gas depends upon the market price of calcium carbide and upon the quantity purchased at one time. Assuming, for the sake of calculation, the price of 1½d. per pound, the next factor is the amount of gas that 1 lb. will produce. Professor Gatehouse tested one brand last year and found it capable of giving 5·38 cubic ft. of gas per pound. Of course, this amount depends upon the quality, and in any machine the thoroughness of the chemical action. Taking 5 cubic ft. as round figures, the next point is the consumption per burner and its candle-power. If a 25-candle-power burner consumes ½ cubic ft. of gas per hour, in ten hours 5 cubic ft. would be burnt. A 100-candle-power burner would consume four times this amount, or 4 lb. of carbide would be used. These assumptions, of course, must be altered to suit any particular case. Taking the cost of carbide at 1½d. per pound then, as 5 cubic ft. are produced from this and 20 cubic ft. are required for 100-candle-power light burning ten hours (at ½ cubic ft. of gas per hour for a 25-candle-power light), the total amount of carbide used is 4 lb. The cost of the above on this basis is therefore 4 lb. × 1½d. = 6d.

There is also the question of the renewal of the chemical purifier, cost of water, any repairs and attention necessary, etc., the last of which are very little. The expense of running a 250-light machine has in one case averaged about 2*l.* a year, excluding carbide.

With regard to the pipes and fittings. Acetylene has greater penetrative powers than gas, so special attention should be given to these. A much smaller bore pipe than is necessary for gas can be used, but it should be of the best material. The joints should be accurately fitting, necessitating a minimum amount of white-lead used. The fittings should also be of the best quality or else trouble is likely to ensue in leakages through cocks, etc.

Burners.

With regard to burners, Messrs. Bray's have patented several, of which some are on the union jet principle and some on the Bunsen principle. The holes for the delivery of the gas are very small, and arranged so that the gas jets impinge on one another and form a flat flame. The burners on the Bunsen principle can be turned down like ordinary gas jets without any fear of carbonisation, a risk always run by the other types. The burners on the Bunsen principle are the most expensive, some costing about 8s. 6d. a dozen. As the burners are made in various sizes, the following particulars, given by Professor Elsey Smith, might be useful:—Burners consuming ⅓ cubic ft. per hour give a light of 6·2 candles; burners consuming ½ cubic ft. per hour, 17·5 candles; burners consuming ⅝ cubic ft. per hour, 35 candles.

As with plant so with burners; therefore these figures are given simply as a means of illustration, for it must be remembered that engineering moves rapidly to-day, and what was considered good practice a few years ago has now become out of date.

For example, Messrs. Thorn & Hoddle, Ltd., give the consumption of the "Incanto" burners and corresponding candle-power as follows:—

⅛	ft. per	hour,	approximate	candle-power	20
¼	,,	,,	,,	,,	30
⅜	,,	,,	,,	,,	40
½	,,	,,	,,	,,	50
1	,,	,,	,,	,,	60

These are on the Bunsen principle and will not carbonise when the burners are turned low.

Speaking generally, the common coal-gas burners are the simplest in construction and action, although they are not economical now that incandescent mantles have been introduced. The fact is, however, that incandescent mantles do not remain clean and give their full lighting value, but soon begin to give a poorer light. Acetylene can be burnt either with the simple burners already mentioned or with the aid of incandescent mantles; with the latter a very great increase in brilliancy is obtained. As rapid developments are being made with incandescent mantles, and the fragile structure of those first introduced is being replaced by a less fragile material, there is every reason to suppose that the above objections will be greatly modified.

Bye-pass Switches.

To enable the light to be turned fully up when entering the room, bye-pass switches can be fixed at suitable positions near doors, etc. The pilot light, of course, must be first ignited, after which the switch can be used at any time.

Plant Buildings.

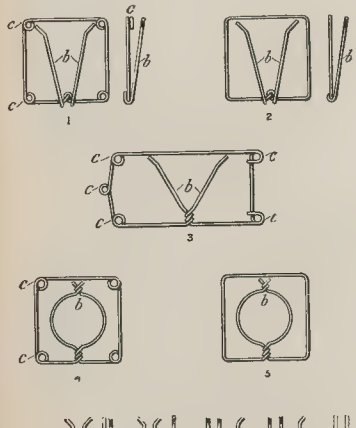
The plant should be placed in an external building, and smoking, etc., should be strictly forbidden in the room in which the plant is situated. To store calcium carbide it is necessary to obtain a licence from the local authority if the user desires to store any quantity of it. The insurance companies, however, make no extra charge for insurance.

As carbide, as has been previously stated, has a great affinity for water, for instance, in the form of moisture in the air, etc., it must be kept in an air-tight bin. These are specially made and are supplied by the various makers of acetylene plant.

Besides the general plant for the production of acetylene throughout the house, lamps of the "table-lamp" type can be had which employ acetylene. Similarly it has been applied to a variety of lamps, hand and otherwise, and is especially useful as a "flare lamp" for night work as commonly employed by contractors. Welding can be done by means of an oxy-acetylene flame as well as the cutting of metal, and in this way is of great use to structural engineers.

Extent of Adoption.

During the last decade the acetylene industry has developed considerably, and the illuminant has become well known and appreciated. Many thousands of plants of all capacities have been installed throughout the kingdom. It may be mentioned that, in order to reduce the cost of carriage of carbide, depôts for supplies have been established in London, Rochester, Ipswich, Hull, Newcastle-on-Tyne, Manchester, Cardiff, Glasgow, Aberdeen, Dublin, and elsewhere.



Figs. 1 to 10.

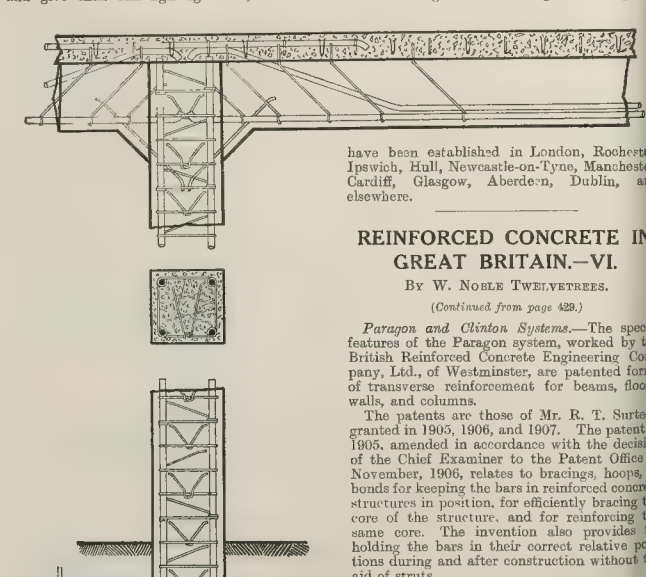


Fig. 11. Beam and Column Construction.

REINFORCED CONCRETE IN GREAT BRITAIN.—VI.

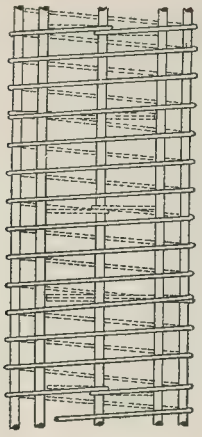
By W. NOBLE TWELVETREES.

(*Continued from page 429.*)

Paragon and Clinton Systems.—The special features of the Paragon system, worked by the British Reinforced Concrete Engineering Company, Ltd., of Westminster, are patented forms of transverse reinforcement for beams, floors, walls, and columns.

The patents are those of Mr. R. T. Surtees, granted in 1905, 1906, and 1907. The patent of 1905, amended in accordance with the decision of the Chief Examiner to the Patent Office in November, 1906, relates to bracings, hoops, or bonds for keeping the bars in reinforced concrete structures in position, for efficiently bracing the core of the structure, and for reinforcing the same core. The invention also provides for holding the bars in their correct relative positions during and after construction without the aid of struts.

Fig. 1 represents type of reinforcement as adapted for use in columns and beams. In it the bracing has a loop *c* at each corner to hold four bars in position, and arms *b* arranged for secure anchorage into the concrete core. Fig. 2 represents a bracing where the corner loops are omitted, this type being intended for use in conjunction with the type shown in Fig. 1.





g. 12. Spiral Reinforcement for Columns.

constructing a column about every fifth acing is similar to Fig. 1, and the intervening acings are similar to Fig. 2.

Fig. 3 illustrates a bracing for use in struc- res with a tongue on one side and a groove on other. It has five loops for holding in place reinforcing bars.

Figs. 4 and 5 are similar to Figs. 1 and 2, cept that the arms *b* are curved and their ds twisted to form a central ring to enable the acings to be used in the construction of umns or struts with a pipe or hollow around central axis.

Figs. 6 to 10 illustrate four varieties of the acings in the form of stirrups for beams, or slabs, and walls. In each case a loop *c* is med so as to grip the bars forming the gitudinal reinforcement, and the arms *b* may placed vertically or bent so as to lie at any ired angle.

Fig. 11 shows the application of the bracing l stirrups to beam and column construction.

The patent of 1906 relates to transverse nforcement for columns and similar members, l consisting of a length of spirally-wound tal with or without one or more loops in its gth, and its ends extending across the area losed by the wrapping. as illustrated in . 12. The spirals can have any required nber of turns in each section. It is claimed t this type of reinforcement possesses all advantages of spiral coils in continuous gths, with the additional advantages that the longitudinal bars are held in position, and that the concrete can be added in successive layers and well rammed instead of being poured in from the top of a closed mould.

When the column is complete the sections constitute one long helical wrapping from top to bottom. Helical coils of this description are suitable for columns of round, square, or polygonal cross section, and may be used in conjunction with "Paragon" hooping of the kind illustrated in Fig. 1, if desired.

The patent of 1907 relates to an improved stirrup for beams and similar members, the stirrup consisting of a rod or bar of metal of round, square, or other suitable cross-section, bent so as to form a loop suitable for threading on the main reinforcing bar, the projecting ends of the stirrups being long enough to extend into the opposite side of the beam, and arranged to lie at any required angle. The loop is made so as to grip the main bar with the object of preventing the stirrup from slipping. Fig. 13 represents the application of such stirrups to round and square bars.

For the reinforcement of concrete slabs, the British Reinforced Concrete Company employ a special type of wire mesh which has been largely adopted in the United States, where it is made by the Clinton Wire Cloth Company.

This fabric, which was introduced into Great Britain by the British Reinforced Concrete Company, consists of a wire mesh made up of a series of parallel longitudinal steel wires, spaced at certain distances apart, and held at intervals by means of transverse wires arranged at right angles to the longitudinal wires, being securely welded to them at the points of intersection by a patented electrical process. The appearance of the finished product is illustrated in Fig. 14, and the character of the weld between the longitudinal and transverse wires is shown by Fig. 15.

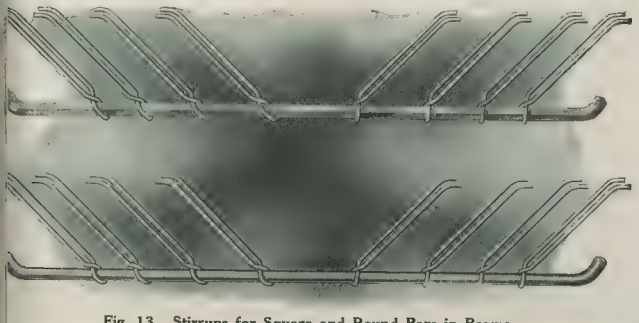


Fig. 13. Stirrups for Square and Round Bars in Beams.

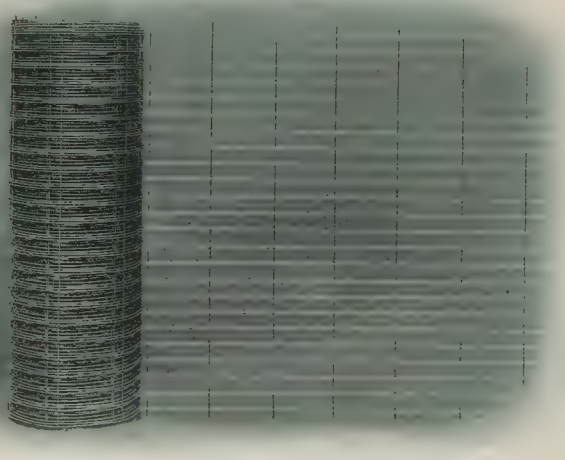


Fig. 14. Clinton Wire Fabric.

The Clinton fabric is suitable for the reinforcement of flat or curved concrete slabs in all kinds of reinforced concrete construction, as well as for the fire protection of steel work in conjunction with cement mortar or fire-resisting plaster.

The business methods of the British Reinforced Concrete Company may be thus briefly stated :—

In cases where they are asked to prepare designs on a professional basis payment is made at a percentage rate of the cost of the work, as in architectural practice.

In other cases the company prepare designs for clients, and obtain competitive estimates from building contractors who are competent to undertake reinforced concrete work. The successful contractor buys reinforcement from the company, whose profit on the sale covers the cost of designs, royalties, and the executive work in connexion with carrying out the contract.

In still other cases the company themselves quote for work, taking contracts direct, and making their own arrangements as regards sub-contracting.

All designs are in accordance with the rules and regulations recommended by the Royal Institute of British Architects Committee on Reinforced Concrete, and the company take full responsibility for reinforcement supplied if they have prepared the design for the work where such reinforcement is used, or if they have approved designs prepared by the architect or engineer responsible for the execution of the work.

Keedon System.—In our issue of November 3 last the essential features of this system, introduced by Messrs. Richard Johnson, Clapham, & Morris, Ltd., of Manchester, were described and illustrated.

Our readers are referred to the article in question for full details, but as a matter of convenience we may here state that the distinctive characteristic of the system is the employment of special web reinforcement in beams and special transverse reinforcement in columns, in conjunction with ordinary round steel bars.

The auxiliary reinforcement in each case is arranged so that it is securely keyed on to the main bars, with the object of preventing accidental displacement of the web or transverse members during the deposition and ramming of the concrete, and also for the purpose of providing an efficient mechanical bond between the concrete and the steel.

The "Keedon" reinforcement can be purchased at fixed charges by any one with or without the main bars. The firm give expert advice, designs, and tenders free of charge,

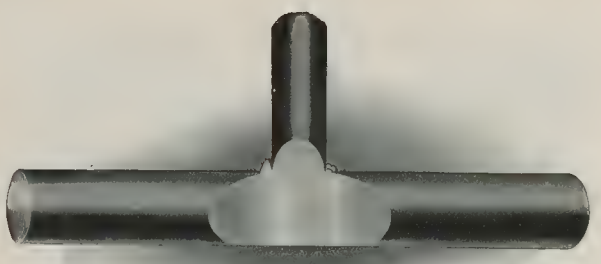


Fig. 15. Weld of Clinton Wire Fabric.

and accept full responsibility for any work designed by them.

As our readers are aware, Messrs. Richard Johnson, Clapham, & Morris have also made a speciality of reinforced brickwork, and are the proprietors of Johnson's Lattice system of reinforced concrete floors.

Expanded Metal.—A review of reinforced construction would obviously be incomplete without mention of the facilities placed at the disposal of architects and engineers by the Expanded Metal Company, Ltd., of York Mansions, Westminster, although the special types of reinforcement made by this firm are not recommended for application in connexion with any particular "system." On the contrary, they are available for general use in accordance with recognised principles of reinforced concrete design as well as for employment in structural and decorative details closely allied or incidental to reinforced concrete work.

Expanded metal sheets and expanded metal bars are supplied at fixed rates to all purchasers without restriction of any kind, and if desired by architects the company will undertake to furnish details showing the most suitable method of employing expanded metal alone or in conjunction with other forms of steel as reinforcement.

In our issues of December 10, 1910, and April 14, 1911, we devoted considerable attention to the uses of expanded metal in reinforced concrete and other types of construction. Nothing need be added at the present time to the particulars given in the above-mentioned numbers of the *Builder*, to which readers are referred for detailed information.

Spiral Bond Bars.—Although, like some other types of patented reinforcement, the bars recently introduced by the Spiral Bond Bar Company, Ltd., of Westminster, do not in themselves constitute a "system," they deserve mention in the present series of articles, being applicable to reinforced concrete construction of any kind designed in accordance with established principles.

These bars are rolled from mild steel of quality equal to that defined by the British Standard Specification for Structural Steel, but in consequence of the mechanical process to which the bars are subjected the elastic and ultimlimit ate strength of the metal are increased by more than 50 per cent. and 40 per cent. respectively, and the resistance to bending is increased by about 70 per cent.

As originally rolled, the bars are of hexagonal cross-section, and they are afterwards gently twisted until the surface presents the helically fluted appearance represented in Fig. 1.

Notwithstanding their high resistance, the bars are as ductile as ordinary mild steel bars, and can be bent cold, as shown in Fig. 2, without fracture.

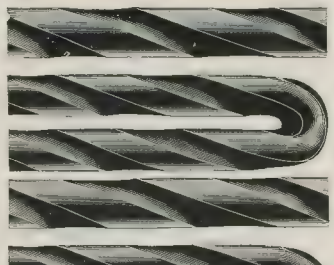
The twisting is continued to a point which numerous trials and tests have proved to conduce to the most beneficial results, and it is interesting to note that it causes no change in the length of the bars, the fibres merely rotating about the centre of the bar.

The helical depressions are sufficient to ensure a good mechanical bond between the steel and the concrete, and thus obviate the need for bending the ends of the bars to J form, or of splitting and fish-tailing the bars in the usual manner.

These bars are at present produced in fifteen sizes, ranging from $\frac{5}{16}$ in. to $1\frac{1}{8}$ in. diameter, and are supplied by the company or their licensees without restrictions of any kind.

The advantages claimed for Spiral Bond bars are:—

(1) That, owing to the great strength and high elastic limit of the steel, 30 per cent.



Spiral Bond Bars.

less reinforcement is required than the amount necessary in the form of mild steel bars, and that a corresponding saving is effected in railway charges, cartage, and handling.

(2) That, owing to the high bending resistance of the steel, the bars are far less liable than ordinary to be bent in transit or after delivery.

(3) That the mechanical bond saves the cost of mechanical preparation such as fish-tailing and hooking, and furnishes additional security against any tendency of the steel to slip in the concrete.

(4) That every bar is self-tested by the mechanical process of twisting, all mill scale being at the same time removed.

OZONAIR SYSTEM OF AIR PURIFICATION.

MANY of our readers have doubtless appreciated the long-needed improvement recently effected in the Central London Railway tubes by the system of ventilation and air purification installed by Ozonair, Ltd., of Westminster.

The equipment consists of a separate and independent plant at each station with the exception of that at Shepherd's Bush, where the end of the tunnel communicates with open air.

Each plant includes an ozone generator, whence this active and allotropic form of oxygen is conveyed to the mixing chamber by a Sirocco pattern blowing fan, being there mixed with air drawn in through a cleansing screen.

From the outlet of the fan the ozonised air is blown down a main air trunk, discharging through outlets in the booking-hall and lavatories, and on the up and down platforms, the trunk terminating with outlets delivering into the tunnels.

The plants range in capacity from 5,500 to 18,000 cubic ft. per minute, and are capable of furnishing the total of more than 80 million cubic ft. of ozonised air every working day.

About one-third of the purified air is distributed along the platforms, and the remainder is delivered directly into the tunnels.

It is interesting to note that, according to the results ascertained by Mr. W. J. Dibdin, F.C.S., the air of the Central London Railway now contains considerably fewer organisms than the dust-laden air of the street, and that the air admitted by the Ozonair inlets is practically free from germs.

Our readers, who are more concerned with domestic than with railway ventilation, may be reminded that Ozonair apparatus is made in sizes suitable for employment in dwelling houses and buildings of every kind where pure air is a desideratum.

In most cases a regular supply of electric current is necessary for operating the apparatus, but small ozone generators are made which can be worked from batteries, and are therefore suitable for service in places where public supplies of electricity are not available.

ENGINEERING NOTES.

Port of Valparaiso.

IT is stated that Messrs. Pearson & Son have secured the contract, upon their tender of 2,600,000*l.*, for the construction of the new harbour at Valparaiso. The works, which will occupy seven years, comprise a breakwater 945 ft. in length, quay walls 2,066 ft., and 690 ft. long, a coal wharf 656 ft. by 100 ft., and a jetty 820 ft. by 328 ft. The harbour will be available for the berthing of the biggest modern vessels.

Reinforced Concrete: Piketty System.

WE have received from Messrs. Paul Piketty & Co., of Bloomsbury, a copy of their illustrated handbook, which, like the analogous publications of other specialist firms engaged in reinforced concrete work, is a technical prospectus rather than a catalogue.

In a recent issue of the *Builder* the essential features of the Piketty system were described and illustrated, and at the same time the commercial methods of the firm were briefly stated.

The present handbook goes into these matters more fully, and also sets forth the formulæ conceived by M. Piketty some twelve years ago, and published in the treatise by MM. Berger and Guillerme in the year 1902, these formulæ being essentially similar to those afterwards adopted by the Royal Institute of British Architects' Committee, the London County Council, and other authorities.

Although practically unknown in the United Kingdom, the Piketty system has been employed to a considerable extent on the Continent, and from figures given in the handbook it appears that works to the extent of more than half a million sterling have been executed in France on this system of reinforced concrete.

The book includes a good selection of photographic views representing typical architectural and engineering structures, and concludes with a reprint of the proposed regulations of the London County Council for reinforced concrete construction.

THE BUILDING TRADE.

TRADE DISPUTES AND BUILDING CONTRACTS.

IN a recent article we referred to the subject of "Builders and Strikes," and dealt with the law relating to strikes as hitherto laid down, but the modern development of trade disputes and the general strike, with the consequent dislocation of business and trade, have raised questions that may yet have to be decided in the Law Courts, and sending the decision of these points it behoves those engaged in trade to be especially careful in protecting themselves by contract.

Before dealing with what are known as strike clauses in contracts, a word or two may be said on the subject of the law and the development of the secondary and general strike. The law, as was stated in our article of May 10, where a man has contracted to perform certain work in a prescribed time, without qualification, holds him bound to perform his contract, and a strike has not afforded him any excuse for a breach of his unqualified undertaking. At the time when the decisions were delivered upon which this statement of the law is based strikes were generally the outcome of a dispute between an employer and his own workmen, and sect. 3 of the Conspiracy and Protection of Property Act was interpreted not to apply to civil actions at all—Quinn *v.* Leathem (1901). In the headnote to the decision of the House of Lords in this case, in the "Law Reports," it is stated that the words in the act section, "trade dispute between employers and workmen," "do not include a dispute on trade union matters between workmen who are members of a trade union and an employer or non-union men who refuses to employ union men. *Semble*, the words are restricted to disputes between an employer and his own workmen." If this accurately represents the effect of the judgments delivered in this case, which is one of considerable complication, it is apparent that not only did the Conspiracy Act afford no protection from civil actio is, but that also left the criminal law available where actions intervened to interfere between employer and employed to procure breaches of contract. The Royal Commission on Trade Disputes misinterpreted the Act, and also considered that it afforded no protection in the case of secondary strikes. However this may be, it is important to observe that the Trade Disputes Act has altered the law, enabling the trade unions to take part in trade disputes and depriving the public of their civil right of action where injury has been sustained which heretofore would have been actionable.

Strikes have therefore assumed different characteristics and proportions, and it yet remains to be seen whether the law as regards contracts will remain the same as it was when the reason of the law of conspiracy strikes were confined to disputes between an employer and his own workmen, and a right of action existed whereby an employer could protect his own interest. So long as strikes were so limited, it could well be argued that some means could be devised by the employer for carrying out his contract if he chose to settle the dispute so as to obtain labour or material from other places; but such a consideration can no longer apply in the case of labour disputes such as the coal strike or the railway strike, which paralyse trades wholly unconnected with the dispute, and it remains to be seen whether if will not be granted by the Courts to those who have been unable to carry out their contracts by reason of a total failure in the means of transport or of the means of production such as coal. Pending a decision of these knotty points, however, it is to the interest of builders and contractors to protect themselves and avoid litigation by the insertion of adequate strike clauses in their contracts, and the object we have in view in the present paper is to draw attention to the inadequacy of the clauses commonly inserted in building contracts to protect contractors from liability in the case of secondary or general strikes. In the Form of Agreement for Building Contracts issued by the Royal Institute of British Architects, Art. 25, which provides for extension of time, the words with reference to strikes are, "or by reason of any local combination of workmen or strikes or lock-out affecting any of the building trades."

This clause appears too narrow to meet the exigencies of the present time. The word "local" would seem undesirable, as it might be interpreted to govern the whole clause, and the expression, "affecting any of the building trades," appears capable of the construction that the strike or lock-out must affect the conditions of employment in the building trades. Neither the railway strike nor the coal strike fulfilled either of these conditions; the coal strike in particular could not be deemed in any sense "local" in certain localities, whilst, although both these strikes may have occasioned unavoidable delay in the execution of building and engineering contracts, neither of them affected the conditions of employment in the building trade.

Other forms of strike clauses found in text-books are equally inapplicable in many cases to modern strike developments. Thus "Provided always that in case the builder shall be prevented by any strike among his workmen" ("Emden on Building Contracts," p. 377), or "In case of any delay in the execution of the work caused by a general strike combination or lock-out of artificers or workmen employed in any of the building trades, or of workmen employed in the preparation or manufacture of materials intended for the work" (Emden, p. 396), are clauses which make no provision for dislocation of labour through a railway or coal strike, whilst even the clause set out in our recent article, "in case of combination of workmen or strikes or lock-outs affecting the building trades," is open to the second objection which we urged against the clause sanctioned by the Royal Institute.

We trust that we have said enough to draw the attention of members of the Royal Institute and of builders and contractors to the importance of considering a revision of the strike clauses in building contracts, and if attention be once directed to the matter possibly combined consultation may produce a really satisfactory clause. We may, however, perhaps venture to suggest that what it is desirable to provide against in such clauses nowadays is not the existence of a trade dispute in any particular trade, but for exemption from liability in case of unavoidable delay occasioned by any trade dispute whatever; in other words, the test should be the inevitable delay occasioned by that new form of *force majeure*, the trade dispute. The architect under Art. 25, or the arbitrator under Art. 32, would have no more difficulty in determining the question of fact whether the works had or had not been delayed by the direct consequences of a strike outside the trade than is experienced at present in deciding whether a strike inside the trade was the cause of the delay.

In view of the magnitude and frequent occurrence of trade disputes, a question may also be raised whether in building contracts an absolute clause against liability from delay through trade disputes should not be introduced apart from the clause permitting an extension of time to be allowed by the architect. Upon this point we offer no opinion, but it must be remembered that under Art. 9 of the Institute's Form of Contract in these days of trade unionism the contractor may have a dispute forced upon him by the action of the architect. If the architect quite reasonably, under Art. 9, requires the dismissal of a person employed by the contractor, and that person happens to be a trade unionist, a general strike may at any moment be the result. A strike on a railway was recently occasioned by the removal of a signalman from one end of a station to the other.

The legislature has licensed strikes on a larger scale than heretofore, but in protecting trade unions has omitted to protect the trader. In the absence of statutory protection it therefore behoves those in trade carefully to provide for the new conditions of the labour market and to protect themselves as far as they are able in their contracts from a liability which may otherwise be forced upon them from causes wholly outside their control.

THE TRADE UNION BILL.

IT seems almost incredible that after the experiences of the past twelve months the Government should have reintroduced their Trade Union Bill, which first made its appearance last year, and which is designed to overrule the Osborne decision and to enable the trade unions to become militant political organisations.

With the political aspect of this question we are in no way concerned; but, as we pointed out last year in articles on June 2 and 30, there are grave objections to this Bill on other than strictly political grounds. It strengthens the hands of those societies which we should have thought had been demonstrated by the recent railway and coal strikes to be already too powerful, and it prejudices the position of non-union and independent men, rendering them liable not only to severe duress at the hands of trade societies, but complicating their position by importing political considerations into the relationship between workmen and workmen and employers and workmen. The trade unions already have power to prevent any man who is not willing to join them as trade societies from obtaining work or plying his avocation, but if this Bill becomes law a man willing to embrace trade union principles so far as trade relations are concerned may yet find himself ostracised by reason of his political convictions, and thus political pressure under the Bill will arise not only in connexion with Parliamentary elections, but also in respect to County Council elections, District Council elections, Parish Council elections, and even to elections to Boards of Guardians. The Bill is the same as that introduced last year, the only alteration being that it no longer provides that trade union funds may be expended on the maintenance of Members of Parliament, because this has since been made a charge upon the taxpayers; but with this exception in all the above elections the unions can expend money in connexion with the candidature and maintenance of persons seeking or obtaining office, and upon the holding of meetings and the distribution of literature, and thus these societies which have already been granted powers and immunities possessed by no other organisations in the country are encouraged to expand into political organisations, and trade unionism can hold up trade while it creates a political pandemonium at the election of even a parish councillor or member of a Board of Guardians. It is in this connexion that the most important point arises. Will sect. 4 of the Trade Disputes Act apply to acts done by trade unions in furtherance of the enlarged number of objects permitted by this Bill? It will be remembered that subsect. (1) of this section provides that "an action against a trade union, whether of workmen or masters, or against any members or officials thereof, on behalf of themselves and all other members of the trade union in respect of any tortious act alleged to have been committed by or on behalf of the trade union, shall not be entertained by any Court." In this subsection no mention is made of the acts thus privileged being limited to acts done "in contemplation or furtherance" of a trade dispute, and as we showed in our recent note to Vacher & Sons *v.* London Society of Compositors, April 12 last, it has not yet been judicially decided whether this subsection applies generally or with that limitation. There is even some doubt whether a trade union cannot publish a libel unconnected with a trade dispute and yet claim immunity from action under the above subsection. This point at least should be made clear, and the unions be made amenable to the law in respect of acts done under this Bill before the enlarged powers proposed are conferred upon them.

A second point is one raised last year by the Employers' Parliamentary Council. The Bill purports to secure the rights of those members of the unions who do not desire to contribute to political objects, and it provides in Clause 3 (*c*) that a member who claims exemption shall not be excluded from the benefits of the union or be placed under any disability. The Employers' Parliamentary Council asked how is a member who claims

exemption to obtain any redress if he is deprived of benefits, seeing that under sect. 4 of the Trade Union Act the Courts cannot enforce agreements as to benefit? Since this question was asked the House of Lords in Russell *v.* Amalgamated Society of Carpenters (the *Builder*, April 5 last) have affirmed the decisions that the Courts cannot interfere to enforce agreements as to benefit. It is, therefore, clear that if this Bill is to become law some provision must be inserted granting access to the Courts to a member of a trade union who has been deprived of benefits from the union in defiance of the provisions of the Bill simply because he objects to contribute to the political funds of the union.

Lastly, by Clause 3 (*a*) a majority "of the members voting" can determine whether the funds of the unions are or are not to be applied to political purposes. For a resolution of this character surely the unions should be compelled to obtain a majority of their members.

There are other grave objections to the Bill (for instance, should the unions who are to be entrusted with administrative powers under the Insurance Act be political societies?), but we have confined our observations to those of paramount importance.

LABOUR IN THE BUILDING TRADE.

At a Conference between the Edinburgh Master Builders' Association and operative joiners, the request of the joiners for an increase of pay and other alterations on working rules was discussed. The joiners asked for an increase of 1d. per hour, from 9d. to 10d. The master builders expressed the desire to see their employees as well off as possible, and would gladly have agreed to the increase asked had the state of the property market justified such an advance. In the circumstances they felt they would not be justified in agreeing to more than ½d. advance. A request to stop work at 12 noon on Saturdays was also preferred by the operatives. Several of the employers present expressed themselves strongly in favour of this, but it was felt that sufficient unanimity among the trades did not exist to enable this alteration to work smoothly this year, and the joiners, being usually responsible for seeing premises under construction or repair safely locked up, were strongly pressed to leave this over till next year, when, if the co-operation of the other trades were secured, it was thought this might be agreed to on behalf of the whole building trades. The joiners ultimately agreed to these suggestions. Several other points were discussed, and alterations in existing rules agreed to, which it was hoped would, by making these points more clear, result in their more strict observance. The new regulations come into force on June 1 next, and hold good for one year.

GOVERNMENT CONTRACTS.

The following tenders have been accepted during the past month by the Government Departments named:—*Admiralty, Works Department:* Works service: additional coast-guard houses at Kildonan—Messrs. R. Aitken-head & Son, 37, Trafalgar-street, Greenock. *War Office:* Works services: alterations to married quarters, etc., Fulwood Barracks, Preston—Messrs. R. Thompson & Morris, 13, Dalton-square, Lancaster; conversion of cottages, Warley—Mr. S. Cronin, Queen-street, Warley; erection of army ordnance depôt buildings, Tidworth—Messrs. Wort & Way, Castle street, Salisbury; erection of barrack block, cook house, latrines, etc., Army Service Corps Barracks, Bordon—Executors of Mr. J. B. Seward, Crown Works, Wokingham: erection of forges and shoeing, Longmore Camp—Messrs. Wigginton & Sons, St. Thomas-street, Portsmouth; erection of new sergeants' mess, Lydd—Mr. T. T. Denne, Walmer, Kent; installation of electric light and power, military hospital, York—Messrs. G. E. Taylor & Co., 3, Bush-lane, E.C.; periodical works services at Bulford Camp—Mr. D. E. Hutton, Briggate, Shipley, Yorks; repairs and maintenance of war department buildings at Bordon—Messrs. Martin, Wells, & Co., Aldershot; Colchester—Mr. F. R. Hipperson, Northumberland-street, Norwich; Warley—Mr. S Cronin, Queen-street, Warley; Woking—Mr E. C. Hughes, Albion Works, Wokingham. *Crown Agents for the Colonies:* Steel bridge-work and steel-framed building—Horseley Company, Ltd., Tipton, Staffs; cement—Associated Portland Cement Manufacturers, Ltd., 8, Lloyd's-avenue, E.C.; Messrs. Martin, Earle, & Co., Ltd., 139, Queen Victoria-street, E.C.; Messrs. Wouldham Cement Company, Ltd., 35, Great St. Helens, E.C.; stoneware pipes—Albion Clay Company, Ltd., 38, Victoria-street, S.W.; carriage washing sheds—Messrs. F. Morton & Co., Ltd., 17, Victoria-street, S.W.; goods sheds—Messrs. A. & J. Main & Co., Ltd., 31, Budge-row, E.C.; rubber sheds—Messrs. F. Morton & Co., Ltd., 17, Victoria-street, S.W. *Office of Works:* Contracts for ordinary works and repairs: Birmingham—Messrs. John Bansley & Sons, 102, Ryland-steet, Birmingham; Bristol and Avonmouth—Mr. F. Chown, Montpelier, Bristol; Cardiff—Mr. J. Thomas, Mardy-street, Cardiff; Duke of York's School, Dover—Messrs. G. H. Denne & Son, Deal; Hampton Court, Kew, and Richmond—Messrs. J. Mowlem & Co., Ltd., Grosvenor Wharf, Westminster, S.W.; Leeds—Messrs. J. Wood & Son, Bank-buildings, Hyde Park-road, Leeds; Leicester—Messrs. J. E. Johnson & Sons, Ltd., 90, High Cross-street, Leicester; Liverpool—Mr. J. Williams, 70, Collingwood-street, Liverpool: Manchester—Messrs. W. D. Scott & Co., 126, Broughton-street, Cheetham, Manchester; Newcastle-on-Tyne—Messrs. Kirk & Brown, Byker Bridge, Newcastle-on-Tyne; Nottingham—Mr. G. A Pillatt, Sherwood-street, Nottingham; Sheffield—Messrs. Ash, Son, & Biggin, Ltd., Furnival-street, Sheffield; Southampton—Avery Brothers, Staple-gardens, Winchester; Windsor—Messrs Wellman Brothers & Co., Peascod-street, Windsor; Messrs. Hollis & Sons, 59, St Leonards-road, Windsor: builders' work: erection, Board of Agriculture—Messrs. Higgs & Hill, Ltd., Crown Works, South Lambeth-road, S.E.; alterations, Bradford Labour Exchange—Messrs. T. Obank & Son, Thackley, Bradford; erection, Bury County Court, Inland Revenue, Customs, and Excise Mr. J. Tinline, Parker-street Saw Mills, Bury: re-drainage Mount Pleasant Parcel Office—Messrs. Galbraith Brothers, Ltd., Camberwell green Works, S.E.; adaptation, Sheffield Labour Exchange—Messrs. J. Fidler, Ltd., Corporation-street, Sheffield; heating, South-eastern District Post-office extension—Messrs. G. N. Haden & Sons, Lincoln House, Kingsway, W.C.; road materials for Royal parks—Mr. H. Boyer, Terminus Wharf, Paddington, W.: Messrs. W. Boyer & Sons, Irongate Wharf, Paddington basin, W.; Messrs. Thomas Clayton (Paddington), Ltd., 9, South Wharf road, Paddington, W.; Messrs. Croft Granite, Brick, and Concrete Company, Ltd., Croft, near Leicester: Messrs. Fry Brothers, Lion Wharf, Greenwich: Mr. H. J Greenham, Rosebank Wharf, Fulham, S.W.: Messrs. London and Rochester Barge Company, Ltd., 2, New London street, E.C.; Messrs. J. Mowlem & Co., Ltd., Grosvenor Wharf, Westminster, S.W.: Messrs. Owen, Older, & Sons, Upper and Island Farms, West Molesey, Surrey; Messrs. H. Sabey & Co., 23 and 31, Willesden-lane, Kilburn, N.W: Mr. William Sharpe, jun., Victoria Works, Ship-lane, Mortlake; The United Stone Firms, Ltd., 2, Bristol chambers, Nicholas-street, Bristol; Messrs. Samuel West, Ltd., 40, Trinity square, E.C.: wainscot panelling, fittings, etc., Courts of Justice extension Messrs. T. H. Kingerlee & Sons, 35, Queen-street, Oxford. *General Post Office:* Laying lines of pipes and pneumatic tubes, Finsbury-pavement, London-wall, etc., and laying lines of pipes, Bournemouth—Messrs. Airds, Ltd., 22, Queen Anne's-gate, S.W.: laying line of Syke's ducts, London to Aylesbury and St. Albans (sect. IV.)—Mr. W. Dobson, Yeaman-lane, Edinburgh; (sect. V.) Airds, Ltd., 22, Queen Anne's-gate, S.W.: (sect. VI.)—Mr. W. Dobson, Yeaman-lane, Edinburgh. *Broadmoor Asylum:* Bricklayers' and plasterers' materials—Messrs. Warmsley & Co., Ltd., Reading. *Commissioners of Public Works, Ireland:* Building works; erecting and furnishing Carrowngaganonagh National School, Co. Donegal—Messrs. McMullan Brothers, Kilcar, Co. Donegal: erection new smithy and foundry at Royal College of Science, Dublin—Messrs. McLaughlin & Harvey, Ltd., Dartmouth-road, Dublin. *Metropolitan Police:* Carrying out alterations at West Hampst Police-station—Messrs. J. Chessum & Son, 7A, South-place, E.C.; erection of new police-station at Harlesden—Messrs. G. Godson & Sons, Pembroke Works, Kilburn-lane, W.

GENERAL BUILDING NEWS.

GARRISON CHURCH, TIDWORTH.

The new church of St. Michael has been erected at a cost of 3,500*l.* from the designs of Mr. E. D. Hoyland, architect, of London. The altar, rails, reredos, panelling of the sanctuary walls, clergy and choir-stalls, and pulpit are all of Burmese teak, of rich tone in its natural colour, designed in the Renaissance style by Mr. C. E. Ponting, F.S.A., of Marlborough. The church was dedicated on the 3rd inst., by Bishop Taylor Smith, Chaplain-General to the Forces.

CATHOLIC CHURCH, LONDON.

His Eminence, Cardinal Bourne, Archbishop of Westminster, on the 17th inst., laid the foundation-stone of the new Catholic Church, Desborough-street, Harrow-road, now being erected by Messrs. E. A. Roome & Co. The architect is Mr. E. H. N. Major.

GIRLS' HIGH SCHOOL, STROUD.

Mr. R. S. Phillips, of Gloucester, is the architect for this school, which has been erected in the Georgian style and constructed of brick-work with Minchinhampton stone dressings, oak cornice and tiled roof. The contractors were:—Building, Mr. A. S. Cooke, Stroud; heating, Mr. R. Woodyatt, Stroud; gas lighting, Mr. E. Pratt, Wallbridge, Stroud.

NEW BUILDINGS IN LONDON.

Proposed extensions to church, Walworth, S.E.; Clerk to the Wardens, St. John's Church, Walworth, S.E. Out relief-station, Arragon-road, East Ham, E. (2,675*l.*); Strand Building Company, builders, 200, Strand, W.C. Factory, Vauxhall-walk, Lambeth, S.E. (30,000*l.*), for Messrs. Schweppes, Ltd.; Mr. A. F. Briggs, architect, Queen Victoria street, E.C. Motor engineering works, Selhurst-road, South Norwood, S.E. (1,676*l.*); Messrs. J. C. Arnaud & Son, 149, High-street, Bromley. Extensions to Princes Hotel and Restaurant, Jermyn-street, W.; Messrs. Emden, Egan, & Co., architects, 2, Lancaster-place, Strand, W.C.; Messrs. Holliday & Greenwood, builders, Brixton, S.W. Extensive buildings to be used as offices, etc., Pall Mall, S.W.; Messrs. White, Druce, & Brown, agents, 9, Brook-street, Hanover-square, W.

TOWN HALL, MUNDESLEY.

This hall is to be erected at a cost of about 600*l.* from the designs of Mr. G. M. Silley, architect, of London, and the building will provide accommodation for 300 people. The contractor is Mr. S. A. Randall, of Mundesley.

TERRITORIAL DRILL HALL, CRANBROOK.

Mr. J. W. Little, F.R.I.B.A., of Tonbridge, is the architect for the new drill hall which has been erected for the use of the A Company of the 5th Buffs. The hall is 60 ft. by 30 ft., and there is also a lecture-room, orderly-room, armoury, etc. The builders were Messrs. Marshall & Son, of Cranbrook.

EMPIRE AND HIPPODROME, CHELMSFORD.

The new Chelmsford Empire and Hippodrome, which is to be erected on the Springfield-road, Chelmsford, has been designed by Mr. Noel Dawson, architect, of Chelmsford, and the building will provide accommodation for 933 persons.

THEATRE, COWDENBEATH.

It is proposed to erect a theatre in the High street near the junction of Foulford-street, at a cost of about 6,000*l.* The architects for the work are Messrs. Bell & Wilson, of Dunfermline.

TRADE NEWS.

Under the direction of Mr. H. Green, M.S.A., Leigh-on-Sea, the "Boyle" system of ventilation (natural), embracing Boyle's latest patent "air-pump" ventilators and air-inlets, has been applied to the new Public Hall, Leigh-on Sea.

The Carnarvon Catholic Schools are being supplied with Shorland's patent warm-air ventilating Manchester grates, by Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester.

APPLICATIONS UNDER LONDON BUILDING ACTS, 1894 to 1909.

At Tuesday's meeting of the London County Council the following applications under the London Building Acts were dealt with. (The names of the applicants are given in parentheses):—

Width of Way and Cubical Extent.

Strand.—Erection of a building upon the site of Nos. 18, 19, 20, and 21, Haymarket, and Nos. 1, 3, and 5, Orange-street (Mr. W. Cave).—Consent.

Uniting of Buildings.

City of London.—Uniting of Nos. 58, 59, and 60, Paternoster-row, and Nos. 61 and 65, St. Paul's churchyard, City (Mr. C. W. Oatley for Messrs. J. Lyons & Co., Ltd.).—Consent.

Norwood.—Uniting of Nos. 62 and 64, Ferndene-road, Herne-hill, by means of an opening at the ground-floor level (Mr. H. C. Morrell).—Consent.

Wandsworth.—Uniting of Nos. 412, 414, and 416, Streatham High-road (Messrs. Herring, Son, & Daw for Messrs. P. B. Cow & D. Cow).—Consent.

Lines of Frontage and Projections.

Dulwich.—Porch at No. 5, Wood-vale, ulwich (Messrs. Watson & Ellwood for Miss ox).—Consent.

Hackney, Central.—Building on the western de of Clifton-grove, Graham-road, Hackney Ir. C. G. F. Rees for the Committee of the ormar Hospital).—Consent.

Hampstead.—Cycle house in front of No. 12, ollycroft-avenue, Hampstead (Mr. N. Hoskins r Mrs. M. C. Hennell).—Consent.

Islington, South.—Projecting showcase at No. 3, Upper-street, Islington (Mr. H. F. P. isher).—Consent.

Lewisham.—Buildings on the western side of ockley-rise, Lewisham (Mr. C. T. Standen).—nsent.

Norwood.—Porches in front and covered ys at the rear of Nos. 66, 68, 70, 72, 74, and Ferndene-road, Norwood (Mr. H. C. orrell).—Consent.

St. George, Hanover-square.—Wooden screen No. 35, Warwick street, St. George, Han-er-square (Messrs. C. E. Fry & Sons).—nsent.

St. George, Hanover-square. — Projecting ck at No. 43, Dover-street, Piccadilly (Green-h Time, Ltd., for Messrs. A. Webster & .).—Consent.

St. George, Hanover square.—Buildings upon hite abutting upon Vauxhall Bridge-road, lton-road, and Gillingham-street, West-minster (Mr. E. Wimperis for His Grace the ke of Westminster).—Consent.

Strand.—Projections at a building upon the of Nos. 3 and 4, Coventry-street, West-inster (Mr. H. J. Blanc).—Consent.

ROJECTED NEW BUILDINGS IN THE PROVINCES.*

CCRINGTON.—Extensions to works, Dale-et, for Messrs. J. W. Woods & Co.

Alnwick.—Parish hall, Painter-hill; Mr. H. Knowles, architect, Newcastle-on-Tyne.

Ballymena.—Proposed hospital at work-se; Architect, Guardians' Offices, Bally-na.

Barrow-on-Soar.—Alterations at grammar ool (1,400*l.*); Mr. W. A. Brockington, Secre-y, Education Committee, Leicester County ncil, Leicester.

Batley Carr.—Brass-foundry, etc., Jack-lane. Messrs. Brown & Naylor.

Beith.—Additions to cabinet works for t of Scotland Furniture Manufacturing pany.

Belper.—Mission church (2,000*l.*); Vicar, St. r's Church, Belper.

Bentley (Yorks).—Hotel, Wath House-lane 00*l.*); Manager, John Smith's Tadcaster wery.

Bexhill. — Institute; Vicar, St. Mark's rch, Bexhill.

Birkenhead. — Alterations to premises, nge-road; Secretary, Y.M.C.A., Birken-l.

Birtley.—Additions, school (2,000*l.*); Mr. W. nworth, architect, Shire Hall, Durham.

Blenheim Auckland.—Extensions to infectious ases hospitals at Tindal-crest and Helm-on-row (6,000*l.*); Mr. R. B. Thompson, hitect, Market-place, Bishop Auckland.

Blackburn.—Roman Catholic Church; Vicar, Peter's, Mill-hill, Blackburn.

Bolton.—Enlargement of cottage hospital; E. A. Johnson, architect, Abergavenny.

Boston. Shops, West-street, for the Boston strial Co-operative Society.

Burton.—Drill hall; Mr. George Hodges, ter, Honnington-road, Burton-on-Trent.

Canterbury. Laundry at workhouse (2,000*l.*): H. Doré, architect, 82, Castle-street.

Cerbury.

Chart. Office block, etc., Newlands-road. Messrs. G. & J. Weir, Ltd., Holme dry, Cathcart.

Chester. Extensions to infirmary: Mr. Privett, builder, Cottage-grove, Southsea.

Derby End (Netherton).—Church; Vicar, St. 's Church, Derby End.

Erwen.—Extensions to Heyfold Mill for rs. Harwood Brothers; mill, Dewhurst-, for the Albert Cotton Spinning Com Ltd.

Bath.—Proposed dyeworks for Messrs. Ast-Pickford, Ltd., Lumb Mill, Delph.

Aylesbury. Parochial hall. Vicar, St. John's ch, Dewsbury.

Binfield. Sheet metal works. Park-road. Messrs. Manwood, Miller, & Co.

Bisham (Hants)—Nurses' dormitories, at m (1,200*l.*); Mr. W J. Taylor, Surveyor. Castle, Winchester.

Brayhill.—Miners' institute: Messrs. J. T. as & Son, builders, Close House, Durham.

e also our list of Competitions, Contracts, n another page

Frizinghall.—Church schools; Vicar, St. Margaret's, Frizinghall.

Glasgow.—Addition to Co-operative Bakery Society's bakery, McNeil-street; Messrs. Bruce & Hay, architects, 26, West George-street, Glasgow. Business premises, Trongate; Mr. A. B. M'Donald, Surveyor, Burgh-buildings, Glasgow. Bakery, Cranston-street; Messrs. Salmon, Son, & Gillespie, architects, 53, Bothwell-street, Glasgow. Alterations and additions to 370, Pollokshaws-road; Messrs. Stewart & M'Donald, Ltd., 18, Buchanan-street, Glasgow.

Gloucester.—Extension of parish hall; Vicar of Acton, Gloucester.

Greenock.—Sheet-iron welding shop for Messrs. Scotts' Company, Ltd., Greenock.

Gwyafeni. — Isolation hospital; Surveyor, Rural District Council Offices, Gwyafeni.

Hanley.—Electric theatre; Mr. W. A. Baynes, architect, Fountain-buildings, Hanley.

Harrogate.—Additions to church; Vicar, St. Wilfred's Church, Duchy-road, Harrogate.

Houston.—Powder magazine off Houston Wood for Messrs. Hunter & Warren.

Jarrow.—Drill hall, Beech-street; Durham Territorial Force Association.

Kilbirnie —Additions to factory for Messrs. W. & J. Knox, Ltd.

Kilwinning.—Post-office; H.M. Office of Works, Edinburgh.

Kinning Park (Glasgow).—Re-erection of premises for Messrs. William Motherwell & Co., rivet, screw, and chaplet makers, Kinning Park.

Leith.—Six tenements of houses, Hermitage Park, for the Lochend Building Company.

Liverpool.—Reconstruction of wooden shed. Salisbury-dock (1,760*l.*); the Mersey Dock and Harbour Board. Alterations and additions to Cottage Homes Infirmary; Mr. C. H. Lancaster, architect, Brougham-terrace, West Derby row, Liverpool.

Lowestoft. -Plans have been passed for additions to works, Alexandra-road, for Messrs. J W. Brooke & Co., Ltd.

Manningham —Church. Vicar, St. Luke's Church, Manningham.

Merthyr Tydfil. -Free library and public offices adjoining Town Hall; Messrs. Johnson & Richards, architects, Abergavenny.

Morley.—Club premises for the Trustees, Bruntcliffe Working Men's Club. Additions to mill for the Morley Cloth Finishing Company.

Nottingham.—Addition, mechanics' institute (3,000*l.*); Messrs. Bromley & Watkins, architects, Prudential-buildings, Nottingham. Church, Sherwood-road (8,000*l.*); Messrs. Sutton & Gregory, architects, Angel row, Nottingham; Mr. J. Wright, builder, Wilford-crescent, Nottingham.

Nuneaton.—Extensions to electricity works (1,355*l.*); Messrs. George Smith & Sons, builders, Chilvers Coton.

Parkhead (Glasgow). — Labour Exchange, corner of Sorby and Southbank streets; Mr. George Dunsdale, 11, Dalmarnock-road, Glasgow.

Penzance.—School; Mr. F. Latham, Surveyor, Town Hall, Penzance.

Pokesdown. — Proposed fire-station; Mr. F. W. Lacey, Surveyor, Town Hall, Bournemouth.

Ramsden Bellhouse. -Houses (982*l.*); Mr. H. R. Bird, architect, St. Thomas's-gate, Brentwood.

Rochdale.—Extensions to electricity works: Messrs. R. & T. Howarth, Royds-street, Rochdale.

Salford. — Alterations to Union Offices (5,338*l.*); Mr. R. Carlyle, builder, Old Trafford.

Sherburn.—Store premises for the Sherburn-hill Co-operative Society; Messrs. Morris & Sons, builders, Howden-on-Tyne.

Shoreham. — Proposed board-room and offices; Clerk, Guardians' Offices.

Sketty (Glam.).—Mission church; Vicar, St. Paul's Church, Sketty.

Southbroom (Wilts).—Additions to church (1,500*l.*); Vicar of Southbroom.

Swansea.—Plans have been passed as follows:—Six houses, Milwood-street, for Mr. George Davies; five houses, Hawthorne-avenue, for Mr. William Thomas; five houses, Vicarage-road, Morriston, for Mr. Edward Harris; forty-five houses, Pentrepoeth road, Morriston, for Messrs. Thomas & Jones; eight houses, Middle-road, Cwmdu, for Mr. C. Gustavus.

Tanfield Lea (Durham).—Church; Architect, Mr. J. W. F. Phillipson, 8, Grainger-street, Newcastle-on-Tyne.

Wallsend.—Offices for the Wallsend and Hebburn Coal Company.

Wrenbury.—Proposed cheese factory for Cheshire Milk Producers, Ltd.

Wolverhampton.—Enlarging church (2,500*l.*): Vicar, St. Jude's Church, Wolverhampton. Additions to drill hall; Mr. George Hodges, builder, Honnington-road, Burton-on-Trent.

Worcester.—Theatre Royal; Mr. V. Rowe, architect, Foregate, Worcester; Messrs. Stokes Brothers, Tybridge-street, Worcester.

METROPOLITAN ASYLUMS BOARD.

At the fortnightly sitting of the Board on Saturday, amongst the matters dealt with were the following:—

Western Hospital.—The tender of Mr. M. McCarthy, of 155, King's-avenue, Clapham Park, of 1,489*l.*, was accepted for cleaning and repair work at the above hospital.

Brook Hospital.—Subject to the consent of the Local Government Board, it was decided to provide balcony accommodation on four ward pavilions at Brook Hospital at an estimated cost of 790*l.*

North-Western Hospital.—The Local Government Board, having asked to be furnished with the details of proposed expenditure on drainage works at the above hospital, the Hospitals Committee submitted a report showing that the estimate of 471*l.* 19*s.* was made up by the provision of bedpan and scalding sinks, hot-water supply to several wards, drainage and incidental work.

Disinfection of Sewage.—It was decided to ask the Greenwich Borough Council to assent to the discontinuance of the practice of treating the sewage of Brook Hospital with permanganate of potash before it enters the public sewer, as the Medical Superintendent reported that, in his opinion, the process is quite inefficient as regards any true disinfection.

METROPOLITAN WATER BOARD.

At the monthly meeting of this Board last Friday, the following matters were dealt with:—

Improvement of Supplies.—Estimates of 5,500*l.* for the improvement of the Staines reservoir, and of 5,070*l.* to improve the supply to Wimbledon, were approved.

Future Supplies.—The Works Committee brought up a recommendation to authorise them to prepare plans and estimates for the construction of a reservoir at Littleton with a capacity of 3,500 million gallons. This is part of a scheme for carrying out the new reservoirs authorised by the Boards Act of last year, the whole of which, it is estimated, would cost 3,481,900*l.* After discussion the matter was adjourned.

Chingford Reservoir Buildings.—It was decided to authorise the Works Committee to accept tenders for the erection of the proposed pumping-station, gas-producer house, and two cottages, at the Chingford Reservoir Works, the estimate for which is 548,000*l.*

LONDON COUNCILS.

Barnes.—Bexhill-road, Mortlake, and Nassau road, Barnes, are to be made up as new streets The following works are to be carried out, and application is to be made to the Local Government Board for sanction to borrow 920*l.*, the total cost of such work:—Kerbing, paving, and channelling Fanny road, Barnes, estimated cost, 263*l.*: paving Eleanor-grove, Barnes, 95*l.*; paving portion of Fitzgerald-avenue, Mortlake, 177*l.*: kerbing, paving, and channelling portion of Lonsdale road, Barnes, 188*l.*: kerbing, paving, channelling, and making up path in portion of Temple Sheen-road, Mortlake, 175*l.*: paving Earl-road, Mortlake, 50*l.* Electricity mains are to be extended at an estimated cost of 620*l.* Plans have been passed for Messrs. Cox & Taylor for the erection of four houses in Temple Sheen-road, Mortlake. Mr. G. E. Sturgis has lodged amended plans for the erection of eight houses in Gilpin-avenue.

Marylebone.—Alterations to cost 600*l.* are to be carried out at the electricity generating-station for the purpose of increasing the coal storage capacity.

Stepney.—Electricity mains are to be extended in four streets. An underground convenience is to be reconstructed at the junction of West India Dock, East India Dock, Commercial and Burdett roads, at an estimated cost of 1,350*l.* A new paving depôt in Narrow-street and Midland-street is to be provided at an estimated cost of 7,150*l.* Plans have been lodged with the London County Council by Mr. H. G. Leslie for the erection of a building at St. Boniface School, Union-street; also by Mr. H. G. Needham, for the erection of buildings in Harrison-court, Wheler street, and Quaker-street.

Tring.—The Surveyor has been authorised to proceed with the work of kerbing and channelling in Aylesbury-road.

Watford (Urban).—The tender of Messrs Bracey & Clark has been accepted, at 94*l.* 1*s.*, for carrying out drainage works at Tolpits-lane

THE QUANTITY SURVEYORS' ASSOCIATION:

ANNUAL DINNER.

THE annual dinner of the Quantity Surveyors' Association was held on Monday at the Connaught Rooms, Great Queen-street, Kingsway, W.C., the President, Mr. C. W. Ball, in the chair. There were also present the Rt. Hon. Lord Mayor of Leeds (Mr. William Nicholson), Mr. H. A. Bartlett, President of the Institute of Builders; Mr. F. G. Rice, President of the Builders' Benevolent Institution; Mr. Dudley Bartlett, President of the Builders' Clerks' Benevolent Institution; Mr. James Wright, President of the National Federation of Building Trades Employers; and Messrs.

J. Aylott
H. A. Addiscott
H. H. Bartlett
J. Dixon Butler
H. P. Boulnois
C. L. Brighton
P. Bywaters
H. B. Bell
A. E. Bare
T. E. Bare
F. R. Betenson
H. R. Bird
A. S. Bennion
H. J. Burr
R. G. Bennett
G. Corderoy
A. W. S. Cross
S. Chatfeild Clarke
T. Costigan
T. J. Carless
H. Cubitt
J. Carmichael
H. R. Cowley
R. Charnock
H. C. W. Dod
A. Dixon
W. E. Davis
B. A. Elphicke
H. England
T. P. Figgis
H. Cornwall Garland
H. A. A. Gate
H. M. Hodgson
A. A. Hudson
W. R. Hood
F. W. Hingston
J. P. Hall
D. Harris
F. W. Harrison
J. Johnstone
F. W. Jeffery
C. A. Kennett
Walter Lawrance
P. Lawrance
W. M. Law
Alan E. Munby
H. Northcroft
B. E. Laine-Pearson
C. E. Pease
G. H. Parker
Alan Paull
E. J. Read
Henry Riley
E. Steel
C. H. Smart
E. H. Selby
H. B. Saunders
Herbert Shepherd
H. T. Sayer
A. J. Smith
J. M. Theobald
E. A. Thorne
E. Trower
T. S. Vickery
A. Needham Wilson
W. Hoffman Wood
J. Wood
A. J. Wood
H. J. West
Walter West
Henry Vale
Arthur G. Cross, Hon. Secretary.

The toast of "The King" having been honoured,

The Rt. Hon. the Lord Mayor of Leeds,
in giving the toast of "The Quantity Surveyors' Association," said he had had considerable experience of quantity surveyors, and he knew they were the best friends of contractors. There was a necessity for such an association as that of the Quantity Surveyors' Association—which he was told was in a flourishing condition—if they were to get a living wage and keep their heads above water. In the North there was a prevalent practice of the architect taking off his own quantities, and he did not think that was desirable, for in the consummation of a good building an architect, a skilled quantity surveyor, and a good contractor were wanted. He noticed that even County Councils sweated quantity surveyors, though there were municipalities which were not employing them at all. He had been fighting that question in the form of engineers *qua* architects, as he saw a great distinction between the work of the two professions. He was told that certain work could be as well done by the City Engineers as by an architect, but he thought that architectural work should be done by an architect. The proposal was rejected twice, and it was only at the third meeting that the principle was conceded. He wanted the Association to take its proper place and do its own fighting in this matter. He should like to express an opinion in regard to the work of contractors and say that he thought they must look forward to dearer prices. In both building and engineering trade had been very bad for the last three or four years, and the time had come, what with legislation, strikes, the increase in the cost and the lessened production of labour, when contractors would have to alter their prices. Contractors had in their minds certain prices which in the past had paid, but which would not pay now by 25 per cent. So when they were framing their estimates they should take into consideration that the old rates would not pay, and should make estimates that would enable them to make a good job.

The President,
in reply, said he regretted that two proposals he had made when he was elected had fallen through, *i.e.*, a conversazione and a visit to Portsmouth, where there were a good many interesting things to see. He was glad, however, that something had come of his wish that the Benevolent Fund should be put on a satisfactory basis. He asked for 46*l.*, but they had sent him 78*l.* The Council of the Association had had a busy year, and the ordinary member had no idea of the amount of work they got through; they had all kinds of communications from all sorts of people and authorities, who wanted information on almost every subject connected with surveying and the building trade generally. During the past year the Association had completed the revision of the articles of association, and the principal alteration was as to the introduction of a new class of membership, *i.e.*, the Associate, who must be twenty-two years of age, have passed the Association's examination or some corresponding similar examination, and give evidence of good training and experience. They thought the new class of members would be a success, for there were a good many young men who passed the examination who were not qualified by experience to act as fully accredited quantity surveyors at once, but after a few years of Associateship they would be qualified to become full members. The Association had passed a new by-law by which it was an offence for any member to do work under a limit of 70,000*l.* below the Association's schedule rate of charges, and they considered that was a very important matter. The Association had not issued this year another pamphlet on the standardisation of measurement, as two had already been issued. A sub-committee of the Association had been working in the matter with representatives of the Surveyors' Institution, and another meeting was to be held, and they could not say what the result would be, but the matter had been well considered, and it was hoped that the two bodies would take some joint action in the matter. The Association had a new Presidential badge, and he might mention the names upon it of the Past-Presidents, *i.e.*, Mr. Walter Lawrence, one of the founders of the Association; Mr. A. J. Gate, Mr. W. R. Hood, Mr. A. E. Harris, Mr. H. T. A. Chidgey, and Mr. Chatfeild Clarke. He was glad to say that they still had their Hon. Secretary, Mr. Cross, with them, and he should like to thank him for his valuable services. There had been considerable increase in the membership of the Association, and several leading surveyors were joining the Association, and the membership was a far-reaching one. They were doing good and useful work, and he thought they would be able to accomplish what they set out to do. When they were more firmly established and had enrolled all or nearly all the principal surveyors of the country they would be a power for good and their influence would be widespread.

Mr. H. M. Hodgson, F.S.I.,
in proposing the toast of "The Architects," said that it was their province and sometimes their unpleasant duty to criticise the architect's work on the scientific side, but on the artistic side their work was practically confined to those beautiful little sketches which adorned the margins of their bills which they sometimes used when words quite failed them to describe the full beauties of the design from which they had to take quantities; but even then the prudent surveyor added a note that these sketches were not to be regarded as details in any way, but merely rough approximate sketches put in to elucidate the text. If they had any leanings towards style it was towards the severely classical, and what they did not like was that "restlessness" in architecture of which they had heard, for it very often doubled their labour without increasing their fees. As a quantity surveyor he liked the three R's of architecture, *i.e.*, regularity, repetition, and rectangles. Fortunately, the true canons of art, he believed, required a certain symmetry and regularity in architecture, and those designs which looked most simple and regular on plan were generally those which worked out best. He had been struck by the great improvement which had taken place in the street architecture of London during the last twenty years, and that improvement was going on still. Great beauty and refinement characterised many of the buildings, which had taken the place of those which existed twenty years ago. Bricks and stucco were going down and marble and stonework were going up. Sometimes ferro-concrete buildings were put up, but he hoped they would not become too evident and that they would be decently clothed in a skin of masonry. What London would be like in fifty years' time if this improvement went on no one could say, and it was to be hoped that in that time there would be some body, on which architects would be represented, which would restrain and regulate the architecture of our streets so that there might be more uniformity and agreement. In this transitional period in the history of architecture we came across strange juxtapositions of buildings, especially as to scale, but no doubt that would right itself in the course of time. There was perhaps a tendency in the great scale of modern buildings in London to be too colossal, and the width of the streets designed for smaller buildings might not be satisfactory when the larger buildings took their place. He thought it was a very satisfactory thing that architects had been associated with the development of large building estates like those at Hampstead and Gidea Park, for that association had been entirely good, and in the course of time he hoped it would do something to change those dreadful suburbs of London with which they were acquainted. At Hampstead Garden Suburb there had been a great improvement in the way the estate had been developed.

Mr. A. W. S. Cross,
in reply, congratulated the Association on its flourishing position, and he hoped to see them extend their work and their sphere of influence. He hoped to see the day when it would be possible to exercise the principles of examination or some form of test of professional ability for quantity surveyors in the United Kingdom. In these days of competition, when it was the practice to admit all sorts into the professions he thought they would agree that the professions which were open should be closed. Quantity surveyors were indispensable to architects, especially when the builder's bill of extras loomed large on the horizon. For their associated capacity they were equally useful, because when any urgent question relating to their duties and responsibilities and to their emoluments arose architects and others appealed to them to be put right. If they started any scheme for the statutory qualification of quantity surveyors they would find immense difficulties to encounter, both from legitimate and other practitioners, but if they persevered the effect would not fail to be good to the whole profession, and architects would be glad to know that quantity surveyors were all tried and competent men.

Mr. Henry Riley (Vice-President of the Association),
in proposing the toast of "The Contractors," referred to the introduction of new types of construction and to the work of specialists, remarking that building operations daily became more difficult for the contractor.

Mr. H. Arthur Bartlett (President of the Institute of Builders),
in response, referred to the trouble of strikes, actual and threatened, and said that the building trade would not stand the increase in wages proposed by the men to meet the increased cost of living, but they hoped the present difficulties would be got over. As to the sub-contractor trouble, it was a great pity that builders were not given more discretion and given the opportunity of doing a great deal of the work of the sub-contractor. If the present tendency went on builders would have to be called builders' merchants' agents instead of builders.

Mr. S. Chatfeild Clarke, F.S.I. (Past-President),
suitably proposed the toast of "The Visitors," coupled with the name of Mr. George Corderoy, F.S.I., who hoped that that evening would be the precursor of a closer intimacy between the two bodies which represent surveyors in the country. There had been a closer approximation, and that he welcomed and had always done his best to foster. He admired the energy which the Association had devoted to professional subjects, and he hoped that the cause which they all had at heart would be advanced. There were difficulties to surmount, but there were opportunities for those who wished to advance the interests of the profession.

The last toast was that of the health of the Hon. Secretary, Mr. Cross, proposed by Mr. A. A. Hudson, K.C., who referred to the admirable work carried out by Mr. Cross on behalf of the Association. Their Hon. Secretary had the satisfaction of seeing the growth

f the society, which was very marked. Not nly had the Association grown, but it had done xcellent work, and he did not know any rofession which rendered such great assistance the lawyer as the quantity surveyors' rofession. He agreed as to fixing a minimum age, but not a maximum. The members of he architectural profession, he believed, had xed a maximum fee, which was a great istake, and no other society he knew of d so except solicitors and cabmen.

Mr. Cross suitably replied, and the proceedings on afterwards concluded.

LIGHTNING CONDUCTORS.

MR. W. T. HATCH, Engineer-in-Chief to the etropolitan Asylums Board, has submitted e following interesting Report on the whole estion of lightning conductors:—"Referring the Memorandum of March 14, 1912, in hich I was instructed to report upon the equacy and efficiency of lightning conctors generally, I would remark that the ual impression appears to be that there is a eat deal of uncertainty as to whether lightning nductors are useful or dangerous in conxion with the buildings to which they are ached. Perhaps a few words on the principle on which lightning conductors work may plain matters.

Lightning, like every other force in nature, ows the path of least resistance. Buildings trees are weaker or less resisting (electric-) than the air, therefore the lightning will through them in preference to going through air beside them; but if there be placed on se buildings paths that are electrically ker, the lightning will pass along those hs in preference to going through the ldings. A line of metal forms the weakest the least resisting path, and, therefore, prevent lightning crashing through any ding with destructive violence it is cusary to place paths of metal for it to follow call them lightning conductors, and if rtifically applied and maintained in good r they are safeguards against damage. like many other things that are simple in ry, the protection of buildings against ning is, in practice, a somewhat difficult ter, requiring considerable knowledge and rience, for the question is generally comted by there being already in and on the dings lines of metal (such as gas pipes, r pipes, guttering, etc.) which, though not owledged as such, are more or less deve lightning conductors which have to fully considered in obtaining an efficient m. A lightning conductor does not ct lightning any more than the other lines etal do, and an exposed part of a building ble to be struck whether there is a conor on it or not, the only difference being if there be an efficient conductor it will uct the flash harmlessly to earth, but if is none the flash will force its way uctively through the structure.

far as figures are available it appears that ngland 400 buildings are damaged by ing each year. Of these, about eight per n, or 2 per cent. only, have been fitted lightning conductors; the remaining cent. have not been so provided. Where ge has occurred to so-called protected ngs it has generally been found to be due to an insufficient number of conductors g been provided for the size of the building, their having been applied incorrectly; er being once fixed, to no further attention been given to them to ascertain that onnexions to earth have been maintained But with very few exceptions little ction by fire has occurred to the 2 per cent. dings protected by lightning conductors, o far as can be ascertained, no case of human life has occurred in a protected g during the last ten years, but there are us instances on record of loss of life in ected ones.

pt where lightning has been seen to a conductor without harmful effects, ly indication of a conductor having d a lightning flash is a small mark on nt, which is not easily visible. Two cases nowever, been noticed during the last connexion with the Board's institutions, he Northern Hospital administrative nd Darenth Asylum water-tower, where nts of the conductors have been found fused owing to their having received of lightning and conducted it safely to ithout any destructive effect.

I find that in the days of the London School Board there were 500 schools (many of which were loftier than the surrounding buildings) unprotected by conductors and considerable damage occurred. In one instance the school was struck and scholars were killed. This led the School Board to adopt lightning conductors throughout the whole of their system, and to have them periodically tested by an expert and kept in order. Since this precaution has been taken I understand that no damage has occurred whatever. When the School Board was taken over by the London County Council it was decided, owing to the immunity from accident by lightning, to disconnect the lightning conductors, and several were removed from some of the schools, with the result that at one school (Eltringham-street, York-road, Wandsworth), a few days after the lightning conductor had been removed, the building was struck and damaged, and on the advice of the electrical department, which had not been consulted with regard to the dismantling of the conductors, they reverted to protection again.

I find also that the Admiralty, although not protecting their iron ships (owing to these being naturally perfect lightning conductors), provide lightning conductors for chimney-shafts, naval barracks, hospitals, and other buildings. The War Department also applies them to similar buildings, as well as to explosive magazines and factories, the Home Office to prisons, and the Office of Works to all important buildings in its charge. The London County Council, besides the schools already referred to, provide lightning conductors for fire-stations, asylums, and for all tall chimney-shafts under their control.

From a financial point of view it may possibly be cheaper to repair damaged buildings struck by lightning rather than instal an efficient protective system, and in the case of an outbreak of fire during such an occurrence the complete system of fire alarms and appliances for extinguishing fire would probably be effective; but there still remains the possibility of the loss of life, and this is one which, in the case of the asylums where large numbers congregate in the recreation hall, chapel, and such-like buildings, any loss would probably be on a large scale rather than be confined to injury to an individual. I beg, therefore, strongly to recommend that the present system of periodically testing and examining the lightning conductors throughout the Board's institutions once every five years be continued, and that the recommendations as to the fuller protection of the more important buildings receive serious attention from time to time."

MAGAZINES AND REVIEWS.

IN the *Burlington Magazine* Mr. Arthur M. Hind has an article on Jacques Callot, the XVIIth-century artist, whose etchings are so admired by collectors. The illustrations of his work include a chalk study and an etching of "Paris, with the Louvre." Mr. Romney Green, who is so closely identified with the Arts and Crafts movement, continues his series of articles on the "Principles and Evolution of Furniture-Making"; he suggests that the degeneration of the craftsman into the mechanic was largely due, even before the invention of modern machinery, to the evolution of his tools and his methods. Mr. O. M. Dalton writes on the "Byzantine Enamels in Mr. Pierpont Morgan's Collection."

The *Connoisseur* contains various articles of interest to collectors, notably those on the objects of art at Carlyle House, Chelsea, on Sussex pottery, on peasants' rings. The plates include a "Portrait of Federigo Gonzaga, First Duke of Mantua," by Francia, and some illustrations in colours of porcelain knife-handles.

In the *Studio* the series of views of Old Moscow, by A. Vasnetzoff, possess a curious interest as an attempt to render the characteristics of the city in mediæval times. The work of Edmond G. Reuter, of Geneva, is both decorative and imaginative in quality. Recent designs in domestic architecture include "Old Castle, Sussex," by Mr. Ernest Newton, A.R.A.; "Claverdon Hall, Warwickshire," as altered by Mr. Arthur McKewan, and a number of competitive designs for a private laundry.

The most interesting article in the *Architectural Record* is from the pen of Otto Wagner, of Vienna; in it the author deals with numerous practical questions arising out of the development of a great city, and in considering the æsthetic aspects emphatically ranks himself with the advocates of the formal and monumental treatment of buildings. Here and there may be noted a side shot at what Professor Wagner evidently regards as the pernicious doctrines of Camillo Sitte, and he is hardly more in sympathy with the modern German and English schools responsible for the rise of the garden city and garden suburb. The article is accompanied by illustrations of some of Professor Wagner's works. The series of Early American churches is continued in this issue.

The current issue of *Concrete* contains a very clear set of illustrations of the constructional steelwork to Messrs. Nicholl & Co.'s premises in Regent-street, with descriptive notes. The article on a large building in Brunswick-street, S.E., entirely in reinforced concrete, exhibits many points of interest, and the description of the cement-gun and its uses suggests great possibilities for this method in the future, more particularly as regards the coating of steelwork in cement without the use of casings or forms.

THE LONDON COUNTY COUNCIL.

THE usual weekly meeting of the London County Council was held on Tuesday, in the County Hall, Spring-gardens, S.W., Lord Cheylesmore, Chairman, presiding.

LOANS.—The Finance Committee recommended that loans be made to Borough Councils as follows:—Lambeth, 700*l.* for street improvement; Poplar, 10,000*l.* for electricity buildings; Shoreditch, 10,845*l.* for electricity undertaking; and St. Marylebone, 70,000*l.* for erection of a town hall.

LEADENHALL-STREET.—The Improvements Committee recommended that, on the understanding that the Council is not thereby committed to contribute towards the cost of any further widening of Leadenhall-street, a contribution be made, on the Council's usual conditions, of one-half of the net cost of the widening of Leadenhall-street, at Nos. 57 to 69 (inclusive), proposed to be executed by the City Corporation, provided (i.) that if such net cost exceed 252,800*l.*, the Council's contribution shall be limited to 126,400*l.*, and (ii.) that in the execution of the improvement no departure whatever be made from the approved plan except with the previous sanction of the Council.

FIRE STATIONS.—Various repairs and alterations are to be carried out at the chief station at an estimated cost of 135*l.* 8s. 6d., and external painting, cleaning, and varnishing works at the fire stations of the Council, for which tenders are to be invited.

THEATRES, ETC.—The following drawings have been approved by the Theatres and Music Halls Committee:—Amherst Hall, Kingsland High-street—alterations; Ladbroke Hall, Notting-hill—alterations; Marlborough Theatre—bioscope-chamber, lobby, and rewinding room; Windsor Castle Hall, Maxey-road, Plumstead—alterations.

ALHAMBRA.—The Committee also report that drawings have been submitted by Mr. Bertie Crewe, showing proposed alterations at the Alhambra Palace of Varieties, Leicester-square. The alterations include the erection of a cinematograph-chamber at the balcony level, abolition of the pit, and rearrangement of the stalls seating, provision of a new exit, and closing up of certain exits at this level.

LEGAL COLUMN.

London Building Act.

The building line in the Euston-road has been the subject of considerable litigation, and in *Rex v.* Tribunal of Appeal a point came to the Divisional Court for decision. The Superintending Architect had fixed the building line between Hampstead-road and Osnaburgh-street, and five parties appealed to the Tribunal of Appeal. The Tribunal, having heard the parties, varied the building line as determined by the architect in some particulars. The five parties were dissatisfied with the finding, and applied for special cases to be stated. The Tribunal, having given notice to certain parties also interested, determined to state three special cases as between various parties. The London County Council applied to the Court for a rule *nisi* on the ground that under sect. 182 of the London Building Act there was only power for the Tribunal to

state one special case. The Divisional Court held that under the section the Tribunal had a discretion to state such a number of cases as they should deem advisable.

The Right to Light.

The case of Griffith *v.* Richard Clay & Sons, Ltd., briefly noted by us, February 23 last, and reported in our columns last week, on the hearing in the Court of Appeal, appears to raise a new question in connexion with the damages recoverable for an actionable interference with the right to light.

The plaintiff was the owner of two houses in Brunswick-street, Blackfriars, and it was admitted that the defendants, by erecting their new buildings, had obscured the light to certain windows in these two houses. Behind these houses there was another building, also in the ownership of the plaintiff, but separately rated and having no windows looking towards the defendants' buildings. The total surface area of the two houses was 1,000 sq. ft., the surface area of the third house was 1,050 sq. ft. The defendants admitted obscuration to the windows of the two houses, and had paid 150*l.* into Court. The Judge in the Court below found that this would have been sufficient damages if the two houses alone had to be regarded, but the plaintiff contended that as the buildings, which were dilapidated, could be pulled down and one large building be erected upon the whole site, the damage to the site as a whole should be regarded, and the Court accepted this view, and assessed the damages at 200*l.* On the appeal it was contended that the damage to the dominant tenement could only be considered; but the Court of Appeal, without calling upon the respondents' Counsel to argue the case, decided in the respondents' favour that the damage to the whole site must be regarded. The point involved seems not to have been dealt with in the text-books, and raises considerations of considerable difficulty. It is clear that the only claim to light could be based on the light coming through the windows of the two houses facing the defendants' premises. Without a window there can be no easement. It would also be limited to light so enjoyed: "The purpose for which a person may desire to use a particular room or building in future does not either enlarge or diminish the easement which he has acquired" (per Lord Lindley in Colls *v.* Home and Colonial Stores). In Colls' case it was also held that such a diminution of light must be proved as to amount to a nuisance. The difficulty in the case under consideration would, therefore, seem to be a difficulty in proving nuisance in the case of a building which, at the time the action was brought, enjoyed no light from windows looking towards the servient tenement. The light enjoyed through existing windows of these old and low buildings would seem to be likely to make little difference to a large building to be erected on a site more than double the size of that the houses were built upon, yet, as we have shown above, the new building could claim no more light than the old buildings. Therefore the damage to the whole site as distinguished from the old houses would seem to be both remote and very slight. In the Court of Appeal the Lords Justices had regard to the fact that although in this case the time had elapsed within which an injunction could be applied for, the buildings complained of having been completed; yet had proceedings been taken in time and an injunction granted, that injunction would have protected the whole site. That may be so, for if a right is infringed, and the infringement can be restrained by injunction, the Courts cannot be careful to inquire whether or not incidental advantages may accrue from the injunction; but it is otherwise in the case of damages, where exact proof is required as to the injury sustained.

Possibly the present decision may be explained when it is considered that the Judge of the Court below had assessed the damages, an assessment which the Court of Appeal will rarely upset if it is shown that any claim to damages can be supported in law; but it must be confessed that it seems to import a new principle, and it is likely that more will be heard of this point in future cases.

LAW REPORTS.

COURT OF APPEAL.

(Before Lords Justices VAUGHAN WILLIAMS, FLETCHER MOULTON, and FARWELL.)

Case under the London Building Act: Minturn *v.* Barry.

THIS case was heard last week upon the appeal of the plaintiff from a judgment of a Divisional Court of King's Bench, consisting of Justices Bankes and Lush.

In this case the plaintiff, Miss Minturn, was the freeholder of a house known as 14, Chelsea-embankment, which she had acquired some years ago. About the time that she had acquired the house she discovered that a wall at the rear of her house was very damp, and her endeavours to remedy that failing, and finding that the dampness caused injury to the health of her servants, she then served a party-wall notice upon the defendant, Sir John Wolfe-Barry, the adjoining owner, under sect. 88 of the London Building Act, the notice expressing the wish to excavate on the defendant's side to try and remedy the defect by putting in some impervious material. It was alleged that the wet came in on the defendant's side. The case then went in the ordinary course under the Act to two surveyors, and the two referred it to a third, and from the decision of the third surveyor the plaintiff appealed to the County Court Judge sitting at Brompton, there being a right of appeal under the London Building Act. In the County Court the defendant took the objection that the wall could not be held to be defective merely because of damp, and the County Court Judge so decided. From that decision the plaintiff appealed to the Divisional Court, where it was held that a party wall could be defective because of damp within the meaning of the London Building Act, and the case was remitted to the County Court for retrial. The County Court Judge retried the case upon the facts, and, following some remarks made by the Judges in the Divisional Court upon the question whether the plaintiff ought to be allowed to execute work upon the adjoining owner's side, the County Court Judge held that the previous history of the wall might be gone into. He then went into the history of the wall, when he found that originally the plaintiff's party wall was erected upon the top or embodied part of the old garden wall. He said that if a building owner chose to make use of a wall such as a garden wall, which must have been quite sufficient for the purposes of a garden wall, he could not complain and say afterwards it was damp and defective, and that he could go on the building owner's side and remedy that defect. His Honour then made an order by which the plaintiff was precluded from going on the defendant's side of the wall and doing something which the plaintiff alleged it was impossible for her to do on her side. From this decision the plaintiff appealed to the Divisional Court, composed of Justices Bankes and Lush, and, her appeal being dismissed, the plaintiff now appealed.

At the conclusion of the arguments Lord Justice Vaughan Williams, in giving judgment, said the sole question for the Court to decide was whether in the circumstances there ought to be a new trial. He was of opinion, and the Court was of opinion, that the County Court Judge took into consideration matters which he ought not to have taken into consideration in arriving at his judgment. It was clear that the County Court Judge did take into consideration matters of ancient history with regard to the wall in question. As there was to be a new trial he did not propose to deal with the evidence or the facts of the case in any way, because it might prejudice the new trial.

Lord Justice Moulton concurred. He thought that the greater part of the discussion in that Court had been upon points which did not affect their judgment. The London Building Act contained provisions which enabled party structures to be repaired and made good by the person owning the house and premises, of which the party structure formed part. The conditions under which those rights were to be exercised depended upon the condition of the party wall and the arrangement of the premises on the side. But the provisions of the Act had no relation to any question as to behaviour in the past, but their object was for the purpose of giving a remedy for a present evil. The language of the Act made it quite clear that the Tribunal, which had to decide these matters between the building owner and the adjoining owner, was composed of surveyors, and if there was a difference of opinion by the County Court Judge. He was of opinion that the surveyors and the County Court Judge, upon such a matter, had no right to inquire in any way how the wall in question got into the condition in which it was and as to whose fault it was previously. What the Tribunal had to decide was the way in which the work could be carried out so as to cause as little inconvenience as possible. Beyond that they had no business to inquire into anything. His Lordship was clearly of opinion that the learned County Court Judge had thought that the questions which arose under the sections of the Act were affected by the past history of the wall; by the fact that the wall had been a garden wall and had been adopted as a party wall. It was clear, according to his view, that the County Court Judge thought that the wall had formerly water in it, and that if the plaintiff wanted to do anything to prevent the water coming into it she must do it on her own side. The County Court Judge had no business to go into the past history of the wall. He thought that in the circumstances there must be a new trial.

Lord Justice Farwell delivered judgment to the same effect, and the appeal was accordingly allowed, the costs of the appeal to the Divisional Court and to the Court of Appeal being awarded to the plaintiff, and the costs of the previous trials in the County Court being ordered to abide the result of the third trial.

Sir A. Cripps, K.C., Mr. Hudson, K.C., and Mr. Cecil Walsh appeared for the appellant; and Mr. J. R. Atkin, K.C., and Mr. Bliss for the respondent.

Case under the London Building Act: Work to a Shop Roof.

A DECISION under the London Building Act, 1894, was given at the Greenwich Police-court on the 9th inst. by Mr. Symmons on a case brought before him by the District Surveyor for Deptford, Mr. B. Greig. The facts were that Mr. F. C. Robertson, builder, of Goodwood-road, Deptford, had stripped off the zinc external covering of the roof of a projecting shop at No. 120, High-street, Deptford, and in place thereof had covered the roof with tarred felt. The whole of the projecting shop roof had been so treated with the exception of a portion occupied by a skylight. No notice of the work had been served on the District Surveyor, and the defendant contended that notice was not necessary, as the work was intended to be temporary. At the date of the hearing the work had been completed some five weeks. The District Surveyor relied on the provisions of sect. 145 of the London Building Act, 1894, which requires that where a building or structure or work is about to be commenced notice shall be served, and contended that as the work done involved the rules of the Act with regard to roof coverings, the duty was imposed on him of securing compliance with such rules. He argued that the defence as to the work being temporary was not material in the case.

The magistrate decided that notice of the work should have been served, and fined defendant 1s. and 12s. costs.

The above decision is especially interesting in view of the case mentioned in the *Builder* of April 5 and 12 last (see pages 409 and 436).

FOREIGN AND COLONIAL.

Prisons, Bulgaria.

The *Zentral Anzeiger für das öffentliche Lieferungswesen* (Vienna) of April 25 states that the Bulgarian legislative authority recently voted a sum of 2,600,000 francs (104,000*l.*) for the purpose of erecting prisons at Rustchuk, Varna, Plevna, Stara Zagora, Vratza, and Küstendil. The erection of the buildings will be begun next year, and it is expected that they will be completed in 1917.

The Building Trade in Amsterdam.

Mr. W. A. Churchill, British Consul at Amsterdam, reports great activity in the building trade during 1911, and the probability of this activity continuing during the next two or three years. There has, in fact, the Consul continues, never been so much building in Amsterdam at one time. A new Stock Exchange, large shops, offices, and residences, buildings are in course of erection, and there is a project to build a new Royal palace. The activity will produce a demand for considerable quantities of building materials, furniture, sanitary engineering, heating and illuminating appliances, etc.

Building in the Argentine Republic.

The *Boletin Oficial* of April 10 publishes a law (No. 8,881) whereby the executive authorities are authorised to give out to contract the construction of a building for the Ministry of Agriculture and for all the offices belonging to that Department. The sum of 5,000,000 pesos currency (about 437,500*l.*).

Town Hall, Craijova, Roumania.

The *Zentral Anzeiger für das öffentliche Lieferungswesen* (Vienna) of May 2 notes that the municipal authorities of Craijova have decided to erect a new town hall in that city at a cost of 1,500,000 lei (52,000*l.*).

List of Competitions, Contracts, etc.

For some Contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) are advertised in this number:** Competitions, iv.; Contracts, iv. vi. viii. x.; Public Appointments, xvi.; Auction Sales, xxii. Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Competitions.

MAY 25.—**A.A. Journal.**—DESIGN FOR COVER. See "Competition News," May 17 (page 574).

MAY 25. — **Lymington.** — PUBLIC OFFICES.—arty and fifteen guineas for second and third signs. Assessor, Mr. R. F. Gutteridge, R.I.B.A. Particulars from the Town Clerk, rmington.

UNE 1.—**Dunfermline.**—INSTITUTE AT NETHER-WN.—Cost not to exceed 7,000*l.* Premiums of . 15*l.*, and 10*l.* Assessor, Mr. E. A. Jamieson. rticulars from the Secretary, Carnegie Trust, bot-street, Dunfermline.

UNE 3. — **Sheffield.** — CRIPPLES' HOME.— mited to local architects. Mr. E. M. Gibbs, R.I.B.A., and Mr. F. E. P. Edwards, R.I.B.A., assessors.

UNE 14. — **Conisbrough.** — ADDITIONS TO SPITAL.—The Doncaster and Mexbrough Joint spital Board invite competitive plans for addi-ns to Isolation Hospital. See advertisement issue of May 17 for further particulars.

UNE 28. — **Hale, Cheshire.**—TOWN PLANNING EME.—Premiums 50*l.* and 25*l.* Particulars m the Council Offices, Hale. See page 601.

JUNE 28.—**Regent's Quadrant.**—DESIGN FOR EATMENT.—Premiums, 25 guineas, and 25 neas divided. Adjudicators, Mr. W. Flock-t, Mr. E. A. Rickards and Mr. Alan E. nby. See advertisement in this issue for ther particulars; also "Competition News," e of April 19 (page 453), May 3 (page 512), y 10 (page 537), May 17 (page 573), and this e (page 595).

UNE 30.—**Padiham.**—TOWN HALL, BATHS, ETC. remiums 40*l.* and 20*l.* Particulars from Mr. Gregson, A.M.Inst.C.E., Surveyor's Office, ham.

ULY 1. — **Dusseldorf.** — A plan for the nsion of the City of Dusseldorf. Premiums ,000*l.* to 375*l.* Conditions on application to Chief Burgomaster, Dusseldorf. A transla-appeared on page 366, September 29.

ULY 1. — **Llanelly.** SCHOOL BUILDINGS.—As-or to be chosen by President of R.I.B.A. nium 50 guineas. Particulars from the Clerk he Education Committee, Coleshill-terrace, helly.

ULY 1.—**Port of London.**—NEW OFFICES.— ited to those mentioned in "Competition s," issue of April 12 (page 424).

UGUST 6. — **Cardiff.** — FIRE-STATION. — The iff Corporation invite designs and estimates fire brigade station in Westgate-street. Mr Marshall Mackenzie, assessor. Particulars the Town Clerk, City Hall, Cardiff.

UGUST 30. — SAXON SNELL PRIZE. — Fifty eas; with medal, is offered for essay on a ital subject. Particulars from the Sanitary tute, 90, Buckingham Palace-road, S.W.

TOBER 1. — **Ottawa.** — MONUMENT TO KING ARD VII.—Sketch models in plaster to be to the Director of National Art Gallery, wa.

DATE.—**Birmingham.**—BATHS. -Twenty and uineas for second and third designs. Appli-ns for conditions to be sent to the Super-dent Engineer, Kent-street, Birmingham

DATE.—**Jordanhill, Glasgow.**—PROPOSED NING COLLEGE.—Limited to six firms, named Competition News," December 1, page 635.

DATE. — **Warrington.** — SCHOOL. — The ington Education Committee invite com-ve plans for the erection of a public ntary school. See advertisement in issue bruary 16 for further particulars.

Contracts.

BUILDING.

date given at the commencement of each raph is the latest date when the tender, or ames of those willing to submit tenders, be sent in.

24. — **Pontypool.** — HOUSES. Erection of y-eight houses on the Blaendare-road, pool, and twenty houses on the Sunny road, Griffithstown Plans and specifica-with Mr. Thos. M. Wintle, Bethany, Park Pontypool.

24. —**Rhondda.** -IMPROVEMENTS, ETC.—For improvements at Howard-terrace, Clydach the erection of a stable at the rear of the nd Hotel, Ystrad. Plans and specifica-en, and forms of tender, on deposit of from Mr W. J. Jones, Engineer and Sur-Council Offices, Pentre, Rhondda.

MAY 25.—**Swansea.**—EXTENSION.—For the extension of Christ Church, Swansea. Mr. E. M. Bruce Vaughan, F.R.I.B.A., architect, 21, Dumfries-place, Cardiff.

MAY 25. - **Wrexham.** - HOUSE. -Erection of a house and outbuildings in Maes-y-dre-road, Wrexham. Plans and specification seen, and quantities, on deposit of 1*l.* 1s., from Mr. J. H. Swainson, A.M Inst.C.E., architect and surveyor, 42, Regent-street, Wrexham

MAY 27.—**Ardglass.**—HALL.—For erection of a parochial hall at Ardglass. Plans and specifications from Messrs. Browne Brothers, architects, Ardglass, Co. Down.

MAY 29. — **Auchterless.**—ROOM.—New manual instruction room at Badenscoth School, Auchterless. Plans and specifications with Mr. W. L. Duncan, architect, Turriff.

MAY 29. **Buckhurst Hill.**—ROOM, ETC. -Erection of a manual instruction and cookery room on land adjoining the boys' Council school at Chigwell, and for a manual instruction room at the rear of and adjoining the boys' school, Princes-road, Buckhurst Hill. Plans and specifications with Mr. Herbert J. Goodwin, Clerk to the Committee, Education Office, Loughton.

MAY 29. **Frome.**—VILLAS.—Erection of a pair of villas at Dommett's-lane, Frome. Plans, specifications, and quantities on deposit of 2*l.* 2s. with Mr. W. Cecil Glass, architect, 9, The Bridge, Frome.

MAY 29. —**Huddersfield.**—HOUSE.—Erection of a house, Barton-road, Crosland Moor. Plans seen, and quantities from Mr. P. A. Hinchliffe, A.R.I.B.A., architect, surveyor, and valuer, 14, Regent-street, Barnsley.

MAY 29. —**Liversedge.** -HOUSES. -Erection of four houses, Union-road, Liversedge. Plans, etc., seen, and quantities from Mr. William Morton, architect, Central-chambers, Cleckheaton.

MAY 29.—**Pontypool.**—EXTENSION.—For the extension of the headquarters of the 2nd Battalion Monmouthshire Regiment at Pontypool. Plans and specifications seen, and quantities from the architects, Messrs. Jenkins, James, & Co., 28, High-street, Newbridge, Mon. Deposit of 1*l.* 1s.

MAY 30. — **Pontypridd.** -HOUSES.—Erection of eight houses at Coedpenmaen, Pontypridd, for the Rhondda Valley Breweries Company, Ltd. Deposit of 2*l.* 2s. for quantities to Mr. T. F. T. Jarvis, F.C.I.S., Pontypridd

MAY 30. -**Scunthorpe.** -CONVENIENCE.—For extension of the public convenience on Market-hill. Plan and specification at the Surveyor's Office, High-street, Scunthorpe.

MAY 30. -**Turriff.** -ADDITIONS, ETC.—For dwelling-house, Ladybog Croft, Auchterless; additions to steading, Lambslack, Auchterless; additions to steading, Lower Oldmill, Turriff. Plans and specifications with Mr. W. L. Duncan, architect, Turriff.

MAY 31. — **Blackwood.** — HOUSES.—Erection of sixteen houses at Blackwood for the Gordon-road Building Club. Plans and specifications with Mr Ralph Simmonds, architect, Royal-chambers, Blackwood.

MAY 31. **Bridgend.** - ADDITIONS, ETC.—For alterations and additions to the schoolroom of the English Congregational Church. Plan and specification with Mr. P J. Thomas, architect, Bridgend.

MAY 31.—**Huddersfield.** WARDS.—Erection of receiving and short-period lunatic wards at the Union Workhouse, Crosland Moor, Huddersfield. Drawings and quantities with Messrs. John Kirk & Sons, architects, Central-buildings, Market-place, Huddersfield.

MAY 31.—**Pontypool.**—OFFICES.—For the erection of new offices for the North Monmouthshire Conservative Association, and club premises for Junior Conservatives, at Osborne-road, Pontypool, Mon. Plans and specifications with Mr. A. Gordon Babbidge, architect and surveyor, Clarence-chambers, Pontypool, Mon.

MAY 31.—**Turriff.**—ROOM.—New manual instruction room at Turriff Public School. Plans and specifications with Mr. W. L. Duncan, architect, Turriff.

JUNE 1.— **Ballaghadereen.**—SACRISTIES.—For erecting new sacristies at Ballaghadereen Cathedral. Plans and specification with Messrs William H. Byrne & Son, architects, 20, Suffolk-street, Dublin. Quantities by Messrs. Morris & Co., 68, Harcourt-street, Dublin.

JUNE 1. — **Derincarthe.** — ALTERATION.—For alteration to Derincarthe Church, near Ballaghadereen. Plans and specification with Messrs. William H. Byrne & Son, architects, 20, Suffolk-street, Dublin

JUNE 3. — **Burnley.**—ALTERATIONS.—For alterations to Abel-street Council School. Specifications, etc., from the Borough Engineer, Town Hall, Burnley.

JUNE 3.—**Cork.**—SCHOOLS.—For erection of new schools off the Dyke-parade. Plans and specifications seen, and quantities, on 1*l.* deposit, from the architect, Mr. F. Hynes, F.R.I.B.A., 5, South-mall, Cork.

JUNE 3. — **Huddersfield.** — BANK.—Erection of new banking premises for the West Yorkshire Bank, Ltd., in Westgate, Huddersfield. Messrs. J. C. Gibson, Skipwith, & Gordon, architects, 5, Old Bond-street, London. Deposit of 5*l.*

★ JUNE 3. — **Southend-on-Sea.** —NEW BLOCK.— The Southend-on-Sea Corporation invite tenders for construction of new administrative block at the Sanatorium. See advertisement in this issue for further particulars

JUNE 3.—**West Bromwich.**—ALTERATIONS, ETC. —For alterations, painting, etc., at the Hall, Great Barr Park. Specifications and conditions of contract seen, and forms of tender from Mr. A. H. Ward, Clerk to Guardians, 22, Lombard-street, West Bromwich.

★ JUNE 4.—**Canning Town, E.**—EXTENSIONS.— The West Ham B.C. invite tenders for (1) building of extension to electricity generating-station, Quadrant-street, and (2) coal bunkers (steelwork) in connexion therewith. See advertisement in this issue for further particulars.

JUNE 4.—**Scarborough.** -WARD.— Construction of a phthisis ward at the Workhouse, Dean-road, Scarborough. Plans and specifications with architect, Mr. J. A. Iveson, 16, Dean-road, Scarborough.

JUNE 5. — **Aberaman.** — ADDITIONS. — The Aberaman Workmen's Hall and Institute Committee invite tenders for proposed alterations and additions to their premises. Plans, specifications, and quantities with architect, Mr. R. H. Willson, 41, Lewis-street, Aberaman.

JUNE 5. — **Cheltenham.**—WARDS.—Erection of children's sick and isolation wards at the Workhouse, Cheltenham. Plans and specifications by Mr. Thomas Malvern, architect, 21, Winchcomb-street, Cheltenham.

JUNE 5. — **Maidstone.**—ROOM, ETC.—For erection of Board-room and offices in King-street. Plans and specifications seen, and quantities and forms of tender from Messrs. Ruck & Smith, architects, 86, Week-street, Maidstone, on deposit of 1*l.* 1s.

JUNE 5. **Woolwich.** -CONVENIENCE.—Construction of an underground sanitary convenience for women in Beresford-square, Woolwich. Drawing, specification, and form of tender with Mr. J. Rush Dixon, M.Inst.C.E., Borough Engineer, Town Hall, Woolwich. Deposit of 1*l.* 1s.

★ JUNE 6. - **Brixton, S.W.** - EXTENSION OF POST-OFFICE. The Commissioners of H.M. Works and Public Buildings invite tenders for extension of Brixton Sorting-office See advertisement in this issue for further particulars

JUNE 6. **Southend.**—PIER.—Construction of a new loading pier Drawings, specifications, forms of tender, and quantities with Mr. Ernest J. Elford, M.Inst.C.E., Borough Engineer, Clarence-street, Southend-on-Sea, on deposit of 2*l.* 2s.

JUNE 8. — **Altrincham.**—COTTAGES. -For erection of thirty-two cottages on the Council's estate, Moss-lane, Altrincham. Specifications and quantities from the architect, Mr. E. W. Hilton, Moesburn-buildings, Stamford New-road, Altrincham, on deposit of 1*l.* 1s

JUNE 10. — **Altrincham.** — SHELTER, ETC.—For erection of a shelter and conveniences in the Broadheath Recreation Ground. Plans seen, and quantities and forms of tender from Mr. H. E. Brown, Surveyor, Town Hall, Altrincham.

★ JUNE 10. — **Brighton.** — NEW FLOOR.—The Brighton B.C. invite tenders for construction and laying of new floor to music room at Royal Pavilion. See advertisement in this issue for further particulars.

JUNE 10.—**Carlisle.** -ADDITIONS.—For additions and alterations at the St. Cuthbert's R.C. Schools, Union-street, Carlisle. Plans and specifications with Mr. H. Foxall, Lic.R.I.B.A., architect, 54, Lowther-street, Carlisle.

JUNE 10. — **Evesham.**—COTTAGES.—Erection of cottages at Broadway. Plans and specifications seen, and quantities and form of tender from the architects, Messrs. Dicks & Waldron, 1, Market-place, Evesham, on deposit of 1*l.* 1s.

JUNE 11. — **Birmingham.** — EXTENSION.—The Great Western Railway invite tenders for extending the superstructure of Park-street Bridge, and for platform and roofing work at Moor-street Station, Birmingham. Plans and specification seen, and forms of tender and quantities at the office of the New Works Engineer at Paddington Station, London.

JUNE 11.— **Crumlin.**—BUILDINGS.—Erection of station buildings at Hafodyrynys, near Crumlin, for the Great Western Railway. Apply, Company's Offices, Paddington Station, London.

BUILDING—*continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

JUNE 11.- **Southall.**—BATH.—Construction of an open-air swimming-bath at the Recreation Ground, Southall Green. Plans and specification seen, and quantities and forms of tender, on deposit of 1*l.* 1s., from Mr. Reginald Brown, A.M.Inst.C.E., F.S.I., etc., Engineer to the Council, Town Hall, Southall.

JUNE 12.— **Preston.**—ADDITIONS, ETC.—Alterations and additions to the Orrell Far Moor and Orrell Holgate Council Schools. Plans seen, and quantities from the County Architect, Mr. Henry Littler, 16, Ribbledale-place, Preston. Deposit of 2*l.*

★ JUNE 15.—**Winchmore Hill, N.** ADDITIONS, ETC.—The Metropolitan Asylums Board invite tenders for alterations and additions to Medical Superintendent's House at Northern Convalescent Fever Hospital. See advertisement in this issue for further particulars.

JUNE 17. **Parkfield.**—SCHOOL.—Erection of a new Council school at Parkfield. Plans, etc., with the architects, Messrs. Ewen Harper & Bro., Ruskin-chambers, Corporation-street, Birmingham. Quantities on deposit of 1*l.* 1s.

★ JUNE 17. — **West Ham, E.** — HANDICRAFT CENTRE.—The West Ham Education Committee invite tenders for erection of handicraft centre, Upton-lane School. See advertisement in this issue for further particulars.

★ JUNE 18. — **Birmingham.**—PARCEL OFFICE.—The Commissioners of H.M. Works and Public Buildings invite tenders for the erection of Birmingham new Parcel Office. See advertisement in this issue for further particulars.

NO DATE. — **Belfast.** — SCHOOLS.—For building new National schools, of "The Holy Family," Newington, Antrim-road. Quantities from Mr. S. W. Hunter, Surveyor, Scottish Provident-buildings. Plans and specifications with Messrs. E. & J. Byrne, architects, 4, Waring-street.

NO DATE. — **Brierfield.**—SHOPS, ETC.—Erection of new picturedrome, billiard hall, and shops in Burnley-road, Brierfield. Quantities from Mr. J. P. Earnshaw, Q.S.A., architect and surveyor, 56, Railway-street, Nelson.

NO DATE. — **Cardiff.** —WAREHOUSE.—Erection of a new warehouse at No. 16, Millicent-street, Cardiff. Quantities, on deposit of 2*l.* 2s., from Messrs. Ivor Jones & Percy Thomas, architects, 18, St. Mary-street, Cardiff.

NO DATE. **Darlington.**—HOUSES.—Erection of a pair of semi-detached houses for the Darlington Garden Suburb Company, Ltd. Quantities from Mr. G. Walesby Davis, M.S.A., Lic R.I.B.A., High-row-chambers, Darlington.

NO DATE.—**Lisbuoy.**—SCHOOL.—Erection of new school at Lisbuoy, Carland, Tyrone. Plans and specifications with Messrs. Byrne, architects, 4, Waring-street, Belfast.

NO DATE. — **London.** — ADDITIONS, ETC.—For alterations and additions to St. Matthew's Vicarage, 27, St. Petersburgh-place, Bayswater, W. Plans and quantities from Messrs. Gleed & Belcher, quantity surveyors, 8 and 9, Martin's-lane, Cannon-street, E.C., on deposit of 2*l.* 2s.

NO DATE. — **Morpeth.** — ADDITIONS, ETC.—For additions to stores buildings and the enlargement of Engineer's cottage. Names and addresses to Mr. J. A. Bean, County Architect, Moothall, New castle-on-Tyne.

NO DATE. — **Neville's Cross.**—LAUNDRY.—For erection of laundry at Neville's Cross, Durham, for the Co-operative Laundries, Ltd. Architect, Mr. L. G. Elkins, Co-operative Wholesale Society, West Blandford-street, Newcastle-upon-Tyne.

NO DATE.—**Pontefract.** HOTEL, ETC.—Erection of the Crosskeys Hotel, stables, boundary walls, etc., in Pontefract, for Messrs. Beverley Brothers, Ltd., Eagle Brewery, Wakefield. Messrs. Garside & Pennington, architects and surveyors, Ropergate, Pontefract, and Wesley-street, Castleford.

NO DATE. — **Pontefract.**—VILLAS.—Erection of two pairs semi-detached villas in Ackworth-road Pontefract. Quantities from Messrs, Garside & Pennington, architects and surveyors, Pontefract and Castleford

NO DATE **Swansea.** EXTENSION.—For extension of Christ Church. Mr. E. M. B. Vaughan, F.R.I.B.A., architect, 21, Dumfries-place, Cardiff.

NO DATE. **Wakefield.**—HOUSES. Erection of fourteen dwelling-houses in Club-terrace, and thirteen six-roomed houses, with bath, etc., in Railway-view, Fitzwilliam, near Wakefield, for the South Kirby, Featherstone, and Helmsworth Collieries, Ltd. Messrs Garside & Pennington, architects and surveyors, Pontefract and Castleford

★ NO DATE — **Ware. Herts.**—BOILER-HOUSE. The Guardians of the Ware Union invite tenders for boiler-house and other alterations at the Workhouse. See advertisement in this issue for further particulars.

ENGINEERING, IRON, AND STEEL.

MAY 29. **Coggeshall.**—BRIDGE. —For widening the bridge over the River Blackwater at Coggeshall. Drawings and specification with Mr. Percy J. Sheldon, M.Inst.C.E, County Surveyor, County Surveyor's Office, Chelmsford.

MAY 29.—**Glasgow.**—CRANES.—For erection of overhead travelling cranes in the sub-stations. Plans seen, and specifications and form of tender from Mr. W. W. Lackie, electrical engineer, 75, Waterloo-street.

MAY 31.—**Bournemouth.** HEATING, ETC.—For heating, etc., new law courts. Particulars and forms of tender from the Engineer, Mr. F. W Lacey, Municipal Offices, Bournemouth. Deposit of 1*l.* 1s

MAY 31.—**Leek.** WASHER.—For erection at the gasworks of a rotary scrubber-washer. Specification, form of tender, and particulars from Mr. S T. Smith, engineer and manager, Gasworks, Leek

MAY 31. **Pytchley.**—ENGINE, ETC.—For fixing an oil engine and pump and erection of an engine-house, at the Pytchley Waterworks. Drawings seen, and specifications and forms of tender from Mr. S. Wallis, Sanitary Surveyor, Market-street, Kettering.

JUNE 3. — **Ammanford.** — BRIDGE.—For the demolition of the existing bridge and the erection of a new masonry bridge, together with constructing embankment, approaches, and fencing, of Ferrws Bridge. Plans and specifications seen, and quantities and form of tender, on deposit of 2*l.* 2s., from Mr. R. Williams Jones, County Surveyor, County Offices, Carmarthen.

JUNE 3. **Manchester.** PLANT.—For erection, at Stuart-street generating-station, of an electrically-driven coal-conveying plant. Specifications and forms of tender from Mr. F. E. Hughes, Secretary, Electricity Department, Town Hall, Manchester. Deposit of 1*l.* 1s

JUNE 7.—**Margate.**—PLANT. -Installation of a laundry plant in the building adjoining the Dane pumping-station, Margate. Plans seen, and specification and particulars from Mr. E. A. Borg, Borough Surveyor, Margate. Deposit of 5*l.*

JUNE 10. — **Hanwell.** — DESTRUCTOR.—For the construction of a refuse destructor. Particulars from the Surveyor, Mr. S. W. Barnes, A.M.Inst.C.E., Council Offices, Cherington-road, Hanwell, W.

JUNE 17. — **Shoeburyness.** — TANK, ETC.—For erection of a cast-iron tank 30 ft. by 14 ft. by 6 ft. deep; erection of an 80-b.h.p. gas-engine (Hornsby Stockport preferred), line shafting, etc.; and erection of a set of three-throw pumps. Specification and particulars from the Engineer at the Waterworks, Shoeburyness.

★ JUNE 17. -**West Ham, E.**—ELECTRIC LIGHT AND HEATING. -The West Ham Education Committee invite tenders for installing electric light and hot-water heating apparatus at Colegreve-road Schools, Stratford, and extension of offices, 95, The Grove, Stratford, E. See advertisement in this issue for further particulars.

NO DATE.—**Dunholme.**—BRIDGE.—For erecting a bridge over the beck at Dunholme. Names and addresses to Messrs. Thropp & Harding, surveyors, 29, Broadgate, Lincoln.

FURNITURE, PAINTING, MATERIALS, etc.

MAY 25. — **Bodmin.** PAINTING.—For outside and inside painters' work on various wards and offices, steel stack, fire-escapes, railings, etc., of the Cornwall County Asylum. Forms of tender from Mr. A. F. Hughes, Clerk of Asylum, Bodmin.

MAY 25.—**Hertford.**—PAINTING.—For distempering, painting, etc., the dining hall and various wards at the Hertford Union Workhouse. Particulars and specification at the Workhouse.

MAY 25. — **Leeds.** — CLEANING, ETC. — For the cleaning and redecorating of St. Stephen's Church, Burmantofts, Leeds. Specifications and particulars from Mr. F. Holms, 27, Butts-court, Guildford-street, Leeds.

MAY 25.—**Spital.**—PAINTING. For painting the Infectious Diseases Hospital and caretaker's quarters. Specifications and forms of tender from the Borough Surveyor, Salter-gate, Chesterfield.

MAY 25. **Wigan.** PAINTING —For the cleaning, painting, etc., of the pavilion and band-stand in the Mesnes Park. Specification seen, and particulars from the Borough Engineer, King-street West.

MAY 28. **Brentford.** BOARDS.—For the supply of 48 fathoms of yellow Baltic board ends. Mr. William Stephens, Clerk to the Guardians, Union Offices, Isleworth, W

MAY 28.—**Chesterfield.**—PAINTING. For painting the exterior wood and iron work of the two lodges, the greenhouses, the seats of the enclosure and the pavilion in the Queen's Park. Specification and forms of tender from the Borough Surveyor, Salter-gate.

MAY 28. — **Shrewsbury.** — WALL, ETC.—For re building wall, laying concrete paving, supplying and erecting unclimbable iron fencing, and other work adjoining north side of river and below Welsh Bridge. Specification and drawings seen, and quantities and form of tender, on deposit of 1*l.* 1s., from Mr. W. Chapple Eddowes, Borough Surveyor, Borough Surveyor's Office, The Square, Shrewsbury.

MAY 30. **Sutton.** PAINTING.—For the painting of the foreman's house at the Council's Farm, Clensham-lane, Sutton. Specification and form of tender from the Surveyor to the Council, Mr. Wm. Hedley Grieves, Municipal Offices, Sutton, Surrey.

MAY 30.—**Uxbridge.**—PAINTING, ETC.—For interior decoration and other work in new scarlet-fever and observation blocks at Hospital, Kingston-lane, Hillingdon, near Uxbridge. Specification with the Surveyor, Mr. William L. Eves, 54, High-street, Uxbridge.

JUNE 4.—**Keighley.**—PAINTING. For repainting the exterior wood and iron work at the Infectious Diseases Hospital and the Consumption Sanatorium, Morton Banks, near Keighley. Quantities and form of tender from the architects Messrs. Moore & Crabtree, York-chambers, Keighley.

★ JUNE 4. — **London, E.C.** — DEMOLITION.—Messrs. Horne & Co. invite tenders for demolition and clearing away of the whole of the building and rubbish of the G.P.O. East. See advertisement in this issue for further particulars.

JUNE 5. -**Carshalton.**—PAINTING.—For painting works at the Council offices and fire-station; at the sewage works; direction posts, nameplates, railings, etc., throughout the district. Specification and form of tender from the Council's Surveyor, Mr. W. Willis Gale, A.M.Inst.C.E., District Council Offices, The Square, Carshalton.

★ JUNE 5. -**Sutton (Surrey).** CLEANING AND PAINTING.—The Metropolitan Asylums Board invite tenders for cleaning and painting works at Down's School, Sutton, Surrey. See advertisement in this issue for further particulars.

JUNE 7.—**Carmarthen.**—PAINTING.—For painting and colouring at the schools, for the County Council Specifications seen, and particulars from Mr. W. Vincent Morgan, A.R.I.B.A., County Architect, County Education Offices, Carmarthen.

JUNE 8. -**Aberdare.** RESLATING.—For reslating the roof of the police-station at Aberaman, near Aberdare Plans seen, and specification at the Police-station, Aberdare, and with Mr. T. Mansel Franklen, Clerk of the County Council, Glamorgan C.C. Offices, Cardiff.

JUNE 10. — **Glasgow.** - PAINTING.- The Caledonian Railway Company invite tenders for the painter work of the bridge over River Clyde, Glasgow, and adjoining bridges. Specification and schedule at the office of the Company's Engineer, Buchanan-street Station, Glasgow. Deposit of 2*l.*

JUNE 10. — **Huddersfield.** -PAINTING.—For the internal painting and decorating of the administrative block of the Sanatorium, Mill-hill, Dalton. Specifications, conditions, quantities, and forms of tender from Mr. K. F. Campbell, M.Inst.C.E., Borough Engineer and Surveyor, 1, Peel-street.

JUNE 10.—**Huddersfield.** —PAINTING, ETC. For the painting, colouring, etc., of various schools in the borough. Specifications, conditions, and forms of tender with the Borough Engineer and Surveyor, 1, Peel street.

JUNE 11. **Hastings.** PAINTING. For the outside painting of the pumping station, and inside painting of four cottages, at Brede. Specification and form of tender from the Borough Engineer, Mr. P. H. Palmer, M.Inst.C.E., Town Hall, Hastings.

★ JUNE 17.—**West Ham, E.**—PAINTING, ETC. The West Hom Education Committee invite tenders for cleansing, repairing, and painting various schools during the summer vacation. See advertisement in this issue for further particulars.

ROADS, SANITARY AND WATER WORKS.

MAY 27. — **Bridgwater.** — PIPES.—For about 210 tons of 3-in. cast-iron pipes and other castings. Engineer, Mr. W. Alexr. Collins, Eastover, Bridgwater. Deposit of 2*l.* 2s.

MAY 28. **Mansfield.** STREETS.—For the severing paving, etc., of the new streets. Specification and form of tender from the City Surveyor. Deposit of 1*l.* 1s

MAY 28. **Pontefract.** MATERIALS.—For supply of 800 tons of broken granite, 800 tons unbroken whinstone, and 400 tons of broken dross or lime stone. Specifications and form of tender from Mr J. E. Pickard, Borough Engineer and Surveyor, Municipal Offices, Pontefract

MAY 29.—**Bishop Auckland.** ROAD.—For making of road at the rear of Latherbrush cottages. Plans and specifications seen, and particulars from Mr. Collins, Surveyor, Town Hall buildings.

MAY 29.—**Bollington.** PAVING.—For paving concrete foundation with granite setts the roadway in Wellington-road. Particulars from Mr S Knight, Clerk, Council Offices, Bollington, near Macclesfield.

MAY 29. — **Tottington.** PAVING For the paving of Bank street. Specification and form of tender from Mr. L. Kenyon, Surveyor, County Offices, Tottington, Lancs.

MAY 30 -**Widnes.** -SETTS. For the supply of cube granite setts or Syenite cube setts. Form of tender and specification from Mr. John Sinclair, A.M.Inst C.E., Borough Surveyor, Town Hall, on deposit of 1*l.* 1s.

JUNE 1.—**Winterton.**—GRANITE.—For a supply of 450 tons of granite. Mr. Norman Gibson, Clerk, South-street, Winterton, Doncaster.

JUNE 3. -**Hastings.**—GRANITE.—For supply of 2,000 tons of broken granite. Specification and form of tender from The Borough Engineer, Mr. P. H. Palmer, M.Inst.C.E., Town Hall, Hastings.

JUNE 3.—**Romford.** -GRANITE.—For the supply of blue Guernsey granite. Specification and form of tender from Mr. George Lapwood, Highway Surveyor, Victoria-road, Romford.

★ JUNE 5. — **Woolwich, S.E.** — GRANOLITHIC PAVING. The Metropolitan Asylms Board invite tenders for granolithic paving at Brook Ambulance Station, Shooters' Hill-road, Woolwich, S.E. See advertisement in this issue for further particulars.

JUNE 11.—**Colchester.**—ROADS.—For sewering, kerbing, channelling, paving and making up road at Priory-grove. Plans seen, and specifications, quantities, etc., from MR. H. Goodyer, A.M.Inst.C.E., Borough Engineer and Surveyor, Town Hall, Colchester.

★ JUNE 11. -**London, S.W.**—PAVING WORKS. The Wandsworth B C. invite tenders for wood paving, etc., in Mitcham-lane, Scuthcroft-road, Wimbledon-road, and Clapham Park-road, and granite-sett paving, etc., in Long-road, Clapham Common. See advertisement in this issue for further particulars.

JUNE 11.—**Southall.**—EXTENSIONS.— For extensions to the sludge press house at the Sewage Disposal Works. Plans and specifications seen, and quantities and form of tender, on deposit of 1*l.* 1s., from Mr. Reginald Brown, A.M.Inst.C.E., F.S.I., etc., Engineer to the Council, Town Hall, Southall.

JUNE 17.—**Cobham.**—ROAD. For the making up of Copse-road. Plans, specification, and form of contract with the Surveyor of Highways, Mr. T. R. Ware, Waterloo-road, Epsom.

★ JUNE 17.—**West Ham, E.**—TAR-PAVING.—West Ham Education Committee invite tenders for tar-paving playgrounds and redressing existing tar-paving at various schools. See advertisement in this issue for further particulars.

Public Appointments.

Nature of Appointment.	By whom Advertised.	Salary.	Application to be in
STRICT ENGINEER (GOVERNMENT FACTORY)	Ceylon P.W. Department	See advertisement in this issue	At once.
ANTITY SURVEYOR	Essex C.C.	300*l.* per annum	June 7
OFESSOR OF ARCHITECTURE	Manchester Univ. & Ed. Com.	600*l.* per annum	June 18

Auction Sales.

Nature and Place of Sale.	By whom Offered.	Date of Sale.
OCK OF PAPERHANGINGS & BLDR'S MERCHTS., WINCHESTER—On the Premises	H. W. Smith	May 29
MANTELS AND OVERMANTELS, NEWINGTON-GREEN, N.—On the Premises	Joseph Hibbard & Sons	May 30
OCK-IN-TRADE PACKING CASE AND MANTEL MANUFACTURER—On the Premises	Hamilton, Palmer, & Co.	June 3
ILDING SITES, CITY OF LONDON AND HOLBORN—At the Mart	Jones, Lang, & Co.	June 10
EEHOLD PROPERTIES AND GROUND RENTS, BRIXTON—At the Mart	Edwin Fox, Bousfield, Burnette, & Baddeley	June 12

OBITUARY.

Mr. A. Harston.

he death is announced of Mr. Arthur ston, F.S.I., of Cawley-road, Hackney, who senior partner of the late firm of Messrs. C. Harston, of No. 15, Leadenhall-street, , and Bexley Heath, Kent, architects and eyors. Mr. Arthur Harston was born in , and became a member of the Archi- ural Association in 1890; Mr. Christopher ston, his partner, was elected a Fellow of Royal Institute of British Architects in The firm were the architects—for the Pancras Guardians—of St. Pancras Work- e in King's-road, built in 1892-5 at a cost 2,000*l.*; the nurses' block, Highgate In- ary, and the casual wards in Holmes-road, lish Town. For the Metropolitan Asylums rd:—The North Eastern Hospital, Totten- (illustrated in the *Builder* of May 25, , for 550 beds, upon a site of 33 acres, by Messrs. McCormick & Sons, con- ors for 122,507*l.*; the Asylum, for 720 beds, ing Bec-common, and the receiving home mbecile children, 1899-1902 (the *Builder*, 20, 1903), at a cost of about 217,000*l.*; the arn Hospital, Homerton, and additions to, 1894-9; Joyce Green Hospital (first on), Dartford, for which Messrs. Leslie & Ltd., tendered for 222,459*l.*, with staff al, crematorium, and the laying-out of the tery, 1900-2, and the subsequent completion he plans with the addition of thirteen s, 1902-5; the extensive enlargement of Western Hospital, Fulham, with eight ion blocks, staff quarters, etc., 1895-6, of ore Farm Hospital, Dartford, and of the uth Asylum and Schools, 1893-4; and the nary Buildings, Tooting. They were the tects of the Lewisham Infirmary, 1892-5; nversion of the old Wells-street, Hackney, ge, into an auxiliary workhouse, 1890; the Sick Asylum, Bromley, E., for the gers of the Poplar and Stepney Sick m District, 1894; in November, 1900, were with other architects selected to ite for the new infirmary, for 1,000 nts, for the sick poor of Bristol. Mr. on left estate of the gross value of 7., with net personalty sworn at 38,451*l.* equeathed 500*l.* to the London Hospital 00*l.* to the Queen's Hospital for Children, ney-road, N.E.

Mr. F. Bonser.

the 14th inst. the death took place of rederick Bonser, in the fifty-eighth year s age. He was well known to many n surveyors, having been articled to s. Gardiner & Theobald; after serving ticles he worked for several years in s offices, and for the last twenty-two he was Manager and Chief Assistant to s. Leonard & Clarke, of Bishopsgate. He leaves two sons and four daughters

Major-General Festing, late R.E.

death, on May 16, at No. 56, Queen's- race, S.W., is also announced of Major- l Edward Robert Festing, C.B., F.R.S., .E., aged seventy-three years. He d his commission as Lieutenant, Royal ers, in 1855, and served during the l Indian campaigns and the Mutiny. Five years afterwards he became -General Superintendent in the Depart- f Science and Art, South Kensington, 1893-1904, was Science Director, Victoria bert Museum.

PATENTS.

APPLICATIONS PUBLISHED.*

7,300 of 1911.—Charles André: Gas-heated ovens.

9,447 of 1911.—Hermann Wegner: Apparatus for emptying gullies, mud-collecting chambers, or the like.

9,513 of 1911.—Richard Austin Rogers: Gas, oil, or like cooking-ovens.

9,569 of 1911.—Robert Alwyn Arnold Stephen Piercy: Devices for connecting girders, beams, and the like together.

9,583 of 1911.—John Smith: Rotary elevators and the like.

9,916 of 1911.—Allan Herbert Storer Campbell: Tiles for ceilings, walls, or the like.

10,304 of 1911.—Francesco Barberis: Flushing and like apparatus.

11,886 of 1911.—Francis Sumner Smith: Water-heating ranges.

13,390 of 1911.—John Matthew Henry Butcher: Shoots.

14,713 of 1911.—Percy Geikie Donald and Matthew Henry Matthews: Elevators or conveyors.

14,948 of 1911.—Raimund Janesch and Anton Schnell: Hollow walls or the like.

19,168 of 1911.—Paul Gunther and Hubertus Jacobi: Device for closing, opening, and bolting fanlight windows, transom windows, and the like.

19,854 of 1911.—Ludwig Klingelhofer: Method of constructing reinforced concrete lining for mine galleries.

20,807 of 1911.—Société Française de Chaleur et Lumière: Heating by the circulation of hot water.

20,814 of 1911.—Max Hynek: Automatic door-operating appliances.

23,119 of 1911.—Henry Harden Ashlock: Door and window guards.

24,036 of 1911.—Frederick Arthur Bullivant and George May Selby: Ropes for use as lifting-slings.

25,013 of 1911.—James Brown Griffith: Reinforced concrete girders.

27,470 of 1911.—David Krausz: Hinges for doors and windows.

90 of 1912.—August Sperlich: Pneumatically-operated door-latches.

2,466 of 1912.—Otto Gehricke: Hoists.

4,251 of 1912.—John Alfred Davenport: Hoops and stirrups for reinforced concrete and like construction.

SOME RECENT SALES OF PROPERTY:

ESTATE EXCHANGE REPORT.

May 2.—By BOULTON & COOPER.

Wykeham, Yorks.—Langdale Bridge Farm and Moor Bird p.h., 50 acres, f. £1,270

May 3.—By STEPHEN GREGORY & SON.

Wlittlesey, Cambs.—Fen land, 8 a. 2 r. 14 p., f. 475
Arable land, 20 a. 2 r. 38 p., f. 1,140
Four cottages and pasture, 1 a. 3 r 10 p., c 235
Arable land, 5 a. 1 r. 3 p., c. 410
Bassenhally-rd., three cottages, c. 120
Garden land, 3 a. 0 r. 23 p, c. 380
New-rd., etc., six cottages, c. 465
Queen-st., shop and house, c. 370
Aliwal-rd., two cottages, f. and c. 215
St. Mary's-st., copyhold cottage 205

May 6.—By W. MAURICE-JONES.

Llaubadarn Fawr, Cardigan.—Cefncoed Farm, 210 a. 0 r. 10 p., f. 3,675

By R. T. HANDLEY.

Cleasby, Yorks.—Freehold farm, 30 acres 2,120

May 8.—By CHEVELL, LAWRANCE, & SON.

Lawshall, Suffolk.—Folly Farm, 25 a. 3 r. 30 p., f. 325

By BOULTON & COOPER.

Cornborough, Yorks.—Golden Fields and Mill Hill Farms, 145 acres, f. £3,280

May 10.—By JONES, SON, & VERNON.

Blockley, Worcs.—Ditchfield-on-Fosse Farm and Mill, 231 acres, f. 6,700

Contractions used in these lists.—F.g.r. for freehold ground-rent; l.g.r. for leasehold ground-rent; i.g.r. for improved ground-rent; g r. for ground-rent; r. for rent; f. for freehold; c. for copyhold; l. for leasehold; p. for possession; e.r. for estimated rental; w.r. for weekly rental; q.r. for quarterly rental; y.r. for yearly rental; u.t. for unexpired term; p.a. for per annum; yrs. for years; la. for lane; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; cres. for crescent; av. for avenue; gdns. for gardens; yd. for yard; gr. for grove; b.h. for beerhouse; p.h. for public-house; o. for offices; s. for shops; ct. for court.

** All these applications are in the stage in which opposition to the grant of Patents upon them can be made.*

PRICES CURRENT OF MATERIALS.

**** Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

BRICKS, &c.

Per 1000 Alongside, in River.	£ s. d.
Best Stocks	1 14 0
Picked Stocks for Facings	2 10 0

Per 1000, Delivered at Railway Depôt.

	£ s. d.		£ s. d.
Flettons	1 13 0	Best Blue Pressed	
Best Fareham Red	3 12 0	Staffordshire	3 15 0
Best Red Pressed		Do. Bullnose	4 0 0
Ruabon Facing	5 0 0	Best Stourbridge Fire Bricks	4 0 0

GLAZED BRICKS—

Best White, Ivory, and Salt Glzd. Str'tch'rs	11 7 6	Double Headers	13 17 6
		One Side and two Ends	17 17 6
Headers	10 17 6	Two Sides and one End	18 17 6
Quoins, Bullnose, and ¼ in. Flats	14 17 6	Splays & Squints	16 7 6
D'ble Stretchers	16 17 6		

Second Quality £1 10s. per 1000 less than best.

	s. d.	
Thames and Pit Sand	6	9 per yard, delivered.
Thames Ballast	5	6 " "
Best Portland Cement	31	0 per ton, "
Best Ground Blue Lias Lime	19	0 " "

NOTE—The cement or lime is exclusive of the ordinary charge for sacks.

Grey Stone Lime ..... 13s. 0d. per yard delivered.
Stourbridge Fireclay in sacks 27s. 0d. per ton at rly dpt.

STONE.

Per Ft. Cube.	s. d.
BATH STONE—delivered on road waggons, Paddington Depôt	1 6½
Do. do. delivered on road waggons, Nine Elms Depôt	1 8½

PORTLAND STONE (20 ft. average)—

Brown Whitbed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2 3
White Basebed, delivered on road waggons Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2 4½

Per Ft. Cube, delivered at Railway Depôt.

	s. d.		s. d.
Ancaster in blocks	1 10	Closeburn Red	
Beer in blocks	1 6	Freestone	2 0
Greenshill in blocks	1 10	Red Mansfield Freestone	2 4
Darley Dale in blocks	2 4	Talacre & Gwaspyr Stone	2 4
Red Corsehill in blocks	2 3		

YORK STONE—*Robin Hood Quality.*

Per Ft. Cube, Delivered at Railway Depôt.	s. d.
Scappled random blocks	2 10

Per Ft. Super., Delivered at Railway Depôt.

6 in. sawn two sides landings to sizes (under 40 ft. super.)	2 3
6 in. rubbed two sides ditto, ditto	2 6
3 in. sawn two sides slabs (random sizes)	0 11½
2 in. to 2½ in. sawn one side slabs (random sizes)	0 7
1½ in. to 2 in. ditto, ditto	0 6

STONE (*Continued*).

HARD YORK—

	s.	d.
Per Ft. Cube, Delivered at Railway Depôt.		
Scappled random blocks	3	0
Per Ft. Super., Delivered at Railway Depôt.		
6 in. sawn two sides landing to sizes (under 40 ft. super.)	2	8
	3	0
6 in. rubbed two sides ditto	1	2
3 in. sawn two sides slabs (random sizes)	0	5
2 in. self-faced random flags		

SLATES.

Per 1000 of 1200 at Railway Depôt.

In. In.	£	s.	d.	In. In.	£	s.	d.
20×10 best blue Bangor	13	2	6	20×10bestEur'ka unfading green	15	17	6
20×12 ditto	13	17	6	20×12 ditto	18	7	6
20×10 1st quality ditto	13	0	0	18×10 ditto	13	5	0
20×12 ditto	13	15	0	16×8 ditto	10	5	0
16×8 ditto	7	5	0	20×10 permanent green	11	12	6
22×10 best blue Portmadoc	12	12	6	18×10 ditto	9	12	6
16×8 ditto	6	12	6	16×8 ditto	6	12	6

TILES.

At Railway Depôt.

	s.	d.		s.	d.
Best plain red roofing (per 1000)	42	0	Best "Hartshill" brand, plain sand-faced (per 1000)	45	0
Hip and Valley (per doz.)	3	7	Do. pressed (per 1000)	42	6
Best Broseley (per 1000)	50	0	Do. Ornamental (per 1000)	47	6
Do. Ornamental (per 1000)	52	6	Hip (per doz.)	4	0
Hip and Valley (per doz.)	4	0	Valley (per doz.)	3	6
Best Ruabon red, brown, or brindled (Edw'ds) (per 1000)	57	6	Staffords. (Hanley) Reds or Brindled (per 1000)	42	6
Do. Ornamental (per 1000)	60	0	Hand-made sand-faced (per 1000)	45	0
Hip (per doz.)	4	0	Hip (per doz.)	4	0
Valley (per doz.)	3	0	Valley (per doz.)	3	6

WOOD.

Building Wood.	At per standard. £	s.	d.	£	s.	d.
Deals: best 3 in. by 11 in. and 4 in. by 9 in. and 11 in.	14	0	0 ...	15	10	0
Deals: best 3 by 9	13	10	0 ...	14	10	0
Battens: best 2½ in. by 7 in. and 8in., and 3 in. by 7 in. and 8 in.	11	10	0 ...	12	10	0
Battens: best 2½ by 6 and 3 by 6	0	10	0 less than 7 in. and 8 in.			
Deals: seconds	1	0	0 less than best.			
Battens: seconds	0	10	0 " "			
2 in. by in. and 2 in. by 6 in.	9	10	0 ...	10	10	0
2 in. by 4½ in. and 3 in. by 5 in.	9	0	0 ...	10	0	0
Foreign Sawn Boards— 1 in. and 1¼ in. by 7 in.	0	10	0 more than battens.			
¼ in.	1	0	0 "			

WOOD (*Continued*).

Building Wood (*Continued*)—	At per load of 50 ft. £	s.	d.	£	s.	d.
Fir timber: best middling Danzig or Memel (average specification)	5	0	0 ...	5	10	0
Seconds	4	10	0 ...	5	0	0
Small timber (8 in. to 10 in.)	3	17	6 ...	4	0	0
Small timber (6 in. to 8 in.)	3	5	0 ...	3	10	0
Swedish balks	2	12	6 ...	3	0	0
Pitch-pine timber (30 ft. average)	5	5	0 ...	6	0	0

Joiners' Wood.	At per standard.					
White Sea: first yellow deals, 3 in. by 11 in.	24	10	0 ...	25	10	0
3 in. by 9 in.	22	10	0 ...	23	10	0
Battens, 2½ in. and 3 in. by 7 in.	17	0	0 ...	18	0	0
Second yellow deals, 3in. by 11in.	19	0	0 ...	20	0	0
" " 3 in. by 9 in.	18	0	0 ...	19	10	0
Battens, 2½ in. and 3in. by 7 in.	14	0	0 ...	15	0	0
Third yellow deals, 3 in. by 11 in. and 9 in.	14	0	0 ...	15	0	0
Battens, 2½ in. and 3 in. by 7 in.	11	10	0 ...	12	10	0
Petersburg: first yellow deals, 3 in. by 11 in.	21	10	0 ...	22	10	0
Do. 3 in. by 9 in.	18	10	0 ...	19	10	0
Battens	14	0	0 ...	15	0	0
Second yellow deals, 3 in. by 11 in.	16	10	0 ...	17	10	0
Do. 3 in. by 9 in.	15	0	0 ...	16	0	0
Battens	11	10	0 ...	12	10	0
Third yellow deals, 3in. by 11 in.	13	10	0 ...	14	10	0
Do. 3 in. by 9 in.	13	0	0 ...	14	0	0
Battens	10	10	0 ...	11	0	0
White Sea and Petersburg— First white deals, 3 in. by 11 in.	15	0	0 ...	16	0	0
" " 3 in. by 9 in.	14	0	0 ...	14	10	0
Battens	11	10	0 ...	12	10	0
Second white deals, 3in. by 11in.	14	0	0 ...	15	0	0
" " 3 in. by 9 in.	13	0	0 ...	14	0	0
Battens	10	10	0 ...	11	0	0
Pitch-pine: deals	19	0	0 ...	21	0	0
Under 2 in. thick extra	0	10	0 ...	1	0	0
Yellow Pine—First, regular sizes	48	0	0 upwards.			
Oddments	32	0	0 "			
Seconds, regular sizes	33	0	0 "			
Oddments	28	0	0 "			
Kauri Pine—Planks per ft. cube.	0	4	6 ...	0	6	0
Danzig and Stettin Oak Logs— Large, per ft. cube	0	3	0 ...	0	3	9
Small " "	0	2	6 ...	0	2	6
Wainscot Oak Logs, per ft. cube	0	6	6 ...	0	8	0
Dry Wainscot Oak, per ft. sup. as inch	0	0	10 ...	0	1	0
¼ in. do. do.	0	0	8½ ...	—		
Dry Mahogany—Houndras, Tabasco, per ft. super. as inch.	0	0	10 ...	0	1	1
Selected, Figury, per ft. super. as inch	0	1	6 ...	0	2	6
Dry Walnut, American, per ft. super. as inch	0	0	10 ...	0	1	0
Teak, per load	18	0	0 ...	22	0	0
American Whitewood planks, per ft. cube	0	5	0 ...	0	6	0

WOOD (*Continued*).

Joiners' Wood (*Continued*)— Prepared Flooring, etc.—	Per square. £	s.	d.	£	s.
1 in. by 7 in. yellow, planed and shot	0	13	6 ...	0	17
1 in. by 7 in. yellow, planed and matched	0	14	0 ...	0	18
1¼ in. by 7 in. yellow, planed and matched	0	16	0 ...	1	0
1 in. by 7 in. white, planed and shot	0	12	0 ...	0	14
1 in. by 7 in. white, planed and matched	0	12	6 ...	0	15
1¼ in. by 7 in. white, planed and matched	0	15	0 ...	0	16
⅞ in. by 7 in. yellow, matched and beaded or V-jointed brds.	0	11	0 ...	0	13
1 in. by 7 in. " "	0	14	0 ...	0	18
⅞ in. by 7 in. white " "	0	10	0 ...	0	11
1 in. by 7 in. " "	0	12	9 ...	0	15

6 in. at 6d. to 9d. per square less than 7 in.

JOISTS, GIRDERS, &c.

	In London, or delive Railway Vans, per t £	s.	d.	£	s.
Rolled Steel Joists, ordinary sections	7	10	0 ...	8	0
Compound Girders, ordinary sections	9	10	0 ...	10	0
Steel Compound Stanchions	11	0	0 ...	12	0
Angles, Tees, and Channels, ordinary sections	9	10	0 ...	10	0
Flitch Plates	9	10	0 ...	9	10
Cast Iron Columns & Stanchions, including ordinary patterns	7	10	0 ...	8	10

METALS.

	Per ton, in Lond £	s.	d.	£	s.
IRON—					
Common Bars	9	0	0 ...	9	10
Staffordshire Crown Bars, good merchant quality	9	5	0 ...	9	15
Staffordshire "Marked Bars"	11	0	0 ...	—	
Mild Steel Bars	9	5	0 ...	9	15
Hoop Iron, basis price	10	0	0 ...	—	
" " Galvanised	17	10	0 ...	—	

(*And upwards, according to size and gauge.)

Sheet Iron Black—

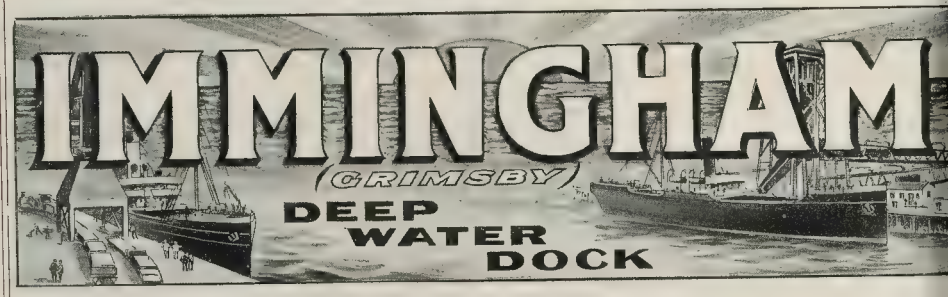
Ordinary sizes to 20 g.	10	5	0 ...	—	
" " 24 g.	11	5	0 ...	—	
" " 26 g.	12	15	0 ...	—	

Sheet Iron, Galvanised, flat, ordinary quality—

Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15	10	0 ...	—	
Ordinary sizes to 22 g. and 24 g.	16	0	0 ...	—	
" " 26 g.	17	0	0 ...	—	

Sheet Iron, Galvanised, flat, best quality—

Ordinary sizes to 20 g.	18	10	0 ...	—	
" " 22 g. and 24 g.	19	0	0 ...	—	
" " 26 g.	20	10	0 ...	—	



IS OPENED PROVISIONALLY.

POINTS OF MERIT:

Favourable Situation.

Immingham Dock is geographically the most central coal port for the Continent, and is in direct rail communication with the great coalfields of the West Riding and South Yorkshire, Derbyshire, Nottinghamshire, &c

Always Accessible.

Immingham Dock has a storm-protected harbour and deep water channel and entrance lock, enabling the largest ships to enter and leave at any state of the tide.

Most Modern Equipment.

Immingham Dock has eight coal hoists capable of shipping 5,600 tons per hour.
Largest ships can bunker at deep water jetty only ten miles from the open sea at any time of the day or night.
Storage accommodation is provided for 11,600 loaded wagons, and there are 170 miles of sidings.
Every precaution taken to minimise breakage of coal.
Movable hoist enables two "holds" of a vessel to be loaded simultaneously.

Low Dock Charges.

Immingham Dock charges are more favourable than at any competitive port.

For Information apply Great Central Goods Agents or Port Master, Immingham Dock, Grimsby. Illustrated Brochure "3" and Map "3," printed in English, French or German, post free from G.C.R. Publicity Office 216, Marylebone Road, London, N.W.

SAM FAY, General Manager.

METALS (*Continued*).

IRON (*Continued*)—	Per ton, in London. £ s. d.	£ s. d.
Galvanised Corrugated Sheets—		
Ordinary sizes, 6ft. to 8ft. 20 g.	15 0 0	.. ..
" " 22 g. and 24 g.	15 5 0	... ..
" " 26 g.	16 15 0	... ..
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker.....	12 10 0	. —
Best Soft Steel Sheets, 2 g. & 24 g.	13 10 0	... —
" " 26 g.	15 10 0	.. —
Nut Nails, 3 in. to 6 in.....	11 0 0	... 11 10 0

(Under 3 in., usual trade extras.)

LEAD, &c.

	£ s. d.	
LEAD—Sheet, English, 4lb. and up	20 10 0	... —
Pipe in coils	21 0 0	... —
Soil pipe	24 0 0	... —
Compo pipe	24 0 0	... —
ZINC—Sheet—	In casks of 10 cwt.	
Vieille Montagne	33 10 0	... —
Silesian	33 5 0	... —
Zinc, in bundles, 1s. per cwt. extra.		
COPPER—		
Strong Sheet .....per lb.	0 1 0	... —
Thin " ..... "	0 1 1	... —
Copper nails..... "	0 0 10	... —
Copper wire ..... "	0 0 10	... —
BRASS—		
Strong Sheet ..... "	0 0 11	... —
Thin " ..... "	0 1 0	... —
TIN—English Ingots..... "	0 2 0	... —
SOLDER—Plumbers' ..... "	0 0 9½	... —
Tinmen's ..... "	0 1 0½	... —
Blowpipe ..... "	0 1 2½	.. —

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.	
16 oz. thirds ..... 2½d.	26 oz. fourths ..... 3½d.
" fourths ..... 1¾d.	32 oz. thirds..... 5d
21 oz. thirds..... 3½d.	" fourths ..... 4½d.
" fourths ... . 2½d.	Fluted Sheet, 15 oz. 3½d.
26 oz. thirds..... 4d.	" 21 oz. 4½d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.	
Rolled plate ..... 2½d.	Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white..... 3½d.
Rough rolled and rough cast plate.. 2½d.	Ditto, tinted..... 5d
Rough rolled and rough cast plate.. 3d.	

* Not less than two crates.

OILS, &c.

	per gallon £ s. d.
Raw Linseed Oil in pipes	0 3 8
" " " in barrels.....	" 0 3 9
" " " in casks	" 0 3 11
Boiled " " in barrels.....	" 0 3 11
" " " in drums	" 0 4 2
Turpentine in barrels	" 0 3 0
" " in drums	" 0 3 2
Genuine Ground English White Lead, per ton	28 0 0
Red Lead, Dry	" 24 0 0
Best Linseed Oil Putty	per cwt. 0 10 6
Stockholm Tar	per barrel 1 12 0

VARNISHES, &c.

	Per gallon. £ s. d.
Pale Pale Oak Varnish	0 8 0
Pale Copal Oak	0 10 6
Superfine Pale Elastic Oak	0 12 6
Pale Extra Hard Church Oak.....	0 10 0
Superfine Hard-drying Oak, for seats of Churches	0 14 6
Pale Elastic Carriage	0 12 0
Superfine Pale Elastic Carriage	0 16 0
Pale Pale Mayle	0 10 0
Best Pale Durable Copal	0 18 0
Extra Pale French Oil	1 1 0
English Flating Varnish	0 18 0
White Pale Enamel.....	1 4 0
Extra Pale Paper	0 12 0
Gilt Japan Gold Size	0 10 6
Best Black Japan.....	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Potting	0 10 9
French and Brush Polish	0 10 6

TO CORRESPONDENTS.

NOTE.—All communications with respect to literary or artistic matters should be addressed to "THE EDITOR" (and not to any person by name); those relating to advertisements and other exclusively business matters should be addressed to "THE PUBLISHER," and *not* to the Editor.

All communications must be authenticated by the name and address of the sender, whether for publication or not. No notice can be taken of anonymous communications.

The responsibility of signed articles, letters, and papers read at meetings rests, of course, with the authors.

We cannot undertake to return rejected communications; and the Editor cannot be responsible for drawings, photographs, manuscripts, or other documents, or for models or samples, sent to or left at this office, unless he has specially asked for them.

All drawings sent to or left at this office for competition should bear the owner's name and address either the face or back of the drawing. Delay and inconvenience may result from inattention to this.

Any commission to a contributor to write an article, or to execute or lend a drawing for publication, is given subject to the approval of the article or drawing, when received, by the Editor, who retains the right to reject if unsatisfactory. The receipt by the author of a proof of an article in type does not necessarily imply its acceptance.

PRIZE D.—Illustrations of the First Premiated Design in the important architectural competition will always be required for publication by the Editor, whether they have been formally asked for or not

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than* 6 p.m. *on Wednesday.* [N.B.—We cannot publish Tenders unless authenticated either by the architect or the building owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is stated, nor any list in which the lowest Tender is under 100*l.* unless in some exceptional cases and for special reasons.]

*Denotes *accepted.* †Denotes *provisionally accepted.*

BIRMINGHAM.—For new engine house, engineers' and blacksmiths' shops and stores at the Western-road Workhouse, for the Guardians of the Poor, Birmingham Union. Messrs. W. H. Ward, architects, Paradise-street, Birmingham :—

Potheroe & Co.	£1,278	F. H. Smith	£1,148
Oakley & Coulson ...	1,199	B. Whitehouse & Sons	1,143
H. Willcock & Son	1,198	E. Crowder	1,137
J. Barnsley & Sons	1,198	S. F. Swift	1,133
W. H. Gibbs.....	1,195	G. Webb & Sons, Birmingham*	1,121
W. & J. Webb.....	1,193	J. Bowen & Sons ...	1,079
W. Sapcote & Sons	1,177		
H. Dorse	1,164		
J. Dallow & Sons ...	1,150		

CADNEY.—For alterations and additions to the Council school, for the Lindsey Education Committee. Messrs. Scorer & Gamble, architects, Lincoln. Quantities by architects :—

G. R. Usher	£667 10	B. Pumfrey	£537 0
J. Stamp	664 0	T. Sutton, Market Rasen*	536 0
Scupham & Son ..	585 0		
J. R. Manders ...	560 0		

DISS.—For restoration of the tower and other work at Winfarthing Church, Diss, for Rector and Churchwardens. Messrs. Lacey & Upcher, architects, Norwich. Quantities by the architects :—

W. T. Newson & Sons	£427 9 0	H. C. Greengrass	£320 0 0
H. S. Wallis & Sons	383 14 0	J. Ayton	303 15 2
R. Hogg & Sons	376 0 0	W. H. Lulkin ...	298 0 0
J. W. Trudgett	364 0 0	Cubitt & Goth ..	280 10 0
R. Chapman	350 2 0	W. J. Hannant...	269 5 0
Blackburn, Starling, & Co ..	338 16 0	E. J. Smith	257 0 0
		Neal Bros., N. Elmham*	204 12 6

HULL.—For erection of Eureka Picture Hall, Hessle-road. Mr. J. Abbott, architect and surveyor, Hull :—

J. Southern ..	£2,431 1 2	Simpson & Son	£2,239 9 9
F. E. Surgden	2,300 0 0	T. Bays & Son	2,215 15 10
A. Lison	2,299 0 0	G. Houlton & Son, Hull*	2,210 0 0
P. T. Kettlewell	2,298 10 0	M. Harper ...	2,180 0 0
W. Lison & Son	2,287 12 6		
F. Goates & Son	2,265 0 0		

LEAMINGTON.—Accepted for alterations, reparations, etc., and the erection of a new lodge at Asborne-hill, near Leamington, Warwickshire. Mr. C. M. C. Armstrong, architect, Warwick :—

G. F. Smith & Sons, Leamington ... £1,632 15 8

LONDON.—For repairs and other works at Nos. 14, 16, 18, and 20, Merthyr-terrace, Barnes, for the Metropolitan Water Board :—

Clemens Bros.....	£65 10	W. King & Sons	£57 0
G. Wimpey & Co....	63 0	W. Chapman & Sons	53 0
Johnson & Co.....	57 15		

LONDON.—For erection of installations of three Diesel oil engines with horizontal three-throw pumps and appurtenant works at Cricklewood and Fortis Green, for the Metropolitan Water Board :—

Hick, Hargreaves..	£25,384	Korting Bros. ...	£21,527
Cole, Marchent, & Morley	25,045	Glenfield & Kennedy	21,200
Westinghouse Co...	23,430	Willans & Robinson	20,596
Diesel Engine Co...	23,116	Mirrlees, Bickerton, & Day, Ltd.	20,108
Sulzer Bros.	23,000		
Tosi	22,711		
Tosi	21,751		

LONDON.—For erection of a Diesel oil engine with deep pump well at Green-street, Green, for the Metropolitan Water Board :—

Westinghouse Co.	£3,548 0
Tosi.....	3,347 10
Hick, Hargreaves, & Co.....	3,321 0
Cole, Marchent, & Morley	3,293 0
Sulzer Bros.....	3,130 0
Korting Bros....	3,050 0
Diesel Engine Co.....	3,044 0
Glenfield & Kennedy	2,980 0
Willans & Robinson	2,766 0
Mirrlees, Bickerton, & Day, Ltd. ...	2,678 0

LONDON.—For external and internal repairs at Nos. 9 and 10, Aveny-row, Brook-street, W., for the Metropolitan Water Board :—

Hampton & Son.....	£99 14	Crooks & Co.	£57 10
W. C. James	62 15	W. King & Sons	52 0
Johnson & Co.	59 0		

LONDON.—For rebuilding the Leipsic-road School, Camberwell, for the London County Council :—

J. Allen & Sons, Ltd.	£19,419 0	G. Godson & Sons	£16,980 0
W. King & Son ...	18,887 0	W. Johnson & Co., Ltd.....	16,944 0
J. Carmichael ...	18,080 0	H. L. Holloway	16,700 0
Patman & Fotheringham, Ltd. ...	17,868 0	J. & C. Bowyer, Ltd.	16,379 0
W. Smith & Son	17,598 0	Holliday & Greenwood, Ltd.	16,378 0
C. Wall, Ltd.	17,586 5	E. Lawrance & Sons, Ltd.	16,365 0
J. Appleby & Sons	17,541 0	T. D. Leng, Evelyn-street, Deptford*	16,302 0
W. Downs	17,447 0		
J. Marsland & Sons	17,025 0		

[The Architect's estimate comparable with the tenders is £16,278.]



The KEY to Efficient Lighting

is to install a system that is Inexpensive, Safe, Reliable, Simple, Healthy.

The only system to fulfil all these requirements is

Acetylene

For all particulars apply—

ACETYLENE PUBLICITY, LTD.,

103, CHEAPSIDE, LONDON, E.C.

LONDON.—For cleaning the cargo tanks, etc., in connexion with the overhaul and repair of s.s. *Burns*, for the London County Council:

P. Tye & Co.	£55 0
J. Wright & Son	46 0
The London Sealing Co., Ltd., Victoria Dock-road, E.*	42 10

LONDON. For the erection of a handicraft centre and new house at the Moreland-street School, Finsbury, for the London County Council:—

Brand, Pettit, & Co.	£23,522 0 0
Woodward & Co.	2,494 0 0
J. Grover & Son	2,464 0 0
F Smith & Co.	2,455 1 11
McCormick & Sons, Ltd.	2,361 0 0
W. Reason	2,359 0 0
G. S. S. Williams & Son	2,304 0 0
L. H. & R. Roberts	2,290 0 0
E. Lawrance & Sons, Ltd.	2,256 0 0
G. Godson & Son	2,189 0 0
E. A. Roome & Co., 36, Basinghall-street	2,173 0 0

LONDON.—For the providing and fixing heating apparatus at the Ancous-road County Secondary School, Woolwich, for the London County Council:

Comyn Ching & Co.	£1,895 0
J. Grundy, Ltd.	1,789 0
C. P. Kimnell & Co., Ltd.	1,600 0
W. J. Burroughes & Sons	1,577 0
W. G. Cannon & Sons, Ltd.	1,560 0
J. & F. May	1,499 0
Ashwell & Nesbit, Ltd.	1,467 0
A. Macintosh & Sons, Ltd	1,449 13
Brightside Foundry and Engineering Co., Ltd	1,365 0
G. & E. Bradley	1,337 0
G. N. Haden & Sons	1,300 0
Palowkar & Sons, 90-91, Queen-street	1,267 0

[The Architect's estimate comparable with the tenders is £1,390.]

LONDON.—For erection of four new hostels and enlargement of the Southwood House Hostel at the Avery-hill Training College, Woolwich, for the London County Council:—

W. Mills & Sons	£50,119 7 0
E. Proctor & Sons	45,566 10 9
E. Lawrance & Sons, Ltd.	44,504 0 0
T. Cressley & Son	44,245 0 0
F. & T. Thorne	42,267 0 0
Rowley Bros., Boundary Works, Wood-green	42,141 0 0

[The Architect's estimate comparable with the tenders is £42,534.]

LONDON. For erection of boilers and superheaters at Crossness pumping-station, for the London County Council:—

W. Wilson & Co.	£3,718 9	Spurr, Inman, & Co., Ltd.	£3,440 0
Yates & Thom, Ltd.	3,663 0	Galloways, Ltd., Manchester	3,220 0
D Adamson & Co.	3,575 0		

LONDON.—For construction of tramways from Forest-hill to Rushey-green, for the London County Council:—

A. N. Coles	£20,377 12 11
J. Mowlem & Co., Ltd	20,297 10 5
Dick, Kerr, & Co., Ltd.	20,242 19 7
G. Wimpey & Co.	19,523 2 3
Kirk & Randall, Woolwich, S.E.	19,417 13 4

[Chief Engineer's estimate comparable with the tenders is £19,919.]

LONDON.—For the removal of filth from Deptford pumping-station, for the London County Council:—

	A Cubic Yard. s. d.
H. Covington & Sons, Ltd	4 4
W. R. Cunis, Ltd.	4 1
J. Paton & Son, Fenchurch-street, E.C.	4 0

LONDON.—For erection of a school for 125 physically defective children on the "Reay" site, Brixton, for the London County Council:—

G. Parker & Sons	£6,445 0 0	T. D. Leng	£5,697 0 0
Triggs & Co.	6,323 0 0	W. Smith & Son	5,695 0 0
J. Garrett & Son	6,259 0 0	J. & C. Bowyer, Ltd.	5,694 0 0
J. Smith & Sons, Ltd.	6,109 0 0	Lole & Co.	5,570 19 1
W. Downs	6,100 0 0	E. Lawrance & Sons, Ltd.	5,570 0 0
R. Cook & Sons	6,089 0 0	W. Johnson & Co., Ltd.	5,477 0 0
J. & M. Patrick	5,910 0 0		
Rice & Son	5,785 0 0		

[The Architect's estimate comparable with the tenders is £5,568.]

LONDON.—For structural improvements at the Hawley-cresent School, St. Pancras, for the London County Council:—

Brand, Pettit, & Co.	£12,142 0 0
McCormick & Sons, Ltd	11,922 0 0
F. & T. Thorne	11,600 0 0
G. S. S. Williams & Son	11,360 0 0
McLaughlin & Harvey, Ltd.	11,331 1 7
G. Godson & Sons	11,143 0 0
L. H. & R. Roberts	11,037 0 0
Rowley Bros	10,972 0 0
J. & C. Bowyer, Ltd	10,889 0 0
W. Johnson & Co., Ltd.	10,578 0 0
E. Lawrance & Sons, Ltd., 15-16, Wharf-road, City-road*	10,651 0 0

[The Architect's estimate comparable with the tenders is £10,649.]

MANCHESTER.—For St. Jerome's Church, for the Bishop of Manchester's Commission. Mr. E. H. Lingen Barker, architect, 78, King-street, Manchester. Quantities by Mr. G. Silvester, 7, Adam-street, Adelphi, London:—

Castle & Son	£6,725	Burgess & Galt	£5,725
Lunt & Son	6,572	Ridyard	5,660
Robertson & Co.	6,136	Gerrard & Sons	5,648
Townson & Sons	6,018	Clayton Bros.	5,648
Hamilton & Son	5,900	Thorpe & Sons	5,574
Wildgoose	5,891	Moore, Eccles‡	5,425
Normanton & Son	5,812		

‡ Accepted after modification.

NORTHWOOD. For erection of a house in Maxwell-road, for Mr. C. S. Pitt. Messrs. Moscrop-Young & Glanfield, Licentiate and A.R.I.B.A., architects, 20, Brook-street, W.:—

W. E. Wallis & Sons	£1,110	Hill Bros.	£1,037
C. Brightman & Son	1,085	S. Pither, Pinner*	875
A. E. Page	1,075		

NORWICH.—For painting (externally) various schools. Mr. C. J. Brown, architect and surveyor, Norwich:—

Coleman-road School.

I. W. King, Grove-road, Norwich*	£16 10

Heigham-street School.

I. W. King, Grove-road, Norwich*	42 0

Horns-lane School.

J. & J. Reid & Son, Pottergate-street, Norwich*	44 0

Nelson-street School.

A. Burrell, Unthank-road, Norwich*	53 10

Surrey-road School.

G. Marshall, Heath-road, Norwich*	44 10

SOUTHAMPTON. For proposed yacht stores at Northam, Southampton, for Messrs. J. G. Fay & Co., Ltd. Mr. Walter Wheeler, A.R.I.B.A., architect and surveyor, Southampton:—

H. Stevens & Co.	£4,200	Playfair & Toole*	£4,117
Jenkins & Sons, Ltd.	4,170		

[All of Southampton.]

J. J. ETRIDGE, Jr.
SLATE MERCHANTS. LTD.

EXPERTS IN
SLATING, TILING.
BEST WORK ONLY.

Telephone 2685 Wall, or write—
Bethnal Green Slate Works,
BETHNAL GREEN, LONDON, E.

Ham Hill Stone.
Doulting Stone.
Portland Stone.
The Ham Hill and Doulting Stone Co., Limited
(Incorporating the Ham Hill Stone Co. and C. Trask & Son, The Doulting Stone Co.).
Norton, Stoke-under-Ham, Somerset.
London Agent:—Mr. E. A. Williams, 16, Craven-street, Strand.

A NEW BATH STONE CO.
Quarrying the finest Corsham Down Stone.
CONNECTED WITH NO OTHER FIRM.
Address
BATH & DORSET QUARRIES, Ltd., BATH.

Asphalte. The Seyssel and Metallic Lava Asphalte Co. (Mr. H. Glen), Office, 42, Poultry, E.C. The best and cheapest materials for damp courses, railway arches, warehouse floors, flat roofs, stables, cow-sheds and milk-rooms, granaries, tun-rooms, and terraces. Asphalte Contractors to Forth Bridge Co. T.N. 2644 Central.

SPRAGUE & CO., Ltd.,
LITHOGRAPHERS AND PRINTERS.
Estate Plans and Particulars of Sale promptly executed.
69 & 70, Dean-street, Soho, W.

OGILVIE & CO., Telephone: DALSTON 138
Many years connected with the late firm of W. H. LASCELLES & CO. of Bunhill Row.
Amhurst Works, **DALSTON LANE, N.E.**
EXPERTS IN HIGH-CLASS JOINERY.
ALTERATIONS AND DECORATIONS. ESTIMATES FREE.

ASPHALTE
For Horizontal and Vertical Damp Courses.
For Flat Roofs, Basements, and other Floors.
The best materials and workmanship are supplied by
THE French Asphalte Co
Whose name and address should be inserted in specifications.
For estimates, quotations, and all information Apply at the Offices of the Company,
5, LAURENCE POUNTNEY HILL, CANNON STREET, E.C.

EWART'S
Cures in 19 cases out of 20.
"EMPEROR"
Write to-day for Illustrated Catalogue Free to
EWART & SON Ltd.,
346-350, Euston Road, London, N.W.
Established 1834.
Telephone: 2570 North.
SMOKE-CURE

THE BUILDER

VOL. CII.—No. 3617. MAY 31, 1912.

CONTENTS.

PAGE

VAL AND RECONSTRUCTION (WITH ILLUSTRATIONS) ... 621
TURE AT THE ROYAL ACADEMY ... 622
... 623
ICAN COLLEGIATE ARCHITECTURE ... 624
NEW ENGLISH ART CLUB ... 624
EMPORARY ARCHITECTS AND THEIR WORK: EDRICH OHMANN (WITH ILLUSTRATIONS) ... 625
LONDON SOCIETY ... 627
ITECTURAL SOCIETIES ... 631
VIEWS OF HOME (WITH ILLUSTRATIONS) ... 631
EOLOGICAL SOCIETIES ... 632
RAL NEWS ... 632
S ... 633
ESPONDENCE ... 633
ORIAL SUMMARY ... 634
INGS ... 634
S TO ILLUSTRATIONS ... 634
ETITION NEWS ... 634
Y YEARS AGO ... 634

PAGE

ADELPHI HOTEL, LIVERPOOL.—II. DRAINAGE SYSTEM AND SANITARY FITTINGS (WITH ILLUSTRATIONS) ... 635

THE BUILDING TRADE:—
THE INSURANCE ACT ... 638
CONCRETE MIXING.—I. (WITH ILLUSTRATION) ... 638
ELECTRICITY IN THE STONEYARD (WITH ILLUSTRATION) ... 639
INCREMENT DUTY ... 640
GENERAL BUILDING NEWS ... 640
APPLICATIONS UNDER LONDON BUILDING ACTS, 1894 TO 1909 ... 640
PROJECTED NEW BUILDINGS IN THE PROVINCES ... 641

WESTMINSTER CITY COUNCIL ... 641
NEW GENERAL POST OFFICE, BOMBAY (WITH ILLUSTRATION) ... 642
STAINED GLASS ... 642
CHURCH OF ST. BARNABAS, JAMAICA (WITH ILLUSTRATIONS) ... 643
MALTA AS A WINTER RESORT: SUGGESTED HOTEL ... 643
LEGAL COLUMN ... 643

PAGE

LAW REPORTS ... 645
LONDON COUNCILS ... 646
OBITUARY ... 647
FOREIGN AND COLONIAL ... 647
TRADE CATALOGUES ... 647
PATENTS ... 647
LIST OF COMPETITIONS, CONTRACTS, ETC., OPEN ... 649
SOME RECENT SALES ... 651
PRICES CURRENT ... 652
TENDERS ... 654

Illustrations.

THE WORK OF PROFESSOR FRIEDRICH OHMANN:—
DESIGN FOR THE REVISION OF THE KARLS-PLATZ, VIENNA.
GENERAL VIEW OF THE KARLS-PLATZ, VIENNA.
VIEW FROM THE LEFT ANGLE OF THE KUNSTLER-HAUS.
SUGGESTION FOR LAYING-OUT THE MARKET PLACE, SALZBURG.
FOUNTAIN IN THE ELIZABETH GARDEN, VIENNA.
PAVILION IN THE STADT PARK, VIENNA.



Ponte Rotto.

From a Drawing by Jakob de Heusch.

(From *Römische Veduten*. See p. 631.)

REMOVAL AND RECONSTRUCTION.

WE are certainly beginning to put a higher value on works of recognised architectural quality, h though our appreciation is still ordinated to our sense of economic commercial demands. Temple Bar in its day an isolated case of reconction, but Crosby Hall bids fair to he forerunner of a number of schemes the re-erection of buildings the re destruction of which would be ittedly a national loss.

/e should be the last to advocate the oval of a fine piece of architecture n the position for which it was origin- designed, and we are convinced that s have often occurred where a good ding has been destroyed which might have been preserved. There are, ever, instances where the imperative essities of the civic organisation dictate removal of old buildings or interest- monuments, and in such instances it should be our recognised policy to reconstruct these in positions equally if not more suitable in respect to environment. This may sound like a counsel of perfection, considering that we are hardly in a position to congratulate ourselves on our efforts to place even our new buildings and monuments; but unquestionably we ought to be qualified to provide suitable settings meeting all the artistic and the psychological demands either for new or old. It should be a part of the *métier* of the artist, and the solution of such a problem is indeed often within his powers if he, perchance, were allowed a voice in the matter. As, however, we seem to regard everyone else as better qualified than the artist to decide these matters for us, it is hardly surprising that a satisfactory result is so rarely arrived at, and that from our present system, which fails in the majority of cases, we are not very likely to evolve the means of dealing satisfactorily in the matter of reconstruction. The Briton's ignorance of his ignorance in questions of art is responsible for this, as for many other happenings that bring despair to the artist.

Now and again an important case of demolition comes before the public, and columns of discussion appear on Crosby Hall or Tattershall Castle, but quietly and unobtrusively the art dealer dismantles many a charming old mansion without attracting the attention of the public. Maybe the house lies rather too low for the modern squire, who orders his fish from London or Grimsby, and does not feel the need of a fishpond within a hundred yards of his kitchen; or, maybe, the drive of 6 miles from the nearest station is not balanced by corresponding advantages in the way of hunting or shooting. At all events, the house is found to be unpopular and almost unlettable. What more natural than that

the carved mantels, rich panelling, and graceful staircase should be extracted for the purpose of imparting the charm of antiquity to some more commodious or accessible residence?

Numerous instances of such a procedure have come to our knowledge, and only a short time back we received illustrated particulars of a dignified old Georgian house from which a purchaser could obtain the whole of the interior woodwork and fittings, if he preferred such a course to that of purchasing and retaining the house as it stood. Photographs (one of which we reproduce) showed the quality of the work, and it is evident that the vendors regarded it as most probable that the house would be gutted and its contents utilised elsewhere.

This is by no means an isolated case, and there is at present no means of checking a practice that it is difficult to look upon with equanimity. We may hope for something from the Bills now before Parliament and in course of being considered by a Joint Committee of the Lords and Commons; but even these are not so drafted as to give definite security. We have already referred to their tentative character in regard to the handling of private property, while the instruction to the Royal Commission on Ancient Monuments to confine their investigations to works over two hundred years old has tended to give the impression that our rich inheritance from the Georgian period is not worth protection.

Public opinion is, however, moving fast, and if our legislators are to keep pace with it, more extended and more definite control will have to be provided in the near future.

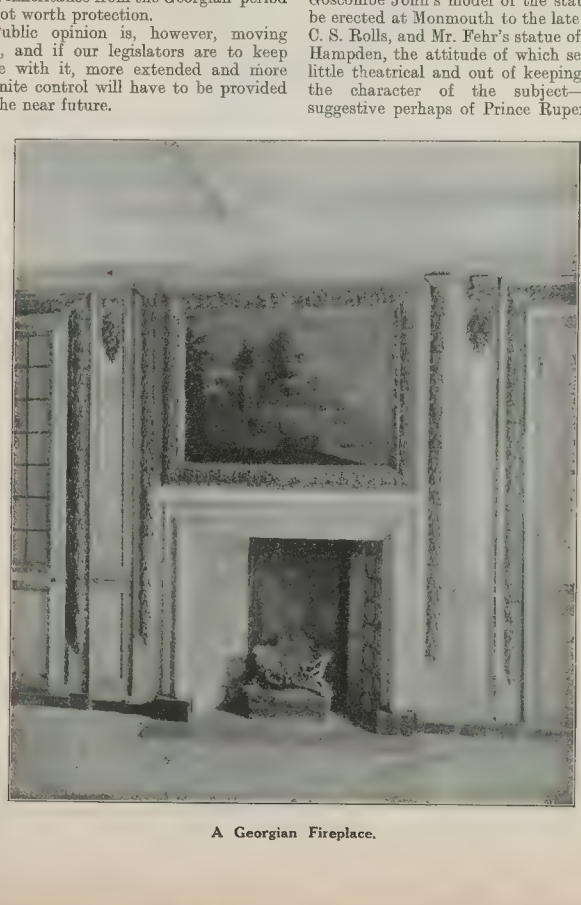
SCULPTURE AT THE ROYAL ACADEMY.

OWING to the way in which the sculpture is arranged — due in the first instance no doubt to the inadequate space devoted to it—it is even more difficult than in the case of the paintings to arrive at any just appreciation of its qualities.

From the architectural point of view, moreover, all works of sculpture need to be related to their environment. It is difficult to judge them in space. Although by the necessary limitations of any exhibition it may be impossible in most cases to suggest this environment, at least open-air statues might have their pedestals, which, after all, are as necessary to the effect of the whole composition as the figures themselves.

The Central Hall contains the usual number of memorial statues ranged against the wall at the wrong height from the ground. Here we get Mr. John Tweed's model of the bronze statue of Lord Clive to be erected in Whitehall. So far as we can judge, the figure looks rather clumsy, heavy, and uninteresting, but possibly when seen in relation to the architecture of the offices of the Local Government Board this effect may disappear.

In the same room we find Sir W. Goscombe John's model of the statue to be erected at Monmouth to the late Hon. C. S. Rolls, and Mr. Fehr's statue of John Hampden, the attitude of which seems a little theatrical and out of keeping with the character of the subject—more suggestive perhaps of Prince Rupert.



A Georgian Fireplace.

The late Maharajah of Mysore b Mr. Colton, Lord Curzon by M Pomeroy, and Thomas Gainsborough b Mr. Mackennal are different treatmen of single figures in which the architec finds it difficult to take much intere without knowing where they are to b placed and how they will be completed while the two charming models by M Henry Pegram for Oriel College, Oxfor seem to suffer somewhat from th awkward shape of the niches in whic they are to be placed.

Mr. Albert Hodge sends two imagina tive groups, of which we prefer the "Bo and Vulture," and Mr. Gilbert Bay exhibits "The Fountain of the Valkyrs —executed in bronze, marble, an mosaic—an interesting work which, how ever, does not convince us entirely.

The centre of the room is occupied b a group by Sir George Frampton entitle "Protection," but, being only a portio of a memorial to be erected to the la Dr. Barnardo, our interest is again limite by this fact. Of greater importance, b being more complete, are the variou scale models for statues or memorials o the late King, of which that by M Derwent Wood is, in our judgment, th most satisfactory.

We venture to suggest that, if it impossible to allow sufficient space t display full-sized models in a prope manner, it would be much better all exhibitors were restricted to suc sketch models as these. This woul enable the intentions of the designs t be better realised and the artists to b judged as artists, and not simply a modellers.

The model of the London Memorial t King Edward VII. is a case in point being far more interesting than would b a full-size model of one of the group This work is described in the catalogu as by "Bertram Mackennal, A.," "th architecture by Edwin L. Lutyens." Considering that this is a case in whic the architecture predominates and deter mines the general size and shape of th monument, this description might wel have been reversed, if the equal associa tion of two names in collaboration wa not thought to be sufficiently explicit.

It is much to be regretted that thi important work is not more satisfactory What one feels is that, although an archi tect and a sculptor have been associated together in its production, they hav achieved no real unity of conception Considering how little training or experi ence either our architects or our sculptor have had in collaborating in this class o work, it is only what might perhaps b expected. It is all to the good, however that the public has at last recognised tha they should collaborate. This, at any rate, is something for which to b thankful.

The recumbent bronze effigy of th late Marquess of Salisbury for th Salisbury Chapel at Hatfield, by Si W. Goscombe John, is another design into which a distinct architectura element should enter. We cannot help feeling, however, that in this respect it i not altogether a success. It is a delicat and workmanlike piece of work, but i seems to be lacking in simplicity an severity of treatment. The arrangemen of the drapery at the feet of the effig

seems rather weak and confused, and does not appear to balance the general composition in so satisfactory a manner as does the helmet or crest beneath the feet, so usual in mediæval monuments of this description.

Among the large number of portrait busts arranged round the wall the most noticeable perhaps is that of the late Lord Collins, Master of the Rolls, by Mr. F. Derwent Wood. This work attracts attention by its striking subject, and keeps it by the fine way in which this subject is handled.

Of quite unusual interest is the wax statue of Thyrsis, by Mr. J. Havard Thomas. This is a thing apart. Of intellectual rather than emotional power, its purely sculptural qualities seem to place it on altogether a different and perhaps higher plane than that on which most contemporary work now stands.

Whatever may be said of the exhibition as a whole, the sculpture, like the painting, is not lacking in works of individual distinction.

NOTES.

The London Society and Public Opinion.

THE report of the inaugural meeting of the London Society * is pleasant reading for the lover of the city beautiful; but those of our readers who noticed a report of the meeting in the daily Press of the 24th inst. had probably seen the letter in the *Builder* of the same date from Mr. W. A. Haskins, stating the underlying reasons for the Piccadilly fiasco, where surely was an opportunity lost—lost as many others that come to mind in a mournful series, from the plan of Sir Christopher Wren for the rebuilding of the City after the Great Fire down to the Aldwych and Kingsway schemes, and the discreditable squabbles of last year about the termination of the Processional Way—because the conflicting interests concerned were greater than the powers behind the artist. The Piccadilly affair is, in a way, unique, for in this case the tenants were willing to concede more than in most cases, but were naturally bound by business interests, and the matter furnished a striking example of the ease with which the best intentions may be frustrated through unforeseen, but not on that account less formidable, obstacles. With no desire to damp the enthusiasm of the new Society it might be well to consider the present position, and to take stock of the forces which have to be reckoned with, forces which are not new, but nevertheless reasonable, and it is here that the lover of the city beautiful has good grounds for despondency and even more—despair. He considers, as the London Society considers, the public as the arbiter, and he considers the public sympathetically; but, at the same time, it must be confessed that the vast majority of the people are exasperatingly indifferent to their surroundings.

Beauty and Utility.

THEN, again, the question arises of personal interest, mostly pecuniary; and there is the age-old conflict between beauty and utility in a new guise. The magnificent schemes for the cities of the future have a marked tendency to set aside the shopkeepers' desire for self-advertisement, which last, however, is only really the product of our swiftly moving times; and, as it is the shopkeeper who pays, who shall deny his right to dictate his requirements? A recent instance discussed in these columns has shown the strong feeling which exists on this matter, and it must be confessed that the clear and just demands of the trader have been rather set aside by the profession. Again, the local authorities, with their cast-iron regulations of yesterday, and the sanitary bodies, must be considered, and a final obstacle, one which the London Society points out, is that, in any public scheme where the people's money is used, the guardians of the public purse would hesitate to spend large sums without public approval and support, and this brings us back to the popular view once more and to the real root of the matter. It may be fairly said that the greatest difficulties arise from lack of education in the higher duties of citizenship, and it is rather a question of time, for with a more enlightened view of civic duty greater harmony will accrue—harmony which will not only rule our affairs but also our buildings, and the individual will not, it is hoped, be suppressed, but rather induced to come into line with his neighbours. This question of time is the key to the problem—the more workers the shorter the time and the more rapid the spread of the knowledge of the higher citizenship, and for this reason the London Society may be most heartily welcomed. In view of the examples mentioned above it may be said that its advent is not too soon. May it prosper! And may it lead us out of the present turmoil of petty interests into the calmer life of a united community, working together for the one end of the enthronement of art once more amongst the gods that rule our daily life.

The Old Town Hall Façade, Manchester.

THE first site selected for the rebuilding of the old Town Hall façade having provoked opposition, the Parks Committee has now decided to find a position in Heaton Park. A Manchester architect, in protesting against the re-erection, argues that it is a waste of money to maintain a building the details of which any student can copy from a text-book, and doubts whether it is feasible to make a mere façade look possible from other points of view. With the first of these arguments we find it impossible to sympathise. Our great cities are not so well provided with examples of refined and scholarly architecture that we can afford to lose one when it can be saved; moreover, the advantage of having such an example before our eyes in the course of our daily life is incomparable with that of being able to refer to accurately-drawn detail in a text-book. What architect would not find himself far more inspired in his work if he were constantly surrounded with the finest types of architecture, and who would exchange such a possibility for even the best-appointed library?

Façade or Building?

THE other contention has a sounder basis—a façade without a building behind it cannot be entirely satisfactory even if some means are taken to screen the ends. It would be far better to find some demand for accommodation suited to the design and to provide a building in character with the façade. Another difficulty will have to be met; a design made for a city street would look out of place in a park unless the surrounding areas are most carefully studied and judiciously laid out on markedly formal lines. The proportions of the building in question are fortunately such that with a well-defined *place* or avenue in front its effect would be satisfactory, but if it were dumped down haphazard the result might only provoke adverse criticism and discourage similar action in future cases.

Liverpool Custom House.

THE long foreseen problem of a fine new Custom House for the first port in the kingdom is at last being definitely raised. It is a problem even now, we believe, almost in the "vexed" stage in the city concerned, and we see a fine crop of difficulties ahead and a doubtful issue. The old Custom House—a gaunt, inconvenient, but not undistinguished building and a landmark from the river, was built exactly on the fitting site: that is to say, on the brink of the nucleus dock and harbour, and balancing the other symbol of the city's dignity, the Town Hall, at the other end of Castle-street, then the backbone of the town. Now the axis has swivelled round, and Dale-street, with the Town Hall as fulcrum, has become what Castle-street used to be. The harbour, to which a Custom House should have direct reference, is also very much other than it was. Instead of consisting of the Pool, Salthouse Dock, and the old basins adjacent, it embraces the whole river front and the docks on the other side. The estuary of the Mersey itself, that is to say, is now required to do what the Pool once did. Our Custom House, then, must be emphatically on the river bank. It might also, not unfitly, be upon that axial thoroughfare upon which the whole city hinges and on which the Town Hall stands. And there happens to be a site which complies with both these requirements. Upon this site, by an instinctive process perhaps rather than through the train of thought indicated above, the majority of Liverpolitans have fixed.

Lack-of-Forethought's Legacy.

AND, apart from the question of cost, at present troublesome, but doubtless to be surmounted, all would seem to be well. But this site is the central one of three formed on an emptied dock. The roadway round about, Man Island geographically (the riverside being called Pier-head—main access to the great landing stage) is virtually the one point at which the land comes to the edge of the water, if we may so express it, there being but dock walls and gates for several miles on either hand. On this land there should naturally be assembled the significant riverside buildings of the city. One is already there, the great offices of the

* See p. 627, this week.

Docks and Harbour Board—a building somewhat in the style of the War Office in Whitehall, but with a gracious dome in the middle on the southernmost site. It was there first; it is not very tall; it does not hopelessly outscale the city behind. All the land belonged to those who built it; and yet in a few years there arose on the northern site the nearest approach to a skyscraper that we have in this country, a great commercial building. It dwarfs the city and it dwarfs the Dock Office, dome notwithstanding. It was said at the beginning that the Pier-head and everything just behind it should have been treated as a whole. Everyone more and more is beginning to realise why. It is not yet quite too late to make something tolerable of the wreckage of a great opportunity. Would that those responsible for the initial small-minded short-sightedness could be sentenced to confinement until they contrived a reasonable solution!

AMERICAN COLLEGIATE ARCHITECTURE.

THE impression one receives from the collection of drawings and photographs at Conduit-street is, on the whole, one of disappointment. Perhaps also because we are becoming accustomed to feeling, on approaching a consideration of work in America, that we are about to find ourselves once again in many directions rather hopelessly "out done" the exhibition affords a light tincture of relief. It is a little selfish, that view, not quite so altruistic or so disinterestedly anxious for the welfare of architecture, broadly speaking, as we would like to think of ourselves as always being, and as we certainly usually profess to be, but it is natural enough. We see the results of the free opportunities of our cousins and of the munificence of clients, and perhaps we are apt, at this distance, to underrate their difficulties, the multiplicity of unprecedented needs they have to meet, and the highly organised speed with which all has to be accomplished. Be this as it may, certain it is that we do not underrate their ability. And no one will be able to gather reason from the work under discussion for lowering that estimate. We are shown many photographs (hard, cruel things) and drawings, and especially must we note some plans, block plans, of the general "lay-out" of some of the newer seats of learning. The work of Messrs. Cram, Goodhue, & Ferguson is chiefly in evidence, supported by exhibits from Messrs. Maginnis & Walsh, Messrs. Day Brothers & Klauder, and Messrs. Cope & Stewardson. Nearly all of it illustrates one clear tendency and aspiration. And that aspiration is the planting in the United States of something of the unrivalled charm of our own old colleges in Oxford and Cambridge. The style attempted is, for the most part, what we call "collegiate." Even here, in an old country, not too bright, and damp enough soon to remove the "raw edge" from what we do—even here, and executed by past masters in its peculiar manner, men in whom it is the breath of life—attempts at addition and resuscitation are, at the best, doubtful and always exceedingly difficult. We do not wish to press the point of rivalry. In this, if in any field, we have a clear advantage. Photograph for photograph, the work shown is, in itself, as good as ours. But the mode depends so much on adventitious co-operation. Weathering and lichen, association and the historic sense, the odour of antiquity and the sweet breath of immemorial seclusion, combine and work together to endow the style, with a charm that the craftiest handled stone itself can never give. Which is but to instance an item in the battery of argument against "revivals"—as though there ever could really be such things. We here are becoming agreed upon that point after our century of attempts—the hottest fights of which our older men can easily remember—some to remain silent, but working according to the old lamps, seemingly undismayed. Among these, in so far as he is working and undismayed, although by no means silent, Mr. Ralph Adams Cram—of whose vivid address at the R.I.B.A. recently the drawings are exhibited as illustrations—consciously ranks himself. He has threshed his standpoint out to something of a philosophy. It is, perhaps, the philosophy of those who in this country are his brethren, but left on a part of the field over which the battle has swept and passed. But with Mr. Cram and those on his side in America this issue is not yet decided. Having a more arrogant modernity against him he has need to be articulate and certain of his standpoint. Briefly, it seems to come to this: "We know that what we are doing is not perfect, but, in view of the aim of our building, it is what should be attempted. Our theme is traditional and serious, and our building and its appearance shall be also traditional and serious. We will guard the flame of the lamp we have till the dawn of a better day." Well, we are grateful for so definite a statement of principle, if only by contrast to the vagueness and very leaky thinking of which we become so tired. But we are inclined to question that flame. Not its reality, for it is genuine enough. But to wonder whether or not it is the right flame to preserve—that one, or any other indeed. For we remember many a dawn which became apparent only on a final extinction of the lamp.

But a hint of the dawn is apparent here despite the flame. There is, after all, something we have to learn; one aspect in which we are, as we suspected, hopelessly "outdone." Perhaps it is not our fault; our country is too small, too old, too keenly possessed, and too minutely divided, and so we have not the large way of planning. There are plans in this exhibition—plans of grouping and general disposition, plans of the scheme, in a word—showing a power of ranking and assembling buildings beyond anything we can do, or at least obtain the opportunity of doing. The ground plan of Princeton being, we gather, a scheme half made up of buildings erected before its conception, is masterly indeed. We especially note Messrs. Maginnis & Walsh's competitive plan for Boston College. In such work as this we think there is sign of dawn enough.

THE NEW ENGLISH ART CLUB.

THERE are few things in the way of pictures which indicate more the rapidity of the intellectual movements of modern times than the present exhibition of the New English Art Club, which was opened to the public last Tuesday. Time was when the artists of this particular coterie were the "bloods" of their day; they were young, enterprising, certainly intelligent, dead up against what was then styled Philistinism (how antiquated the term sounds now!), eager to influence and educate opinion. They performed brilliant spade-work; it is not too much to say that these young people of the Victorian nineties were the pioneers in paint of points of view which to-day largely prevail. They had their *confrères* in literary criticism, romantic literature, poetry, music, and in architecture, although architecture was perhaps less drawn into the swim than the other arts.

The curious thing about the present exhibition is that the New English Art Club does not seem to have developed under its own influences; that while it helped to promote the forward movement it remains pretty much where it was—it bears even the signs of middle age. We have, for instance, always the greatest respect for the work of Mr. William Rothenstein, but we doubt that his portrait group of three children in fancy-dress, entitled "The Princess Badroulbadour," is equal to the production of his early years. Mr. Walter Sickert, on the other hand, in his interesting garden scene, "Le Champ du Père-Denière," would seem to be carrying many years of experiment to a successful issue. His methods, largely derived from the French impressionists, have matured into a mastery which is both individual and original. A seasoned academician like Mr. Sargent, strangely enough, in his present tentative humour, fits in more appropriately with the earlier spirit of the New English Art Club than most of its present members. Mr. Sargent is obviously seeking rejuvenation in the getting away from the type of work which has made him famous. His two pictures, "Reconnoitring" and "Falbalas," are technically brilliant, but otherwise inconclusive performances indicating a questioning state of mind rather than a definite outlook. There is no hesitation about Mr. William Orpen's methods (we might sometimes wish that there were). His "Café Royal," with its many portraits, is skilful in a certain garish and bizarre way; but it is all a little overdone and caricaturish, as probably it is meant to be. There are a large number of works by Mr. Lucien Pissarro, who is consistent in his manipulation of the positive arrangement of colours, obtaining pretty much the same sort of result that is obtained by old-fashioned samplers in wool. Mr. Wilson Steer is now apparently seeking for other effects than vivid luminosity, the play of brilliant sunlight on verdant foliage and spaces, characteristic of his work a little while ago. His "Woodland Scene," a fine tangle of forest, is not thrown into violent relief by any scheme of contrasting light; the picture is probably a direct transcript from Nature in comparatively a somewhat opaque mood. Mr. C. J. Holmes views landscape in a certain spacious decorative aspect; he is more concerned with distinguishing outlines and large planes of colour than with matters of detail. Mr. Philip Connard and Mrs. Betty Fagan show two accomplished studies of flowers; but the first painter's "Castle Acre," a ruin with figures in the foreground, is a posed and artificial affair and does some injustice to his undeniable talent, which is independent of photographic expressions of this kind. Among other outstanding works are Mr. Shackleton's "Landing of the Cod-fish," painted in the light tones adopted by this artist, and Mr. Von Glehn's "New England," which contains the façade of an old frame house and which is a vigorous essay in composition.

The exhibition contains a large number of sketches, numerous etchings, and some water-colours. Mr. Albert Rothenstein is frankly decadent, somewhat after the Beardsley manner, but without Beardsley's decorative quality. From an architectural point of view, the etchings, sketches, and oil-paintings of Mr. C. M. Pearce are the most interesting in the galleries; whether he is dealing with buildings of some architectural importance or those of a merely picturesque kind, he shows definite knowledge of the scale, proportion and detail of his subject. There are drawings of buildings by other artists, however, which indicate a lamentable deficiency even in an elementary knowledge of architecture.

DIÉ CATHEDRAL, FRANCE.

We learn that a fire has done considerable injury to the interior of this church, in the Department of the Drôme, in the South of France, which is classified as one of "les monuments historiques de France." The flames, in the night of May 16, destroyed the high altar, with the adjacent XIIth century portique and tabernacle, and the doorway, remarkable for its old sculpture.



Parish Church, Zlonic: Restored by Professor Friedrich Ohmann.

From *Friedrich Ohmann* (Anton Schroll & Co., Vienna).

CONTEMPORARY ARCHITECTS AND THEIR WORK:

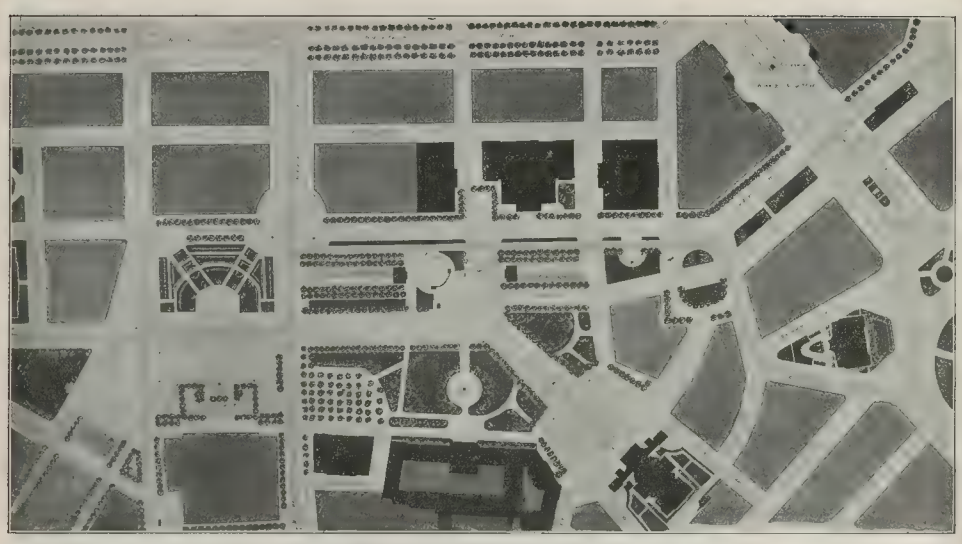
FRIEDRICH OHMANN.

PROFESSOR OHMANN'S reputation as architect has at the present time penetrated far beyond the confines of Austria, and those who have followed the development of Austrian architecture during the last decade will readily acknowledge Ohmann to be its most individual exponent. Just as Austrian art, and more especially architecture, is entitled to a place of honour in the history of art, so we must accord to the artist, Friedrich Ohmann, his share of fame amongst the artistic personalities of our time.

Born on December 21, 1858, in Lemberg, in a Germano-Austrian family attached to the Civil Service, Ohmann displayed as a boy a remarkable talent for drawing, and at the termination of his school course he entered the Vienna Technical High School, where he became a pupil of Karl König, and later studied mediæval architecture under Friedrich Schmidt in the Academy of Plastic Arts.

His next move was to Holland, where he, together with John Groll, won the first prize in the competition for a design for the Amsterdam Bourse. Returning to Vienna, he became the assistant of Karl König at the Technical High School, and through this he obtained the post of Professor of Decorative Architecture at the Industrial School of Art in Prague.

To him Prague owes a series of fine creations, and it is significant that our artist, inspired on the one hand by his historical training, on the other by the influence on his poetic mind of this artistic centre, produced works in mediæval and in baroque style remarkable for their invariable feeling for style, for their interesting and definite conception, and for the extreme delicacy of detail. We may mention as examples the Gothic Stork House, the Eagle House, and the Reichenberg Museum (in the German Renaissance style), and more particularly the Museum in Magdeburg. In the case of the latter building Ohmann did full justice to his commission by the ingenious manner in which he laid out the ground plan and adopted in each separate part of the



Plan for the Revision of the Karls-Platz, Vienna.

By Professor Friedrich Ohmann.

building the architectural expression belonging to the special period to which the objects exhibited therein belonged.

To his Prague period belong more especially such important examples of the baroque style as his Valtera Palace, the Variety Theatre, the restorations of the Parish Church of Zlonic (see illustrations) and of that at Prestic, and carried out with remarkable judgment, the improvements to the Church of the Trinity in Prague, the ballroom of Prince Clary's Garden Pavilion at Teplitz, and the restoration of the same nobleman's mountain castle, also in Teplitz.

To the Prague period belong also a remarkable group of plans—for instance, the competitive design for the German Casino, the plans for the Savings Bank in Troppau, which carried off the first prize, and more especially those for the Prague Exchange and Mart and for the General Insurance Office, in which Ohmann proved himself to be a complete master of the late Renaissance style.

Our artist's last period of activity in Prague already shows clearly that he is in complete sympathy with the modern art movement in Austria; but the manner in which he approaches the modern standpoint testifies to his high degree of originality and to his refined conception of art. His first productions in this manner are his Café Corso and the Hotel Central in Prague.

But it was only with his call to Vienna as director of the architectural work connected with the Hofburg, and with the commission entrusted to him in connexion with the architectural execution of the regulation of the Wien River, that Ohmann entered the field of activity to which his artistic position entitled him.

Unfortunately but few of his eminently important artistic designs for the Hofburg found their way into publicity; but what a wealth of artistic production is revealed by the various undertakings connected with the regulation of the Wien River, and more especially the decoration of the arches of the various bridges, of the superintendent's house in Hadersdorf-Weidlingau, of the refreshment kiosk in the Stadt Park, and of the villa in the Gloriettegasse in Hietzing. The latter, as a thoroughly modern building, yet harmonising so well with the town and



Design for the Revision of the Karls-Platz, Vienna.

By Professor Friedrich Ohmann.

landscape of this historical old suburb of Vienna, best shows the artistic intentions and aspirations of the artist. The pearl among the productions of the last few years is the Elizabeth Memorial in the Volksgarten. Ohmann, by including a large portion of the park in the general scheme, to form a grove near the actual memorial of the Empress, with a spring and a little lake in front of it and shady walks and plantations, has left posterity an evidence of his poetic feeling.

The new Museum Carnunti, in Deutsch-Altenburg, destined for the preservation of the Roman excavations of the district, must not be forgotten.

Ohmann has prepared an important design for the Historical Museum of the City of Vienna, and has also made in connexion with this very serviceable studies on the improvement of the whole of the Karls-Platz on which it was to be situated.

There is, besides, a whole series of very valuable sketches which belong to this time, which, as in the case of the above-mentioned buildings and designs, can only claim to form a characteristic selection from the activities of the artist. Since 1904 Ohmann has held an appointment at one of the two schools of architecture connected with the Academy of Plastic Arts in Vienna—a piece of good fortune for the rising generation of architects and for the present architectural activity generally.

With masterly skill he guides his pupils in the right direction, never forsaking the paths of good tradition, but conforming without over-emphasis of style to modern requirements, and teaching them to find ever the right expression for each piece of work in hand: the only correct artistic intention. He deserves great credit for thus developing national art in his school.

Apart from his powers as a designer, Herr Ohmann is gifted with remarkable talent as a draughtsman and illustrator: his sketches of historical buildings in Prague, Cracow, and Lemberg, usually in pen and ink or in monochrome, are masterly in their handling. The artist won special recognition in this domain by his series of plates illustrating the buildings in the baroque style in Vienna and the Crown demesnes of Austria, mostly executed in pen and ink in his well-known manner. In Ohmann's water-colour drawings, mainly illustrating his own designs, he charms by the originality of his colour schemes. As a gem amongst these water-colour drawings might be cited the complete sketch of his design for the regulation of the Wien River in the Stadt Park.

Amid the present confusion of architectural conceptions Friedrich Ohmann's artistic personality is sharply defined. In the pages of the History of Art he will surely find a recognised place.

Those who would like to study in more detail the works of Professor Ohmann will find in "Friedrich Ohmann's Entwürfe und ausgefuhrte Bauten," published by Anton Schroll & Co., Vienna, a magnificent series of reproductions from his designs and drawings. In this book, from which two of our views are taken, all Professor Ohmann's more important works are dealt with, and numerous studies and sketches from his hand are delightfully reproduced.



Parish Church, Zlonic: Reconstruction and Decoration of the Presbytery.

From *Friedrich Ohmann* (Anton Schroll & Co., Vienna).

THE LONDON SOCIETY.

The first meeting of the London Society was held on Thursday, May 23, at the Galleries of the Royal Society of British Artists, Suffolk-street, Pall Mall, under the Chairmanship of Sir Aston Webb, R.A.

The Chairman announced that, in accordance with the resolution passed at the preliminary meeting, a number of gentlemen had met and prepared rules for the Society, but these rules would, of course, be subject to such alteration as experience might show they required.

Dr. S. Miall moved and Mr. D. B. Niven seconded the adoption of the rules.

Mr. H. V. Lanchester raised the question of fixing the subscription at 1*l.* 1*s.*, and urged that, whilst he had no objection to that sum, yet it would be well to put the Society on as democratic a basis as possible so as to draw in those who were interested in London but could not afford that sum unless they got something in return, such as a club.

Mr. J. May, L.C.C., supported Mr. Lanchester, and pointed out that there were, for instance, Labour and other members of the County Council who could not afford more than 5*s.* a year subscription.

Mr. H. H. Statham suggested fixing the subscription at 10*s.* 6*d.*



After discussion, it was agreed, at the instance of the Chairman, that the matter should be further considered by the Executive Committee.

On the motion of Mr. Paul Waterhouse, the following gentlemen were elected on the Council: Sir George Alexander, Sir J. Wolfe Barry, Sir Thomas Brock, R.A., Professor Reginald Blomfield, A.R.A., Mr. W. D. Caröe, M.A., F.S.A., Mr. J. M. Dent, Sir Alfred East, R.A., Sir Douglas Fox, Mr. Thomas Gautrey, L.C.C., Mr. C. H. St. John Hornby, Sir J. Pritchard Jones, Bart.; Mr. Philip Norman, LL.D., F.S.A., Sir E. J. Poynter, Bart., P.R.A., Sir Aston Webb, R.A., C.B., Sir Frank Short, R.A., representing the Royal Academy, Mr. Leonard Stokes, representing the Royal Institute of British Architects, Sir George Frampton, R.A., representing the Royal Society of Sculptors, and Mr. C. J. Allan, representing the Mansion House Council on Health and Housing.

The Chairman said it was proposed to have two representatives of the Royal Academy, and one representative each from the Royal Institute of British Architects, the Royal Society of Sculptors, the Institution of Civil Engineers, the Surveyors' Institution, the Mansion House Council on Health and Housing, the Municipal Surveyors' Association, the Architectural Association, and the National Housing and Town Planning Council. Ten other gentlemen would be co-opted by the members of the Council.

Mr. May suggested that Sir John Benn and Mr. Cyril Jackson, of the London County Council, should be invited to join the Council; and another suggestion was to include a representative of the Institute of Builders.

The Chairman said that there would be the opportunity to elect those gentlemen amongst the co-opted members, and the matter would be considered by the Council.

The following gentlemen were elected as the Executive Committee:—Professor S. D. Adshead, Messrs. Herbert Batsford, C. C. Bradley, Arthur Crow, T. Raffles Davison, Douglas Fox, J. Hutton Freeman, Vincent Harris, A. H. Hodge, Brook Kitchin, W. L. Lucas, D. B. Niven, Professor Beresford Pite, Messrs. G. Stevenson, Carmichael Thomas, R. G. Todd, Raymond Unwin, Paul Waterhouse, Maurice Webb, W. Willett, B. W. Young, T. H. Mawson.

Dr. S. Miall was elected Treasurer, and Mr. H. J. Leaning Hon. Secretary.

The Earl of Plymouth subsequently presided over a largely-attended open meeting, when Mr. T. Raffles Davison read a paper on "London as It Is and as It Might Be."

The Chairman said that some persons might be inclined to think that the London Society had taken upon itself the task of guidance or interference with the authorities who rightly controlled the London buildings and improvements. He wished emphatically to state that was not the promoters' intention. But as they believed all good citizens should take an intelligent interest in the growth and changing development of the capital of their country, so did they wish to stimulate and to focus that interest, to give the public some guidance, and to help them to exercise that legitimate influence that they ought to exercise upon the mark which our own generation was leaving upon the planning and the stones of the metropolis. They knew how in the days gone by in the small community of Florence the citizens used to assemble together in their chief square and approve or disapprove by show of hands, or by some such simple method, the designs of the proposed buildings of their city. They could do that because their eyes had been trained to a sense of beauty from childhood, and all the inhabitants who took the trouble to examine and discuss the designs were competent to express an opinion. Of course, under present conditions such a thing was impossible, but none the less it was useful and right that there should exist an organisation from which an expression of general artistic opinion could proceed with some weight and authority behind it. One other subject they might bear in mind. The guardians of public money, be that money derived from taxes or from rates, must hesitate to recommend large public expenditure if they were not assured of public approval and support. Such a Society as theirs might help to form public opinion, and might render great service to those who would willingly take the right course and initiate some splendid improvement if they were certain of such general support voiced by such a Society.

Mr. T. Raffles Davison then read the following paper, entitled—

LONDON AS IT IS AND AS IT MIGHT BE:

The Problem of London.

"What London really is no one fully knows; what it might become no one can imagine. Greater London is already so vast as to be incomprehensible, with its seven million inhabitants, 600 square miles of area, 2,000 miles of streets, 600 railway-stations, and an annual cost of over twenty-five million pounds for government alone. Should it go on doubling every fifty years, its growth would become intolerable and impossible. To prevent it stretching north to Nottingham and west to Bristol we should be compelled to create a zone area into which it might not spread. But, whether we quarrel with the growth of our child or not, we ought at least to see that it is well dressed and clean, fair to look upon, and free to live a gracious life, not clothed in ill-fitting dress or swaddling robes for ever. In view of what it is and what it might be, the state of London now is so lamentable and so disheartening that it calls for immediate and united efforts from all who can help to make it better.

With its huge population, London tolerates the inconveniences and disabilities of narrow streets, originally planned for a town of a few thousand people, and reduces this obvious inconvenience by dint of smooth paving, rubber-wheeled carriages, motor-driven traffic, and a highly-organised system of police, whilst patiently accepting the ceaseless congestion of traffic. The magnificent waterway of the Thames, no longer occupies the same relation to the city which it once did. The city is now not a place to live in as formerly, but is mainly used for business purposes. Our city churches, which are still amongst our finest architectural assets, have now been partly relegated to a backwater off the stream of city life. Our ancient corporation has been compelled to divide its labours with the County Council. With our immense and intricate system of local government, including twenty-eight borough councils, forty district councils, and the London County Council and the City Corporation, London has almost reached the position of a small empire which requires the separation of purely local matters from those of larger moment. What wonder is it that, in this aggregation of interests, their due relation and relative value have been seriously overlooked?

There is nobody specially to blame for the present state of London. You cannot blame the Lord Mayor; he is too busy. You cannot blame the City Corporation; its age and its dignities are surely heavy enough burdens to carry? It supplies hospitality to the whole world, and pours charity in a ceaseless flood over every great sorrow and disaster. For these things alone it deserves to live. The County Council is, we are told, the first administrative body in the world, and it is an honour to serve on it, but it sits seventeen hours at a stretch, and it cannot get through its work. It deals with an important subject, like the entrance to the Mall, at six o'clock in the morning, after an all-night sitting on sewers, tramways, and schools, troubled all the time with the politics of the Progressives and the Moderates. You could not blame the County Council.

Though nobody is to blame, the indictment is against us all. The present state of affairs would surely not be tolerated in Munich or Basle, in Paris or Vienna. The city sentiment in these places would surely not permit the beauty and amenity of the city to be disregarded. The sentiment there calls for pleasant gardens, fine boulevards, noble buildings, beautiful vistas, and cheerful streets. And when this sentiment reaches London we shall get these things here. Is it sentiment we lack?

It is in no spirit of superior wisdom that we venture to point out how ill-prepared London has been for the great and marvellous development of the last fifty or seventy years, and how we have failed to foresee the advent of steam power or electricity, or the widespread revolution which these have caused in manufacture, traffic, heating and lighting, and how little we now foresee the developments which will still take place.

It would be impossible to enumerate the evils which have resulted from lack of foresight. When we look at the banks of the Seine we marvel at the muddy banks along the Thames. When we see what other cities do with navigable rivers we wonder why we lack a pleasant and speedy traffic on our fine flowing stream. When we consider our riverside park at Battersea we wonder whether Paris or Vienna would not have transformed such a possession years ago into a beautiful, instructive, and solacing delight for millions. When we consider our huddled congeries of mean streets our minds go back to Christopher Wren. When storms arise about open spaces, such as Euston-road and Edwardes-square, we know that long ago the valuable heritage of certain of London's garden squares and road frontages should have been secured for ever as a public right. Is this condition of affairs the outcome of our business methods and practical minds, or is the lack of that finer quality which is called imagination?

To many who have given little consideration to the subject a plan seems to call for great expenditure and a consequent increase in taxation. The reverse is the case. A new plan ensures that, when any public work shall be undertaken, it will fall into its proper and predetermined place in the general scheme, and thus contribute to the unity, convenience, and beauty of the whole. To anticipate and provide for a great public improvement, instead of being more costly, is less so. Surely a great and comprehensive plan scheme is needed at once if a noble future is to be secured. Immense sums of money will be spent on London as the years go by, and it will be a matter of everlasting regret if new bridges and embankments, fine new thoroughfares, and great public and commercial buildings are not erected in consonance with some settled scheme of orderly and dignified design.

London is being robbed continuously and relentlessly of golden opportunities for improvement, and the theft is often committed in the name of the very thing it takes away. The problem of London to-day is how to form a proper estimate of its future possibilities and how to provide for an authoritative and wise control which shall ensure its continual improvement and beautification.

The London Society's Aims.

To make London a perfect and beautiful city by the concentration and unification of existing forces, and to stimulate the sympathetic interest of its citizens towards this end defines in general terms the policy of the London Society.

In a thousand ways philanthropic, æsthetic, and scientific influences are continually at work for the improvement of London. No government, no council, and no society can claim a monopoly of this work. But all these beneficent efforts are too disjointed to give satisfactory results, and it is the endeavour of the London Society to co-ordinate these activities and to secure a common ground for the fair and impartial consideration of all the needs of London.

We know, of course, that the first word of beautification or artistic development freezes the blood and arrests the sympathies of many great citizens whose desire for economy, or overpowering sympathy for the poor, blinds the vision as to the necessity for a generous and catholic view of life, and for the spirit of foresight and enterprise in the development of a great city. But even for such as these the aims of the London Society need have no terrors. One of these aims is to make the consideration of art as far as possible part of every problem we have to face, to guide our industrial and commercial enterprises, our municipal improvements, our business and pleasure into such directions as shall make our environments more beautiful and our daily lives more pleasant.

It is not absolutely necessary to have a public convenience or a monumental fountain as the two equally important objects in a public square; it may not be necessary to bring coal through London to get it to Brighton; to make pickles or beer in the centre of the city; to have barracks put where they spoil a fine thoroughfare and a beautiful park; to barricade our parks with lofty railings; to make public lighting arrangements ugly instead of beautiful, or confine the expression of our public joy to red and yellow bunting.

Civic beauties satisfies a craving of human nature so deep and so compelling that people travel far to find and to enjoy it. The orderly arrangement of fine buildings and monuments brings fame and wealth to a city. You have only to wipe out in imagination Wren's churches

and Somerset House to realise how poverty-stricken London would be without the work of two architects alone. You need only compare Waterloo Bridge with the Charing Cross Railway Bridge to realise what nobility and dignity are created or destroyed in providing traffic road-ways over a river.

It would take too long to give even a summary of all that might be done and should be done to guide and control in the best future of our capital. It might be divided into various heads, such as Sanitation, Traffic, General Town Planning, Building Control, Tree Planning, Parks, Gardens and Public Amusements. Limitations of Nuisances, such as smoke, smell, noise, advertisements, and ugly sky lines. When we enumerate subjects like these we may be told at once that agencies are already at work for their consideration. This is true enough, but these agencies, many of which are official and authoritative, are not governed by one supreme controlling power, and consequently can do comparatively little. It is the aim of the London Society to secure a fair and impartial view of all these things, and a better inter-relation and sympathy between their many activities.

The London Society speaks for ideality of life, a better, pleasanter, and more artistic environment for the daily life of all, of rich and poor. It calls to its aid the services of statesmanship, philanthropy, science, economics, and art. It asks the help of politicians, engineers, social reformers, business men, and artists. The sympathetic association of every class of intelligent workers towards a great aim offers rewards of a kind that most men value. We all know that the pursuit of an ideal is in itself a good thing, even though we fail in its complete realisation. And in the London Society we shall keep clear of politics. We shall find red-hot Radicals bearing with us all in the conservation of ancient monuments, and crusted Tories -if there are any left—will work hard for the clearing away of ancient slums. The Socialist is, of course, at one with a society which aims to give beauty and joy equally to Pimlico, Whitechapel, and Belgravia.

Whatever others have done, or may do, we hold there is urgent need for the London Society. It is believed that the Council of the London Society will be competent to advise us to a right course to take in ensuring the best, economical, and artistic development of London. But its mission as an advisory body may even yield in importance to its educational influence in bringing forward for discussion and illustration all the conditions of success for the perfect development of London in its material aspect.

It is not the object of this paper to do more than suggest the many lines of development, which need forethought and the many means of ameliorating existing conditions, which need the continuous study and attention of the London Society. Whether the London Society will ever fulfil the aims which are at present in its birth it is impossible to say, but it is naturally expected that something should be stated as to how it is hoped it may realise those aims and what its course of action may be. The following will probably cover most of the fields of effect in which at first it may work.

The London Society's Work.

In the forefront of everything is the encouragement of all schemes which will tend to make London a fine city as to health, beauty, and general amenity, and to stimulate the imagination of all its citizens as to the possibilities of its future.

As a means to this several specific lines of action are suggested :—

1. To advocate the establishment of a central authority.

2. To advocate reform in the Building Acts which will compel a proper consideration as between heights and widths of streets.

3. To obtain some better guiding rule as to building line and to watch their development so that better architectural and economic results may be obtained.

4. To guard the amenities of our noble river and to save it from degradation. There seems grave risk at this moment that its fine northern embankment may be ruined by a seven-story hotel built about 100 yds. in advance of the general line of frontage. To secure the consideration of the artistic point of view in all works of Borough or County Councils by means of advisory committees.

5. To work for a better and more adequately distributed park system, with a view to provision for future extension ; and also to do all that is possible for the increase and extension of open spaces.

6. To secure the better opening up of good public buildings.

7. To insist on the completion of improvements and to impose measures which prevent it.

8. To do all that is possible towards the co-ordination of all schemes and plans which will gradually lead to the best general plan scheme for the whole city.

9. To endeavour to bring into a better method of order and decency and design all the various objects which are placed in the streets and open places, such as street lights, conveniences, shelters, kiosks, statues, etc. This might be defined as a sort of tidying-up process.

We have a County Council whose prodigious activities, if generally known, would amaze the public with the scope and extent of its administrative and protective services, a unique City Corporation with control of enormous funds. We have twenty-eight Borough Councils, each of which does more work than those of half our country towns, and we have forty District Councils. Over all these we have a vast Water Board, an Asylums Board, a Port of London Authority, and innumerable private associations for the accumulation of human activities, such as the Smoke Abatement Society, the Society for the Preservation of Ancient Monuments, the Metropolitan Gardens Association, the London Playing Fields Society, the Scapa Society, the Mansion House Council on Health and Housing, the Co-partnership Housing Council, the Garden Cities and Town Planning Association, the Royal Institute of British Architects, with its Town Planning Committee. We have also Public Health Acts, with their sanitary by-laws, our Building Acts, our magnificent police system for controlling traffic, Annual Improvements Acts, Advertisement Regulation Acts, Housing and Town Planning Acts, etc.

The Anomalies of London.

But in spite of all these, anomalies, such as never could exist except in this country, may be named as follows: —

1. Local bodies with a right to veto any general scheme for London, which, however good as a whole, may be thought to damage small local interests.

2. The main body so absorbed in its manifold duties of the present that it has no time to stop and consider the future, with the result that, until two years ago (with the exception of two imperative schemes such as Kingsway and Millbank), very little heed has been given to the future needs of London or to the lines upon which it should develop.

3. Such improvements as are made are done for strictly utilitarian reasons in a strictly utilitarian way after great pressure.

4. Improvements which, by not being sufficiently comprehensive to include properties affected, as well as those contiguous to a new street, leave unletable patches and ugly fringes of old buildings which remain for sometimes fifty years as left.

5. Railways, not only originally allowed to devastate large tracts of central areas with their viaducts and yards and stations, but also to neglect them deplorably and increase their original ugliness.

6. Huge areas of slum property which cannot be dealt with publicly owing to exemption of such areas from the Town Planning Acts and the failure of the Housing Acts, nor privately owing to the obstinacy of fossilised owners who refuse to co-operate with those adjoining who may be willing to rebuild.

7. Untold waste of fine sites through bad access, etc., owing to want of co-operation between owners and authorities, resulting in the perpetuation of such districts as Soho and Covent Garden hard by the most important and wealthy streets in London.

8. Great public buildings, such as the Central Criminal Court, the British Museum, the Institute of Chartered Accountants, the Wesleyan Hall, and the Westminster Cathedral, hidden away in narrow streets and lost to public view.

9. The smoke question lost or only half administered in a tangle of vested manufacturing interests.

10. Advertisements scattered wildly everywhere without reference to the interests of adjoining or opposite owners or public, because the Act regulating them is optional and not compulsory.

11. Narrow and unhealthy streets made even more unhealthy by the power given to owners to erect high buildings in them regardless of the width.

12. Perpetuation of bad alignments and projection in streets because owners have power to do so, and it is no one's business to suggest public action to prevent it.

13. Buildings erected of the most fantastic design, most incongruous with their surroundings, and of materials of most vivid colours and unsuitable texture.

14. Costly new buildings rising where manifestly improvements will rapidly necessitate removal.

15. Parks in excess of requirement in some places and entirely absent in others.

16. Both parks and squares closely barricading and obscuring the view, obstructing passage and destroying all sense of freedom and space.

17. Streets obstructed by permanent erections above and below ground, such as conveniences, kiosks, orderly-boxes, cab-shelters, ambulance-sheds and refuges, usually in the worst possible taste.

18. Tree planting on a miniature scale, and even then without reference to surroundings.

19. The invasion of residential districts by manufacturing and commercial buildings, and *vice versâ*, and an entire absence of any attempt at civic, administrative, or educational concentration.

20. And lastly, a chaotic system of goods collection and delivery whereby enormous waste is caused, both in time and the space occupied for goods yards."

Mr. Davison then showed on the screen a number of illustrations bearing on various aspects of the subject. Among the more important of these were a series illustrating London as it is, lent by Mr. Crow, many of these being devoted to showing the crowded condition of the East End, and how this is becoming accentuated by the building over of back gardens and houses of increased height in narrow streets.

These slides were followed by a series showing the deplorable architectural muddles surrounding most of our principal railway terminal stations.

The detrimental effect of Blackfriars railway bridge was next illustrated, and then a number of ill-considered new alignments in street frontages either in connexion with improvements or simply due to the neglect to take advantage of opportunities.

The ineffective termination of Rosebery-avenue was next shown, and following this the appalling jumble now facing the east end of Holborn Viaduct. "Bart's" chimney on the left, the dull blocks of the new General Post Office in the centre, and the razor edge of the Newgate-street corner on the right.

Following this were slides showing the unfortunate sky-line of the Piccadilly Hotel rising above the sweeping lines of Regent's Quadrant, the encroachments in the Euston-road over forecourts which were nominally protected by an Act of Parliament, the miserable termination of Northumberland-avenue, and the damage done to the effect of Parliament-square by the frontage alignment of the new Middlesex Guildhall.

The audience was then asked to consider the question of congested traffic, and slides were shown illustrating the effect of defects in street planning in Commercial-road, High Holborn, and other points. Then a series of new buildings unsuited to their surroundings was given, succeeded by a number of plans for the improvement of London, among which we may mention the following :—

Evelyn's and Wren's plans for rebuilding after the Great Fire.

Professor Adshead's plans for the rearrangement of the Marble Arch, the opening up of the British Museum, and the improvement of Hyde Park-corner.

A series entitled "John Burns's London" and "Imperial London," showing the removal of the railways to the south side of the Thames and the further developments such a proceeding would render feasible. These designs, which were shown by permission of the *Builder* (see issues of January 6, 1911, and January 5, 1912), embody Mr. Paul Waterhouse's suggested southern road from the City to Westminster, and other schemes that have been brought forward from time to time for the improvement of London.

The next slides exhibited Mr. Lucas's and

Mr. Collcutt's schemes of a Charing Cross-road bridge, as well as one illustrated in the *Sphere* in connexion with the King Edward Memorial. We then pass to Piccadilly-circus and see Mr. Norman Shaw's and Mr. John Murray's plans.

Then Outer London and main traffic routes came under review, with Mr. Crow's radial roads leading to "cities of health." Mr. Niven's zone line, a ¼-mile wide, and Mr. Paul Waterhouse's improvement on the Traffic Commission's lines of route.

Mr. H. V. Lanchester's suggestion for duplicated streets, each taking traffic in one direction only, was then dealt with in an illustration taken from Bond-street with Albemarle-street continued parallel to it.

Various possibilities in street alignment and in the arrangement of parks and gardens were illustrated by plans and views from various Continental cities, and finally two schemes for the arrangement of the proposed London University, the work of Mr. D. B. Niven and Mr. H. J. Leaning respectively, were shown on the screen.

It was regrettable that the number of the slides prevented an adequate explanation of each in the time at the disposal of the lecturer; in order that they could be properly understood at least an hour would need to be devoted to these alone, and it should have been recognised that it was out of the question to attempt to cover so much ground in so short a time as that available.

Continuing his remarks, Mr. Davison pointed out that:—

"Foremost amongst the immediate possibilities for London is the improvement which might be effected under the direction of a parks or garden authority. Why are our parks and gardens railed off from the approach of the public with lofty railings as though we were kangaroos or elephants? One thing which strikes an Englishman so much in foreign cities, like Munich, Düsseldorf, Vienna, and Berlin, is that the public are allowed to get much more enjoyment out of the parks and open spaces than we are. If our railings were half the height they would cost less to maintain and lay our parks and gardens much more open for our pleasure. But why could not a fringe of the parks along Piccadilly and past the Marble Arch be thrown open to the roadway with paths, grass plots, flowers, and seats? Is it not possible to redeem all our garden squares from private use to ownership for the public good, without destroying the general amenity of the square, nay, even enhancing it?

The treatment of the Marble Arch is the most striking illustration, perhaps, which could be brought of our present incapacities and futilities. The agitation for its improvement was largely due to the credit of a private citizen, and it was brought at last to its present state by a combination of forces enough to cause despair in the stoutest heart. Its appearance now is worse than ever, and calls for remedial measures, if it is ever to be what its splendid possibilities suggest.

In all the agitation for the opening up of Southwark Cathedral has anything been said about the approaches of London Bridge, which call for a fine and comprehensive plan that might be given great dignity or even grandeur of effect? The removal of Charing Cross and Cannon-street railway-stations does not seem to be a project too great for an imperial city. One could almost imagine it would pay for itself, but its effect would be so fine and far-reaching that it would seem worth a great deal to accomplish.

Of course, many great public buildings have their location already fixed. But the question of sites for important new buildings leaves much to be done, so that such sites may be carefully considered as to their surroundings. It is one of the worst regrets in the history of Modern London that we might have now gradually built up one of the finest and most impressive groups of public buildings in the world had there been any general scheme for the laying-out of sites for the Natural History Museum, College of Science, Albert Hall, College of Music, and Victoria and Albert Museum, which are now planned one behind the other. Surely a well-planned square mile of public buildings might have been one of the finest city effects in the whole world!

Here we are to-day faced with proposals for a hundred miles of new streets, with town-planning schemes in every quarter of London, with projects for new buildings of great magnitude, consisting of Colonial Government Offices, an Imperial University, a central Settlement House, offices for the Water Board, a home for the London Museums and the National Theatre, much-needed extensions of our National Picture and Sculpture Gallery, a national exhibition building, homes for learned societies, insurance companies, hotels, even larger than we have now, an inevitable increase in the huge blocks of central-heated, central-kitchen residential suites. Who is there to exercise any watchful care that such opportunities shall not be wasted, and that mistakes such as have been made in the past shall not occur again; and, above all, that due regard shall be given to the artistic element, without which all our efforts may leave us in a worse plight than before? At present no one! Only the individual whose separate and isolated needs cannot be satisfied without some general co-operation between themselves and the landowners and authorities. That is where we hope that a disinterested body like the London Society may help in a way that no government department nor improvement committee could possibly do.

On all hands we are confronted with pleasing visions of possible improvements. It is not the mission of this Society to form a sort of clearing-house for all the ideal dreams of enthusiasts, but it would ill fulfil its mission unless it offered all the help it could to the encouragement of ideality.

Nearly every important city centre and great thoroughfare presents opportunities for improvement. Many of these could be effected with little cost, others could be carried out gradually, and as parts of larger schemes which would in the end probably pay for themselves. Such things as the following occur to us at once (of course, in a superficial way). In St. George's-square you may well imagine that the main traffic might well pass through the central garden, leaving island gardens to the east and west, and thus giving greater privacy and quietude to the surrounding buildings. In Lincoln's Inn-fields one wonders why diagonal paths across the garden ground are not practicable. The idealist might think that Regent-street should have had an upper pathway at the first-floor level, like the old Chester Rows, and thus provide two rows of shops in place of one. The Mall roadway might surely be as pleasant as the Unter den Linden in Berlin, and the public allowed to sit under the shade of trees and rest. We wonder if there is ever to be a great southern embankment to the Thames, or if it is always to remain an alternating stretch of cathedrals, wharves, railway-stations, County Hall, and hospital without unity and beauty of effect. May we have flowers on our lamp-posts, less dangerous crossings of streets, covered footways to our bridges, and scores of other things which are possible to a city which is an Empire in itself?

They must indeed be destitute of imagination who cannot be affected by the thought of what is possible to beautify, to dignify, and to transform London so that it should become a magnificent and perfectly-governed city; and it must be remembered that without imagination we can do nothing. No one ever had in the past so fine an imagination as to realise what London now is. A great waterway might, of course, be lined on either side by fine embankment roads bordered with trees, gardens, and great buildings, with vistas leading through to the main thoroughfare beyond. A great roadway might lead from the west front of St. Paul's in a direct line to the Law Courts. A fine north and south avenue would lead over the river to the south transept of St. Paul's, giving off traffic east and west, and a wide roadway to the north of the Cathedral would connect traffic from Holborn by a new east-end road direct to Broad-street Station. The railway-stations could be shifted to the south side of the river and their bridges disappear. Battersea Park might be transformed into a great national pleasure-garden. Our streets would gradually be tidied up and made decent by the disappearance of ugly erections as prominent features in the view. We should cross great centres of traffic easily and pleasantly by underground ways or road bridges. Trees and outdoor *cafés* would enliven our streets in summer-time. River traffic would be developed, and we might again have water pageants come to life. The bridges would have covered footways. Steam railways, horse traffic, and tramways would be banished to an outer zone; sky signs, hideous advertisements, smoke nuisances, and the manufacturing smells would disappear. The air would be clear, the buildings more cheerful, the avenues and vistas finer, the squares and streets pleasanter, the traffic easier—in short, London would be practically improved and beautified.

From time to time we receive stern reminders as to the real essentials of human hopes and work. For the moment we now perhaps take less pride in the marvel of a 50,000-ton steamship than in the human sentiment and heroism which accompanied its final doom.

Slippery dividends and luxurious life sink for a time, and sentiment floats upon the waters.

Whilst we muddled through the Boer War we should have found our millions of money of poor avail without the national sentiment and sacrifice which it evoked. London's wonderful development has given little rise to fine sentiment, and apparently evokes little great art. If we are busy now trying to undo past mistakes, there are some we shall never cast behind us. Whilst Paris, with all its wars and social troubles, has gone on steadily developing into a fine and noble city because the plans were well laid beforehand, we have muddled away at partial, ill-completed efforts.

We have two banks to our river, but only one embankment, and no one completely impressive thoroughfare. Many fine buildings but half-buried and out of sight, splendid chances like Waterloo-place and Trafalgar-square, but nothing finally grand and noble.

Is this the outcome of a business turn of mind? Is it a lack of that fine civic sentiment which seems so much in evidence in other lands? The development of a city like ours depends on business methods and practical design to bring it to completion, but this Society believes there needs a stimulus behind this which must come from the heart and the imagination. May not the apparent despair of Modern London show us there is something higher than the everyday facts of economy and politics?

As a mere business venture you would be ashamed to run London as it is now—a mass of complicated and conflicting organisations, a surging sea of struggling forces, pulling in all directions without firm, conclusive, and statesmanlike control. It is not economically sound as a matter of business. It is not decently attractive as a world-show. We are a wealthy city, and have spent twelve millions in sixteen years on public improvements. But Paris spent fifty-three millions on the city, and has earmarked thirty millions more. In 1907 tourists and travellers alone spent 120 millions in France in hotels, travelling, shops, etc. What is fifty millions to that? What proportion does our outlay bear to our vast size and great income?

As a great and noble embodiment of city life, as the capital city of a vast Empire, we cannot stand comparison with many small cities of the world. A needful sentiment is lacking. Can it be aroused? A distinguished writer said the other day: "Everything noble, beautiful, and splendid that has ever been written, sung, painted, or done since the world began has been born in sentiment, carried through by sentiment, and remembered by sentiment." Shall that sentiment which ennobles, idealises, and inspires be lacking for the great and immediate necessities in the improvement and beautification of London?"

Mr. Forbes Robertson said he was a Londoner bred and born. He always had thought poor old London hideous, but that night it had been borne in upon him that it was more hideous than he thought. It was true, as the lecturer had said, that they depended on the feelings of the people and the sentiment of the people to get better effects out of London, and it could be got. London had great charm and individuality, but a city or a State got just as good art as the people of that city or State wanted. If as Londoners they wanted beautiful statues and elevations and streets they would have them eventually, and certainly no city in the world gave greater opportunity than London. He admitted that they had improved, and that there had been considerable improvements, but they had not made the advance in beautifying London that they should have done. Painting, architecture, music, and the other arts had improved and developed, and they had also seen proposals brought forward for changes in London, some of which he sincerely hoped would be carried out. There were, however, certain small matters which, to their disgrace, were not carried out and which the expenditure of a few thousands of pounds would remedy. In Trafalgar-square there was a perfect monstrosity perpetrated. They remembered

the statue of Charles I., which was a poor affair, it was true. [Mr. Granville Smith: No; it is one of the finest in London.] He ventured to say that the statue of Charles I. was a poor affair, but that the pedestal was one of the finest in the world. Even against this statue, commemorating as it did the sorrows of a remarkable king, who at all events had a great artistic sense and feeling, within the last ten years had been placed a monstrous iron lamp and a lavatory. There was no necessity for such a thing as that, and it was only one of many cases of the same kind. That Society must try and impress the minds of the men and women who, when they looked at a picture or an elevation or statue, said: "I do not know much about it, but I know what I like." They wanted enthusiasm, and if only those present would go away with the determination to look into these things much would be done. He had just come from an extended tour in the United States, and had visited sixty-four cities, and he had found the energy and enthusiasm of the citizens had produced some statues and buildings in most of these cities which were remarkable and extraordinary. He had paid a visit to Sicily and delighted his soul with the remains of the Greeks on that beautiful island. Coming back *viâ* Rome, he was talking with a distinguished prelate, who asked him if he had been to Athens, and told him he regretted he had not. This gentleman said: "It may seem curious to you, but I can assure you that you who know Sicily so well have a better idea of the ancient civilisation of the Greeks than if you had only gone to Athens." Now history was repeating itself. Were they to let future generations discover that the Mother Country was being outdone by the great cities of America and Canada? In London he was afraid they were too parochial, and the man who had the money to provide for beautiful buildings and other things wished always to interfere. He asked such people to take a lesson from the citizens of Chicago, who for their Exhibition called in the finest men of the State and asked for the best, and these men produced their White City, which was like some fantastic dream, so perfectly designed and proportioned was it.

Capt. Jessell, M.P.,

said he agreed with the objects of the Society, but with regard to health they had to remember that London was one of the healthiest cities in the world. An indictment had been made against the municipal authorities, but one of the greatest sinners was the Office of Works. He suggested that it was time they had a Minister of Fine Arts in this country, who would be responsible for things other than making the Crown properties pay.

A vote of thanks to the Chairman and to Mr. Raffles Davison concluded the proceedings.

ARCHITECTURAL SOCIETIES.

Manchester Society of Architects.

At a meeting of this Society on the 24th ult. the report and accounts were approved and adopted, and the following officers and members of Council were elected:—President, Mr. John Brooke, F.R.I.B.A.; Vice-Presidents, Professor S. H. Capper, M.A., A.R.I.B.A., and Mr. F. B. Dunkerley, F.R.I.B.A.; Hon. Secretary, Mr. Isaac Taylor, F.R.I.B.A.; Assistant Hon. Secretary, Mr. J. T. Halliday, A.R.I.B.A.; Members of Council, Messrs. A. E. Corbett, John Ely, W. C. Hardisty, Joseph Holt, P. D. Lodge, Paul Ogden, Claude Paterson, J. H. Sellers, G. Sanville, Edgar Wood, J. H. Woodhouse, and P. S. Worthington.

From the forty-eighth annual report we take the following:—

"The Council have long felt the advisability of getting more closely into touch with the outlying and distant parts of the Society's extensive province. To do this they have now decided to divide up the whole area into twenty-seven districts and to appoint in each an architect to act as correspondent for his district. By this means it is hoped to obtain the very earliest information of any proposed competitions and town-planning schemes, and generally to extend the usefulness and influence of the Society.

During the past year the attention of your Council has been drawn to two cases of tradesmen openly offering, by letter, a commission to architects. In each case the correspondence was submitted to the Royal Institute of British Architects with a request that the tradesmen be prosecuted under the Prevention of Corruption Act, 1906. In one case the Royal Institute expressed satisfaction with the explanations given by the tradesman, and in the other case the architect who laid the matter before your Council declined to be associated in the legal proceedings which the Council of the Royal Institute instructed its solicitors to take, and, as without his assistance legal proceedings could not be taken, your Council had reluctantly to consent to the proceedings being dropped.

The members will remember that last year the Council interested itself in the preservation of the Old Town Hall in King-street, and addressed to the Manchester Corporation and to Lloyd's Bank a resolution urging the careful consideration of the possibility of saving this building. The President, on behalf of your Council, addressed on February 15, 1912, the following letter to the press:—'Sir,—My Council understand that the Parks Committee have under consideration the removal and re-erection of the scholarly and dignified façade of the Old Town Hall in King-street to a suitable position in one of the Manchester parks. The Council of the Manchester Architects are strongly desirous of giving all the support that they are able to such a proceeding, and in this they are strongly supported by their professional brethren throughout the kingdom. It would by for ever an interesting monument of the cite history, showing a high standard of architecture attained at that time, of which any city might be justly proud. To the continuous stream of architectural students of the School of Architecture, which is a part of the Corporation scheme of education in conjunction with the University, this would have a real practical value for detail study and measurement. If the façade was re-erected with surroundings carefully selected, combining foliage and water treatment, it would always be a source of educational value and æsthetic pleasure to the public, and would support the work and intention of the Art Gallery and School of Art. We cannot urge too strongly that this is a rare example of the highest standard to which architecture has attained, and the Manchester Society welcomes the opportunity to offer such help for its partial retainment as lies in their power.—Yours, etc., on behalf of the Council of the Manchester Society of Architects, EDGAR WOOD, President.'

The Parks Committee decided that if the public showed such an interest in the proposal as to subscribe part of the cost of re-erection, then the Corporation would carry out the re-erection in one of the city parks. A fund was then raised to which this Society contributed 25*l.* (about 20*l.* of this amount has been subscribed by individual members). Your Council is pleased to report that the Parks Committee is satisfied with the response of the public and has agreed to re-erect the façade in Platt Fields.

The appeal made to the members for funds to aid the endowment of the Chair of Architecture resulted in a further contribution of 250*l.* This amount has been handed over to and has been cordially acknowledged by the University authorities. The amount of the previous contribution was 200*l.*"

OLD VIEWS OF ROME.

WHATEVER appertains to the history of the buildings of Rome has an unfailing interest for the architect. The spell that the glamour of the Eternal City has thrown over the imagination of the artists of all times and of all countries is illustrated in *Römische Veduten*, which we have received from Messrs. Friedr. Wolfrum & Co., of Vienna and Leipzig. This consists of reproductions of a series of views of Rome executed by artists of different nationalities from the XVth to the XVIIIth century, compiled by Dr. Herman Egger from the originals in the galleries of the principal cities of Europe. To the



The Crowning of Sixtus V. (1585).
A Fresco in the Vatican Library.
(From *Römische Veduten.*)

connoisseur these drawings, apart from their subject matter, make their own appeal. To the architect and the archæologist probably the chief value of such works would consist in their accuracy as contemporary records, preserving the original design of buildings since destroyed, or as throwing light upon the history of their structure and subsequent alteration, and upon the general lay-out and topography of the city; although to the architect, also, there is value in impressions, and a truth which is not necessarily a precise statement of literal facts. This collection, as a whole, makes no claim to historical exactitude, as, although some of the drawings, such as those by Maarten van Heemskerck, may probably be relied upon, some are merely fancy sketches by artists who may never have been in Rome; while considerable licence as to position and surroundings has been taken with others, which were presumably done on the spot or worked up afterwards from original sketches. All the same, the cautious student will find much that is of value, and that he has not been left altogether without guidance from Dr. Egger. The volume of letterpress, containing numerous small illustrations, which accompanies the drawings, discusses each view, and gives information as to its origin and probable trustworthiness as a record. Apart from its appeal to every man of taste, the special appeal of this publication will probably be to the student of the antiquities of Rome. To such a one a collection of drawings by such artists as Israel Silvestre (1640), Giorgio Vasari (1511-1574), Jan Asselyn (1610-1652), Schellinks, Beerstraaten, De Moncheron, and others, brought together for comparison and reference from such cities as Vienna, Paris, Dresden, Berlin, Rome, London, and Florence, will certainly be of great interest and value.

ARCHÆOLOGICAL SOCIETIES.

Exeter Diocesan Architectural and Archæological Society:

"At Home" at Rougemont House.

This Society — the oldest archæological society in the Kingdom—made a new departure on Tuesday last week by holding an "At Home" in the house attached to the historic grounds of Rougemont, by kind permission of the Mayor of Exeter (Dr. Vlieland).

The Society for the past seventy years has been in the habit of holding its meetings at the College Hall of the Vicar's Choral, in South-street, varied by visits to interesting buildings of archæological interest, and by making excursions at a distance.

The *transactions* of the Society, now entering on its third series, form a splendid monument of the work done by the Society in the past, and their records practically cover all that is to be said concerning things architectural and archæological over the whole country.

For years it included among its members the most noted and literary men of Devon and Cornwall, and such well-known names as Acland, St. Aubyn, Buller, Carew, Champernowne, Clinton, Coleridge, Courtenay, Ebrington, Fortescue, Kekewich, Lopes, Northcote, Palk, Rolle, Woolcombe—all stood upon its roll of membership, many contributing papers of great value.

With such prestige the learned assistance was secured of such names as George Edmund Street, Edmund Sedding—names which still carry weight and authority.

The Society has invariably had the Lord Bishop of the Diocese as its patron, and a distinguished layman has always occupied the office of President.

With a view to bringing the Society and its work to the notice of those interested in matters archæological and architectural, the Committee recently decided to arrange an "At Home" under the auspices of the President and officers.

The former house of the Member for Exeter, Mr. Richard Somers Gard, was, for the while, turned into a small temporary archæological museum, the members and their friends having brought sketches, prints, and diagrams, which had been suspended on the walls of the dining-room, whilst in the library was displayed a selection of the library belonging to the Society. Many of these were of great interest and valuable.

The unique collection sent by Mr. F. R. Rowley, F.R.M.S., the able curator of the museum, evoked great interest, especially the collection of seals of the suppressed abbeys, the Bishops of Exeter, the Dean and Chapter and civic seals—a valuable paper on which latter has been prepared by the Town Clerk. The seal which had most share of attention was the vesica-shaped silver seal of the last Abbot of St. James's Priory, which housed a community of the Cluniac Order, and whose extensive buildings occupied the site near the river, in Topsham-road, and known as Old Abbey.

It appears that the seal—a beautiful specimen of the heraldic engraver's art—was only known by the wax impressions on ancient documents, and it has now come into the possession of the city through the kindness of Lord Waleran. It has had many vicissitudes, and the city is fortunate in finding it a resting-place as an honoured treasure.

Other exhibits were a bronze standard city gallon, *temp.*, Elizabeth, a 14-lb. bronze standard weight, time of Henry VII., and a curious iron treasure-chest, with locks innumerable.

Two cases of so-called Samian red ware, with bronze and glass remains, of the time of the Roman occupation in Exeter, were also exhibited, a bronze Roman standard being amongst the more interesting, as belonging to a Roman legion, and found embedded in the river at Sidmouth.

GENERAL NEWS.

Professional Announcement.

Mr. James B. Dunn, F.R.I.B.A., architect, owing to the acquisition of his present chambers, at No. 45, Hanover-street, by the Government, has removed his office to No. 14, Frederick-street, Edinburgh.

Mr. H. V. Lanchester.

Mr. H. V. Lanchester, F.R.I.B.A., prior to his departure for India to join the Delhi Commission, was received in audience by his Majesty the King on Monday, the 27th inst.

Manchester School of Architecture.

The Education Committee and the University jointly invite applications for the Professorship of Architecture, the salary being 600*l.* per annum. Particulars and forms of application may be obtained from the Registrar, the University, Manchester, on receipt of a stamped addressed foolscap envelope. The last day for the receipt of applications is Tuesday, June 18.

Hotel Cecil, Strand.

Under the directions and superintendence of Mr. E. Keynes Purchase, two Palm Courts have been constructed in the courtyard and part of the approach from the Strand, and several other structural alterations have been effected, at a cost of some 50,000*l.* The site of the lounge is thus taken for the two courts, which are connected by wide steps; the upper one is 110 ft. long by 28 ft. to 34 ft. wide, and 28 ft. high; and the lower one is 93 ft. by 45 ft. and 32 ft. high; the lower court is 4 ft. below the level of the upper court, and between the east block and the lower court is a covered way, 10 ft. wide, giving access into the hotel. All the decoration has been carried out in the Louis XIVth manner in a colour scheme of blue and gold.

Rodin's "Burghers of Calais."

At the annual meeting of the National Art-Collections Fund, held at Burlington House on May 22, an interesting fact was made known with regard to Rodin's "Burghers of Calais," which will be placed on a site on the Millbank extension between the Tate Gallery and the Houses of Parliament. This work is not, as is sometimes supposed, a copy of the group at Calais, but an original specimen of Rodin's work, actually finished by the great sculptor himself. It is probable that Monsieur Rodin will himself visit England and assist in the selection of the site.

Post Office Buildings.

The Treasury have appointed a Departmental Committee to inquire into the system of providing Post Office buildings with particular reference to the alternative policies of renting or building whether by the Office of Works or the Post Office. The Committee is constituted as follows:—Sir F. Cawley, Bart., M.P. (Chairman), Mr. W. E. Horne, M.P., Mr. H. H Hambling, Mr. J. Slater, F.R.I.B.A., Mr. Howell Thomas, F.S.I. The Secretary is Mr. L. C. Bromley, of the Treasury. Mr. W. E. Horne, M.P., is the President of the Surveyors' Institution. Mr. John Slater, F.R.I.B.A., is Surveyor to the Berners estate in Marylebone. He was President of the Architectural Association in 1887, and Vice-President of the Royal Institute of British Architects from 1900 to 1904. He is also a member of the Tribunal of Appeal under the London Building Acts. Mr. C. J. Howell Thomas, F.S.I., is one of the principal valuers in the Inland Revenue Department at Somerset House.

An Architectural Tour in France.

The Rev. Dr. West, A.R.I.B.A., pupil of E. M. Barry, R.A., and of Viollet-le-Duc, and author of "Gothic Architecture in England and France," proposes to conduct an architectural tour in France during the ensuing summer. The number of the party will not exceed fifteen (ladies or gentlemen). Rouen or Paris will be the starting-point. Every facility will be given for sketching and photographing. Particulars may be obtained from the Rev. G. H. West, D.D., Selsley Vicarage, near Stroud, Glos.

London Society's Blind School, St. John's Wood.

Mr. R. C. Edwards, F.R.I.B.A., has been appointed as the architect for the additions upon the Eton-avenue side, which will be made to the London Society's Blind School, near the Swiss Cottage. The School was founded in 1838, and the present buildings, at the corner of Upper Avenue-road and Eton-avenue, were erected after the plans and designs of Mr. Kendall.

Subways in New York.

The Board of Estimate resolved at their meeting, on May 24, to conclude negotiations with the Interborough and Brooklyn Rapid Transit Companies for the construction of new subways at an outlay of about 24,800,000*l.*, on the part of the City, and about twice that amount on the part of the two companies, who share in the dual subway system. The contracts for the making and working of the subways will be referred to the Public Service Commission.

A New Firm of Publishers.

We are informed that Mr. Herbert Jenkins, who for more than ten years was manager for Mr. John Lane, has joined the publisher's ranks. He is the author of the "Life of George Borrow," which Mr. Murray published in the spring, and is also known as a Blake enthusiast, for he discovered the State papers relating to the poet's trial for high treason, and located his grave in Bunhill Fields Cemetery, which is likely to result in a memorial being erected to Blake's genius. Associated with the new venture are Sir George H. Chubb, Bt. (Chairman), and Mr. Alex. W. Hill, M.A. The new firm is to be know as Herbert Jenkins, Ltd., and the premises are 12, Arundel-place, Haymarket.

Church Building Society.

The Incorporated Church Building Society held its usual monthly meeting on the 23rd inst., at the Society's House, 7, Dean's-yard, Westminster Abbey, S.W., the Rev. Canon C. F. Norman in the chair. Grants of money were made in aid of the following objects, viz.—Building new churches at Clacton-on-Sea, St. James, Essex, 200*l.* for the first portion; Lambeth, St. Anselm, Surrey, 150*l.*; and Pontypool, St. John-the-Divine, Mon, 100*l.* for the first portion; and towards reseating and repairing the churches at Cadney, All Saints, Line., 50*l.*; and Woolwich, St. John, Kent, 50*l.* A grant of 50*l.* was also made from the special Mission Buildings Fund towards building a Mission Church at East Wickham, St. Michael, Kent. The following grants were also paid for works completed:—Elland, All Saints, Yorks, 200*l.*; Chessington, St. Mary-the-Virgin, Surrey, 15*l.*; Cricklewood, St. Peter, Middlesex, 60*l.*; Dawdon, St. Hilda and St. Helen, Seaham Harbour, 18*l.*; Penrieth, St. Christiolus, Pembs, 25*l.*; Hucclecote, St. Philip and St. James, Gloucester, 30*l.*; and East Thorpe, St. Mary, Essex, 10*l.* balance of a grant of 50*l.* In addition to this the sum of 1,070*l.* was paid towards the repairs of twelve churches from trust funds held by the Society.

Property Sales.

The properties recently placed in the market include Oaks Park, near Epsom, of which the house was originally built by the Hunters' Club for their resort in the hunting season. It passed in turn from Sir Thomas Gosling to General Burgoyne, and to Edward, twelfth Earl of Derby, who made large additions to the house and stables. The estate has finely-timbered grounds, with plantations, and gives a name to one of our "classic races."—Mertoun, 6,550 acres near Abbotsford and Melrose, formerly belonged to the Haliburtons, who, in 1680, sold it to Sir William Scott of Harden, ancestor of Sir Walter Scott; the house, built in 1702, was enlarged by the late Lord Polwarth; the rental value amounts to nearly 9,300*l.* per annum, and in the confines are the Border keeps of Littledean and Smailholm, the Sandy-Knowe familiar to readers of Scott's autobiography and poetry.—Brasted Place, Sevenoaks, with 650 acres, was built for George III.'s physician, Dr. Turton, in 1780, from designs ascribed to Robert Adam—a wing was added forty years ago; the house was occupied for a while by Prince Louis Bonaparte, afterwards Emperor of the French.—The Duc d'Orléans has just sold to Sir Charles Swinfen Eady, Judge of the Chancery Division, his estates of Bishampton and Wood Norton, near Evesham. The latter was bought of Mr. E. Holland, M.P., by the Duc d'Aumale, who added largely to the property that passed to his grand-nephew, Louis Duc d'Orléans, who rebuilt the house, in 1897, on an eminence overlooking the valley of the Avon; the wrought-iron gates at the main entrance into the grounds were brought from York House, Twickenham, and formerly stood at Versailles.—The Derbyshire County Council have resolved to purchase Mr. E. T. Hooley's estate of Risley with the object of establishing thereon a farm colony upon co-operative principles.—No. 112, Strand, erected from E. M. Barry's designs for the Art Union of London, on the Duchy of Lancaster estate, will be offered for sale on June 14.

BOOKS.

The Mechanics of Building Construction. By HENRY ADAMS, M.Inst.C.E., M.I.Mech.E., F.S.I., F.R.San.I., etc. With 590 diagrams. (London: Longmans, Green, & Co. 1912. Pp. 240. 6s. net.)

A FEATURE quite evident after a merely superficial examination of this work is the carefully-arranged logical sequence of the various branches of the general subject. The author, who has given a good deal of attention to the principles of building construction, has placed before his readers a most helpful exposition, whose practical interest is maintained chapter by chapter to the very end.

We use the word "chapter," despite the fact that the volume is divided into sections termed "Lectures," for the reasons that the subject matter is based upon a course of lectures delivered to science teachers at South Kensington in 1906 and 1907, and that the sections may be used as the basis of lectures to students. In their present form the lectures have been expanded so as to cover the requirements of students as well as of teachers, and they cover the whole ground to be traversed before the student begins to make a special study of any particular branch of constructive work.

The wide range of subjects included, and the manner in which they are treated, make the book useful as a work of reference for architects and engineers.

Numerous worked examples and graphical diagrams are given throughout the treatise, which is a welcome addition to the literature of building construction.

Elementary Principles of Reinforced Concrete Construction. By EWART S. ANDREWS, B.Sc.(Eng.). (London: Scott, Greenwood, & Son. 1912. Pp. 195. 3s. net.)

THE special merits of this text-book are that it embodies in compact and inexpensive form a simple and lucid exposition of the principles of reinforced concrete construction, with examples illustrating the design of beams and columns.

The notation adopted is that proposed by the Concrete Institute, which, it is hoped, will lead to a universal standard notation, and so obviate the trouble now experienced by all who have occasion to consult works on reinforced concrete.

Several diagrams given as examples of labour-saving devices for beam design may be commended to the notice of students, as also may be the alternative treatment given throughout for the stresses in beams and the application of the same method to the calculation of deflection.

A useful chapter near the end of the book describes some leading systems of design and patented types of reinforcement.

The volume is one we have pleasure in recommending a handy and reliable guide to the special branch of construction discussed by the author.

The Principles of Structural Mechanics. By PERCY J. WALDRAM. (London: B. T. Batsford. Pp. 369. 7s. 6d. net.)

IN view of the large number of text-books already available on structural mechanics, it may not be quite clear why another book should be published on a subject which has been so amply discussed by many well-known writers.

The special object of the author, however, in producing this work appears to have been the desire to provide a manual for the use of architectural draughtsmen setting forth in simple language and without the use of higher mathematics an explanation of the origin of formulæ and graphical methods in common use, and of the mechanical principles with which architects are called upon to deal in structural work.

The book covers a wide range of subjects, which are discussed very clearly and quite in accordance with the standard of simplicity laid down by the author. While giving all the theory of the general subject that is required in architectural practice, it may also be recommended as a helpful and systematic handbook for the young structural engineer. The volume is excellently produced and amply illustrated by diagrams and drawings.

The Steel Square and Its Uses Simply Explained. (London: Cassell & Co., Ltd. 1912. Pp. 119. 2s. net.)

A SMALL but eminently practical guide to the use of the modern steel square in carpentry and joinery, with clearly-written instructions for setting-out roofs of various kinds, staircasing, and other work. The text is amply illustrated, and deserves to be in the hands of every craftsman who has not yet learned to appreciate the value of the instrument of precision which is now available as the successor of the old-fashioned iron square.

Bevels and Cuts. By EDWARD HARDY. Illustrated by 228 diagrams. (London: Cassell & Co., Ltd. 1912. Pp. 148. 2s. net.)

STUDENTS of carpentry and joinery, and those who are engaged in practising or teaching these arts, may well be commended to study this little volume, which describes a scientific method whereby the artisan can find the required angles in such position that bevels can easily be adjusted to them, and whereby his lines can be developed on the piece of timber which has to be cut. In addition to being based on scientific principles, the method presents the advantage of being applicable without the aid of a drawing-board and materials. Numerous practical examples are given, and the carefully-drawn diagrams throughout the text constitute a valuable feature of the book.

Pattern-Making. By JOSEPH G. HORNER, A.M.I.Mech.E. Fourth edition; about 500 illustrations. (London: Crosby Lockwood & Son. 1912. Pp. 404. 7s. 6d. net.)

As a rule, architects either omit the design of castings from their practice or are content to leave purely technical details to experts. Consequently, the art of pattern-making, so thoroughly expounded in this well-known treatise, does not appeal to a large proportion of our readers. To engineers a sound knowledge of pattern-making is important, as it necessarily has direct bearing upon the design of details in construction.

Having been engaged for many years as a practical pattern-maker, Mr. Horner is well qualified to write on the subject, and those desiring information on the subject cannot select a better manual than the present edition of his comprehensive work.

Modern Destructor Practice. By W. FRANCIS GOODRICH, A.I.Mech.E., F.I.S.E. One hundred and sixteen illustrations. (London: Charles Griffin & Co., Ltd. 1912. Pp. 278. 15s. net.)

MR. GOODRICH is already known as the author of a standard work on refuse disposal, which dealt with the position as is stood some eight years ago. The present volume is a review of modern practice in refuse disposal both in this country and abroad, and may be studied with profit by all who are practically interested in the question discussed. One gratifying feature brought out is the proved superiority of British destructors in many countries where they have been employed under difficult and widely varying conditions. It is distinctly unsatisfactory, however, to find that the efficiency and sanitary nature of modern methods of refuse disposal are still disregarded by so many of the local authorities in this country.

Second Supplement to the Third Edition of The Law of Building Engineering and Shipbuilding Contracts. By ALFRED A. HUDSON, K.C., Barrister-at-Law. (London: Sweet & Maxwell. 1912. Pp. 30. 5s. net.)

THIS Second Supplement to this well-known treatise consists of a full report in all the Courts, including the House of Lords, of the case of Roberts *v.* Hickman & Co., the decision of which was given in the House of Lords, May 9, 1911. In connexion with this case the author in a Preface draws the attention of architects and engineers who are called upon to give certificates which are binding upon both parties to the necessity of maintaining a strictly independent and judicial attitude. This case, which does not appear to have been reported in the "Law Reports," is of extreme importance to those like architects and engineers who are called upon to exercise these quasi-judicial functions in giving certificates, and they should seize the opportunity offered by this report of the case of considering the judgments delivered in the House of Lords and the Court of Appeal, which are very instructive. We are not aware whether the case is elsewhere reported, so for obvious reasons we only refer our readers for the facts to the volume now published.

CORRESPONDENCE.

Southwark and St. Paul's Bridges.

SIR,—Referring to your "Note" in the issue for May 17, headed "Southwark and St. Paul's Bridges," it is not *now* that the City Corporation recognise the claim of architecture in bridge design, as upwards of two years ago the Bridge House Estates Committee received an influential deputation from the Institute, comprising architects, painters, and sculptors, and promised them that advice would be sought before designs for the bridges were decided upon.

This stage has *now* arrived, and, in accordance with the promise, they have sought the assistance of Sir Ernest George as adviser, in conjunction with Mr. Mott, the engineer in connexion with Southwark Bridge, which is to be proceeded with at once, and have retained the services of Sir William Emerson as assessor in matters relating to the St. Paul's Bridge.

J. DOUGLASS MATHEWS,
Member of the Committee.

The Royal International Horticultural Exhibition.

SIR,—I was rather surprised on visiting this exhibition to notice what little attention had been paid to the revival of formal gardening in England. It is true that there was the usual display of cut bushes both in yew and box, but as to garden ornament, apart from work designed and exhibited by Messrs. Cashmore & Co., and some antique work exhibited by another firm, which, by the way, rather savoured of vandalism, there was nothing to arrest attention.

I had the same feeling when I was looking at the garden furniture; there seemed to be no originality in the designs.

I do not know whether this exhibition is to become an annual one, but if it is, might it not be possible for a separate section to be formed, displaying plans, drawings, and models of modern gardens by modern artists? I feel sure such an adjunct to the exhibition would be appreciated by a large section of the public.

A VISITOR.

EDITORIAL SUMMARY.

"Removal and Reconstruction" is the title of the leading article.

"Sculpture at the Royal Academy" is the title of our second article (p. 622).

In "Notes" Column (p. 623) will be found comments on: "The London Society and Public Opinion"; "Beauty and Utility"; "Liverpool Custom House"; "The Legacy of the Lack of Forethought"; "The Old Town Hall Façade, Manchester"; "Façade or Building?"

An article on American Collegiate Architecture, dealing with the drawings shown by Mr. R. A. Cram at the Royal Institute of British Architects, appears on p. 624.

A review of the pictures at the New English Art Club Exhibition is given on p. 624.

An illustrated article on the work of Friedrich Ohmann appears on p. 625.

A report of a meeting of the new London Society will be found on p. 627. A paper by Mr. T. Raffles Davison is given in connexion with the report.

Under Architectural Societies (p. 631) a notice of the "Manchester Society of Architects" appears.

Book notices (p. 633) include: "The Mechanics of Building Construction"; "Elementary Principles of Reinforced Concrete Construction"; "The Principles of Structural Mechanics"; "The Steel Square"; "Bevels and Cuts"; "Pattern-Making"; "Modern Destructor Practice."

In Correspondence Column (p. 633) will be found letters on: "Southwark and St. Paul's Bridges"; "The Royal International Horticultural Exhibition."

A second article on the Adelphi Hotel, Liverpool, with illustrations, is given on p. 635.

The Building Trade Section (p. 638) includes: "The Insurance Act"; "Concrete Mixing"; "Electricity in the Stoneyard"; "Projected New Buildings in the Provinces," etc.

In Legal Column (p. 643) are notes on: "Landlord and Tenant"; "Workmen's Compensation"; "Party Walls: London Building Act"; "London Drainage By-laws"; "Landlord *v.* Tenant."

Law Reports (p. 645) include: "Wallis *v.* Biddulph"—ancient lights and Crown leases; "Dawnay *v.* Mulholland"—claim against a building owner; "Clinch *v.* Jackson"—Referee on time-sheets; "Marylebone Borough Council *v.* White"—case under the Metropolis Management Acts.

MEETINGS.

FRIDAY, MAY 31.

Junior Institution of Engineers.—Mr. Arthur Bourne on "Standardisation of Engineering Catalogues."

MONDAY, JUNE 3.

Royal Institute of British Architects. Mr. Wm. Woodward on "The Responsibilities of Architects and the case of Muter *v.* Waldstein." 8 p.m.

The Society of Engineers (at the Institution of Electrical Engineers, Victoria-embankment).—7.30 p.m.

WEDNESDAY, JUNE 5.

The Institution of Municipal Engineers.—Visit to premises of Messrs. Doulton & Co. 2.30 p.m.

THURSDAY, JUNE 6.

The Institution of Water Engineers.—Summer general meeting, Cheltenham.

FRIDAY, JUNE 7.

The Institution of Water Engineers.—Summer general meeting, Cheltenham.

The Institution of Municipal and County Engineers.—Scottish district meeting, Albert Hall, Stirling.

BOOKS RECEIVED.

FARM BUILDINGS. By C. E. Curtis. (London: Vinton & Co. 3s. 6d. net.)

CONCRETE COSTS. By F. W. Taylor and S. E. Thompson. (New York: J. Wiley & Sons; London: Chapman & Hall. $5·00; 21s. 1d. net.)

COMPETITION NEWS.

Federal Capital City, Australia.

We have referred repeatedly to the facts which have made this competition so unsatisfactory, and in our issue of May 3 (p. 513) we printed a letter from the Secretary to the Royal Institute of British Architects explaining the reasons why British architects probably would not feel able to compete. The winners of the competition have now been announced, and we can only hope that the result is as satisfactory to the promoters as the affair has been disappointing to those who under other conditions would have entered the lists. The first prize (1,750*l.*) has been awarded to Mr. Walter Burley Griffin, Steinway Hall, Chicago; the second (750*l.*) to M. Eliel Saarinen, Helsingfors, Finland; the third (500*l.*) to M. Alfred Agache, 11, Rue Eugène Flachat, Paris. "The awards were made on the recommendation of a majority of two out of three judges," says the *Times*, and we await the official report of the proceedings. The assessors were Mr. J. H. Smith (Engineer), Mr. John Kirkpatrick (Architect), Mr. J. M. Coane (Surveyor).

The Whiteley Homes.

We are informed that a meeting of the trustees of the Whiteley Homes was held on Saturday, May 18, at Fox Oak, Burhill, near Hersham, at which the schemes submitted in the limited competition for plans for laying out the site for the homes (in future to be known as "Whiteley Park") were considered, and it was decided that the plan sent in by Mr. R. Frank Atkinson, F.R.I.B.A., contained the best suggestions for the purpose. Mr. Walter Cave, F.R.I.B.A., was the assessor.

Welsh National Memorial Sanatoria.

The King Edward VII. Welsh National Memorial Association for the Prevention and Abolition of Tuberculosis in Wales and Monmouth (which has this week been granted a Charter of Incorporation) is arranging for the provision of institutions in North and South Wales for the furtherance of the campaign. As will be observed from our advertising columns, the Memorial Association is now inviting applications from architects for the erection of a sanatorium in South Wales for 250 beds, and one in North Wales for 150 beds. Further information, upon which architects can prepare the necessary pencil sketches and supply other details, can be obtained from the Secretary, Welsh National Memorial Offices, Newtown, Montgomeryshire. We see no reference so far to the appointment of a professional assessor, and until this question is settled we advise intending competitors to refrain from proceeding.

Society of Architects.

Mr. F. Morrell-Maddox, of Burton-on-Trent, has been awarded the Travelling Studentship (25*l.* and Silver Medal) of the Society of Architects. The subject set was "A Town Hall to cost not more than 30,000*l.*"

Exhibition of Mural Paintings.

An exhibition of designs for mural paintings and for the decoration of schools and other institutions will be held at Crosby Hall, More's Garden, Chelsea, from June 3 till June 22, 12 noon to 8 p.m. The competition designs for which prizes were offered will be included.

Benfieldside Sewage Disposal.

Last year the Benfieldside Urban District Council invited five engineers to submit competitive designs for sewage disposal works. These schemes were referred to Dr. Hill, County Medical Officer of Health, who considered the best scheme was that prepared by Messrs. Taylor & Wallin. The Council have now accepted this scheme, and have engaged the engineers for the execution of the works. The whole of the sewage will be dealt with by gravitation, and no pumping will be needed. The estimated cost of the works, including the purchase of land, will probably be between 9,000*l.* and 10,000*l.*

Proposed School at Stebonheath, Llanelly.

Unforeseen circumstances have intervened to prevent the Education Committee of Llanelly proceeding for the time being with the competition for designs for the above school. The advertisement was issued in the early part of May, and the date given for sending in designs was July 1.

New Chester-road Proposed Council School, Port Sunlight.

With regard to this competition, we are informed that objection was taken by the Liverpool Architectural Society to the conditions of the competition, and owing to the urgent need for further school accommodation the County Authority found it necessary to abandon the competition and to proceed at once to appoint an architect from among the gentlemen who had submitted their names in respect to the proposed competition. Messrs. George Bradbury & Sons, 14, Cook-street, Liverpool, were the architects appointed.

Government Palace, Montevideo.

The following information has been circulated in France, and although neither the officials of the Board of Trade nor of the Uraguay Legation in London are able to confirm it, there seems no doubt that the facts are correct. The amounts of the premiums, however, are different to those originally published in this country. The award has been notified in France as follows:—First premium (20,000 francs) to M. Nénot, member of the Institute of France, with whom is associated M. Ebrard. (An article on the work of M. Nénot appeared in the *Builder*, November 19, 1910.) Two second premiums of 15,000 francs each to M. Erro (Uraguay) and M. Carré (France). Two third premiums of 10,000 francs each to M. Pittamiglio (Uraguay) and M. Summaruga (Italy). The award in the competition for a town improvement scheme for Montevideo has yet to be made.

ILLUSTRATIONS.

The Work of Professor Ohmann.

FULL reference is made in the article beginning on page 625 to the designs and buildings of Professor Friedrich Ohmann, to whose work our plates are devoted this week.

FIFTY YEARS AGO.

From the *Builder* of May 31, 1862.

The Metropolitan Prisons.

SEVERAL of the old prisons which figure in an important way in the pages of the history of London have, even within a comparatively recent period, been disused and demolished. Without enumerating those which have been removed at an older date we may mention the names of the Marshalsea, the Fleet, and the Giltspur-street Compter, which have been last removed; and soon the celebrated "Bench"—the "Queen's Prison"—will be also among the matters of the past. The state-prison at the Tower has been long unoccupied by traitors or conspirators; and the Serjeant-at-Arms is but seldom called upon to take into custody unruly members of Parliament. The Star-Chamber Court, the Palace Court, and other notorious institutions of the ancient times have been abolished; and now new and more enlightened laws in connexion with the confinement of debtors have caused the Whitecross-street Prison to be almost unoccupied, and rendered the Queen's Prison, Southwark, no longer necessary. In consequence, Mr. Waddington has written to the Lord Mayor to say that the Government is of opinion that the prison in Whitecross-street will now be sufficient for the confinement of all the debtors of London and Middlesex, and proposes to bring a Bill into Parliament for the abolition of the Queen's Prison.

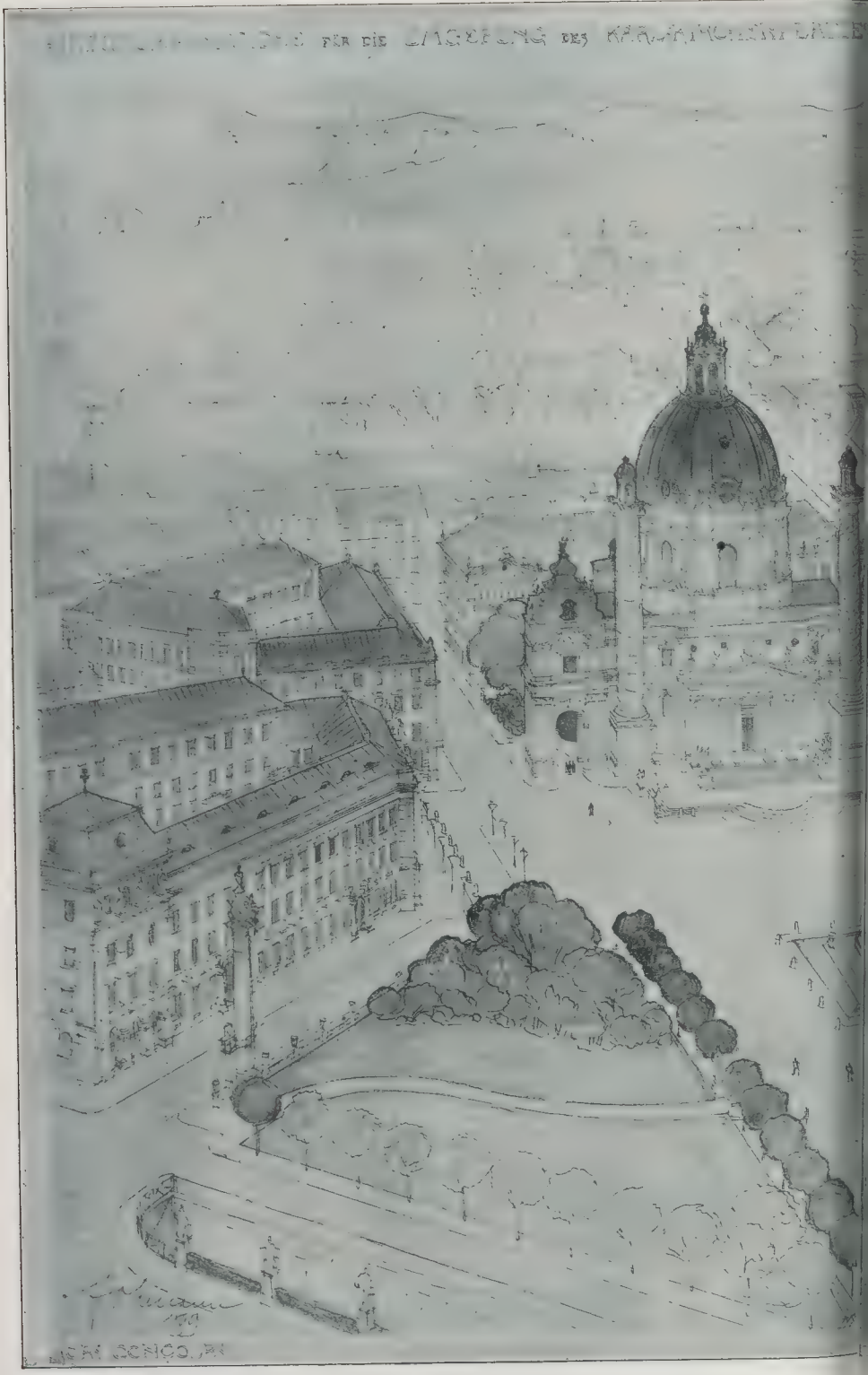
TALKIN WATERWORKS.

The Brampton Rural District Council have accepted the scheme prepared by Messrs. Taylor & Wallin (Mr. Harry W. Taylor, A.M.Inst.C.E.), of Newcastle-upon-Tyne and Birmingham, for the water supply of the parish of Talkin, Cumberland. The water will be taken from the main of the Council's large scheme, also carried out by Messrs. Taylor & Wallin, and conveyed through the village to a pressure maintaining tank.

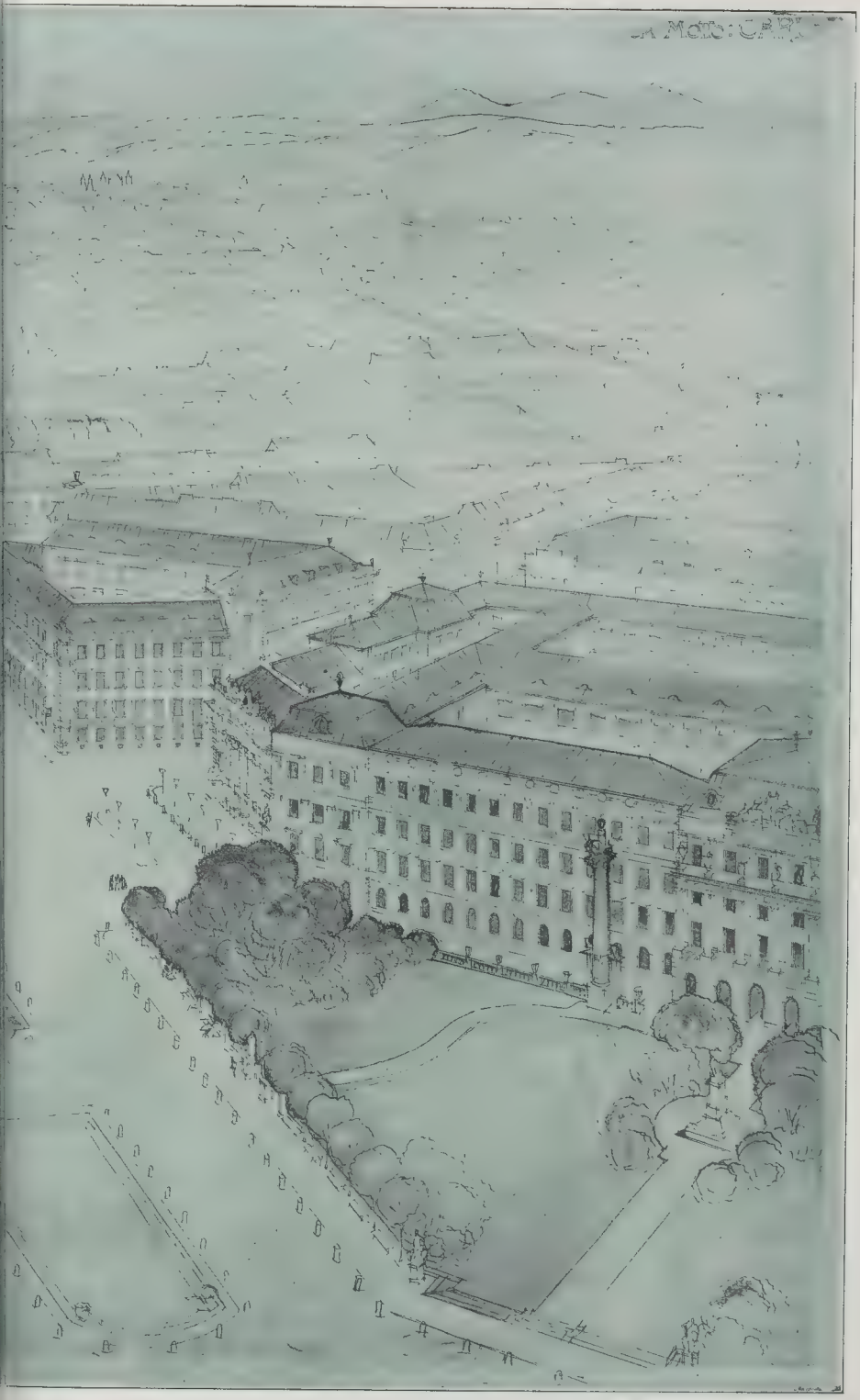


Sprague & Co., Ltd., Printers, 69 & 70, Dean St., Soho, W.

SUGGESTION FOR LAYING OUT THE MARKET PLACE, SALZBURG — By Professor Friedrich Ohmann.



DESIGN FOR THE REVISION OF THE



Sprague & Co., Ltd., Printers, 69 & 70, Dean St., Soho, W.

VIENNA.—By Professor Friedrich Ohmann.



GENERAL VIEW



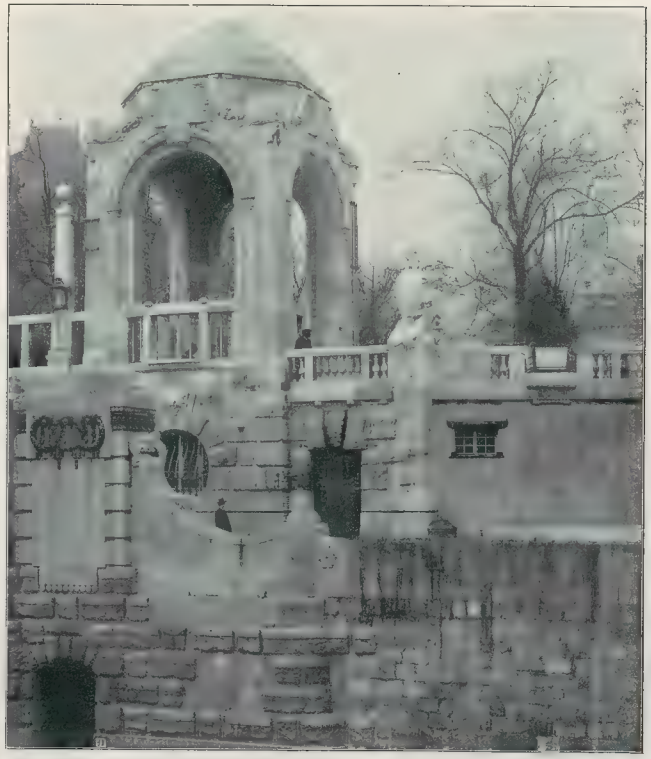
VIEW FROM THE LEFT ANGLE OF THE KUNSTLERHAUS.

Sprague & Co., Ltd., Printers 69 & 70, Dean St Soho, W

DESIGN FOR THE REVISION OF THE KARLS-PLATZ, VIENNA.—By Professor Friedrich Ohmann.



FOUNTAIN IN THE ELIZABETH GARDEN, VIENNA.



PAVILION IN THE STADT PARK, VIENNA.

By Professor Friedrich Ohmann

Sprague & Co., Ltd., Printers, 69 & 70, Dean St., Soho, W

ADELPHI HOTEL, LIVERPOOL.—II.

(Continued from page 554.)

DRAINAGE SYSTEM AND SANITARY FITTINGS.

FROM the drawings and particulars given in our first article it may be gathered that the system of drainage in the new portion of the Adelphi Hotel is one of onsiderable magnitude.

The entire system of rainwater, waste, and oil pipes, and the main drains connected with the sewers, were designed by the architect, Mr. R. Frank Atkinson, who adopted the nusual course of preparing a complete set f ½-in. scale working drawings showing everyhing in full detail for the guidance of the ontractors, Messrs. Davis, Bennett, & Co., of Vestminster.

These drawings, which were approved by the ity Engineer of Liverpool, contain several ovel features and may justly be regarded s embodying an ideal installation for a buildng of the kind.

The rainwater pipes and heads are of ead, the pipes having specially-designed ountings and ears, and the heads were deigned to suit the general architectural scheme.

The waste, soil, ventilation, and anti-siphon ipes are of cast-iron throughout the building, ne metal being ⅝ in. thick and the pipes lined nside with glass. In order to ensure permaent efficiency the joints were made without ne use of caulking yarn; and to provide ready eans of cleaning the pipes access doors are itted at all junctions and changes of direction.

The main vertical pipes are placed in conenient situations where they are out of sight, nd fitted so that they can be cleaned from nd to end if required. Internal areas are ised as far as possible for the grouping and ollection of the pipes, and the system includes eneral provision for gulleys, traps, manholes, nd all other auxiliaries requisite for mechanical nd sanitary efficiency.

All branch waste, soil, and ventilation pipes re placed in spaces provided between the lse ceilings of toilet-rooms and the floors of the oms above, the spaces in question being 2 ft. eep, while means of access to each space is rnished by a circular trap-door in the ceiling. ne branch pipes are fitted with a sufficient mber of gun-metal screwed plugs to enable very part of the pipes to be swept or otherwise eansed as occasion may demand.

All exposed service, waste, and other pipes nnected with bath and lavatory fittings e plated and furnished with all requisite cilities for cleaning purposes.

It would be impossible to give a comprensive description of the drainage system as whole without reproducing a series of drawings nich even on a greatly reduced scale would cupy far more space than we have at disposal. oreover, such illustrations could only be of mparatively limited interest, in the sense at they would merely represent the general sposition of the pipes in one particular ilding.

Therefore we consider a more useful proedure is to illustrate a few representative tails selected from the complete set of detail awings placed at our disposal by the chitect.

Fig. 1 is a vertical section through a typical ries of the toilet-rooms in the suites of apartents mentioned in our previous article.

At the left hand are a 4-in. soil pipe for the osets, and the anti-siphon pipes for closets d lavatory basins respectively. At the right nd are a 3-in. waste pipe and an anti-siphon pe for baths.

It will be noticed that the main pipes are clined at a slight angle from the vertical, this rangement having been necessitated by the sition of structural members in the steel me of the building. The only alternative uld have been to fit the pipe in successive ps by using swan-neck bends, a course very desirable owing to the consequent restriction flow and the large number of access doors volved. The present inclined arrangement

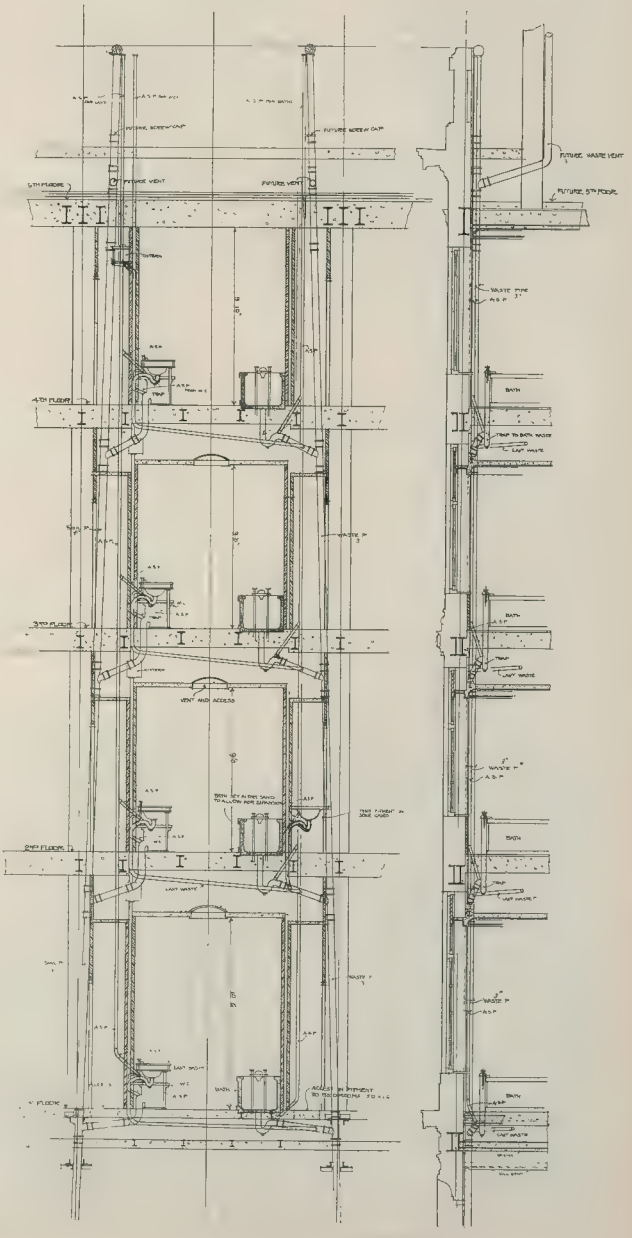


Fig. 1. Detail of Sanitary Fittings, etc.

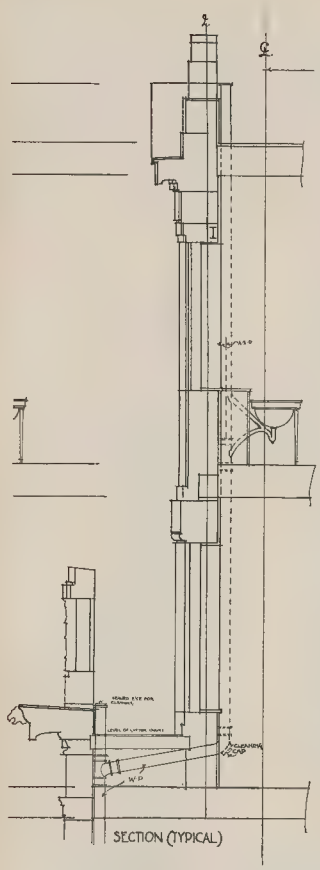


Fig. 2. Typical Section of Sanitary Fittings.

has made each main pipe quite straight in itself. Therefore any of these pipes can be readily swept from end to end, and after removing the top cap and the bottom joint piece it would be possible to look right through the pipe.

We may here explain that the drawing from which Fig. 1 is reproduced was prepared at a time when the idea was to leave the fifth and sixth stories for erection at a later date. The subsequent decision to build these stories with the lower part of the building involved the alterations shown by the typical section forming Fig. 2. It will there be seen that the top of the original pipe is closed by a sealed eye for cleaning, while the offset extension has a cleaning cap and is carried to the level of the upper parapet.

Reverting to Fig. 1, the reader should notice the details of the manhole and soil pipe connexions and the gulley fittings for waste pipe, and also the details of the chambers for branch pipes between each floor and the false ceiling of the toilet-room below. In addition to providing for pipes, these chambers accommodate the supply cisterns for closets, the down pipe being concealed behind a partition, which also hides the connexion operating the cistern valve and taking the place of the familiar unsightly chain. The domed access doors to the pipe chambers are perforated and act as ventilators to the toilet-rooms.

Fig. 3 is a typical plan showing the arrangement of the toilet-rooms for suites of apartments, and Fig. 4 is a typical plan of one of the general toilet-rooms for visitors occupying apartments without accommodation of the kind.

On the fifth and sixth floors, where none of the bedrooms have bath and toilet rooms the general toilet-rooms at various points are of larger size to obviate the risk of inconvenience to the staff and visitors.

It will be remembered by those who have read our former article that all bedrooms are fitted with lavatory basins supplied with hot and cold water. The drainage system for these and for the fittings in the chambermaids' and service rooms is generally similar to that already described and need not be illustrated specially.

To elucidate further the character of the drainage connexions in the basement of the hotel, we give in Figs. 5 and 6 two representative sets of details from the architect's drawings.

Fig. 5 is a plan of one of the four small areas beneath the terrace around the fountain court. The arrangement here shown is generally typical of that in similar areas where rainwater, waste, and soil pipes, and surface drains are connected with one general branch drain pipe.

In the case of the area now in question this pipe is of 6 in. diameter and proceeds to the manhole adjacent to column No. 21a where, as shown in Fig. 6, it is connected with the 6-in. main drain pipe discharging into the sewer on the Brownlow-hill side of the building.

Fig. 6 includes a plan and sections illustrating the details of the manholes provided at frequent intervals along the same side of the hotel for the connexion of down pipes with the main drain. Similar arrangements have been made on the Copperas-hill side and elsewhere.

The drainage system in the upper stories provides for the waste from some 200 bath-rooms, in addition to that from a very large number of lavatories, sinks, and closets. In the lower stories the system has to perform the still greater duty of carrying the drainage from

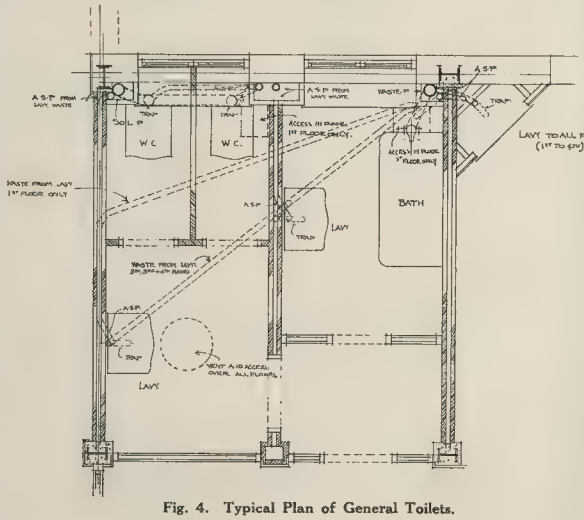


Fig. 4. Typical Plan of General Toilets.

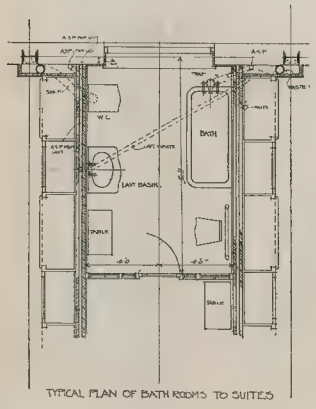


Fig. 3.

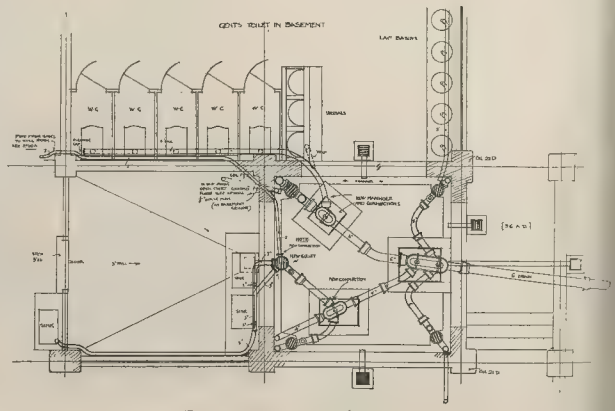


Fig. 5. Detail of Drains to Area D.

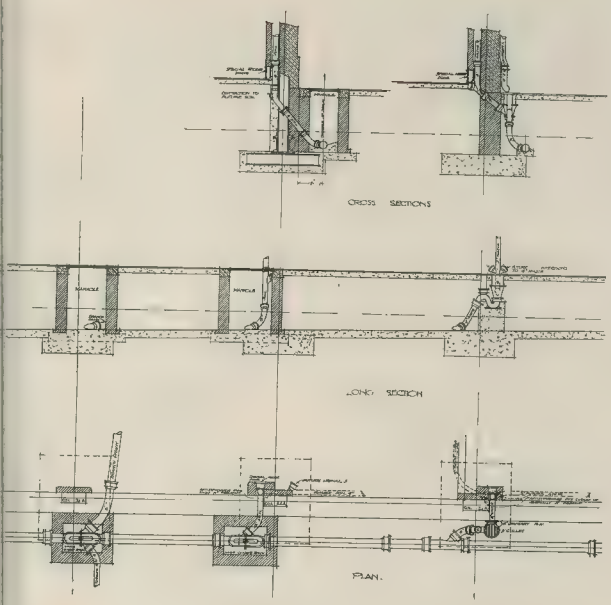


Fig. 6. Detail of Drainage to Brownlow-hill Side.

erous sanitary and domestic fittings as as from the boiler-house, laundry, and nen department. Adding to all these ainwater drainage from the entire building, ll be realised that the installation is one ery considerable magnitude, the design of h has evidently involved much labour and nate knowledge of technical details.

ter careful consideration the sanitary gs of Messrs. Davis, Bennett, & Co. were ted by the architect, subject to modifica- required to bring them into harmony the architectural treatment of the .

e lavatory basins, baths, and closets are hite glazed fireclay, all provided with d fittings. The lavatory basins have t lever action dome top accessible com- pull-up standing wastes and overflows, re fixed on plated stands 1½ in. away from valls to obviate any unsightly cutting of or surface work, and to enable the chamber- s to dust behind them. The service and pipes and traps are plated and arranged at they pass through the floors at one in the tiling.

every bedroom a lavatory basin with ascata marble top is provided instead of istomary washstand, and in the enclosure the basin there are two fireclay receptacles toilet chambers. The fitting includes ted swing two-arm towel rail, a glass for water bottle, and soap-tray of special n. The constant supply of hot and cold is a great convenience to visitors and s a considerable reduction in the amount tendance demanded from the staff.

baths are of somewhat unusual form, approximately rectangular, as shown igs. 3 and 7. They are specially deep , but this feature gives rise to no incon- nce, as the baths are fitted so that the n is slightly below floor level. With the of ensuring cleanliness and preventing cumulation of dust, the baths are fitted he walls and floors, in pursuance of the idea which has been carried out in con- with wardrobes and toilet-tables. s complying with hygienic principles, system reduces the work of cleaning considerable extent. The baths can be or emptied within sixty seconds.

closet pans are nearly 1 in. thick and an exceptionally large water area. The cisterns, which, as previously mentioned, aced in the pipe chambers above the eilings, are noiseless in action, and are ed by means of plated side pulls in f the customary hanging chains.

All the sinks in the chambermaids'-rooms and service-rooms are of Messrs. Davis, Bennett, & Co.'s usual hotel patterns, a special flushing jet being fitted to each sink trap to obviate the risk of stoppage. The sinks provided for charwomen have 3-in. glass-lined traps, each with a 1½-in. flushing pipe connected directly to the trap and entirely separate from the flushing pipe provided for the sink itself.

The whole of the sanitary and plumbing work in the hotel was executed by Messrs. Davis, Bennett, & Co., of Westminster, under the direction of their foreman-in-charge, Mr. T. Berkham, and we are informed that the contract for a similar installation in the second part of the hotel about to be built has been entrusted to the same firm.

Since the publication of our first article we have been informed that the asphalt of Messrs. Thomas Faldo & Co., Ltd., was employed at the Adelphi Hotel in the form of horizontal and vertical damp-courses throughout, for the waterproofing of the roofs, and of all cornices and balconies, and for the special purposes mentioned below. One of the latter was the formation of a lining carried up the back of the masonry from the level of the horizontal damp-course to roof level, this being a feature which appears to be a novelty in building construction. The lining of the fountain court and the fountain basin were executed in the same material, which was also used beneath the circular skylights to the fountain court with a hidden gutter to carry away water of condensation. The asphalt supplied by the firm mentioned was their "pure natural genuine Seyssel asphalt."

We are also informed by the architect that Messrs. Cooper, Wettern, & Co., Ltd., supplied and fixed the granite for part of the basement story in the Adelphi Hotel.

BATTLE OF LARGS MEMORIAL.

The monument to commemorate the battle fought between Alexander III. and Haco III., King of Norway, in 1263, will be erected on the foreshore of Lord Glasgow's land at Largs. The memorial has been designed by Mr. J. S. Kay, of Glasgow, architect, and consists of a reduced reproduction, 66 ft. high, of the round tower (which exceeds 100 ft. in height) at the side of Brechin Cathedral, to be constructed of local whinstone, with the doorway and its details of white freestone. The doorway will be 8 ft. above the ground level, and will present an exact copy of the carvings of the original at Brechin.

GLOUCESTER AND STROUD TECHNICAL SCHOOLS.

A party of students from the Building Trades Classes at Gloucester and Stroud Technical Schools visited recently several works and buildings at Bristol. The day's work commenced at Messrs. Reve Brothers' Lead Works at Cannons-marsh. A visit was subsequently made to Messrs. C. Jennings & Co.'s Joinery Works. Mr. Jennings and his son explained each machine. Messrs. Gardiner's Iron Works in Willway-street were next visited. The final visit was to the extensions of the Royal Infirmary now in course of completion by Messrs. Cowlin & Son, at a cost of 75,000*l*. Amongst those accompanying the party were Mr. R. Leach, B.Sc., headmaster of the Gloucester Technical Schools; Mr. T. Newsome, headmaster of the Stroud Schools; Mr. W. F. Wakeford, teacher of plumbing; and Mr. K. H. Read, lecturer on building construction and builders' quantities at both schools, who was responsible for the arrangement of the visit.



Fig. 7. Adelphi Hotel, Liverpool: Typical Bath Room.

THE BUILDING TRADE.

THE INSURANCE ACT.

AS it seems probable that the Insurance Act will now come into force on July 15 next, and that the public will have to do the best they can in unravelling its provisions, it may be well to consider that portion of the Act which relates to unemployed insurance, as this particularly affects those engaged in the building trade.

Sect. 84 provides that every workman who is unemployed, having been employed in a trade mentioned in the Sixth Schedule of the Act referred to as an "insured trade," shall, subject to the conditions laid down in the Act, be entitled to receive "unemployed benefit" as authorised by the Seventh Schedule, provided that no unemployment benefit shall be paid in respect of any period of unemployment occurring within six months of the commencement of the Act. The employer, who, as will be shown, is liable in the first instance to pay the contributions, will, therefore, first have to ascertain what is an "insured trade" within the meaning of the Act.

In the Sixth Schedule there are seven trades scheduled, viz., building, construction of works, shipbuilding, mechanical engineering, iron-founding, construction of vehicles, and saw-milling. It is not necessary for us to consider all these in detail, but "building" is described as "the construction, alteration, repair, decoration, or demolition of buildings, including the manufacture of any fittings of wood of a kind commonly made in builders' workshops or yards."

"Construction of works" as "the construction, reconstruction, or alteration of railroads, docks, harbours, canals, embankments, bridges, piers, or other works of construction." "Saw-milling" (including machine woodwork) is described as being carried on in connexion with any other insured trade or of a kind commonly so carried on.

It is obvious that under these definitions questions will arise similar to those which were raised under the Workmen's Compensation Act of 1897.

When the Bill was in Committee various questions were put to the Solicitor-General, as, for instance, whether under the definition of "building" drainage work would be included, also the fitting of a corrugated iron roof. Questions such as these have usually had to be determined by the Law Courts, but by sect. 91 of the Act the Board of Trade has power to make regulations for, amongst other things, giving employers and workmen an opportunity of obtaining the decision of an umpire appointed under this part of the Act whether contributions are payable in respect of any workman or class of workmen. Under this section regulations were made on March 26, and under these regulations a number of applications have been made to the umpire for decision. So far, only two decisions of interest to those engaged in the building trades have been published. The umpire has decided that contributions are payable in respect of workmen employed in washing ceilings, stripping off paper in buildings, whitening, colouring, repairing, pumicing woodwork, and general preparations for painting; but that contributions are not payable in respect of workmen employed in making stock bricks by machinery and in the burning of bricks in open clamp kilns.

A number of other applications which will be of interest to those engaged in the building trades yet await decision which we shall refer to on a future occasion.

When the question has been determined what is an "insured trade" the next question for the employer to consider is what is a "workman." This word is defined in sect. 107 more or less in terms made familiar by the Workmen's Compensation Act: "Any person of the age of 16 or upwards employed wholly or mainly by way of manual labour who has entered into or works under a contract of service with an employer, whether the contract is expressed or implied, is oral or in writing." By sect. 103 the Board of Trade has power by order to vary the age. The cases decided under the Workmen's Compensation Act will serve to elucidate most of the terms in the above definition, but the question which will most occupy the mind of the employer —especially when he employs navvies in the construction of works—is, what about casual labour?

This question will, we think, cause considerable difficulty and trouble. The workman to be entitled to claim unemployment benefit has, under sect. 86, to prove that he has been employed as a workman in an insured trade "in each of not less than twenty-six separate calendar weeks in the preceding five years"; but under sect. 85 subsect. (2) every employer of workmen in an "insured trade" is made liable to pay contribution at the rates specified in the Eighth Schedule, that is, in the case of an adult workman, 2½d. "for every week he is so employed." The schedule, however, also provides: "Every period of employment of less than a week shall for the purposes of this Schedule be treated as if it were employment for a whole week except that where the period of employment is two days or less the contributions both of the employer and of the workman shall be reduced to 1d. if the period does not exceed one day and to 2d. if it exceeds one day." By sect. 85 subsect. (3) the employer has, in the first instance, to pay both the contribution of himself and the workman, and then can deduct the workman's contribution from his wages. In these days of labour unrest and trade union agitation, the Act thus imposes upon the employer the unenviable duty of haggling with every person employed for but one day over a penny deduction from his wages. By the Unemployment Insurance Regulations, dated April 25, 1912, it is provided that every workman shall obtain from a local office an "unemployed book." The employer has to demand this book from the workman and be responsible for it during the employment, returning it with the stamps affixed at the conclusion of the employment.

There are certain exceptions in the Act relating to those temporarily or casually employed. By sect. 97 a special provision is made "in rural neighbourhoods." "Where a workman is employed in a district which is rural in its character and the workman usually follows in that district some occupation other than an insured trade and is employed in an insured trade occasionally only, contributions under this part of the Act shall not be payable in respect of the workman," except by agreement between the employer and the workman.

By sect. 107 subsect. (1) temporary work provided by a Central Body or Distress Committee under the Unemployed Workmen Act, 1905, or towards the provision of which such bodies have contributed under that Act, shall not be deemed employment in an insured trade. It may also be noted that by subsect. 2 it is provided that "in determining any question as to whether any trade in which a workman is or has been employed, is an insured trade or not, regard shall be had to the nature of the work in which the workman is engaged rather than to the business of the employer by whom he is employed."

This provision seems to complicate the position of the employer who, it must be remembered, is, by sect. 101, liable to penalties if he fails to pay any contribution for which he is liable under the Act. An employer could satisfy himself once and for all whether the business he carries on is or is not an "insured trade," but that subsidiary operations may come within the Act is proved by sect. 104, which enables the Board of Trade to make orders excluding subsidiary operations from the occupations which are to be deemed employment in an insured trade. This subsection, however, in ordinary cases appears to place upon the employer the onus of determining whether the particular class of work a man is put to brings him within this part of the Act.

In the present article we have endeavoured to explain the primary obligations imposed upon employers under this part of the Act, but such is the complication of this measure that we must confess that any attempt to explain its provisions appears but to emphasise its inherent difficulties. In addition to the contributions levied under the Act, it would appear likely that in large works it will involve the employment of a special insurance clerk, or even of staff of clerks. Whilst the Legislature seems alive to the increased cost of living and articles produced by labour, and suggests consequent artificial increase of wages, appears to overlook the fact that it is legislation of this character, complicated and involving large administrative expenses, which fetters employment and adds to the cost of production whilst it in no way satisfies those who receive the benefits. Were there no Workmen's Compensation, no Old Age Pensions, no Insurance Act (though we express no opinion whether such provisions are desirable or not) wages would be higher and the cost of production less and an increase in wages would pacify labour in a way which statutory benefits fail to accomplish.

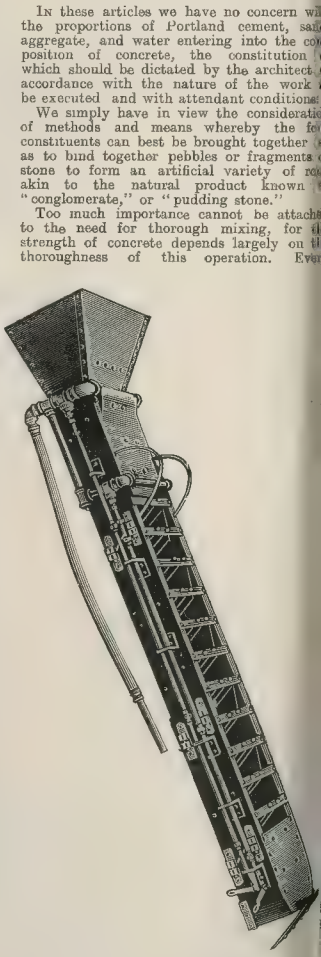
CONCRETE MIXING.—I.

Introduction.

IN these articles we have no concern with the proportions of Portland cement, sand, aggregate, and water entering into the composition of concrete, the constitution of which should be dictated by the architect in accordance with the nature of the work to be executed and with attendant conditions.

We simply have in view the considerations of methods and means whereby the few constituents can best be brought together so as to bind together pebbles or fragments of stone to form an artificial variety of rock akin to the natural product known as "conglomerate," or "pudding stone."

Too much importance cannot be attached to the need for thorough mixing, for the strength of concrete depends largely on the thoroughness of this operation. Every



Gravity Concrete Mixer.

particle of sand ought to be coated with cement, and every fragment of aggregate coated with cement and sand, while all voids between the particles of sand should be filled with cement, and all voids between

e fragments of aggregate filled with cement
d sand.
Imperfect mixing can only have the result
leaving excessive quantities of mortar
tween the surfaces of the aggregate in
me parts, and of leaving the aggregate in
her parts with an insufficient amount of
nding material. An excess of mortar
duces compressive strength because mortar
not so strong as stone, and deficiency of
rtar reduces both compressive and tensile
ength, but especially the latter, because
e particles of aggregate lack cohesion.
Thus it will be seen that even the costly
vice of trying to make amends for
ticipated imperfection of mixing by increas-
g the proportion of cement cannot be
tirely successful.
A far better alternative is to spend money
mixing rather than in an excessive
nount of cement. Lest any reader should
rry away a wrong impression, we add the
nark that by an "excessive amount" is
eant any quantity over and above that
nply adequate for filling and coating the
nd, and for helping to fill and coat the
gregate. If the original proportions are
or in cement, then an increased proportion
that constituent will certainly result in
reased strength up to the stage where
e sand and aggregate are completely filled
d coated.

Hand and Machine Mixing.

At the present time it is generally admitted
at hand mixing is less efficient than
achine mixing. Good concrete can un-
ubtedly be produced by hand labour under
reful superintendence. But the work is of
newhat uninteresting nature, and the men
gaged on it are apt to think less of
ficiency than of the monotonous task of
ntinually turning over the materials, and
ey usually welcome the little change of
cupation awaiting them on the completion,
imagined completion, of each batch. The
eriority of hand mixing is recognised by
ne specialists who make a practice of
cifying a larger proportion of cement for
hand-mixed concrete, and careful tests
de in the United States show that the
ength of concrete mixed by hand may
ge from about 50 per cent. to 90 per cent.
the strength possessed by concrete of the
ne composition mixed by machine.
Notwithstanding the superiority of
chanical mixing, hand labour must
ntinue to be employed very extensively by
lders, except in contracts of magnitude
ficient to justify the installation of the
uisite mixing plant.
As our readers are presumably familiar
h every detail of hand mixing, we purposely
tain from discussing this operation.

Gravity Concrete Mixer.

An appliance of American origin introduced
o the United Kingdom, and supplied by
Associated Portland Cement Manu-
urers (1900), Ltd., will be found of
siderable service to contractors having
k in hand which does not justify the
ployment of mixing machinery. Although
en classified as a machine, this appli-
e, of which a view is given, includes
mechanism, and simply consists of a
angular steel tube having a feed hopper
the top and a discharge valve at the
tom, while the interior is provided with
eries of ribs, termed deflectors, on the
es, and a series of grids formed of steel
s. An arrangement of pipes and valves
mits the introduction of water in the form
spray near the middle of the tube. The
gth can be varied from 4 ft. to 10 ft. by
ing or removing spare sections of tube.
To employ this apparatus to the best
antage it should be placed in a slanting
ition, with the feed hopper at the same
el as an elevated platform for the recep-
and gauging materials, and the dis-
rge outlet should be far enough above the
und to enable barrows to be wheeled
derneath to received the mixed concrete.
f the materials are measured on the plat-
m and fed into the hopper by shovels the
aratus operates on what is known as the
ntinuous" system, while if measured in
required proportions and tipped in from
ox in bulk it works on the "batch"
em.
he inventor claims that the violent agita-
caused by the deflection of the materials
their downward passage produces a perfect mixture and yields concrete of great strength.

The apparatus possesses the obvious advantage that no mechanical power is required for its operation, and it may well be taken into consideration by building contractors, as providing a convenient halfway house between hand and machine mixing.

Concrete Mixing Machines.

Concrete is too weighty a material to be effectively mixed in a machine worked by hand power, except in very small quantities. Therefore, the purchaser of a mixer has to provide for its operation by power in the most convenient manner.

An efficient mixer should not merely stir up the mass of materials or treat them by a simple process of churning, but must provide in some way for breaking up the mass and repeatedly transferring portions of it to different parts of the machine, so that the light and heavy particles may be uniformly distributed throughout.

Among the numerous forms of mixing machines on the market the best-known varieties may be divided into two general classes—rotary and paddle mixers.

The rotary mixer comprises a receptacle of cylindrical or other shape fitted inside with deflectors, blades, or other obstructions to uninterrupted movement of the materials, designed so as to cause the greatest possible agitation when the receptacle is being revolved at sufficiently rapid rate of speed.

The paddle mixer consists essentially of an open vessel fitted with blades, which are rotated while the vessel remains stationary, or with fixed blades, which come in operation when the vessel is rotated.

Machines coming into one or the other of these classes differ considerably in respect of efficiency, design, and auxiliary fittings, and it is incumbent on purchasers to make a judicious choice of the apparatus best suited to their individual needs. It is also necessary to see that the output of the mixing plant is sufficient to keep the concrete hands fully employed, and desirable, from the standpoint of economy, not to provide machines of larger capacity than is actually necessary.

Concrete-mixing machines are commonly divided into two classes :—(*a*) continuous mixers and (*b*) batch mixers.

To make continuous mixers thoroughly efficient the materials should be measured and fed automatically. If the dry materials are roughly mixed on a platform, and shovelled into the receptacle in small quantities, there is every probability that the resulting concrete will be of varying quality.

Where batch mixers are employed, the materials are measured in boxes of known capacity and tipped into the machine in the predetermined proportions, thus conducing to uniform quality and entailing less supervision than would otherwise be requisite.

It should be noted, however, that concrete-mixing machines cannot always be definitely placed in either class, because various machines on the market are constructed so as to be available for use in continuous or batch mixing as may be preferred.

(To be continued.)

ELECTRICITY IN THE STONEYARD.

An interesting application of electric motor-driving is to be found at Messrs. C. W. Courtnay's stoneyard, at Swan Wharf, Putney Bridge, and, although the number of jobs to which motors can be applied is limited to all intents and purposes to hoisting and sawing, there can be no doubt about their suitability for this kind of work. Space in a stoneyard is generally rather at a premium, and boilers and small steam engines, with their attendant coal piles, will often occupy enough of it to be a nuisance.

A 10-ton jib-crane with a 66-ft. jib can be slewed out over the barges and can cover the major part of the yard. This crane, which is by Messrs. John Smith & Co., Ltd., Keighley, is driven in a somewhat novel manner



Electrically-driven Stone Saw.

by a 10-h.-p. 3-phase semi-enclosed constant-speed Westinghouse motor, which runs at 930 revolutions off the Fulham Borough mains at 200 volts and 50 cycles. The motor is located in a shed, and is about 16 ft. distant from the crane slewing pivot. A belt drive is taken from the horizontal motor shaft to a vertical shaft beneath the crane. The latter shaft runs up into the crane driver's cab and operates the lifting and slewing gear.

The stone to be cut is levelled up on a trolley travelling on rails, which is then run in underneath the saw frame, which is raised to the upper extremity of its travel to allow of this. The wheels of the trolley are blocked, and the saw frame is lowered on to the top of the stone to be cut. The saw frame is a rectangular structure, to which the steel saw planes can be fitted in any number and at any distance apart. The frame is reciprocated by connecting rods coupled up to each side member and operated from a crank shaft which is rotated by some external source of power. Suspended above saw frames are reciprocating water sprays, which are adjusted to direct a spray of water along the length of each saw cut in order to keep the saws cool and to give a clean cut. At Messrs. Courtnay's yard are two frames, one measuring 14 ft. by 6 ft., and making 160 strokes per minute, and the other 11 ft. by 5 ft., making 175 strokes per minute. The length of the stroke is 10 in. in each case. The rates of cutting vary with the class of stone, its quality as regards hardness, and the number of saws cutting. The hardness of any class of stone may vary within about 25 per cent. up or down; while the number of saws employed is only limited by the degree of thinness to which the slices of stone can be cut. For a two-saw cut, and with a full frame, the larger machine will cut Portland stone of average quality at the rate of about 6 in. per hour, marble at 2 in. per hour, and granite at 1 in. per hour. The downward feed of the saw frames is accomplished by a ratchet movement, and is rendered variable by the provision of change speed wheels similar in principle to those used on screw-cutting lathes.

The maximum feed available is about 18 in. per hour, whilst the minimum may be obtained by simply allowing the saw frame to feed the saws through the stone by virtue of its own weight. Fly-wheels are mounted upon the crank shaft, which operates the saw in order to help the frames over the ends of the strokes. These saw frames, which are also built by Messrs. John Smith & Co., Ltd., are driven through belt reduction gearing by a 25-h.-p. A. C. constant-speed Westinghouse motor.

The absence of attention with which the above-mentioned motors are operated not only results in a great saving in wages over those which would accompany steam-driven machinery, but the cost of running is also greatly decreased, and stand-by losses are reduced to an absolute minimum. The capital expenditure, depreciation, and the ground rent for the space occupied by the power plant are also very much less with electric motor drives than with any other form of motive power.

INCREMENT DUTY.

THE following letter has been sent to Mr. J. H. Kerner-Greenwood, of King's Lynn. His reply is appended:—

"In reference to your letter to my trade paper *re* Increment Duty, I can't quite understand it. In your third paragraph you say under those conditions no Increment Duty is payable. How is it possible for a house to be bought for 400*l.* and sold for 500*l.* without the value of the site increased? What is the best means to distinguish the two values?"

REPLY.

"DEAR SIR,—Yours of the 13th inst. to hand, for which I thank you. Builders every day are taking contracts under cost, and I have many times known builders sell houses under cost in order to get ready-money. If I bought a house for 400*l.*, and a few weeks after sold it for 500*l.*, probably because a doctor wanted it for his special use as it was just the spot for him, it would not necessarily mean that the site value had increased, but that I had used my brain in buying cheaply and selling at a profit. The site value is not altered. It might have been done within a week; in fact, I have known houses like that turned over in a day, but that alters the argument. If it were done in a day, it would not be transferred to the middle man. But I think you have got my idea.

(Signed) J. H. KERNER-GREENWOOD."

GENERAL BUILDING NEWS.

CHRIST CHURCH, BLOOMSBURY.

The Vicar and churchwardens of Christ Church have appointed Mr. S. B. K. Caulfield to make additions to the church, upon the south-western side of Upper Montague-mews. The church was built on the east side of Woburn-square for 800 sittings, after Vulliamy's designs, in the Perpendicular style, in 1832-3. Forty years afterwards the interior was remodelled, and the seating was re-arranged by Mr. Hall.

NEW CHURCH, SUNDERLAND.

The designs for the new church of St. Gabriel's were prepared by Mr. C. Clayton Greene, the architect, of Sunderland, and the building has been erected at a cost of about 12,000*l.* The contract was carried out by Mr. W. D. Allison, builder, of Whitburn.

SEWAGE WORKS, MANSFIELD.

The Duke of Portland performed the opening ceremony of the new sewage works, which have been erected at a cost of about 26,728*l.* by Mr. Mackay, of Derby. The plans were prepared by the late Mr. R. F. Vallance, who was the Borough Surveyor, and the work has been carried on by the present Surveyor, Mr. T. P. Collinge.

CONVALESCENT HOME, CLACTON.

The foundation-stone of this new home was laid on the 10th inst., and the building, which is to be completed in seven months time, is being erected by Messrs. J. Wilmott & Sons, of Hornsey, from the designs of Mr. Fred Rowntree, architect, of Hammersmith. The home will consist of several buildings:—The children's quarters, isolation quarters, manual instruction, etc., rooms, and administration offices. The clerk of the works is Mr. Downing, of Ipswich.

GENERAL POST-OFFICE, EASTBOURNE.

This new post-office has a frontage of about 170 ft. to Apperton-road and 190 ft. to South Fields-road, and is constructed throughout of fireproof material with red-brick basings and Portland stone dressings. On the ground floor are the public offices, sorting-office, staff-rooms, kitchen, etc. On the first floor is the telephone-room, instrument and test rooms, clerks' office, etc. The contractors are Messrs. J. & M. Patrick, of Wandsworth, and the building is being erected under the supervision of H.M. Office of Works.

SHEFFIELD AND DISTRICT CINEMATOGRAPH THEATRES, LTD.

This company have decided to extend the scope of their enterprise by the erection of, in the first instance, a new theatre—to be known as Cinema House—upon an extensive site in Fargate, Sheffield, adjoining the Grand Hotel and opposite the Town Hall. The plans and designs, prepared by Messrs. Hickton & Farmer, of Birmingham, will provide for a theatre having a seating capacity of 1,000, together with a lounge, refreshment, writing, and club rooms, etc. Messrs. Gibbs, Flockton, & Teather, of Sheffield, will act as consulting architects.

NEW OFFICES OF THE MARCONI COMPANY.

Marconi's Wireless Telegraph Company are now in occupation of their new home in the Strand, the building which was formerly the Gaiety Restaurant. The site occupies an area of about 54,500 sq. ft., and the building has nine floors. The main entrance hall off the Strand opens into a waiting-room panelled in Honduras mahogany, and on the same floor a room, measuring 60 ft. by 80 ft. A balcony round this room is occupied by dictaphone machines and their operators, and from it an electric lift for the conveyance of dictaphone records runs to every floor in the building. The ground floor also contains the telegraph office, which is open day and night for the reception of marconigrams. The grand staircase, 10 ft. wide, leads to the first floor, where is to be found the managing director's room with manager's room and accommodation for private secretaries adjoining. The second floor contains the secretary's and accountant's departments and the Board-room. The third floor is given up to the engineering and technical staff, while on the fourth are Mr. Marconi's private room, and the patent, field-station, stationery, and publicity departments. The traffic manager and his staff occupy the fifth floor, the sixth is partially reserved for the housekeeper, and the seventh will contain a workshop, a room for making prints of the drawing office tracings, a photographic dark-room, a drawing office, and large show-rooms, where working sets can be demonstrated. Three lifts, made by Messrs. Waygood & Co., serve the various floors, and for inter-communication between the different rooms there is a system of telephons with nearly 100 extensions, supplied by Messrs. W. G. Hodgson & Co., who also installed the electric bells and fire-alarms. The architects were Messrs. Dunn & Watson, and the surveyors Messrs. T. M. Deacon, Son, & Addiscott. Messrs. Trollope & Colls were responsible for the structural alterations, and also for all the joinery and mahogany screens, and Messrs. F. Geere Howard carried out the electric lighting work.

SWIMMING-BATHS, EAST HAM.

These new baths have been erected at the rear of the Town Hall at a cost of about 8,900*l.* The pond is 120 ft. long by 40 ft. wide, and is constructed with cement concrete retaining walls and concrete floor, the whole being lined with marble terrazzo. The heating apparatus is by Messrs. Royles, Ltd., of Manchester. The bath was designed by the late Borough Engineer, and has been erected by the direct employment of labour under the supervision of the present Borough Engineer, Mr. J. E. W. Birch.

BANK BUILDING, MOORGATE STREET.

Messrs. Dunn & Watson are the architects of the new offices for the British Bank of South America in Moorgate-street. The building will be ready for occupation during the summer.

TRADE NEWS.

Messrs. Wheeler & Sons, ventilating engineers, 14, Victoria-gardens, Notting Hill-gate, London, W., have secured the contracts for heating by electricity and ventilation of St. Michael's Church, Cornhill, E.C., also the ventilation of the electricity works at Avonbank, Bristol, for the Corporation of Bristol.

Vulcanite, Ltd., London, E.C., have acquired the business of Messrs. Watson & Co., of Brentford, and they will be manufacturing at their own works Messrs. Watson & Co.'s Reliance lead and bitumen dampcourse, and their other bitumen and asphalt specialities. In future inquiries and orders for Messrs. Watson & Co.'s specialities should be sent direct to Vulcanite, Ltd., at their offices, 118, Cannon-street, London, E.C., Laganvale, Belfast, or Westinghouse-road, Trafford Park, Manchester.

The **Improved Wood Pavement Company** have been accepted for all the wood-paving contracts at Westminster (fifteen thoroughfares). The company have also been accepted for eight thoroughfares in Kensington, although in five cases their tenders were not the lowest.

Under the direction of Messrs. Jeffery & Lacey, architects, Ashford, the "Boyle" system of ventilation (natural), embracing Boyle's latest patent "air-pump" ventilators and air inlets, has been applied to Wye College, Ashford, Kent.

The Carron Company, Stirlingshire, N.B., have sent us a copy of a large and effective poster in connexion with the Carron Line service, plying between London, Grangemouth, and Bo'ness.

The extensions to the Royal Infirmary, Bristol, are being supplied with Shorland's double-fronted patent Manchester stoves, in faience and with descending smoke flues, by Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester.

APPLICATIONS UNDER LONDON BUILDING ACTS, 1894 to 1909.

AT the last meeting of the London County Council the following applications under the London Building Acts were dealt with. (The names of the applicants are given in parentheses):—

Width of Way.

Chelsea.—Building on the western side of Little Cadogan-place, Chelsea, at the rear of No. 65, Cadogan-place (Messrs. W. D. Hodges & Co., Ltd.).—Consent.

Peckham.—Erection of a one-story building between Nos. 31 and 33, Stafford-street, Peckham (Messrs. F. Ward & Sons for Mellin's Food, Ltd.).—Consent.

Width of Way and Projections.

Holborn.—Projecting bases to pilasters on the public way in West-street, Holborn (Messrs. Pilditch & Co.).—Consent.

Width of Way and Construction.

Hampstead. — Bridge across a footpath between the grounds of Hill House and Heath Lodge, North End-road, Hampstead (Mr. T. H. Mawson for Sir W. H. Lever, Baronet). —Consent.

Lines of Frontage and Construction.

Islington, South.† — Temporary one-story ilding at the rear of No. 62, Barnsbury eet, Islington, next to the north-eastern side Thornhill-road (Mr. Heaton Comyn for the apers' Company).—Consent.

Lewisham.—Wood and iron shed at No. 20, pringbank-road, Hither-green (Mr. J. Laird). Refused.

St. George, Hanover-square.—Iron and glass oilter in front of No. 7, Curzon-street, St. orge, Hanover-square (Messrs. Jones & illis).—Consent.

Woolwich.—Temporary wood and glass porch No. 15, Macomo-terrace, Woolwich (Mr. S. Weller).—Consent.

Space at Rear.

Greenwich.—House on the eastern side of aconsfield-road, Greenwich (Messrs. Davis & anuel for Mr. A. F. Yarrow and Mr. F. E. liot).—Consent.

Kennington.—Erection of Nos. 10 and 11, illard-street, Kennington (Messrs. J. A. J. oodward & Sons for Mr. J. Dennis).—nsent.

St. Pancras, West.—Caretaker's living-rooms connexion with a building to abut upon dhill-street and Little Edward-street, St. ncras (Messrs. Pilditch & Co. for Mr. W. S. epherd).—Consent.

Westminster. — House abutting upon the tern side of Tufton-street, Westminster, and northern side of a new street between fton-street and Smith-square (Mr. H. S. G. ndel for Captain H. Adeane).—Consent.

Woolwich.—Conversion of a one-story work-p and office building upon land at the rear Nos. 1 to 29, Vernham-road, Plumstead, o a dwelling-house (Mr. E. H. Wright for . D. Gibson).—Consent.

Separation and Alteration of Buildings.

Clapham.—Alterations at No. 157, High-eet, Clapham (Mr. A. W. Cleaver for City ilors, Ltd.).—Consent.

Cubical Extent.

Walworth.—Motor garage to abut upon tory-place, Walworth (Messrs. Gilbert & nstanduros for Messrs. T. Tilling, Ltd.).—nsent.

St. George, Hanover-square.—Addition to a lding approached from Carrington-street Hertford-street, Mayfair (Mr. H. S. well for Messrs. Lakeman, Tucker, & mmell).—Refused.

Uniting of Buildings.

City of London.—Uniting of Nos. 19 and 21, ringdon-avenue, City, by means of an open-, at the basement level (Mr. F. J. Harring-).—Consent.

St. Pancras, South.—Uniting of Nos. 261 and Pentonville-road, St. Pancras (Mr. E. S. for Messrs. Fulford & Sons).—Consent.

St. Pancras, South.—Uniting of No. 261, tonville-road with King's-cross (Metro tan Railway) station (Mr. W. Willox for Metropolitan Railway Company).—Consent.

Cubical Extent and Uniting of Buildings.

Paddington, South. — Mirrors on the oured doors to the emergency communi-on doorways between the blocks of the new ding at the premises of Messrs. W. teley, Ltd., Queen's road, Bayswater ssrs. John Belcher, R.A., and J. J. Joass). fused.

Bayswater. — Rolling shutters in lieu of ndary fire-resisting doors to the lift open- in the block next to Porchester-gardens ssrs. J. Belcher, R.A., and J. J. Joass).—sent.

Construction of Buildings.

City of London.—External walls of a pro-d building to abut upon Lime-street and um-street, City, to be 9 in. in thickness re the ground story, instead of 14 in. in kness (Messrs. Fair & Myer).—Consent.

The recommendation marked † is contrary the views of the Metropolitan Borough ncil concerned.

BUILDING, FURNISHING, AND HOUSE-PLANNING EXHIBITION.

is proposed to hold in Bristol early in an exhibition of the building, furnishing, house-planning trades and interests. The notor is Mr. Charles Howes, Centre-mbers, Bristol, who will be pleased to ish all particulars.

SKELMERSDALE MAIN SEWERAGE.

e Skelmersdale Urban District Council, shire, have instructed Messrs. Taylor & in (Mr. Harry W. Taylor, A.M.Inst.C.E.), wcastle-upon-Tyne and Birmingham, to tigate the existing system of sewers and ge disposal works, and to advise generally the construction of an up-to-date scheme.

PROJECTED NEW BUILDINGS IN THE PROVINCES.*

ABERDEEN.—Proposed four hostels (20,000*l.*); The Aberdeen Provincial Committee for the Training of Teachers.

Banbury.—Warehouse, West Bar, for the Pytchley Autocar Company.

Berkshire. — Additions, Grazeley County School; Mr. E. Fisher, architect, 19, Buckingham-street, Strand, W.C.

Bradford. — Extensions to Girlington Wesleyan Church (1,000*l.*); The Trustees.

Brynderwen.—School; Mr. C. Best, architect, 3, Bulwark, Brecon.

Burntwood.—Eight houses at asylum; Mr. W. H. Cheadle, Surveyor, County-buildings, Stafford.

Chasetown. — Mining institute; Mr. J. Hutchings, architect, Stafford; Messrs. Mason Brothers, builders, Station-road, Hednesford, Staffs.

Cheltenham.—Additions, workhouse; Mr. T. Malvern, architect, Winchcombe-street, Cheltenham.

Cullompton.—Unitarian Church; Mr. R. M. Challice, architect, Bedford-circus, Exeter.

Darlington.—Theatre; Messrs. Hoskins & Brown, architects, Connisciffe-road, Darlington.

Dennistown.—Block of tenements, Aberfoyle-street; Mr. C. T. McNair, architect, 112, Bath-street, Glasgow.

Derbyshire.—Schools, Long Eaton and Spondon; Mr. G. Widdowes, architect, St. Mary's-gate, Derby.

Dublin.—Premises for the Bank of Ireland, Stephen's-green; Mr. C. H. Ashworth, architect, 11, Northbrook-road, Dublin; Messrs. G. & T. Crampton, builders, Pembroke-road, Dublin.

Dundee.—Offices, Esplanade, for the North British Railway Company. Reconstruction of offices, Hilltown, for Messrs. T. L. Millar & Co. Proposed improvements to laundry at East Poorhouse (1,400*l.*); Surveyor, Parish Council Offices, Dundee.

East Hove.—Cookery and laundry centre at school (1,000*l.*); Mr. S. G. Dancy, Town Hall, Hove.

Elderslie.—Proposed oil engine works for Messrs. Barclay, Curle, & Co., Whiteinch, Glasgow.

Elgin, N.B.—Public baths (3,000*l.*); Mr. A. A. Turriff, Surveyor, Burgh-buildings, Elgin.

Exeter.—Restoration of St. Nicholas Priory (1,000*l.*), also rehousing scheme at St. Thomas; Mr. T. Moulding, Surveyor, Town Hall, Exeter.

Farncombe (Surrey).—Conservative club; Messrs. Gorringe & Sons, builders, Hare-lane, Farncombe.

Farnworth.—Alterations at grammar school; Mr. Thomas Lucas, builder, Rainhill.

Fatfield.—Five houses for the Lambton and Hetton Collieries, Ltd.

Glasgow.—Church hall, Springburn-road; Messrs. H. E. Clifford & Lannau, architects, 225, St. Vincent-street, Glasgow.

Grange.—Parish hall: Mr. H. Fowler, architect, 6, Cornwallis-street, Barrow-in-Furness.

Great Bridge (Tipton).—School; Mr. W. Long, architect, New-road, West Bromwich.

Hawick.—Rebuilding St. George's United Free Church (5,000*l.*); Rev. W. A. P. Johnman, Minister.

Hennock (Devon).—Additions to school; Mr. P. Morris, architect, Richmond-road, Exeter.

Hereford.—Proposed alterations and additions, Brinsop court; Rev. Hubert Delaval Astley, Benham Valence, Newbury.

Hessle.—Cottage homes (2,500*l.*); Clerk to the Sulcoats-gardens, Hessle.

Holmfirth.—Five houses; Mr. W. Hurst, Oak Lees, New Mill, near Holmfirth.

Ilkley.—Additions to King's Hall; Mr. Henry West, architect, Urban District Council Offices, Ilkley.

Ladywood (Birmingham).—Hospital; Mr. F. Martin, architect, Colmore-row, Birmingham.

Liverpool.—Alterations to Seafield House (12,000*l.*); Messrs. W. Hall & Sons, Ltd., 60, Christian-street, Liverpool.

Lossiemouth.—Proposed extensions to cod-liver oil factory for Messrs. Isaac Spencer & Co., Ltd., Aberdeen.

Macclesfield. — Additions to workhouse (6,500*l.*); Messrs. Whittaker & Bradburn, architects, 19, King Edward street, Macclesfield: Messrs. Brown & Co., builders, Wilmslow, Manchester.

Maidstone.—Additions at Kent Ophthalmic Hospital (1,000*l.*); the Governors.

Nantygroes.—School (150 places); Mr. J. W. Nicholas, County-buildings, Carmarthen.

Neithrop.—Forty houses (8,000*l.*); Mr. N. H Dawson, Town Hall, Banbury.

Newport (Mon).—Church (1,780*l.*); Rev. A. A. Matthews, St. James' Parish Church, Newport. Extension, County Hall (6,000*l.*); Mr. H. Tanner, Shire Hall, Newport.

Omagh.—Two hundred houses; Surveyor, Council Offices, Omagh.

Paignton.—Erection of St. Paul's Church; Mr. J. C. Beare, architect, 68, Queen-street, Newton Abbot.

Perry Bar (Birmingham).—School; Mr. J. Hutchings, architect, County-buildings, Stafford.

Poole.—Alterations to Cornelia Hospital; Messrs. A. & F. Wilson, builders, Parkstone.

Rawtenstall.—Thirty-seven houses; Mr. J. Johnson, Town Hall, Rawtenstall.

Renton.—School (5,000*l.*); Cardross School Board.

Renfrew.—Works, Porterfield-road, for the Clyde Rubber Works Company, Ltd.

Retford.—Extension to St. Alban's Church (2,020*l.*); The Vicar, Retford.

Rocklands (Norfolk).—Workhouse infirmary; Mr. H. J. Green, architect, Castle Meadow, Norwich; Mr. R. Shanks, builder, Station-street, Chatteris.

Rye Harbour.—Mission church (1,250*l.*), for the Rev. F. G. R. Wade.

Scarborough. — Roman Catholic Church; Messrs. J. Petch & Son, architects, Valley Bridge, Pandy, Scarborough.

Sheffield.—Enlargement and improvement of Jessop Hospital for Women; the Managers. Additions at Ellesmere-road School (12,530*l.*). and at Whitby-road School (6,854*l.*); Mr. G. S. Baxter, Town Hall, Sheffield.

Shelf.—Additions at Victoria Mills for Messrs. E. Hind & Co., Ltd.

Sherborne.—Twenty-two houses (3,190*l.*); Messrs. Guppy & Son, builders, Bristol road, Sherborne.

Sholing (Hants).—School; Mr. J. Taylor, The Castle, Winchester.

Southampton.—Plans have been passed for rebuilding Kemp's Hotel, Threefield-lane, for Mr. A. A. Burnett, and for nine houses, Oakmount-avenue, for Mr. J. Smith. The latter has also lodged a plan for four houses, Darlington-gardens.

South Cleatham.—Thirteen houses for the Winston Colliery Company.

Stafford.—Nurses' block at asylum (5,800*l.*); Mr. W. H. Cheadle, Surveyor, County buildings, Stafford.

Stalybridge.—Extensions at Bankwood Mills for Messrs. George Cheetham & Sons, Ltd.

Stanley (Yorks).—Erection of St. Peter's Church (8,000*l.*); Mr. W. D. Caröe, architect, Little College-street, S.W.

Wallsend.—Alterations to premises for the Wallsend Industrial Co-operative Society.

Walton-le-Dale.—Weaving shed, Stone Mill, School-lane, for Messrs. T. Eccles, Sons, & Co., Ltd.

Worcester.—School, St. John's; Mr. T. Graysebrook, architect, 168, High-street, Stourbridge. School, St. George's; Mr. A. Parker, architect, Church House-chambers, Worcester.

Ynysmudw.—Church (3,000*l.*); Mr. J. C. Rees, architect, St. Mary's-chambers, Neath.

York.—Alterations to school (1,750*l.*); Mr. J. H. Mason, Town Hall, York.

* See also our list of Competitions, Contracts, etc., on another page.

WESTMINSTER CITY COUNCIL.

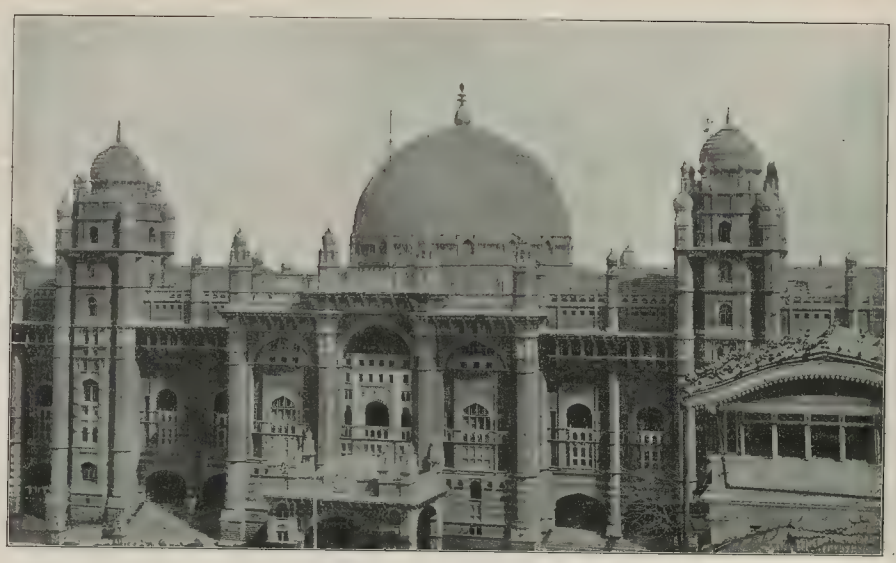
At the fortnightly sitting of this Council on May 23 the following matters were dealt with:—

Tar Spraying.—The Works Committee recommended that thirty-nine streets be tar-sprayed at an estimated cost of 1,000*l.*, the work to be done by Messrs. H. V. Smith & Co., of 20, Victoria-street. The total area to be sprayed is 117,610 super. yds. Agreed.

Subway in Brompton-road.—It was agreed to accede to the application of Harrods, Ltd., to construct a subway under Brompton-road to connect their existing premises with the new premises at 104, Brompton-road. The subway will be 13 ft. wide and 8 ft. high.

Paving Works.—The Works Committee reported on the tenders received for paving and repaving twenty streets. The total of the tenders for the whole of the streets was 23,826*l.* 1s. 7d. It was decided to accept the tenders of the Limmer Asphalte Paving Company, amounting to 738*l.* 16s. 8d.; of Messrs. Griffiths & Co., amounting to 9,240*l.* 6s. 6d.; of the London Asphalte Company, Ltd., amounting to 776*l.* 12s. 2d.; and of the Improved Wood Pavement Company, amounting to 13,070*l.* 7s. 3d.

Argyll-place and Noel-street Improvement.—It was agreed to purchase the freehold of several properties in Argyll-place from Durham University for 23,500*l.*, for the above improvement.



The New General Post Office, Bombay.
Mr. John Begg, F.R.I.B.A., Architect.

NEW GENERAL POST OFFICE, BOMBAY.

THE accompanying illustration shows the central portion of the new General Post Office, Bombay, recently completed from the design by Mr. John Begg, Consulting Architect to the Government of India, and which forms a picturesque feature in the business quarter of Bombay. A prominent feature of this building is the dome, which is rendered waterproof by the use in its construction of Ceresit, supplied by the British Ceresit Waterproofing Company, Ltd.

STAINED GLASS.

A LECTURE on the "Theory and Practice of Stained Glass" was delivered at the Byam Shaw and Vicat Cole School of Art, Campden-street, Kensington, on May 16, by Mr. Leonard Walker, R.B.A. Mr. T. Phillips Figgis, F.R.I.B.A. (who designed the fine school buildings) presided.

The first part of the lecture consisted of an investigation of the state of mind to be cultivated by a designer and worker in stained glass. The latter part consisted of a more detailed description and demonstration of the making of a stained-glass window from the first design to the complete window ready to be erected. In making the design the lecturer insisted on the necessity of the theme and treatment being in harmony with the permanent nature of stained glass; that in the studies from the model for the figures, heads, draperies, etc., one should strive for something more than the particular, more akin to the universal and general, and in harmony with the eternal rather than the particular. An excess of realism in a stained-glass window is not to be sought for, but almost to be preferred to the lifeless conventionality which one gets if one is not continually being vitalised and refreshed by a reference to nature.

In the course of his lecture Mr. Walker said: "I propose to-night to deal with the subject of stained glass from the artistic and workmanlike, rather than the historical and antiquarian, point of view. Not in a retrospective fashion, gazing with wistful eyes at a glorious part gone for ever. We can confidently learn from the world around us, revering the past and studying the works of those who have gone before in so far and only so far as they correspond to the dictates of the highest artistic thought. The things of the artistic spirit transcend time and place limitations. The horizon of art may be extended in a sense, but cannot be superseded.

The earliest history of glass is wrapped in mystery, but there seems to be no doubt that glass was used by the ancients in the East in the earliest times to imitate precious stones, for vessels, then for mosaic, and later panes of glass were set in bronze and copper and even in lead, the beginning of our present system. At any rate, not till A.D. 800 did stained glass in the commonly accepted use of the term make its appearance, but little of this glass remains.

From this date some of the finest windows were made. The drawing expressed by the lead-line as far as possible and as it should be. Then when men became very agile at pointing on the glass they got so keen that they converted their windows too much into pictures. Though one cannot entirely withhold one's admiration from the skill shown on stained-glass windows, they fail. At the present day one is glad to say there is a healthy recognition of the limitations of a stained-glass window on the part of individuals working on their own and a few firms.

Now I hinted just now that there is a state of mind to be cultivated by any would-be stained-glass designer based on the limitations of his material. What these limitations are it is difficult to determine exactly, as the work of a great designer seems to transcend restrictions, but, speaking for ourselves, we note that a designer must recognise the relation of a stained-glass window to the surrounding architecture, your window must look as if it grew with the building, not a foreign addition endeavouring to gather all the glory, though complete in itself, yet an integral part of the whole building.

The above remarks need some slight qualification perhaps. I do not advance the view that there should be an absence of individuality in stained-glass windows unnecessarily subservient to the style of the building in manner and treatment, for there is often a resultant charm experienced when one sees buildings witnessing to a variety of thought and custom expressed in its different kinds of windows, memorials, etc. Particular cases of the variety of styles of architecture in one building with happy results will occur to our minds. We can revel in the beauty obtained from the sight of a bed of flowers of one colour and type, restrained order, and also from an herbaceous border, with its infinite variety of colour and species, veiled order under an appearance of freedom.

These thoughts seem to advise, then, a digested appreciation of the style of the building, general lighting, etc., without the artist experiencing a sense of restriction and surrender, but rather a desire to triumph with accepted limitations. And so the designer of a stained-glass window recognises and accepts the shape of the window; he must by handling the glass familiarise himself with its limitations; with practical experience you discover what shapes will stand the kiln without fracture. In a word, he must think in terms of a stained-glass window. Thus a designer, having thought himself into the stained-glass atmosphere, any subject that he chooses can be legitimately carried out. His window will be automatically conditioned within the boundaries of the material. You will heartily welcome the lead-lines. They will express the boundaries of the figures, folds of drapery, etc.

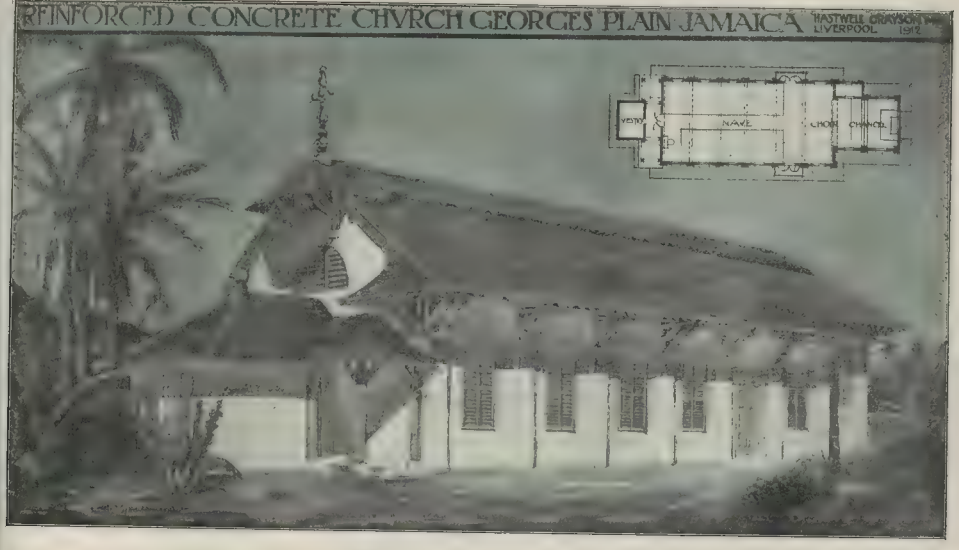
The aspect of your window will control the scheme of balance of light and dark values that you adopt. If much light is wanted to come through the glass, you must not have a heavy rich scheme but a light one, and *vice versâ*. If the stained-glass spirit is upon you you will recognise the flatness of a window; you will not, by an extravagant use of perspective, try to give a "way-over-there" look to portions of your design. No, if we are thinking rightly, light and shade, the diminishing of objects governed by the laws of perspective, etc., may be accepted and all harnessed to legitimately serve you.

There is no reason for weak drawing and an absence of character on your lines; you will carefully compose, then enhancing perhaps by curved lines the uprightness of the stonework, or by similarity echoing the hosts of twists and turns of beautiful tracing. I am only touching on these points in so far as they are particular to stained-glass designing.

Colour with the extension of your palette from white paints to white light provide plenty of excitement; you cannot so much trust to accident as one can sometimes in other branches of art. You must deliberately choose your colours, and you notice that primaries have a tendency to come forward and greys to retire.

We shall then be careful that our design is of such a nature as to allow a strong colour to be near the retiring ones to preserve a kind flatness of effect, an accepted characteristic of the best stained-glass work. Preciousness and jewel-like appearance expressed by the quality of the glass will be carefully considered—in fact, everything that will go to make your work a perpetual joy.

And so briefly I have tried to show what must be the same with all the artistic crafts. Coupled with the vision splendid must be the obedient submission to the conditions and limitations of your material for the production of a work of art."



Church of St. Barnabas, Jamaica.

Mr. Hastwell Grayson, F.R.I.B.A., Architect.

The Chairman, in thanking the lecturer, commended the audience to visit those buildings where beautiful glass may be seen. He instanced the churches in the Strand and city, the cathedrals, and particularly the beautiful windows of Chartres.

CHURCH OF ST. BARNABAS, JAMAICA.

The site of this church, on George's Plain, just clear of the earthquake and hurricane zones, but so near that it has been felt better to use reinforced concrete for foundations, walls, and principals. The roof itself will be covered with cedar shingles. The church is planned to obtain the maximum cross-ventilation. The whole extent of the nave windows open towards right back against the walls, and the openings are protected by jalousies on the outside. The building is a gift from a lady to the coloured population on her estate. Mr. J. T. Emett is responsible for the reinforced concrete, and Mr. Hastwell Grayson, M.A., F.R.I.B.A., is the architect.

MALTA AS A WINTER RESORT:

SUGGESTED HOTEL.

SIR F. MOWATT, Sir M. D. Chalmers, and Mr. Russell Rea, M.P., the Royal Commissioners appointed in August last to inquire into the economic position, etc., of Malta, have concluded their investigations. In the course of their report they observe: "It appears to us that the attractions of Malta as a winter resort for health and pleasure have not been duly appreciated. The climate in winter is as sunny and more equable than, that of either the Riviera or Algiers. Frost is almost unknown. Valetta is the cleanest, and in situation and architecture one of the most beautiful, of the cities of the Mediterranean. The two great harbours with their branch harbours afford excellent water for rowing and sailing. The old ramparts and fortifications, with the numerous and extensive public gardens, provide clean, picturesque, and attractive promenades. The new system of drainage is complete in the towns, and the water supply is good. There is a handsome opera house, which is open all the winter. The island has the advantage of a large English garrison and is the headquarters of the Mediterranean fleet. English sports, including golf, are available. As a centre from which to visit other places Valetta is convenient. Syracuse may be reached by a daily steamer in eight hours and Tunis in eighteen hours. Both islands are extraordinarily rich in archæological historical, and architectural interest. It appeared to us that, with so many attractions, many of which are not shared by any other of the places of resort for pleasure and health on the coasts of the Mediterranean, it is somewhat singular that Valetta should not possess any large hotel of the first class. We ascertained that the Government are willing to surrender on advantageous terms a site in a central, beautiful, and commanding position. Such a hotel would add to the convenience and attraction of Malta as a place for winter residence, and contribute greatly to the prosperity of the city of Valetta. It is no part of our business to advocate speculations of any kind, but we have made the preceding observations for the consideration of those who are engaged and skilled in such speculations."

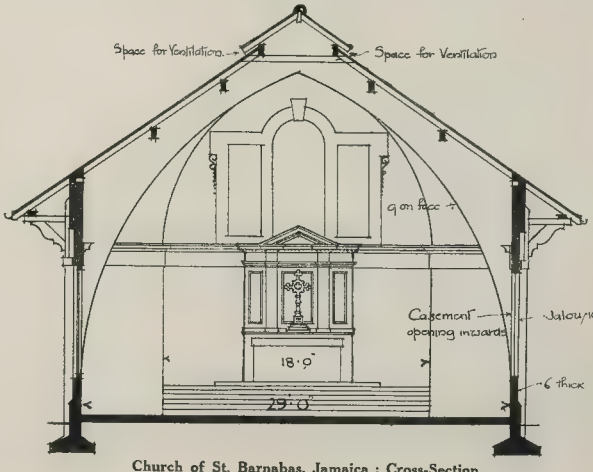
LEGAL COLUMN.

Landlord and Tenant: Relief from Forfeiture.

The House of Lords, in the case of Hyman and Another *v.* Rose, have had to consider in what circumstances relief under sect. 14, sub-sect. 2, of the Conveyancing Act, 1881, from forfeiture for breach of covenant in a lease ought to be granted. There has been considerable litigation between the parties, but in both the Court of Appeal and the House of Lords the point to be decided was simply whether relief from forfeiture should or should not be granted.

In 1845 a lease of a piece of land was granted for ninety-nine years, less ten days, for the erection of a chapel. The lease contained covenants that the chapel should well and substantially be repaired and maintained, and that the front elevation of the buildings should not be varied or altered without the consent in writing of the lessor; certain trades were prohibited to be carried on on the premises, and there was a power of re-entry in case of breach of covenant. The chapel became unused and fell into disrepair, and in 1910 the lease became vested in Hyman and another, the Charity Commissioners having authorised the sale of the lease, and they proceeded to adapt the premises for use as a cinematograph theatre. Mrs. Rose, the reversioner of the lease, applied for damages for injury to the reversion, an injunction, and possession of the premises.

The defendants, in converting the chapel into



Church of St. Barnabas, Jamaica: Cross-Section.

a theatre, had put it into repair, but they had made some alterations in the building. The main alterations were the opening of a door in the west side wall, the removal of railings on two sides and a dwarf wall, thus throwing strips of ground into the streets, the removal of the gallery staircases, and the substitution of others. The Master of the Rolls considered that waste had been committed as well as a breach of the covenant to repair, and Lord Justice Fletcher Moulton held there was breach of covenant to repair, and as there was no undertaking that the breach would not be continued the Court declined to grant relief. Lord Justice Buckley dissented, and the House of Lords agreed with his dissenting judgment.

The Lord Chancellor, referring to various rules which had been laid down by the Master of the Rolls, upon which the discretion for granting relief might be grounded, intimated that they should not be taken as rigid rules, but the discretion of the Courts conferred by the statute should be left unfettered.

In the lease under consideration it was competent for the lessees to discontinue the use of the building as a chapel and to use it for any purpose not prohibited, of which the use of the building as a theatre was not one, and the rearrangement of the internal portion of the building was therefore legitimate. The opening of the door was also held to be neither waste nor a breach of covenant. Only an alteration of the front elevation was expressly prohibited. The removal of the railings and dwarf wall was held not to constitute a breach of covenant, because it was not in existence at the time of the demise, nor was it waste, because the lessees had undertaken to prevent a dedication to the public of the land hitherto enclosed by from time to time erecting movable railings.

Thus it appears that the grounds upon which relief was granted in this case were:—(1) That there had been no breach of covenant at all by the three lessees; (2) nor was there waste. The character of the premises demised had not been altered, nor had the value of the reversion been injured; on the contray, the value had been enhanced.

It should be noted, however, that the lessees had offered to deposit a reasonable sum of money to ensure the entire restoration of the premises to their former condition as a chapel, which offer exceeded such terms as the Court thought necessary to prescribe. The terms prescribed by the House of Lord were that the ground lying within the former fence should be paved to distinguish it from the footpath, that a movable fence should be erected from time to time, and that the building should be repaired consistently with the notice to repair served on the vendor.

Party Walls: London Building Act.

The case of Minturn *v.* Barry, noted by us July 21, 1911, and reported on appeal in our columns last week (May 24), is not a favourable example of speedy or certain litigation. The question involved in the case was whether a party wall was "defective or out of repair" within the meaning of sect. 88, sub-sect. (1) of the London Building Act, so as to enable the plaintiff to avail herself of the procedure provided by the Act. The wall was damp, and it was proposed to open the foundations, and if there was no damp-proof course, to insert a horizontal damp-proof course; also to build a vertical damp proof course on the defendant's side of the wall, to repaint the brickwork, and to construct a weather joint on the defendant's side.

The surveyors appointed under sect. 91 held that the wall was not so defective as to come within the sub-section; the County Court Judge held that the plaintiff's claim amounted to rebuilding the premises with modern improvements, and that this exceeded what was contemplated by the section, "making good and repairing." The Divisional Court sent the case back to the County Court Judge. The Judges appear to have found that the surveyors came to the conclusion that the wall was not out of repair, because it could bear the weight imposed upon it, and that the County Court Judge had not considered whether damp could make a wall defective within the meaning of the section.

The case was retried in the County Court, and on this second trial the Judge went into the history of the wall, and found that on the plaintiff's side the party wall was originally but a garden wall, and this being so, that the plaintiff could not go on the building owner's side and remedy a defect arising from the conversion of a garden wall into a party wall. The Divisional Court was again appealed to and approved this decision. Now the case has come before the Court of Appeal, and the Court of Appeal have held that there must be a new trial, as the County Court Judge had no right to inquire into the history of the party wall, but was only to consider it as an existing structure. Thus there have been six judicial inquiries, including that of the surveyors, and the case has yet to be decided, and all that can be said upon the law is that the Divisional Court on the first appeal intimated that dampness might suffice to make the wall "defective and out of repair" within the meaning of the section.

London Drainage By-laws.

In our issue for March 8 we commented upon a decision of a Police Magistrate in the case Marylebone Borough Council *v.* White, venturing to suggest that the decision could not be supported. The case has now been carried to the Divisional Court, and that Court has considered the by-law in question in the manner we suggested. The by-law which it was contended in the case had been infringed was By-law 11 of the Drainage By-laws of the London County Council, made under the Metropolis Management Act, 1855, and dated June 14, 1901. It provides "that any person who shall provide a soil pipe in connexion with a new building for the purpose of conveying to a sewer any solid or liquid excremental filth or shall for that purpose construct a soil pipe in connexion with an existing building, shall, whenever practicable, cause such soil pipe to be situated outside such building and shall construct such soil pipe in drawn lead or of heavy cast-iron. Provided, that in any case where it shall be necessary to construct such soil-pipe within such building he shall construct such soil pipe in drawn lead. . . ."

On the premises in question there was a soil pipe running down the back main wall of the building. At the first-floor level, there being an extension of the building with a flat roof, the pipe entered the building, being caried down to the basement level inside. During its whole length it was of iron. The Magistrate held that the by-law applied only to pipes wholly inside or wholly outside the building; but the Divisional Court reversed this decision. As we pointed out before, the by-laws appear perfectly clear, and By-law 12 provides for connexions between lead soil pipes and iron pipes. Structural considerations may apply to render it necessary to construct a soil pipe within the building, and the by-law (No. 11) recognises this necessity, but insists on the pipe within the building being of drawn lead.

Landlord *v.* Tenant.

In an underlease granted to the plaintiffs in the case Premier Rinks, Ltd., *v.* Amalgamated Cinematograph Theatres, Ltd., there were covenants by the plaintiffs not to assign, underlet, or part with the possession of the premises without consent, "such consent not to be unreasonably or vexatiously withheld in the case of a respectable assignee, underlessee, or tenant," and not to carry on any dangerous, noxious, noisy, or noisome, or offensive trade or business. The reversion of the underlease was vested in the defendants. A receiver had been appointed of the plaintiffs' undertaking, and the premises were to be sold, so application was made to the defendants for consent. The defendants raised no objection to the respectability of the assignee, but as they were carrying on a cinematograph theatre in the adjoining premises they endeavoured to make it a condition that no such exhibition should be carried on in the premises to be assigned, and submitted a licence in this form to be construed as though it had been originally inserted in the underlease. A number of cases were cited to the Court, but, according to the report of the case in the "Weekly Notes," the Court considered that the sole question to be decided was whether the refusal was reasonable or not; and it was held unreasonable, for the defendants were making the assignment conditional upon an entirely new condition being engrafted on to the lease. Other cases on this question will be found noted the *Builder*, July 11, 1903: March 26, 1910: and May 10, 1911.

Workmen's Compensation.

The case of Ball *v.* William Hunt, which we noted the *Builder*, April 7, 1911, and again referred to April 26 last, has been carried to the House of Lords. The case is a very curious one. A man employed as an edge tool moulder some seventeen years ago had lost the sight of one eye in an accident, but he was able to continue his employment at the old rate of wages. In September, 1910, he met with another accident, which set up inflammation in the blind eye, and in consequence the eye had to be removed. The defect in his sight had before that not been obvious, but now, of course, it became apparent; but in other respects the man's earning capacity after he had recovered from the operation remained the same. He was paid compensation until he had recovered, and the majority of the Court of Appeal in these circumstances held he was not entitled to further compensation. The House of Lords have reversed this judgment, holding that "incapacity for work," the words used in Schedule I., par. 1, of the Act, include not only incapacity to do work, but inability to get work provided that inability is due to injury by accident and not to the conditions of the labour market. It must be confessed that this decision only increases the difficulty of interpreting the statute, and will leave employers and insurers in greater doubt than ever as to their liabilities. In the case Hargreaves *v.* Haughhead Coal Company, Ltd. (the *Builder*, April 26 last) the House of Lords held that the loss of an eye did not entitle a man who was able to obtain work at the same wages to have a nominal award made so as to keep his claim to compensation open. The present case is hard to reconcile with that decision, as the one-eyed man is always apt to find difficulty in obtaining work, and if he has obtained it once there is no reason to believe that he will retain it, yet the interval of employment, according to the decision in Hargreaves' case, would lose him any right to compensation. Lord Shaw recognised one difficulty which would follow on the decision now given, which is, that depressed conditions of labour affect mutilated men more than sound men, and there may be considerable difficulty in determining which is the cause of unemployment, the depression in the labour market or the mutilation. Lastly, if a man's capacity to do work is no longer to be the test applied, but his capacity to get work is to be regarded, most extraordinary results will ensue. For instance, it is well known that middle-aged clerks cannot get employment, and that they have to dye their hair to appear younger. If a clerk meets with an accident and his hair in consequence goes grey, and he can no longer get employment, his case is exactly similar to the man in this case—his earning capacity remains unchanged, but his chances of obtaining work are diminished through the accident, and, according to this decision, followed to its logical conclusion, he is entitled to compensation as for "personal injury by accident," the words used in sect. 1 in respect of his hair changing colour. The determination of physical incapacity has proved an extremely difficult task under the Act, but it will become even more complicated now that the House of Lords have held that physical appearance has to be taken into account. We recently pointed out that a one-eyed man is in a worse position under the Act than a one-armed man, and possibly the Legislature may see fit to amend the Act in view of the above decisions, so that the one-eyed man may obtain a nominal award to keep his claim alive in case real physical disability supervenes as a consequence or a partial consequence of the loss of one eye, for, as we observed in our article, April 26, if the man loses the sight of his remaining eye, his total incapacity is due in part to the original accident.

In another case on appeal from the Scotch Court of Sessions (Macdonald or Duris *v.* Wilson's and Clyde Coal Company) the House of Lords had to consider the case of an injured workman. The man in that case was capable of doing certain light work which his employers gave him, in addition to a payment of compensation. After eighteen months they ceased so to employ him, and he applied for a review of the compensation. The Scotch Courts held there was no ground for a review, but the House of Lords remitted the case to the Sheriff.

The man alleged that his employers, although he continued fit to do the same light work, had declined longer to give it him, and he was unable to obtain work in the district. The House, in remitting the case, observed that it was for the arbitrator to determine what steps a man could be asked to take in order to obtain employment, and this involved a fact often difficult of determination: but the Lord Chancellor intimated that it must be understood that work could not be obtained at a place within reasonable access. On this question we may refer to our article of June 2, 1911, where some of the cases are considered. When a man is only fit after an accident for very special light work, in most cases it is the employers who seek for a review with a view to reducing the full compensation, and then the onus lies upon them of proving the man's capacity. In this case the man was applying for a review, but presumably if he showed that light work was impossible to him, the onus of proving the contrary would be shifted to his employers. In both the above cases, however, the House of Lords appear to not limit the question to capacity for work, but to extend it to ability to obtain work. This is a serious question for employers and insurers.

LAW REPORTS.

CHANCERY DIVISION.

(Before Mr. Justice SWINFEN EADY.)

illis and Others *v.* Biddulph and Others :

Ancient Lights and Crown Leases.

HIS was a motion by the plaintiffs to rain the defendants from erecting any ding on land adjoining the plaintiffs' mises in Pall Mall in such a manner as njure the plaintiffs' lights.

r. Micklem, K.C., said the plaintiffs held Pall Mall under a Crown lease, granted 1823, and the premises were used as a ure gallery and known as the French eries. The gallery was lighted by a ern light, which ran along its whole length, t. 10 in., and the interference complained was caused by the proposal of the de- ants to carry up a wall 16 ft. away, 38 ft. re the sill of the window, much higher it was before. The defendants had ght reversions of the Crown leases of Nos. and 119, Pall Mall, which they had ndered to the Crown, and they were now ding under a building lease, and alleged their plans had been approved by the rn. Counsel contended that such approval d not affect the plaintiffs' rights.

s Lordship said the fact that the de- ants held under a Crown lease did not ar to affect the question.

r. Micklem said that another wall was posed to be carried to a height of 49 ft. e the sill.

r. Macnaghten, K.C., for the defendants are trustees of a club), said his clients always been prepared to meet the tiffs in any way, apart from altering plans.

fter his Lordship had been taken through plans by Mr. Micklem, K.C., Mr. Mac- ten, K.C., submitted that, having regard he defendants' position as tenants of the n, they could not be restrained, and ter, there was no sufficient obstruction of to justify an injunction.

s Lordship said that if the parties were to try at once without pleadings he d make no order on the motion, except the costs be costs in the action. The s could apply to expedite the hearing, he would do his best to try the case very next sittings.

OFFICIAL REFEREE'S COURT.

(Before Mr. MUIR MACKENZIE.)

Claim against a Building Owner :

Dawnay *v.* Mulholland.

ERVED judgment was delivered in this ast week. The plaintiffs, Messrs. Archi- D. Dawnay & Sons, Ltd., engineers, of rsea, claimed 2,301*l.* 19s. 10d., balance of ount due from the defendant, Mr. J. B. lland, for steel constructional work ed at Wimbledon Theatre, of which Mr. lland is the owner. The plaintiffs had ed the defendant with 1,000*l.* odd paid ount to them in September, 1910. Mr. lland admitted the claim, but pleaded he work which the plaintiffs contracted should have been completed by June 30, ut that it was not finished by then, and nder the contract between the parties s entitled to 25*l.* a day as penalty for lay. Mr. Mulholland, urging that he have unliquidated damages, claimed that d been prevented from producing plays autumn season, and that he had suffered wing to the delay. He had also con- . that his Christmas pantomime of 1910 en prejudiced by the same cause.

plaintiffs, on the other hand, disclaimed sponsibility for delay—if any—and said had not been furnished with adequate out plans, and that they had, in mak- signs, to comply with alterations, sent rvals, on behalf of Mr. Mulholland. ffs declared they had proceeded with rk with all possible despatch.

Randolph and Mr. Herman Cohen (in- d by Messrs. Amery, Parkes, & Co.) red for the plaintiffs; and Mr. M. ker and Mr. Bodoano (instructed by Mr. ey Sharp) represented the building

Bertie Crewe, an architect specialising atre work, was amongst the many es called on behalf of the plaintiffs. contentions he upheld. He declared in rse of his evidence that it was usual steelwork engineers a full set of plans he tiers to begin with. They invariably d the longitudinal sections. These were, he said, the most essential plans. Steel constructional engineers could not set about their work properly without correct plans.

Mr. Mulholland, in the witness-box, when examined by Mr. Drucquer, stated that to the plaintiffs' representatives he had, from the outset, emphasised upon them the importance of time. He alleged that the plaintiffs gave him no indications that there would be delay over which they had no control.

Answering Mr. Randolph, the defendant said he did not regard the architect, whom he engaged as his "creature." He thought, however, that an architect should act in conjunction with the building owner, and his architect had had to do that.

Mr. Randolph was proceeding with a further question in that connexion, when Mr. Muir Mackenzie said that the architect was in a certain measure agent for the building owner. Under certain matters he had to act impartially between the building owner and the builders.

Mr. Randolph asked Mr. Mulholland if it were his suggestion that plaintiffs had deliberately acted in order to make more out of the contract.

Mr. Mulholland: I should not like to say that. I consider they were simplifying and economising.

Mr. Randolph: Trying to do the best they could?—Put it like that if you like, but not for me.

Mr. Randolph: I say they were trying to do the best they could in your interests. Throughout, the plaintiffs are objecting to be saddled with the delay. You said: "You are delaying," and they said: "The delay is not ours, and you cannot complain. You cannot impose penalties."

Witness: In some of their letters they apologise for their delay.

Subsequently, however, Mr. Mulholland admitted that the plaintiffs repudiated responsibility.

Mr. Cecil Albury Masey, an architect, said that for some years he was chief assistant to Mr. Bertie Crewe, and when with that gentleman witness undertook sole responsibility in connexion with the carrying out of plans for numerous theatres. In March, 1910, witness was engaged to help in connexion with the Wimbledon Theatre project. He thought that plaintiffs had been provided with adequate plans and data. Plaintiffs had not complained to him verbally of the absence of complete plans, but witness, on the other hand, had had to complain to Messrs. Dawnay of the slow way details were coming in.

In answer to the Official Referee, the witness said that in letters he had written to the plaintiffs during the progress of the work he had not reminded them that they were incurring penalties of 25*l.* a day. It had not occurred to him to do so.

The Official Referee expressed the opinion that it was possible that if plaintiffs knew they were incurring penalties of 25*l.* a day, or 175*l.* a week, they might, perhaps, not have regarded the contract as an over-profitable one.

Mr. Robert Briggs, partner in the firm of Messrs. Frank Matcham & Co., architects, who have designed over 150 theatres, said he regarded the plans prepared by Mr. Masey as sufficient to enable Messrs. Dawnay to prepare their details of their own scheme. The roof at the outset was the only weak part, but he had seen pencilled additions.

Mr. Drucquer: What is the best order of erecting this steelwork in a theatre?—From an architect's point of view, the proper way to put the steelwork up is to follow the building up. Put the ironwork in as you go up. Engineers prefer that they should fix their roof, then their gallery, and then their circle. It is easier for them.

Mr. Henry, another architect, having given evidence on behalf of the defendant's case,

Following the evidence and arguments during a protracted hearing, Mr. Muir Mackenzie reserved judgment on May 13, and delivered it on May 23. After an exhaustive review of the parties' respective contentions, Mr. Muir Mackenzie said he thought he would be doing his duty if he adopted what Mr. Bertie Crewe had said in the course of his evidence, to the effect that he considered there had been some delay, and that the iron and steel work should have been completed about three weeks earlier than it was completed. In the circumstances he decided to award defendant 300*l.* for unliquidated damages on the counterclaim. There would be judgment for the plaintiffs on the claim for 2,301*l.* 19s. 10d., and judgment for the defendant on the counterclaim for 300*l.* He thought the counterclaim was very much exaggerated, and, to a great extent, had failed, and accordingly defendant would be awarded only one-third of the costs of the counterclaim. Plaintiffs would have the whole of the costs of the action.

OFFICIAL REFEREE'S COURT.

(Before Mr. H. W. VEREY.)

Clinch *v.* Jackson :

Referee on Time-Sheets.

A CONSIDERED judgment was given by Mr. Verey, after a hearing lasting several days, in an action brought by the plaintiff, Mr. William Clinch, trading solely as Messrs. A. Clinch & Son, and carrying on business as a builder and decorator at 8, Halliford-street, Canonbury, against the defendant, Mr. Lewis Jackson, of Glenhaven, Gloucester-gate. The plaintiff sought to recover 416*l.* 16s. 11d. for decorative and other work executed at a house in Ashley-road, Hornsey Rise, which defendant had purchased. Mr. Jackson had paid 175*l.* to the plaintiff, and 75*l.* into Court, which he contended was sufficient to satisfy the plaintiff's claim.

Mr. Verey, in delivering judgment, said that the defendant did not dispute that he engaged the plaintiff to do the work, and had expressed his willingness to pay fair value for work done. Dealing with the various questions which he (the Official Referee) had to decide, he said that first of all he found that plaintiff did agree to give defendant full trade discounts on all materials, as alleged by the defence. Dealing with the question as to what was a fair and reasonable value for the work done, Mr. Verey said that plaintiff rested his case on time and materials. Time-sheets deserved full consideration, but where work could not be seen and measured an employer was not necessarily to be bound strictly by the time-sheets. Three surveyors had been called for the plaintiff, but none of them, said the Referee, remained on the premises for much more than an hour, and they took no measurements. On the other hand, two surveyors had, on behalf of the defendant, inspected, together with a builder, the work over a period of two days. Furnished with items of expenditure, they had examined every detail and measured up the work, allowing 15 per cent. profit to the plaintiff. Those witnesses were men of experience, and evidently thoroughly acquainted with details of such work; they had given their evidence fairly, and had been unshaken in cross-examination. In his (the Referee's) opinion, 15 per cent. was a fair profit for plaintiff's work. On the whole facts, he had come to the conclusion that the plaintiff had failed to prove his claim, both as to labour and materials, and that 250*l.* was full value for work done and materials supplied, and that the 75*l.* paid into Court by defendant, together with 175*l.* paid before the action, was sufficient to satisfy plaintiff's claim. Judgment would, accordingly, be given for the defendant with costs.

DIVISIONAL COURT.

(Before the LORD CHIEF JUSTICE and Justices PICKFORD and AVORY.)

Case under the Metropolis Management Acts :

Marylebone Borough Council *v.* White.

THIS case was heard on the 23rd inst. upon the appeal of the Marylebone Borough Council from a decision of the Stipendiary sitting at the Marylebone Police-court.

The facts came before the Court in the form of a special case stated by the Stipendiary, from which it appeared that the respondent, Sir Edward White, was the owner of No. 21, Upper Berkeley-street, W., who in January, 1912, was making certain alterations and additions to the drainage system and sanitary appliances at his premises, which work first came to the notice of the Council's Sanitary Inspector on January 3. Respondent had given the appellants no notice of his intention to carry out such works, nor had he deposited with them plans, etc., as required under the London County Council by-laws made under the Metropolis Management Act, 1855, sect. 202, and the Metropolis Management (Amendment) Act, 1899. When the Sanitary Inspector inspected the works he found that the respondent had constructed at the premises a soil pipe, which extended for some distance above the top of the back main wall, vertically to the basement level, with which communicated water-closets at the second and first floor levels. At the first-floor level the soil pipe entered the interior of the premises, there being built out from the back main wall a two-storied back addition with a flat roof. On the ground-floor level, at the rear of the back addition, there was a third water-closet, from which a soil pipe went inside the premises vertically downwards to the basement level, then passed along the basement level towards the front of the premises, and joined the lower end of the soil pipe. On January 3 the Medical Officer wrote to the respondent, pointing out that proper notice had not been given of the work, nor had

plans been deposited, and stating that much of the work done was not in accordance with the by laws. Respondent afterwards deposited with the Council certain plans, and on January 16 the Medical Officer wrote again to the respondent, stating that the soil pipes inside the building were not of lead, as required by the by-laws of the London County Council, and that therefore the plans could not be passed. On January 18 the respondent wrote to the Medical Officer, stating that he did not intend to alter the iron soil pipes, so he would have to be content to let them remain without his approval. On February 7 the Medical Officer wrote that the plans had been considered by the Public Health Committee of the Council, and that as the soil pipe was not in accordance with the by-laws, the portion inside the premises being of iron instead of drawn lead, the Committee could not grant approval.

It appeared that the soil pipe was 50 ft. long from its commencement down to the basement level, of which about 30 ft. from the top to the first-floor level was outside the premises, and about 20 ft. within the premises. It also appeared that the whole length of the soil pipe was of iron piping and not of drawn lead, with proper wiped plumber's joints where it had been constructed inside the building.

Upon these facts the Council laid an information against the respondent that he did unlawfully construct within his premises soil pipes of iron instead of in drawn lead, with proper wiped plumber's joints, as required by By-law 11 of the Drainage By-laws of the London County Council.

The magistrate held, however, that as the pipes were half inside and half outside the premises, the by-law was not applicable, and that unless a pipe was wholly inside or wholly outside the premises the by-law did not apply From this decision the Council now appealed.

At the conclusion of the arguments, their Lordships held that the object of the by-law was that inside a building the pipe must be of lead with proper joints, and that, therefore, the by-law did apply to the facts in the case. They therefore remitted the case to the magistrate.

Mr. Patrick Hastings appeared for the appellants, and Mr. Wild for the respondent.

LONDON COUNCILS.

Acton.—At the last meeting of the Urban District Council, plans submitted by the Surveyor were approved for paving with tar macadam the carriageways of Churchfield-road, East Acton lane, Alfred-road, Rosemont-road, and portions of South-parade, Valetta-road, and Southfield-road; also for paving with artificial stone the footways of The Avenue, Alfred-road, Burlington-gardens, and Essex-road. The total estimated cost is put at 2,400*l.*, and tenders are to be invited for carrying out the work.

Barnet. The second portion of Bedford-avenue is to be made up. At a recent meeting of the Isolation Hospital Committee it was decided to apply to the County Council for permission to borrow 4,000*l.* for extensions to the hospital.

Battersea.—The carriageway of Clapham-common-road is to be made-up with tarred slag macadam at an estimated cost of 2,190*l.* Other works are to be carried out in connexion with this, including the provision of new 12-in. by 18-in. kerbing, at an estimated cost of 2,324*l.*

Bermondsey.—Plans have been passed for Mr. J. M. Kennard, architect, 13, Railway-approach, London Bridge, S.E., on behalf of Mr. W. J. Hall, for the erection of buildings in St. Helena-road.

Camberwell.—The Council have decided to carry out, on behalf of the London County Council, paving works, etc., in connexion with the widening of a portion of Camberwell New-road The cost is put at 240*l.*, excluding pipe alterations. In consequence of Messrs. E. & E. Iles withdrawing their tender for carrying out kerbing, channelling, foundations, and roadwork, etc., in part of Redpost-hill, fresh tenders are to be obtained.

Croydon.—At the last meeting of the County Council a memorial was received for the immediate enlargement of the South Norwood Baths. This was referred to the Sanitary Committee. Electricity mains are to be extended at an estimated cost of 1,945*l.* The following plans have been passed:—Mr. W. Booth, 101, Queen Victoria-street, E.C., Salvation Army Hall, Brighton-road; Messrs. Higgins & Thomerson, 37, Finsbury-pavement, E.C., six houses, Macclesfield-road; Mr. E. A. Tyler, Ealing, W., three houses and shops, Brigstock-road: Messrs. Smith & Sons, 202, London-road, hall, Thornton-road, and two houses, Pollard's-hill West; London Co: and Westminster Bank, Ltd., bank and house, London-road, Norbury; Mr. J. Cooper, 101, Cherry Orchard-road, fifteen houses, Kilmartin-avenue; Messrs. Paish, Tyler, & Co., 6, Station-road, West Croydon, four houses, Fryston-avenue; Mr. J. B. Gunn, West Kensington, S.W., four houses, Shirley-road.

Finchley.—The following plans have been passed:—Mr. J. T. Cherry, four houses, Friern Barnet-lane; Mr. J. Watts, four houses, Rosemary-avenue; Mr. E. Brown, motor garage, Oaklands, Woodside Grange-road. Plans have been lodged by the Co-Partnerships Tenants, Ltd., for twenty houses off Regent's Park-road; also by Mr. Robert Turner's executors, for three roads and sewers on Willow Lodge Estate.

Greenwich.—Vanbrugh-fields is to be formed and paved as a new street. Tenders are to be invited for forming and paving Kidbrooke-gardens.

Hackney.—Portion of Wattisfield-road is to be made up as a new street. In connexion with the reconstruction and electrification of the tramways in Dalston-lane and Graham-road, the Borough Council has decided to intimate to the London County Council, at whose expense the paving will be laid, that they prefer that the breasts of the carriageways (which are to be afterwards maintained by the Borough Council) to be paved with Acme sectional jarrah wood-blocks, 3 in. deep, subject to the condition that the Acme Flooring and Paving Company (1904), Ltd. (the sub-contractors for the work), shall first enter into an undertaking with the Borough Council that they will maintain the paving in good condition to the satisfaction of the Borough Engineer and Surveyor, and free of all expense to the Council, for a period of seven years from the date at which the work is completed. The Works Committee have decided to provide an above-ground châlet in Victoria Park at an estimated cost of 700*l.* The work of kerbing, paving, etc., to improve the entrance to the Park, is to be carried out at an estimated cost of 775*l.* Messrs. Gordon & Gunton, F.R.I.B.A., Finsbury House, Blomfield-street, E.C., have been appointed architects to act with the Borough Electrical Engineer for the erection of the necessary buildings included in the scheme for the extension of the electricity undertaking. The following plans have been passed:—Messrs. J. Garey & Sons, on behalf of Messrs. F. W. Glover & Son, building, Lower Clapton-road; Mr. J. Tennant, factory, Hertford-road; Messrs. Sheffield Brothers, factory, rear of No. 3, Downs Park-road: Messrs. G. Wilson & Co., buildings, rear No. 130. Lansdowne-road.

Hendon (Urban).—Sanctions have been received from the Local Government to the borrowing of 11,642*l.* for street improvement works in Golder's Green-road: 17,053*l.* for the proposed garden suburb schools and 695*l.* for the equipment and furniture. The Surveyor has been instructed to prepare plans and estimates for making-up portion of Colindale-avenue; the footpaths are to be paved with artificial stone. The tender of Messrs. H. Elliott & Co., Ealing, has been accepted at 806*l.* for carrying out sewerage and surface-water drainage work in Green-lane. The following plans have been passed:—Mr. F. W. Troup, additions to Spalding Hall, Victoria-road; Messrs. Harvey & Potter, dairy, etc., Finchley-road; Messrs. Haymills, Ltd., motor garage, Golder's Green-road; Mr. T. G. Golby, six houses, Limes-avenue, Mill Hill: Mr. W. J. King, four houses, Park drive and The Park, Golder's Green; Metropolitan Electric Tramways Company, omnibus garage, Edgware-road, The Hyde. The following have been lodged:—Mr. S. W. Bristowe, six houses, The Drive, Golder's-green; the Ecclesiastical Commissioners, new road, near Cricklewood-lane: Mr. J. D. Rawlings, six houses, St. George's-road; Mr. T. Dinwiddy, ten shops, Hale-lane, Mill Hill; Mr. J. Gibb, six shops, Lawrence-street, Mill Hill; Hampstead Heath Extension Tenants, four houses, Hampstead-way; Messrs. Hamiltons, seventy-eight houses, Neald-crescent and Queen's-crescent.

Islington.—Electricity mains are to be extended at an estimated cost of 333*l.*

Kensington.—Siphon trapped pan gullies are to be substituted for the existing obsolete type in eight roads, at an estimated cost of 324*l.* The tenders of the Improved Wood Pavement Company, Ltd., have been accepted as follows:—Laying new wood-paving: portion of Clarendon-road, 9s. 10½d. per super. yard; portion of Ovington-square, 9s. 3½d. per super. yard: portion of Thurloe-place, 11s. 9d. per super. yard; renewing wood-paving: portions of Kensington High-street and Kensington-road, 7s. 6d. per super. yard; Sydney-place and Onslow-square, 6s. 3½d. per super. yard: portion of Gloucester-road, 6s. 10½d. per super. yard; portion of Richmond-road, 7s. 5½d. per super. yard; portion of Ladbroke-grov 6s. 10½d. per super. yard.

Lambeth.—Portions of the carriageways Waterloo-road, York-road, and Stamford-stre are to be repaved with Swedish paving bloc at an estimated cost of 315*l.* Plans have be lodged with the London County Council, Mr. Walter Cave, for the erection of a buil ing at the corner of Exton-street and Secke street.

Lewisham.—Plans prepared by the Borou Surveyor have been approved for paving a forming Thomas-lane. The cost is put at 44 The Improved Wood Pavement Compan Ltd., are to be offered the wood-paving wo along the route of the new tramways fro Rushey-green to Forest-hill, at the prices out in their contract, which was accepted f paving Catford-bridge. Artificial stone is be laid in lieu of the existing tar-paving portions of nine roads, at an estimated cost 254*l.* Repair works are to be carried out St. Mildred's-road at an estimated cost 178*l.* Plans have been lodged by Messrs. J. Heath & Sons for the erection of six houses Arthurdon-street; also for Messrs. F. & Abbiss for fifteen houses in Bartram-road a six houses in Brockley-road.

Shoreditch.—In connexion with the propos of the Council to repave Shrubland-road, estimate of the Northern Quarries Company lay a 4-in. bed of Quarrite paving, with waterproof surface of strong bitumen, stre with granite chippings, upon foundations be prepared by the Council, at 4s. 2d. square yard, has been accepted, the work be guaranteed for a period of twelve months.

Surbiton.—Tenders are to be invited carrying out the work of making-up Malve road. The carriageway is to be done with macadam on hardcore foundations, with paving for the footpaths.

Tottenham.—Tenders are to be invited straightening and culverting the Stonebrid Brook, South Tottenham. The following pl have been passed:—Messrs. Whitbread & C additions at the Bell Brewery, 676, Hi road; Mr. H. Lebus, re-erection of wood w shed, Ferry-lane; Mr. W. Brown, the Ea public-house, Tottenham; alterations, etc., Black Boy public-house, West Green-ros Messrs. Millington & Sons, extensions to factory, Crown Works, Fountayne-road; A. Dixon, additions at Oakdale Arms, Herr tage-road; Mr. S. E. Child, twenty-th houses, Gladesmore-road; Messrs. Tucker Sons, Ltd., timber stores, Lawrence-road. following have lodged plans:—Mr. H. Couchman, shop and warehouse, Bruce-grov Messrs. James A. Jacobs, Ltd., factory, ne Tariff-road; Messrs. Hale & Co., gara Queen's Head public-house, Green-lanes.

Walthamstow.—Sanction has been receiv from the Local Government Board to borrowing of 217*l.* for making-up Evesh avenue. Plans have been passed for Mes H. Slow & Son for the executors of late J. Hitchman, for the erection of four houses Forest View-road. Plans have been lod by Mr. J. E. Ashby for the erection of foundry, etc., in Blackhorse-lane; also by F. G. Faunch, on behalf of the Trustees Commercial-street Trust, for the erection a chapel and Sunday-school in Church-hill.

Wandsworth.—The following tenders h been accepted:—Messrs. J. Mowlem & Ltd., paving part of Cowick-road, Toot (footpaths with Aberdeen adamant), 625*l.*; Thomas Adams, repairing part of C borough-road, Streatham, 264*l.*; Messrs. Woodham & Sons, repairs to part of Prince road, Southfield, 787*l.* Plans have passed for Messrs. Holloway Brothers (Londo Ltd., for the erection of a motor garage, alterations and additions to Sylva, Putn Heath; also for Mr. J. J. Taylor, for fourte houses in Oakmead-road, Balham.

Watford (Rural).—Plans have been pas for Messrs. Clutterbuck & Co., of Chorleywo for additions to the Old Red Lion pub house, Grove-place, Aldenham; also for Rickmansworth and Uxbridge Water Co pany, for a pumping-station at the Swille

West Ham.—The Education Committee h decided to invite tenders for the erection o new handicraft centre at the Upton-l School. The Architect to the Education C mittee has been instructed to prepare pl for remodelling two departments of the Cla son-street School on more modern lines.

Westminster.—Various maintenance wo are to be carried out in three streets at estimated cost of 284*l.* The tender of Mes H. V. Smith & Co. has been accepted carrying out tar-spraying works in thirty-t streets (making a total of 117,610 super. y at 1¾d. per square yard. Consent is to given to Messrs. Harrods, Ltd., to constru subway under the footway on the north sid Brompton-road. A petition is to be presc in favour of the Housing and Town Plann

to., Act (1909) Amendment Bill. The following tenders have been accepted for paving the undermentioned streets with wood at the stated osts:—Improved Wood Pavement Company, Ltd., Gloucester-street, 3,243*l.* 4s.; Henrietta-treet, 576*l.* 5s. 4d.; Knightsbridge-green, 77*l.* 10s.; portion of Lees-mews, 230*l.* 12s. 6d.; Little Bruton-street, 152*l.* 7s. 11d.; Lowndes-lace, 610*l.* 0s. 6d.; portion of Mall-approach, 85*l.* 15s.; Motcomb-street, 773*l.* 19s. 2d.; portion of Portugal-street, 323*l.* 15s. 6d.; Semley-place, 1,147*l.* 17s. 5d.; portion of Spring-gardens, 172*l.* 2s. 11d.; Tilney-street, 95*l.* 17s. 6d.; portion of Vauxhall Bridge-oad, 2,121*l.* 18s. 8d.; portion of Vincent-quare, 1,284*l.* 1s. 3d.; portion of Westmore-and-street, 1,274*l.* 19s. 7d.; Messrs. William Griffiths & Co., Ltd., portion of Lupus-street, 220*l.* 16s.; portion of Grosvenor-road, 1,006*l.* 8s.; Cliveden-place, 1,013*l.* 2s. 6d. The enders of the Limmer Asphalte Paving Company, Ltd., and the London Asphalte Company, Ltd., have also been accepted for paving ith asphalt Chadwick-street, at 738*l.* 16s. 8d.; nd portion of Drury-lane, at 776*l.* 11s. 2d., espectively.

Willesden.—Tenders are to be invited for he erection of a caretaker's house at the esley-road School. Plans prepared by the ngineer have been approved for making up ortion of Wotton-road, Cricklewood. Tenders re to be invited, and application is to be ade to the Local Government Board for nction to borrow 2,053*l.*, for making-up ewbury-road and Donnington road, Harles-en.

Wood Green.—Plans have been passed for r. T. Stevens for additions to the Ranelagh ublic-house, Bound's Green-road.

OBITUARY.

Mr. P. Kerr.

The late Mr. Peter Kerr, of Melbourne, ictoria, was elected a Fellow of the Royal stitute of British Architects in 1889. In our ue of April 30, 1892, we illustrated his signs, with plans, elevations, and sections, r the Houses of Parliament, Melbourne.

Mr. E. T. Felgate.

Mr. Ernest Theodore Felgate, Lic.R.I.B.A., ose death also is announced, practised in ork, and, until a few years ago, in partner-ip with Mr. J. E. Hepworth—the firm of ssrs. Felgate & Hepworth, architects and evevors, was dissolved in December, 1906. r. Felgate was the architect of the Church nday-schools, and of several villas and other idences at Haxby, and, in 1909, of the nd stand erected for the exhibition of the xby and District Agricultural and Horti-tural Society.

FOREIGN AND COLONIAL.

ternational Building Exhibition at Leipzig in 1913.

With reference to the notice on p. 130 of *Board of Trade Journal* of April 20, 1911, ative to an International Building Exhibi-n to be held at Leipzig in 1913, it is notified t some further particulars have now been ived from the British Vice-Consul at that n (Mr. R. M. Turner). The exhibition will open from May till October; it is intended embrace all home and foreign products used building or for interior decoration, furniture fittings, and building materials of all ds. There will be eight sections, divided various groups, including, *inter alia*, ineering building works; decorating and nishing of interiors; laying-out of gardens parks; manufacture, preparation, and use various building materials; heating and ting apparatus; machinery used in the ding trades; and sanitation and fire pre-tion. Applications for space must be made he Directors, International Building Ex-tion, Leipzig, before October 1, 1912. A copies of the programme (in English) of exhibition, together with forms of applica for space, may be obtained by British s at the Commercial Intelligence Branch he Board of Trade, 73, Basinghall-street, don, E.C.

Russian Cement Trade.

r. P. Stevens, British Consul, reporting on trade of Batoum (Russia) for the year states that, with the great advance made ecent years in the use of cement for a ety of purposes, and more especially in ing reinforced concrete buildings, etc., the and for cement was very great. The Port-cement works at Novorossisk and Gelendjik were unable to keep pace with the consumption, and towards the middle of the year a serious cement famine occurred. Prices of cement rose to a fabulous level, and before long it became evident that steps for the importation of cement from abroad would have to be taken unless all constructional works requiring cement were brought to a standstill. Before prices began to decline, and the Russian cement works referred to were able to cope with the unprecedented situation, 1,342 tons of Portland cement were imported from Austria-Hungary, and a smaller quantity was landed for the harbour works at Poti. Extensive plants of the rotary kiln kind are now being erected at Novorossisk, Gelendjik, and Tuapse, and it is hoped, when these additional works are completed, a repetition of the dearth will be averted.

Building in Portuguese East Africa.

It is hoped shortly to establish a large first-class hotel and possibly a casino at Lourenço Marques, which it is felt would be extremely popular among visitors from the Transvaal. A fine hospital is in course of erection in one of the seaward suburbs, which it is hoped may be completed during 1912. One of the evidences of commercial improvement, however, lies in the growing demand for houses. Of these there is a decided shortage, and the want of medium-sized residences of a superior class grows more and more insistent. As a result a number of new buildings have made their appearance during the past year, but indications point to a prolonged period of considerable activity in the building trade locally.

Stoneware Pipes and Specials, Malta.

The Commercial Intelligence Branch of the Board of Trade is notified by the Crown Agents for the Colonies that sealed tenders will be received at the Office of the Receiver-General and Director of Contracts, Valletta, up to 11 a.m. on May 30, for the supply of stoneware pipes and specials. Tenders are to be accompanied by a deposit of 100*l.* If the tenderer does not reside in Malta, his tender must contain the name of a person residing in the island, to whom power must be given to represent the tenderer. Copies of the specification and form of tender may be obtained on application to the Crown Agents for the Colonies, Whitehall-gardens, London, S.W.

Mills, Saskatchewan and Alberta.

The issue of the *Canadian Miller* for May states that a seven-story flour-mill with a capacity of 2,000 barrels per day and grain elevators with a storage space of 200,000 bushels, are about to be erected in Regina, Saskatchewan. The mill is expected to be complete and in operation by September, 1913. The same journal also announces that about 500,000 dollars (about 102,700*l.*) will be spent on the erection at Medicine Hat, Alberta, of a flour-mill with a capacity of 3,000 barrels daily, an elevator to hold 400,000 bushels, and a warehouse for 2,500 barrels.

Building in Bahia, Brazil.

The following information is from the report by H.M. Consul at Bahia (Mr. W. H. M. Sinclair) on the trade of that district in 1911, which will shortly be issued:—A great deal of activity exists in the building trade, both in the city and suburbs. In the lower city or business quarter numbers of old houses are being pulled down with a view to the construction of an avenue of modern buildings. The expenses of expropriation are being met by the Federal Government with the proceeds of a 2 per cent. tax on imports payable in gold, established in connexion with the harbour works (see *Board of Trade Journal* of March 4, 1909, p. 427). There is a growing demand for iron beams and girders, as well as for cement and building materials of all kinds. It is probable that elevators will be required if the new buildings are erected on the lines intended by the promoters of the scheme.

Sanatoria, Constantinople.

The *Zentral Anzeiger für das öffentliche Lieferungswesen* (Vienna) of April 21 states that Mr. S. Haimovici, of Bucharest, has formed a company with a capital of 3,800,000 lei (152,000*l.*) to be increased to 5,000,000 lei (200,000*l.*) for the purpose of constructing and working two open-air sanatoria at a place called Cury-Jalova, which can be reached in two hours from Constantinople.

Harbour Works, etc., Italy.

The following information is from the report by the British Vice-Consul at Syracuse (Mr. J. Lobb), on the trade of that district in 1911, which will shortly be issued:—

Owing to the lack of sufficient wharves and harbour accommodation at Syracuse, and to the increasing traffic as a result of the annexation of Tripoli and Cyrenaica, the Italian Government have under consideration a project and estimates for the carrying out of extensive harbour improvements, and the construction of a new railway-station, custom-house, and post-office for sorting letters, etc., arriving from Tripoli. There are also projects for harbour improvements at the port of Augusta, and during the year 1911 a large area of land near the wharf was levelled for the purpose of being utilised as a depôt for coal.

TRADE CATALOGUES.

Claridge's Patent Asphalte Company, Ltd., send us a pamphlet enumerating the uses and fire resisting properties of their specialty, and the purposes to which it may be applied with advantage in building and other construction. The principal constituent of Claridge's asphalt is the bituminous limestone procured from the mines at Pyrimont, near Seyssel, in France. This mineral is ground to a fine powder and mixed hot with a certain proportion of pure bitumen, a proportion of grit being also added, and the mixture run into moulds, forming blocks which weigh about 1 cwt. each. The pamphlet contains various practical notes of service to architects and builders, as well as illustrations showing methods of applying the asphalt in construction, and references to numerous buildings and structures where this material has been employed. Having been extensively used for nearly three-quarters of a century, this asphalt has amply justified the claims made on its behalf by the makers.

PATENTS.

APPLICATIONS PUBLISHED.*

8,102 of 1911.—Samuel Elliott: Casement or French windows.

10,274 of 1911.—Frank Edgeler Williamson. Heating systems.

11,133 of 1911.—Ben Henry Johnson and Frederick Rings: Concrete floors and like structures.

11,752 of 1911.—Bernard Charles Molloy: Windows.

14,960 of 1911.—Moses James Adams: Flushing apparatus.

16,485 of 1911.—Frederick George Hallett: Sash fasteners.

18,102 of 1911.—John Howard Cartland and Joseph Lilly: Gear boxes or brackets for the operating mechanism of fanlights, windows, and the like.

20,076 of 1911.—Dr. Johann Heinrich Schallenberg: Compositions for hastening the setting of cements and the like, and for water proofing them.

21,146 of 1911.—Allan Mortimer Hirsh: Sectional concrete pipes and methods of making the same by jointing.

22,215 of 1911. Michael Freeman Loundar. George Freeman Loundar, and William Freeman Loundar: Movable shelf brackets.

22,335 of 1911.—Herbert James Bertsford: Water-closets.

27,248 of 1911.—Reginald Tavernor Johnson: Lavatory brackets.

27,271 of 1911.—Hugh Thomson: Cowl for ventilating shafts.

250 of 1912.—Edmond Lanhoffer: Roofing slates or tiles and the method of fixing same.

4,326 of 1912.—Charles Henry Freeman and Samuel Rowland Parkes: Manufacture of glazing bars for roof-lights and windows, and ridge cappings for skylights.

5,073 of 1912.—Robert Brown: Lavatory basins.

5,408 of 1912.—William Nelson Haden, Charles Ingham Haden, and Herbert James Adams: Operating gear for ventilators and the like.

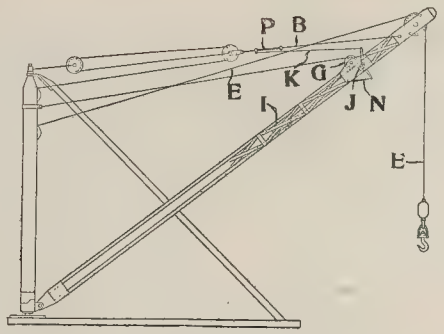
5,875 of 1912.—Percival William Flavel: Gas fires.

SELECTED PATENTS.

28,023 of 1910.—James Thomas Butters, of Messrs. Butters Brothers & Co., and Alexander Morton Hume: Cranes.

This relates to cranes as described in specification No. 25,292-1909, wherein the lifting-rope is automatically locked to the jib-head to support the jib when the supporting-rope breaks. An auxiliary rope is provided which is secured at one end to the crane post, and, after passing around a pulley G on the jib, is connected at its free end to a sliding weight I. A pivoted block J is held away from the pulley G against a spring N, by a rope K secured to the jib-supporting rope B, through

* All these applications are in the stage in which opposition to the grant of Patents upon them can be made.

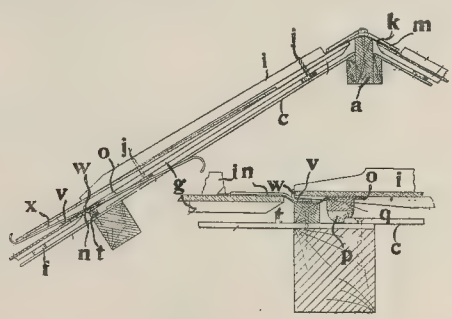


28,023 of 1910.

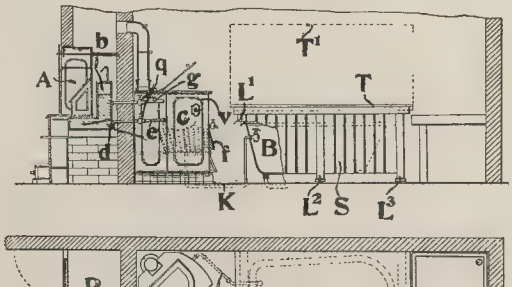
a spring connexion P. When the supporting-rope breaks, the block is released and locks the auxiliary rope to the jib, which is thus supported.

28,764 of 1910.—Robert Hudson: Glazing roofs.

This relates to glazed roofs wherein the glazing elements are constructed to provide the glazed parts with a degree of flexibility, and to allow all cleaning and repairs being done from the inside. Flexible spars are secured to the purlins and support grooved sash-bars *g* on intermediate washers *f*; the glass panes are secured between the sash-bars and capping-bars of triangular section by screws *j*, which pass through the spars, washers, sash-bars, and capping-bars, and are manipulated from the inside of the building. At the rear the flashing-strip *k* is held down by wire springs *m* secured to the ridge member *a*, and the upper ends of the capping-bars *i* are cut V-shape to accommodate correspondingly-shaped portions of the flashing. Between adjoining rows of panes, flashing strips *n* are provided, supported on wood strips *t*, and held down by wire springs *v*, secured by the nails or screws used to secure the flashings and strips to the purlins, the upper ends of the springs being formed with upwardly-bent portions *w* to prevent glass panes from sliding down when the screws *j* are slackened. The upper ends of the flashings *n* are bent over at *o*, and are arranged either to leave ventilation spaces beneath the glass, or to make contact with the glass by blocks *q* supported on cork or other spring pads *p*.



28,764 of 1910.



28,838 of 1910.

28,838 of 1910.—Frederick Bath Burby and Ernest Jones: Ranges, coppers, and baths.

This relates to combination apparatus for use in artisans' dwellings. The non-pressure boiler *b* of the range A is connected by circulating-pipes *e*, *g*, to the boiling-vat *c* of the copper C, which is provided with a fireplace *f*, for use when the range fire is not alight. Taps *q* in the pipes *e*, *g*, allow the copper to be isolated from the range boiler when it is in use for washing. A bath B is connected to the copper or the range boiler by a pipe K; in either case, a fire in the range or in the copper heats water for the bath. The bath is covered when not in use by a board T, the side S, and castor-supported legs L^1, L^2, L^3. The side S has also arms U, having a groove and tongue connexion with arms V projecting from the wall, so that the side S and top T are supported when drawn out to the position S^1, T^1, to form a partition. Curtains Z complete the enclosure of the bathing space.

29,379 of 1910.—Henry Charles Platts: Fireplaces.

This relates to an open domestic fireplace wherein a casing is secured to the front by nuts and lugs, and adjustable openings control the air supply to the fire. Doors are provided for the supply of fuel and removal of ashes, and a shoot formed to direct the fuel. The casing may be of transparent material; it may be in two or more parts connected by hinges, and may be mounted on wheels or the like for easy removal, or hinged to the fireplace.

495 of 1911.—Dr. Fritz von Emperger: Columns.

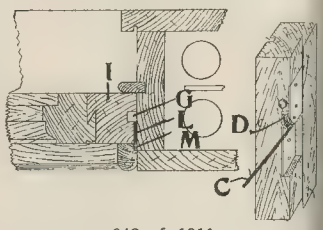
This relates to columns which are formed with a tubular iron lining, surrounded by concrete containing helical and longitudinal reinforcement. A flanged ring forms a support for joists. The lining may be built up of plates, and may have diametral partitions.

521 of 1911.—Samuel Stelling: Chimney-tops.

This relates to a chimney-top which consists of three superposed conical sections. The lowest section has an enlarged base, and the intermediate and inverted top sections are formed with vertical slots or openings, which may have diverging sides.

642 of 1911.—William Charles Jennings: Windows.

This relates to windows having sash-bars pivoted to sliding stiles, and wherein the sash-cords *C* pass down grooves *G* in the sliding stiles, under pulleys *D*, and are connected to the sashes, so that the sashes are balanced when in the turned down position as well as in the sliding position. The sash-cords are knotted, and are secured in bent plates on the sashes. The sliding stiles *I* are provided with plates *L*, which work in grooves *M* in the frame, to prevent the stiles *I* from coming away from the frame. The frame is provided with a false head to enable the upper sash to be turned down beneath the lower sash when raised.



642 of 1911.

648 of 1911.—William Charles Gilbert: Machines for mixing concrete.

This relates to apparatus for mixing the ingredients of cement and similar powdered materials in which the materials are delivered to the apparatus by a set of rollers with pockets, the rollers being driven by belt or friction-gearing, so that, in case of one roller jamming, the others can go on; also the edges against which the rollers work are so formed as to avoid jamming. The edge *e* against which the roller *a* works is rounded so as to press hard substances back amongst the material without jamming. The rollers *a* deliver into a chamber *c*, provided with inspection openings *q* opposite to the rollers. Unmixed material is fed to the chamber *c* by a conveyer *f*. The material is removed

PATENTS.—*Continued on page 651.*

List of Competitions, Contracts, etc.

For some Contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) are advertised in this number:** Competitions, iv.; Contracts, iv. vi. viii. x.; Public Appointments, xviii.; Auction Sales, xxii. Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Competitions.

JUNE 1.—**Dunfermline.**—INSTITUTE AT NETHERTOWN.—Cost not to exceed 7,000*l.* Premiums of 200*l.*, 150*l.*, and 100*l.* Assessor, Mr. E. A. Jamieson. Particulars from the Secretary, Carnegie Trust, Abbot-street, Dunfermline.

JUNE 3. -**Sheffield.** CRIPPLES' HOME.—Limited to local architects. Mr. E. M. Gibbs, F.R.I.B.A., and Mr. F. E. P. Edwards, F.R.I.B.A., assessors.

JUNE 14.— **Conisbrough.** — ADDITIONS TO HOSPITAL.—The Doncaster and Mexbrough Joint Hospital Board invite competitive plans for additions to Isolation Hospital. See advertisement in issue of May 17 for further particulars.

JUNE 24.—**Reigate.** CORPORATION FARMHOUSE. Not to exceed 550*l.* Local architects only. Premiums 10*l.* 10s. Particulars from the Town Clerk, Reigate.

* JUNE 24. -**Wales.** -TWO SANATORIA.—The Executive Committee of the King Edward VII. Welsh National Memorial invite architects to submit sketches for two sanatoria, one in North and the other in South Wales. Accommodation, 150 and 250 beds respectively. See advertisement in this issue for further particulars.

JUNE 26. **Birmingham.** BATHS.—Twenty and 10 guineas for second and third designs. Applications for conditions to be sent to the Superintendent Engineer, Kent-street, Birmingham

JUNE 28.—**Hale, Cheshire.** -TOWN PLANNING SCHEME.—Premiums 50*l.* and 25*l.* Particulars from the Council Offices, Hale. See issue of May 24 (page 601).

* JUNE 28.—**Regent's Quadrant.**—DESIGN FOR TREATMENT.—Premiums, 25 guineas, and 25 guineas divided. Adjudicators, Mr. W. Flockhart, Mr. E. A. Rickards, and Mr Alan E. Munby. See advertisement in this issue for further particulars; also "Competition News," issue of April 19 (page 453), May 3 (page 512), May 10 (page 537).

JUNE 30.—**Padiham.**—TOWN HALL, BATHS, ETC. —Premiums 40*l.* and 20*l.* Particulars from Mr. J. Gregson, A.M.Inst.C.E., Surveyor's Office, Padiham.

JULY 1.—**Dusseldorf.**—A plan for the extension of the City of Dusseldorf. Premiums of 1,000*l.* to 375*l.* Conditions on application to the Chief Burgomaster, Dusseldorf. A translation appeared on page 365, September 29

JULY 1 -**Port of London.**—NEW OFFICES.—Limited to those mentioned in "Competition News," issue of April 12 (page 424).

AUGUST 6. — **Cardiff.** — FIRE-STATION. — The Cardiff Corporation invite designs and estimates for a fire brigade station in Westgate-street. Mr. A. Marshall Mackenzie, assessor. Particulars from the Town Clerk, City Hall, Cardiff.

AUGUST 30. - SAXON SNELL PRIZE. — Fifty guineas; with medal, is offered for essay on a hospital subject. Particulars from the Sanitary Institute, 90, Buckingham Palace-road, S.W.

OCTOBER 1. —**Ottawa.** — MONUMENT TO KING EDWARD VII.—Sketch models in plaster to be sent to the Director of National Art Gallery, Ottawa.

NO DATE.—**Jordanhill, Glasgow.**—PROPOSED TRAINING COLLEGE. Limited to six firms, named in "Competition News," December 1, page 635.

NO DATE —**Warrington.** — SCHOOL. - The Warrington Education Committee invite competitive plans for the erection of a public elementary school. See advertisement in issue of February 16 for further particulars.

Contracts.

BUILDING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

MAY 31. **Harwich.** -FIRE-STATION, ETC Erection of a fire-station and public convenience. Drawings seen, and specification and quantities, with form of tender, on deposit of 1*l.* 1s., from H. Ditcham, Borough Surveyor, 42, Church-street.

MAY 31. -**Royston.** -ADDITIONS, ETC.—For additions and alterations to Royston Vicarage. Plans seen, and quantities from Mr. Joseph Oldroyd, architect, Royston Manor, Barnsley

JUNE 1.—**Ballina.**—WORKS. -For sundry works Ballina Cathedral. Plans and specification with Messrs. William H. Byrne & Son, architects, 20, Suffolk-street, Dublin.

JUNE 1.—**Tuam.** — POINTING.—For exterior pointing, etc., of Tuam Cathedral. Specification with Messrs. William H. Byrne & Son, architects, 20, Suffolk-street, Dublin. Quantities by Messrs. Morris & Co., 68, Harcourt-street, Dublin.

JUNE 3.—**Craigantlet.**—HALL.—Erection of a mission hall at Craigantlet, Co. Down. Plan and specification with Mr. J. S. Munce, B.E., A.M.Inst.C.E., C.E., 141, Scottish Provident-buildings, Belfast.

JUNE 3. **Southend.** -BLOCK.—Construction of new administrative block at the Sanatorium. Plans, specifications, and conditions seen, and form of tender and quantities, on deposit of 1*l.* 1s., to Mr. Ernest J. Elford, M.Inst.C.E., Borough Surveyor, Southend-on-Sea.

JUNE 4.—**Blackwood.**—HOUSES.—For erection of ten semi-detached houses for the Plas Farm Building Club. Plans and specifications with Mr. Ralph Simmonds, architect, Royal-chambers, Blackwood.

JUNE 4 —**Carnarvon.** — ALTERATIONS. — For alterations to 18, Bangor-street. Plans and specification with Mr. E. F. White, M.S.A., architect and surveyor, 17, Bridge-street, Carnarvon.

JUNE 5.—**Ballinrobe.**—CHAPEL.—For building a mortuary chapel at Ballinrobe Church. Plans with Messrs. William H. Byrne & Son, architects, 20, Suffolk-street, Dublin. Quantities by Messrs. Morris & Co., Harcourt-street, Dublin.

JUNE 5.—**Basingstoke.**—CHAPEL, ETC.—For erection of cemetery chapel, lodge, boundary-wall railing and entrance gates. Plans seen, and specification and quantities from Mr. F. R. Phipps, A.M.Inst.C.E., Surveyor to the Board, Town Hall, Basingstoke. Deposit of 1*l.* 1s.

JUNE 5.—**Fegg Hayes.**—MILL.—For erection of a fustian cutting mill. Drawings, general conditions, and specifications with Mr R. Burslam, architect and surveyor, Moody-street, Congleton.

JUNE 5.—**Greenore.** -VILLA.—For erection of a detached villa at Templetown, Greenore. Plans and specifications with Mr. P. Cahill, C.E., architect, Francis-street, Dundalk.

JUNE 6. —**Ellon.** - HOUSE.—Construction of dwelling-house at Mill of Waterton, Ellon. Plans and specifications with Mr. Hugh M'Donald, land steward, Ellon.

JUNE 6.—**London.**—EXTENSION —For the extension of Brixton Sorting Office. Drawings, specification, and conditions and form of contract with Mr. J. Rutherford, 22, Carlisle-place, London, S.W. Quantities and forms of tender, on deposit of 1*l.* 1s., from the Secretary, H.M. Office of Works, etc., Storey's gate, London, S.W.

JUNE 6. **Manchester.**—SHELTER. —For erection of a rustic shelter at Gorton Park. Drawings seen, and specification from the City Architect, Town Hall. Deposit of 10s. 6d.

JUNE 7. **Ilkley.** -ADDITIONS.—For additions to Ben Rhydding Council School. Plans seen, and specifications, with quantities, from the Education Architect, County Hall, Wakefield. Deposit of 1*l.*

JUNE 7. **Rugby.**—ADDITIONS.—For erection of additions to the public baths, Regent-street. Plans and general conditions of contract seen, and specification and quantities from Mr. D. G. Macdonald, C.E., Engineer and Surveyor, Benn-buildings, Rugby.

JUNE 7 **Twynyffald.**—HOUSES —Erection of sixty houses at Twynyffald, near Blackwood, Mon. Plans and specification with Mr Dan H. Price, Surveyor's Office, Aberbargoed, or Mr. W. Beddoe Rees, 3, Dumfries-place, Cardiff, on deposit of 2*l.* 2s.

JUNE 8.—**Boston.**—HOUSE, ETC.—Erection of a house, stables, and cowshed in Brothertoft-road, Boston. Quantities and forms of tender from Mr. Frederick Parker, F.S.A., architect, 7, Pump-square, Boston.

JUNE 8.—**Carrickmacross.** CHAPEL.—Erection of a chapel at the Convent of St. Louis, Carrickmacross, Co. Monaghan. Plans and specification with Mr. J. J. M'Donnell, architect, 27, Chichester-street, Belfast, and quantities from Messrs. W. H. Stephens & Sons, 13, Donegall-square, North Belfast.

JUNE 8. **Devizes.** REPAIRS, ETC.—For constructural repairs, etc., to Avondale. Specifications seen, and particulars from the Borough Surveyor, Town Hall.

JUNE 8.—**Great Chisall.**—COTTAGES.—For erection of a pair of cottages. Plans, specifications, and tender with Mr. H. H. Dunn, A.R.I.B.A., County Architect, Sidney-street, Cambridge.

JUNE 8. **Ripon.** FACTORY —Erection of a factory at Ripon, for Messrs. Abbott & Co. Plans and specifications with Mr. Thomas Stokes, architect, Thirsk.

JUNE 8.—**Selby.**—COTTAGES.—Erection of fifteen cottages on land in East Common-lane. Plans and specifications seen, and particulars from Mr. Bruce Gray, C.E., F.R.S.Edin., Council-chambers, Selby.

JUNE 8. —**Shrewsbury.** — ALTERATIONS.—For alterations and improvements to the Presbyterian Chapel, Bomere Heath, near Shrewsbury. Plans and specifications with Messrs. Dickens-Lewis & Haynes, architects, Pengwerne-chambers, Pride-hill, Shrewsbury.

JUNE 10.—**Sherborne.**—HEADQUARTERS.—For erection of new headquarters in Acreman street, for the Territorial Force Association for the County of Dorset. Plan and specification from Mr. F. T. Maltby, A.M.Inst.C.E., architect and Surveyor, Dorchester. Deposit of 1*l.* 1s.

JUNE 10.—**Sudbury.** -ROOM, ETC.—For construction of a new bathroom and water-closet, etc., at St. Leonard's Hospital. Drawing, specifications, and conditions with the architect, Mr. A. Howard, Cornard-road, Sudbury.

JUNE 10 —**Swindon.** -CENTRES —For erection of two domestic centres. Plans and specifications with Mr. R. J. Beswick, architect, Victoria-road, Swindon. Deposit of 1*l.* 1s. for quantities.

* JUNE 11 **Chesham.** POST-OFFICE ADDITIONS. -The Commissioners of H.M. Works and Public Buildings invite tenders for alterations and additions to post-office, Chesham. See advertisement in this issue for further particulars.

JUNE 11.—**Seven Sisters.**—HOUSES.—Erection of forty-two houses at Seven Sisters, for the Bryndulais Building Club. Plans and specification with Mr. J Cook Rees, M.S.A., Parade-chambers, Neath.

JUNE 11.—**Ware.**—URINAL.—Erection of a brick urinal. Plans and specification with the Surveyor, Town Hall, Ware.

JUNE 12. **Ousefleet.** -BUILDINGS.—Erection of new farm buildings at Ousefleet. Plans seen, and specifications, with quantities, from the West Riding Land Agent, County Hall, Wakefield. Deposit of 1*l.*

JUNE 13.—**Halifax.**—POINTING.—For pointing sundry portions of the borough police-courts, Harrison road, Halifax. Specifications seen, and forms of tender from Mr. James Lord, M.Inst.C.E., Borough Engineer, Town Hall, Halifax. Deposit of 5*l.*

* JUNE 13 -**Southend-on-Sea.**—ADDITIONS, ETC. -The Southend-on-Sea Education Committee invite tenders for alterations and additions to London road Infants' Council School. See advertisement in this issue for further particulars.

JUNE 15.—**Benfleet.**—ROOM, ETC.—Erection of a classroom and sundry alterations at North Benfleet School. Plans and specifications at the school.

JUNE 15.—**Dewsbury.**—HOUSE.—Erection of a stone-built chalk mixing-house at Broadstone Reservoir, near Cumberworth. Plans and specifications seen, and quantities from Mr. H. Dearden, Waterworks Engineer, Town Hall, Dewsbury.

JUNE 15. —**London.** —ADDITIONS, ETC. —The Metropolitan Asylums Board invite tenders for alterations and additions to the medical superintendent's house, at the Northern Convalescent Fever Hospital, Winchmore-hill, N. Drawing and specification, by Mr. W. T. Hatch, M.Inst.C.E. M.I.Mech.E., Engineer-in-Chief, at the Office of the Board, Embankment, E.C. Deposit of 1*l.*

JUNE 15. **Shotton.**—HOTEL.—Erection of a new hotel at Shotton, near Chester. Plans and specifications by Mr. Sam. Evans, F.S.I., architect, The Grove, Rhyl. Quantities on deposit of 3*l.* 3s.

* JUNE 15.—**Winchmore Hill, N.**—ADDITIONS, ETC.—The Metropolitan Asylums Board invite tenders for alterations and additions to Medical Superintendent's House at Northern Convalescent Fever Hospital. See advertisement in this issue for further particulars.

JUNE 17.—**Hastings.**—SCREENS.—Construction and erection of twenty-five hardwood screens upon the sea front at Hastings and St. Leonards. Drawings seen, and specification and form of tender from the Borough Engineer, Mr. P. H. Palmer, M.Inst.C.E., Town Hall, Hastings

* JUNE 17. **Southend-on-Sea.** ADMINISTRATIVE BLOCK.—The Southend-on-Sea Corporation invite tenders for new administrative block at Sanatorium See advertisement in this issue for further particulars

* JUNE 22 **Leytonstone.** -SHOPS, ETC. The Trustees of Harrington's Charity invite tenders for erection of six shops and premises in High-road. See advertisement in this issue for further particulars.

BUILDING—*continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

JUNE 22.—**Llanelly.**—ADDITIONS, ETC.—For proposed new schoolroom and additions. Plans and specifications with Mr. Wm. Griffiths, F.S.I., architect, Llanelly.

JUNE 24.—**Keighley.** — EXTENSIONS. — Alterations and extensions to the baths in Albert-street. Drawings and quantities from the architects, Messrs. J. B. Bailey & Son, Scott-street, Keighley.

JUNE 28.—**Hythe.**—HALL, ETC.—For erection of a public hall, police-courts, offices, and other works in Corporation-street, Water-street, and Greenfield-street. Plans and specifications seen, and quantities and particulars from the Borough Surveyor, Mr. J. Diggle, A.M.Inst.C.E., Town Hall, Hyde, on deposit of 3l. 3s.

No DATE.—**Barnsley.**—PREMISES.—For new club premises for the Committee of the Darton Working Men's Club and Institute. Messrs. R. & W. Dixon, Lics.R.I.B.A., architects, 5, Eastgate, Barnsley.

No DATE.—**Barry.**—HOUSE.—Erection of a house at Romilly Park, Barry. 2l. 2s. cheque deposit for quantities to Messrs. Ivor Jones & Percy Thomas, architects, 18, St. Mary-street, Cardiff.

No DATE.—**Belper.**—ELECTRIC PALACE.—For erection of an electric palace of varieties, King-street Mr E. B. Dean, M.S.A., architect, Market chambers, Mansfield. Plans, etc., seen, and quantities on deposit of 1l. 1s.

No DATE.—**Chapel-en-le-Frith.** HALL.—Erection of the proposed Constitutional Hall, at Chapel-en-le-Frith. Architect, Mr. William Swann, St. Peter's-chambers, Stockport.

No DATE.—**Chelmsford.**—THEATRE.—Erection of a new theatre building at Chelmsford. Deposit of 2l. 2s. to Mr. N. J. Dawson, A.R.I.B.A., architect, 17, Duke-street, Chelmsford.

No DATE.—**Cliffe.**—VILLAS.—For pair of villas at Station-road, Cliffe-at-Hoo. Plans, specifications, and conditions of contract with Mr. W. Crockett, architect, Station-road, Cliffe.

No DATE.—**Hull.**—STORES.—For erection of new bottling store, and alterations in Raywell-street, for Messrs. Moors & Robson's Breweries, Ltd. Plans, specifications, and conditions of contract with Messrs. Harbron & Robson architects, 50, Spring-bank, Hull. Quantities on deposit of 1l. 1s.

No DATE.—**Leeds.**—HALL.—For erection of Victoria Picture Hall, York-road. Plans and particulars with Messrs. W. Rodgers & Co., Balkan-grove, York-road, Leeds.

No DATE.—**Riddlesden.** HOUSE.—Erection of a detached house, Riddlesden. Mr. Hartley Hogarth, architect, Compton-buildings, Bow-street, Keighley.

No DATE.—**Ware.**—HOUSE, ETC.—Erection of a boiler-house and other alterations at the Workhouse Plans and specifications at the Workhouse, and quantities from Mr. Farley, of Hertford, on deposit of 1l. 1s.

ENGINEERING, IRON, AND STEEL.

JUNE 3.—**Clonpriest.** EMBANKMENT.—For building up the breaches in the sea embankment at Clonpriest, near Killeagh. Specification and plan by Messrs W. H. Hill & Son, 28, Southmall, Cork.

JUNE 4.—**Cambridge.**—MAIN, ETC.—Construction of a 24-in. cast-iron rising main from the sewage pumping-station to the farm; construction of a 24-in cast-iron outfall from the sewage farm to the river. Drawings and specification seen, and quantities and form of tender from the Borough Surveyor, on deposit of 1l 1s.

JUNE 10.—**Clones.**—BRIDGES.—For the reconstruction of two underline bridges between Clones and Enniskillen, for the Great Northern Railway Company (Ireland). Drawings and specification at the Engineer's Offices at Dublin and Belfast, and quantities and form of tender from Mr. T. Morrison, Secretary, Amiens-street Terminus, Dublin, on deposit of 2l. 2s.

JUNE 10.—**Middlesbrough.** — BRIDGE. — The North-Eastern Railway invite tenders for the reconstruction of Marsh-road Bridge, over the railway at Middlesbrough. Plans seen, and specification, quantities, and form of tender from Mr. C. F. Bengough, the company's engineer at York.

JUNE 11.—**Newcastle-on-Tyne.**—BRIDGE.—For the pulling down and rebuilding of the bridge carrying Argyle-street over the main line and branches of the North-Eastern Railway at Newcastle-on-Tyne. Plans, specification, and quantities at the office of Mr. Charles A. Harrison, Chief Engineer, Forth Banks Newcastle-on-Tyne.

JUNE 15.—**Dewsbury.**—TANK.—Construction of a concrete water tank at Broadstone Reservoir. Plans, sections, and specifications seen, and quantities from Mr. H. Dearden, Waterworks Engineer, Town Hall, Dewsbury.

JUNE 17.—**Shoeburyness.** — TANK, ETC.—For erection of a cast-iron tank 30 ft. by 14 ft. by 6 ft. deep; erection of an 80-b.h.p. gas-engine (Hornsby Stockport preferred), line shafting, etc.; and erection of a set of three-throw pumps. Specification and particulars from the Engineer at the Waterworks, Shoeburyness.

✱ JULY 5.—**Beverley.** — BRIDGE.—The East Riding of Yorkshire C.C. invite tenders for removal of existing bridge across River Hull, near Beverley, and construction of a new opening bridge on the site of existing bridge, etc. See advertisement in this issue for further particulars.

AUGUST 31.—**Reykjavik, Iceland.** HARBOUR Construction of a harbour, including construction of three moles, two steamboat piers, and dredging works. General and special conditions of tender at the Commercial Intelligence Branch of the Board of Trade, 73, Basinghall-street, E.C.

FURNITURE, PAINTING, MATERIALS, etc.

MAY 31.—**Barnstaple.**—PANELLING.—For the renewal of the wood panelling on the wall adjoining the railway at the end of the Long Bridge. Specification at the Surveyor's (Mr J. C. Southcombe's) Office, Bridge-buildings

JUNE 1.—**Ballina.**—PAINTING.—For painting and decorating work at Ballina Cathedral. Specification with Messrs. William H. Byrne & Son, architects, 20, Suffolk-street, Dublin.

JUNE 3.—**Dundee.**—PARTITION.—For the fixing of a sliding and folding partition at the South-road Public School. Quantities, form of tender, and plans at the School Board Offices, Dundee.

JUNE 4.—**Birmingham.**—PAINTING.—For painting the interior of the church at the Guardians' Institution, Western-road. Specifications and particulars from the Master of the Institution.

✱ JUNE 4. — **London, E.C.** — DEMOLITION.—Messrs. Horne & Co. invite tenders for demolition and clearing away of the whole of the building and rubbish of the G.P.O. East. See advertisement in this issue for further particulars.

JUNE 7.—**Richmond.**—PAINTING.—For works of painting, paperhanging, and distempering at the workmen's dwellings in Manor-grove, Victoria-place, and North Sheen, Richmond. Conditions of the contract with the Borough Surveyor, Town Hall, Richmond. Deposit of 10s. 6d.

JUNE 10. **Brighton.** FLOOR.—For the construction of a new floor to the music-room of the Royal Pavilion. Specification and form of tender from the Borough Surveyor, Town Hall, Brighton.

✱ JUNE 10.—**London, E.**—REDECORATING LIBRARY.—The Stepney B.C. invite tenders for redecorating Public Library in Castle-street, St. George-in-the-East, Stepney, E. See advertisement in this issue for further particulars.

✱ JUNE 12 **Upper Edmonton.**—INSIDE PAINTING. The Edmonton Guardians invite tenders for inside painting of infirmary, 77, Bridport-road. See advertisement in this issue for further particulars.

JUNE 22.—**King's Lynn.**—PAINTING.—For cleaning and colouring the interior of the following schools:—St. Nicholas' Schools, Pilot-street; South Lynn All Saints' Schools, South Everard-street; St. Michael's School, Saddlebow-road; cookery centre, St. James'-road. Specifications and particulars with Mr. A. J. Smith, Borough Surveyor, Town Hall, King's Lynn.

ROADS, SANITARY AND WATER WORKS.

JUNE 3.—**Battersea.**—GRANITE.—For supply of about 6,000-ft. run of 12-in. by 8-in. granite kerb and 200 tons of 5-in. by 4-in. dressed granite setts. Mr. W. Marcus Wilkins, Town Clerk, Town Hall, Battersea, S.W.

JUNE 3.—**Bedwas.**—ROAD.—For the construction of a new road at Bedwas, Mon. Plans, specifications, forms of tender, etc., on deposit of 1l., to Mr. A. E. S. Thomas, solicitor, Pengam, and Bedwas, Mon

JUNE 3.—**Hastings.** GRANITE.—For supply of 2,000 tons of broken granite suitable for road metal. Specification, form of tender, and information from the Borough Engineer, Mr. P. H. Paimer, M.Inst.C.E., Town Hall, Hastings.

JUNE 4.—**Hunslet.**—STREETS.—For making-up of private streets at Halton. Plans and specifications seen and forms of tender, with quantities from Mr. W. B. Pindar, Clerk to the Council, Leek-street, Hunslet, Leeds.

JUNE 4.—**St. Albans.** SEWAGE.—For providing and laying new sewers and building manholes at Redbourn, near St Albans, Herts. Plan, specification, and form of contract seen, and quantities from the Surveyor, Mr. Henry F. Mence, 11, St Peter's-street, St. Albans. Deposit of 1l. 1s.

JUNE 5.—**Hove.**—PAVING, ETC.—For paving and other works in Glebe-villas. Plan and specification with the Borough Surveyor, Town Hall, Hove.

JUNE 5.—**Woolwich.**—PAVING.—The Metropolitan Asylums Board invite tenders for granolithic paving at the Brook Ambulance Station, Shooter's Hill-road, Woolwich, S.E. Specification and form of tender at the Office of the Board, Embankment, E.C. Deposit of 1l.

✱ JUNE 10.—**Camberwell, S.E.**—ROAD-MAKING The Camberwell B.C. invite tenders for kerbing, channelling, foundations for asphalt paving, and roadwork in Red Post-hill. See advertisement in this issue for further particulars.

JUNE 10.—**Wakefield.** STREETS.—For private street works in Major-street. Plan and specification seen, and quantities and form of tender from Mr. J. P. Wakeford, A.M.Inst.C.E., City Surveyor, Town Hall.

JUNE 11.—**Gosforth.**—SEWER.—For laying 9-in. rainwater sewer in Elmfield-gardens Particulars from Mr. G. Nelson, A.M.Inst.C.E. Engineer and Surveyor to the Council, Council chambers, High-street, Gosforth.

✱ JUNE 11.—**Tottenham.** TAR, ETC., PAVING.—The Tottenham U.D.C. invite tenders for repairs of the tar and asphalt paving throughout their district. See advertisement in this issue for further particulars.

JUNE 12.—**Bembridge.**—SEWAGE.—For laying 9-in flanged pipes, with necessary bolts, washers, hatch-boxes, etc., for the construction of a sewer outfall. Plan, specification, and forms of tender from the Council's Surveyor, Mr. H. B. Cullin, Brooklands, Wootton, Isle of Wight.

JUNE 12 **Enfield.** GRANITE.—For supply of 3,300 tons of 1½-in. hand-broken Clee Hill dhu or best blue Guernsey granite. Mr. Richard Collins, Council's Surveyor, Public Offices, Enfield.

✱ JUNE 18.—**East Ham, E.**—TAR-PAVING.—The East Ham Education Committee invite tenders for repairs to tar-paving at Kenesington avenue, Shaftesbury-road, and Walton-road schools. See advertisement in this issue for further particulars.

JUNE 18.—**Wembley.**—ROAD.—For private and public street improvement works. Drawings and specifications with Mr. Cecil R. W. Chapman, the Engineer and Surveyor to the Council, Public Offices, Wembley

Public Appointments.

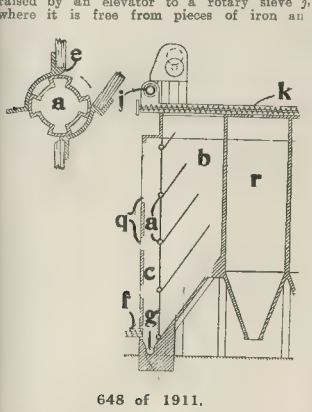
Nature of Appointment.	By whom Advertised.	Salary.	Application to be in
*CLERK OF WORKS	Brentford Union	3l. 3s. per week	June 5
*QUANTITY SURVEYOR	Essex C.C.	200l. per annum	June 7
*CLERK OF WORKS	Edmonton Union	3l. 3s. per week	June 10
*QUANTITY SURVEYOR	Burnley Corporation	200l per annum	June 11
*PROFESSOR OF ARCHITECTURE	Manchester Univ. & Ed. Com.	600l. per annum	June 18

Auction Sales.

Nature and Place of Sale.	By whom Offered.	Date of Sale.
*BUILDER & DECORATOR'S STOCK & PLANT, GT. PULTENEY-ST., W. On the Prems.	May & Rowden	June 6
*SHOPFITTER'S MACHINERY, PLANT, Etc., 175, HIGH HOLBORN—On the Premises	Fryett, White, & Co.	June 6
*BUILDING SITES, CITY OF LONDON AND HOLBORN—At the Mart	Jones, Lang, & Co.	June 10
*FREEHOLD BUILDING LAND, TWICKENHAM—At the Mart	Farebrother, Ellis, & Co.	June 11
*BUILDING MATERIALS, IRONMONGERY, ETC., 86, BANNER-ST. On the Premises	Fryett, White, & Co.	June 11
*DEALS, BATTENS, BOARDS, TIMBER, ETC. Great Hall, Winchester House, E.C.	Churchill & Sim	June 12
*STOCK OF TENT & TARPAULIN MANUFACTURER, 86, BANNER-ST.—On the Premises	Fryett, White, & Co.	June 12
*BUILDING MATERIALS, CLAPHAM, S.W.—On the Site	Hooker & Webb	June 13
*FREEHOLD BUILDING ESTATE, HACKBRIDGE—At the Mart	Debenham, Tewson, Richardson, & Co.	June 15
*FREEHOLD PROPERTY—At the Mart	Debenham, Tewson, Richardson, & Co.	June 18

PATENTS.—*Continued from page 648.*

from the chamber *c* by a conveyer *g*, and raised by an elevator to a rotary sieve *j*, where it is free from pieces of iron an



648 of 1911.

similar impurities. It then passes to a conveyer *k*, which returns most of the material to a chamber *b*, whence it is removed by the roller *a*, an amount equal to that introduced by the conveyer *f* passing to a silo *r*.

TO CORRESPONDENTS.

NOTE.—All communications with respect to literary and artistic matters should be addressed to "THE EDITOR" (and not to any person by name); those relating to advertisements and other exclusively business matters should be addressed to "THE PUBLISHER," and *not* to the Editor.

All communications must be authenticated by the name and address of the sender, whether for publication or not. No notice can be taken of anonymous communications.

The responsibility of signed articles, letters, and papers read at meetings rests, of course, with the authors.

We cannot undertake to return rejected communications; and the Editor cannot be responsible for drawings, photographs, manuscripts, or other documents, or for models or samples, sent to or left at this office, unless he has specially asked for them.

All drawings sent to or left at this office for consideration should bear the owner's name and address either the face or back of the drawing. Delay and inconvenience may result from inattention to this.

Any commission to a contributor to write an article, or to execute or lend a drawing for publication, is given subject to the approval of the article or drawing, when received, by the Editor, who retains the right to reject it if unsatisfactory. The receipt by the author of a proof of an article in type does not necessarily imply its acceptance.

N.B.—Illustrations of the First Premiated Design in any important architectural competition will always be purchased for publication by the Editor, whether they have been formally asked for or not

SOME RECENT SALES OF PROPERTY:

ESTATE EXCHANGE REPORT.

May 10.—By KEMSLEY.

Tattershall, Lincs. Tattershall Estate, 860 acres, f. (remaining portion) £14,641

May 11.—By MOORE & SON.

Sedon, Worcs.—Clattsmore Farm, 75 a. 3 r. 19 p., f. 2,160

May 13.—By DRIVER, JONAS, & CO.

Hackney. Mare-st., f.g. rents 100l., reversion in 18 yrs..... 2,600

Whyteleafe, Surrey.—Spring Cottage and 1 a. 0 r. 13 p., f 360

By BALLS & BALLS.

Paxton.—32, Torrens-rd., u.t. 69 yrs., g.r. 7l., y.r. 30l. 290

By PERCIVAL HODSON.

Good Green.—5, Sylvan-villas, f., y.r. 26l. 350

By GILBERT & HOW.

Clouch End.—Holly Park, Oaklands, f., p..... 950

By KEMSLEY.

Cadwell Heath, Essex. Home House Farm, 43¾ acres, f. 3,700

Eckhurst Hill.—Roebuck-la., Elmwood, f., y.r. 50l. 750

Roebuck-la., plot of land, f. 550

By MARKS & BARLEY.

Eckhurst Hill. Roebuck-la., The Roebuck Hotel, f., p..... 2,850

By WILKINSON, SON, & WELCH.

Brighton.—11 and 12, North-st. (s.), f., y.r. 350l. 5,850

May 14.—By BROWETT & TAYLOR.

Burwood. -110, Auckland-rd., u.t. 68 yrs., g.r. 20l., y.r. 77l. 175

Hall, Avenue-rd., u.t. 62 yrs., g.r. 12l. 10s., y.r. 50l. 250

Land and 7, Queen's-rd., u.t. 48 yrs., g.r. 17l. 8s., y. and e.r. 78l. 150

By CURTIS & HENSON.

Hyde Park.—42, Sussex-gdns., u.t. 25 yrs., g.r. 6l., y.r. 250l. £2,700

By C. W. DAVIES & SON.

Holloway.—333, 335, and 341, Camden-rd., u.t. 33 yrs., g.r. 24l., y.r. 117l. 450

Islington.—1, Gordon st., f., w.r. 43l. 10s. 300

Hornsey Rise.—44 and 46, Grenville-rd., u.t. 67 yrs., g.r. 6l., w.r. 57l. 1s. 230

By E. GIBBS & CO.

Tooting.—2 to 8 (even), Defoe-rd., u.t. 57¼ yrs., g.r. nil, y.r. 132l. 980

18 and 22, Defoe-rd., u.t. 54¼ and 56¼ yrs., g.r. 12l. 10s., e.r. 70l. 350

South Kensington.—2, Fawcett-st., u.t. 50¾ yrs., g.r. 8l. 10s., y.r. 55l. 300

5, Oakfield-st., u.t. 50¾ yrs., g.r. 8l. 10s., y.r. 60l. 350

By DREWEATT & WATSON.

Newbury, Berks.—Hambridge-rd., four houses, f., w.r. 57l. 4s. 600

Lambourne, Berks.—Pasture land, 11¾ acres, f. 165

By DENYER & COLLINS.

Tonbridge, Kent. 33 and 37, High-st. (s.), f.... 2,100

Three cottages and garden, f., w.r. 30l. 11s. 295

Roller skating rink, f. 365

133 and 135, Shipbourne-rd., and piece of land, f. 395

Yardley Park rd., fruit and grass land, 4 acres, f. 650

Hadlow, Kent.—Winchester and Star Farms, 34¾ acres, f 2,505

May 15.—By H. DONALDSON & SONS.

Islington.—2, 3, 4, and 5, Barnsbury-sq., f., y.r. 120l. 1,065

Clapton.—80 and 82, Powerscroft-rd., u.t. 63 yrs., g.r. 10l., y.r. 62l. 585

By FOSTER & CRANFIELD.

Herne Hill.—Dulwich-rd., f.g. rents 40l. 9s. 6d., reversion in 50 yrs. 940

Old Ford.—St. Stephen's-rd., f.g.r. 20l., reversion in 83 yrs 410

Kentish Town. Castle-rd., etc., f.g. rents 60l. 12s., reversion in 48¼ yrs 1,320

By MAPLE & CO.

Northwood, Middlesex.—Frithwood-av., building site, f 1,100

By MARLER & CO.

South Kensington. 127, Warwick rd. (s.), u.t. 63 yrs., g.r. 17l., y.r. 100l. 430

By ROGERS, CHAPMAN, & THOMAS.

Wanstead. Cambridge pl., Cheops, f., y.r. 40l. 6,000

By GEO. TROLLOPE & SONS.

Sandhurst, Berks. Amberrow Farm, 272 a. 2 r. 23 p., f. 7,250

By JAMES ELY.

Langriville, Lincs.—Freehold farm, 198 a. 1 r. 22 p. 1,100

May 16.—By DANIEL WATNEY & SONS.

City.—1, Dunster-ct. (offices), f., y.r. 550l. 10,530

Strand.—3, Clare-market, area 300 ft., f., p. 1,600

Paddington.—18, London-st. (s.), u.t. 37¼ yrs., g.r. 20l., gross rental 150l. 650

Kilburn.—41 and 43, Callcott-rd., u.t. 74 yrs., g.r. 18l. 18s., y.r. 90l. 510

By CHESTERTON & SONS.

Wood Green. 133, High-rd. (s.), f., y.r. 100l.... 1,870

By FRITH & CO.

Camberwell.—281, Camberwell-rd. (s.), f., y.r. 60l. 300

Finsbury Park. 4, Tuncred-rd., u.t. 65½ yrs., g.r. 6l. 10s., e.r 36l. 280

By NEWBON & SHEPHARDS.

Stamford Hill.—13, 15, 17, and 19, Crowland-rd., u.t. 67 yrs., g.r. 28l., w.r. 171l. 12s. 655

Forest Gate.—118, Odessa-rd., f., w.r. 22l. 2s.... 160

Dalston.—95, Greenwood-rd., u.t. 39 yrs., g.r. 7l., y.r. 36l. 200

Holloway.—14, Huddleston-rd., u.t. 55 yrs., g.r. 7l., y.r. 42l. 5s. 295

53 to 61 (odd), Charteris rd., u.t. 20 yrs., g.r 19l., y.r. 115l. 500

Highbury.—103, 105, and 107, Highbury-hill, u.t. 65 yrs., g.r. 21l., y.r. 146l. 1,210

Hornsey rise.—435, 437, and 441, Hornsey rd. (s.), u.t. 35 yrs., g.r. 15l., y.r. 102l. 500

1, 3, and 5, Lambton rd, u.t. 65 yrs., g.r. 13l., y.r. 72l. 415

By STIMSON & SONS.

Anerley.—34 and 36, Jasmine-gr., f., y.r., 64l. 600

Brixton.—9, Geneva-rd., u.t. 54 yrs., g.r. 6l., e.r. 36l. 265

Chiswick.—53 and 59, Riverview-gr., u.t. 90 yrs., g.r. 10l. 10s., y.r. 44l. 4s. 150

2 to 14 (even), 11 to 17 (odd), Rockitt-rd., u.t. 56 yrs., g.r. 49l. 10s., w.r. 327l. 12s. 325

Kentish Town. 21, Burghley-rd., u.t. 51 yrs., g.r. 9l. 9s., y.r. 50l. 250

By GRIMLEY & SON.

Saltley, Warwick. 391 to 399 (odd), Alum Rock-rd., u.t. 95 yrs., g.r. 13l. 15s., w.r. 101l. 8s. 1,750

Smethwick, Staffs.—201 and 202, Grove-la., f. 370

Handsworth, Staffs.—68, Alfred-rd., f., w.r. 19l. 17s. 600

94 and 96, Newcombe-rd., f., w.r. 44l. 4s. ... 265

91 and 93, Booth-st., f. 990

By KNIGHT, FRANK, & RUTLEY.

Redlynch, Somerset. -Part of the Redlynch Estate, 3,205 acres, f.... 70,242

By ALFRED J. BURROWS.

Maidstone, Kent. 109, Week-st. (s.), f., y.r. 53l. 720

4, 6, 8, and 10, Bower-st., f., w.r. 72l. 16s. ... 300

Lenham, Kent. Four cottages, f., w.r. 26l

May 17.—By JOHN BARKER & CO.

Kensington.—22, Holland-rd., u.t. 38 yrs., g.r. 8l., y.r. 50l. 405

By PRICKETT & ELLIS.

Kentish Town.—31, Lady Somerset-rd., u.t. 65 yrs., g.r. 7l., y.r. 45l. 355

By R. B. SIM & SON.

Walthamstow.—43, Evelyn-rd., f., w.r. 27l. 6s. 240

By EDWARD WOOD.

Battersea.—4, Heaver rd., u.t. 65 yrs., g.r. 5l., w.r. 33l. 16s. £205

Clapham.—17, Cavendish-rd., u.t. 72 yrs., g.r. 13l., y.r. 55l. 450

Brockley.—6, Stillness rd., u.t. 85 yrs., g.r. 6l., e.r. 28l. 200

By ALFRED PREECE.

Dulwich.—16 to 24 (even), Pickwick-rd., u.t. 92 yrs., g.r. 36l. 15s., y.r. 190l. 1,265

Tooting.—57, Lucien-rd., f., y.r. 28l.... 275

Twickenham.—12, Haggard-rd., u.t. 56 yrs., g.r. 5l. 10s., w.r. 30l. 105

Hornsey. 16 and 18, Grove-house-rd., u.t. 55 yrs., g.r. 9l., w.r. 67l. 12s. 190

20, 22, and 24, Grove House-rd., f., w.r. 83l. 12s. 635

Peckham.—Gibbon-rd., l.g.r. 100l., u.t. 51 yrs., g.r. 47l. 10s 410

Finchley.—Christchurch-av., five residences, f., y. and e.r. 280l. 2,845

Edmonton.—351, Hertford-rd. (s.), f., e.r. 36l. 275

Ilford.—30, Hampton-rd., u.t. 86 yrs., g.r. 5l., w.r. 35l. 2s. 130

By G. B. HILLIARD & SON.

Chelmsford, Essex.—Coval Hall and Red Cow Hotel, 8 a. 2 r. 21 p., f..... 5,700

May 20.—By E. HUGH HENRY.

Peckham.—Sunwell-st., f.g. rents 38l. 15s., reversion in 53 yrs..... 795

Battersea.—50, Thorparch-rd., u.t. 72 yrs., g.r. 8l., w.r. 41l. 12s. 160

By G. B. HILLIARD & SON.

Fyfield, Essex.—Lee House and Green's Farm, 72 a. 2 r. 4 p., f 1,125

Stanford Rivers, Essex.—Four pieces of grass land, 3 a. 0 r. 38 p., f. 100

By JONES, LANG, & CO.

Peckham.—Sumner-rd., f.g.r. 10l., reversion in 42¼ yrs. 250

Battersea.—High-st., f.g.r. 23l., reversion in 44 yrs. 600

Leyton.—Church-rd., f.g.r. 20l., reversion in 36½ yrs. 450

Plumstead. Brewery rd., f.g. rents 11l., reversion in 44 yrs. 230

Piedmont-rd., f.g. rents 9l., reversion in 66 yrs. 190

Brockley.—Brockley-rd., l.g. rents 46l., u.t. 54 yrs., g.r. 20l. 440

By G. E. SWORDER & SONS.

Braughing, Herts.—The Mount and 16 acres, f. 2,500

By TUCKETT & SON.

Hampstead. High-rd., f.g. rents 199l., reversion in 62 yrs. 5,500

West End-la., f.g.r. 22l. 10s., reversion in 67 yrs 560

Chislett-rd., f.g.r. 17l. 10s., reversion in 69 yrs. 445

Cleve rd., f.g.r. 16l. 16s., reversion in 69 yrs. 435

By WEATHERALL & GREEN.

St. John's Wood.—Carlton Hill, f.g. rents 27l. 10s., reversion in 37 yrs 730

Bow.—Blackthorne-st., f.g. rents 17l. 5s., reversion in 51 yrs 340

Hampstead. Avenue-rd., l.g.r. 25l., u.t. 21 yrs., g.r. nil 275

St. John's Wood. 28a, Upper William-st., u.t. 9 yrs., g.r. 25l., y.r. 75l 220

Clerkenwell.—Rosebery-av., f.g.r. 21l., reversion in 9 yrs..... 1,000

May 21.—By BEALE & CAPPS.

Acton.—Park-rd. North, f.g.r. 5l. 5s., reversion in 63 yrs 110

Bollo Bridge-rd., f.g. rents 29l., reversion in 63 yrs. 690

By DEBENHAM, TEWSON, RICHARDSON, & CO.

Bethnal Green.—Old Ford rd., f.g.r. 50l., u.t. 927 yrs 1,100

By EDWIN FOX, BOUSFIELD, BURNETTS, & BADDELEY.

Euston-rd. No. 302 (s.), f., y.r. 140l. 1,900

By HERRING, SON, & DAW.

Westcliff, Essex.—Hermitage-rd., Sunnyside, f., y.r. 36l. 420

By RUTLEY, SON, & VINE.

Hampstead.—Cotley-rd., f.g. rents 34l., reversion in 74 yrs. 730

Kilburn.—Aldershot-rd., f.g. rents 14l., reversion in 71 yrs. 290

Wood Green. Lordship-la., l.g. rents 39l., u.t. 59 yrs., g.r. 3l. 580

St. Pancras.—7 and 8, Platt-st., u.t. 33 yrs., g.r. 14l., y.r. 90l. 630

13, Goldington-st., u.t. 33 yrs., g.r. 6l. 6s., y.r. 40l. 215

By FRANK SWAIN.

Kensington. 166, Church-st. (s.), f., e.r. 80l.... 1,210

By BRODIE, TIMBS, & CO.

St. John's Wood. -25, Abbey-gdns., u.t. 27 yrs., g.r. 8l., y.r. 44l. 225

Wood Green.—24, Truro-rd., f., y.r. 32l. 370

Bowes Park. Bounds Green-rd., Rosebank, u.t. 66 yrs., g.r. 8l., y.r. 32l 235

Chelsea.—Blantyre-st., Blantyre Arms p.h., f., y.r. 175l. 3,050

Knightsbridge. -33, Kinnerton-st. and stabling, u.t. 44 yrs. at 40l., y.r. 140l. 100

Kensington.—Lexham-gdns., l.g. rents 56l. 12s., u.t. 58 yrs., g.r. 34l 335

Chelsea. 1, Little Cadogan-pl., u.t. 13 yrs. at 30l., with possession 150

By W. WATSON & SON.

Alfreton, Derbyshire.—Carnfield Hall Estate, 833 acres, f. 16,732

By HAMPTON & SONS.

Baschurch, Shropshire.—Marton Hall Estate, 629 acres, f. 18,420

By LEE & FARR.

Cippenham, Bucks.—Spring Cottages and 1¼ acre, f.... 620

Slough, Bucks.—Eversley and Heckfield, f. ... 1,170

May 22.—By BUNCH & DUKE.

Walthamstow.—198 and 200, Queen's-rd., u.t. 69 yrs., g.r. 6l., w.r. 44l. 4s. 145

Homerton.—54 and 56, Templar-rd., u.t. 65 yrs., g.r. 9l., w.r. 58l. 10s. £210
69, Templar-rd., f., w.r. 33l. 16s. 235
1, 3, and 5, Church-rd., f., w.r. 97l. 10s. 720
210, 212, and 214, High-st., and 12, Nisbet-st., f., y. and w.r. 234l. 4s 1,350
2 to 16 (even), Marsh-hill, and plot of land, f., w.r. 399l. 2s. 2,400

By CHONK.

Farningham, Kent.—Speedgate Farm, 147 a. 0 r. 33 p., f 1,670
Sutton-at-Hone, Kent.—Deaths Croft, 13 a. 0 r. 28 p., f. 900
Horton Kirby, Kent.—Four cottages and 1¾ acre, f., w.r. 44l. 4s. 350

By DYER, SON, & HILTON.

Blackheath.—165, Old Dover-rd., u.t. 89 yrs., g.r. 4l. 16s., w.r. 36l. 8s 300
24 and 25, Vanbrugh-park, u.t. 45 yrs., g.r. 32l., p. 242

By HAROLD GRIFFIN.

Battersea. 12, Rollo-st., u.t. 50 yrs., g.r. 4l., w.r. 33l. 16s 100

By HENRY HOLMES & CO.

Paddington. 12, Sale-st., u.t. 18 yrs., g.r. 10l. 12s., w.r. 81l. 18s. 3d. 250
Kentish Town.—72, Queen's-cres. (s.), u.t. 28½ yrs., g.r. 7l., y.r. 70l. 690
Twickenham.—62, 64, and 66, London-rd. (s.), u.t. 43¼ yrs., g.r. 12l., y.r. 125l. 1,200

By DOUGLAS YOUNG & CO.

Clapham. 21, Larkhall-rise, u.t. 50 yrs., g.r. 10l., o.r. 5l. 375
32, Haseltrigge-rd., u.t. 54 yrs., g.r. 5l. 10s., p. 158
Tooting.—48, Robinson-rd., u.t. 92 yrs., g.r. 6l., w.r. 36l. 8s. 230
Norbury. Beatrice-av., f.g. rents 94l., reversion in 90 yrs 2,190

By G. B. HILLIARD & SON.

Great Leighs, Essex.—Long's Farm, 192 a. 3 r. 2 p., f. and c. 2,550

By WYATT & SON.

Woodmancot, Sussex.—Copyhold cottage 105
Chichester, Sussex. 7 and 8, North st. (s.), f., y.r. 82l. 10s. 1,800
South Mundham, Sussex.—Arable and pasture, 16 a. 2 r. 25 p., f. 650
North Bersted, Sussex. — Rookery Farm, 99 a. 1 r. 15 p., f. 4,200

By T. WOODS.

Feltham, Middlesex. — Accommodation and building land, 41 a. 1 r. 21 p., f. 4,000
Holly Farm, 35 a. 0 r. 8 p., f. 3,050
Arable land, 31 a. 3 r. 12 p., f. 1,900
Thanet House and 55 acres, f. 4,600
Accommodation land, 20 a. 2 r. 11 p., f. 1,800
West end, Cedar Lodge and one acre, f., y.r. 55l. 850
Meadow land, 2 a. 2 r. 8 p., f. 200
1 and 2, Wheatsheaf Cottages, f., y.r. 31l. 4s. 500
Residence and two plots, f 415
Arable land, 3 a. 2 r. 18 p., f. 400

Hanworth, Middlesex. Arable land, 7 a. 3 r. 18 p., f. £580
House and two cottages, f., w.r. 45l. 18s. 500
Copyhold cottages, y.r. 15l. 110
Hatton, Middlesex.—Residence and 1 a. 0 r. 13 p., f 450
Arable field, 18 a. 2 r. 33 p., f. and c. 1,430

May 24.—By H. J. BLISS & SONS.

Bethnal Green. Fuller-st, f.g. rents 12l. 12s., reversion in 42 yrs. 1,400
186, Bethnal Green-rd. and 4, Fuller-st., f., y.r. 55l. 625

By CANE & CO.

Camberwell.—39, Talfourd-rd., f., y.r. 38l. 405
Peckham.—14, 16, and 18, Denman-rd; u.t. 35 yrs., g.r. 18l. 18s., gross rental 122l. 18s. 6 0

By CHAS. CANEY.

Peckham. 139, 141, 143, and 145, Peckham Park-rd. and 1, g. rents 17l. 12s. 8d., u.t. 147 yrs., g.r. 25l. 6s. 4d., w.r. 156l. 890

By H. HOOKEY & CO.

Kentish Town.—Litcham-st., f.g. rents 19l., reversions in 42 and 48 yrs. 245
2 and 3, Litcham-st., f., w.r. 109l. 4s. 255
194, Weedington-rd., u.t. 44 yrs., g.r. 6l. 6s., w.r. 54l. 12s. 125
By C. C. & T. MOORE.
Eltham, Kent. — Court-rd., Mayfield, u.t. 54 yrs., g.r. 3 l., e.r. 150l. 1,000
Poplar 37 to 43 (odd), Spey-st., u.t. 53 yrs., g.r 12l., w.r. 140l. 8s. 675
9, Ullin-st., u.t. 53 yrs., g.r. 4l. 10s., w.r. 33l. 16s 155

By NEWBON & SHEPHARDS.

Barnsbury.—9 to 12, Barnsbury-sq., f., y. and e.r. 255l. 2,200
Islington.—Liverpool-rd., c.g.r. 49l. 19s. 10d., reversion in 23 yrs 1,210
Hammersmith.—Studland-st., etc., l.g. rents 40l., u.t. 5 yrs., g.r. 10s. 9d 615
Pentonville. 43 and 45, Risinghill-st., u.t. 21 yrs., g.r. 20l., w.r. 182l. 165

By STIMSON & SONS.

Peckham.—Danby-st., f.g. rents 28l. 16s., reversion in 63 yrs 660
Cronin-rd., etc., f.g. rents 35l., reversion in 51 yrs. 710
120 to 130 (even), Cronin-rd., f., w.r. 169l. 1,120
Camberwell. —219, Camberwell-rd., f., y.r. 36l. 87, 89, and 91, New Church-rd. (s.), f., y.r. 89l. 8, 10, and 16, Southampton-st., f., w.r. 74l. 2s. 1,510
Stockwell.—71 to 79 (odd), Dalyell-rd., u.t. 58 yrs., g.r. 30l., y. and w.r. 185l. 16s. 540
Brixton. 10 and 12, Milstead-st., u.t. 45 yrs., g.r. 6l., w.r. 52l. 990
Camberwell. Lothian-rd., l.g. rents 23l., u.t. 47 yrs., g.r. 13l. 250
Canonbury. Ashby-rd., etc., l.g. rents 32l. 2s., u.t. 34 yrs., g.r. 10l. 130
Tottenham.—150, Mount Pleasant-rd., f., y.r. 28l. 305
800

By WESTON & SONS.

Fulham.—2, 7, and 10, Winchendon-rd., u.t. 81 yrs., g.r. 21l., y.r. 114l. £1,0
Brixton.—87, Angell-rd., u.t 49¼ yrs., g.r. 10l., e.r. 75l. 4

By CHAS. P. WHITLEY & SON.

Chelsea. Cheyne-walk, f.g rents 150l., reversion in 66 yrs 3,0

Contractions used in these lists.—F.g.r. for freehold ground-rent; l.g.r. for leasehold ground-rent; i.g.r. for improved ground-rent; g.r. for ground-rent; r. for rent; f. for freehold; c. for copyhold; l. for leasehold; p. for possession; o.r. for estimated rental; w.r. for weekly rental; q.r. for quarterly rental; y.r. for yearly rental; u.t. for unexpired term; p.a. for per annum; yrs. for years; la. for lane; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; cres. for crescent; av. for avenue; gdns. for gardens; yd. for yard; gr. for grove; b.h. for beerhouse; p.h. for public-house; o. for offices; s. for shops; ct. for court.

PRICES CURRENT OF MATERIALS

*** Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

BRICKS, &c.

Per 1000 Alongside, in River.	£ s.
Best Stocks	1 14
Picked Stocks for Facings	2 10

Per 1000, Delivered at Railway Depôt.	£ s. d.		£ s.
Flettons	1 13 0	Best Blue Pressed	
Best Fareham		Staffordshire	3 15
Red	3 12 0	Do. Bullnose	4 0
Best Red Pressed		Best Stourbridge	
Runbon Facing	5 0 0	Fire Bricks	4 0
GLAZED BRICKS—			
Best White,		Double Headers	13 1
Ivory, and Salt		One Side and two	
Glzd. Str'tch'rs	11 7 6	Ends	17 12
Headers	10 17 6	Two Sides and	
Quoins, Bullnose,		one End	18 12
and 4½ in. Flats	14 17 6	Splays & Squints	16 7
D'ble Stretchers	16 17 6		

Second Quality £1 10s. per 1000 less than best.

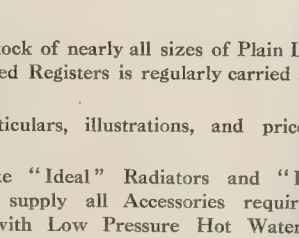
	s. d.	
Thames and Pit Sand	6 9	per yard, deliv-red
Thames Ballast	5 6	"
Best Portland Cement	31 0	per ton, "
Best Ground Blue Lias Lime	19 0	" "

NOTE—The cement or lime is exclusive of the ordinary charge for sacks.

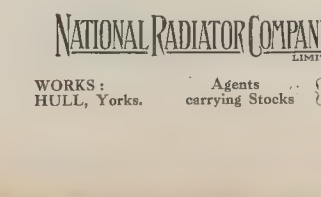
Grey Stone Lime	13s. 0d. per yard delivered
Stourbridge Fireclay in sacks 27s. 0d. per ton at rly dpt	

"Ideal" Registers & Ventilators.

"Ideal" Registers combine superior design and finish with strength and durability—they are made of cast-iron, therefore do not rust and can be fixed in any situation—are available in a great variety of sizes—can be promptly supplied in any colour or finish.



"Ideal" Plain Lattice Design Register.



Cast-iron Wall Frames are specially designed to hold Registers securely in position, are inexpensive, and can be masoned solidly into brickwork.

A large stock of nearly all sizes of Plain Lattice Black Japanned Registers is regularly carried at our Hull works.

Full particulars, illustrations, and prices on request.

We make "Ideal" Radiators and "Ideal" Boilers, and supply all Accessories required in connection with Low Pressure Hot Water and Steam Heating.

NATIONAL RADIATOR COMPANY LIMITED. 439 & 441, Oxford Street, London, W.

WORKS: HULL, Yorks. Agents carrying Stocks { BAXENDALE & CO., Ltd., Miller Street Works, MANCHESTER. WILLIAM MACLEOD & CO., 60, 62, & 64, Robertson Street, GLASGOW

STONE.

Per Ft. Cube.

	£ s. d.
ATH STONE—delivered on road waggons, Paddington Depôt	1 6½
o. do. delivered on road waggons, Nine Elms Depôt	1 8½
ORTLAND STONE (20 ft. average)—	
Brown Whitbed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2 3
White Basebed, delivered on road waggons Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2 4½

Per Ft. Cube, delivered at Railway Depôt.

	£ s. d.
hcaster in blocks..	1 10
eer in blocks	1 6
reenshill in blocks	1 10
arley Dale in blocks	2 4
ed Corsehill in blocks	2 3

Closeburn Red Freestone 2 0
Red Mansfield Freestone 2 4
Talacre & Gwespyr Stone 2 4

ORK STONE—*Robin Hood Quality.*

Per Ft. Cube, Delivered at Railway Depôt.

	£ s. d.
appled random blocks	2 10

Per Ft. Super., Delivered at Railway Depôt.

	£ s. d.
in. sawn two sides landings to sizes (under 40 ft. super.)	2 3
n. rubbed two sides ditto, ditto	2 6
n. sawn two sides slabs (random sizes)	0 11½
n. to 2½ in. sawn one side slabs (random sizes)	0 7
in. to 2 in. ditto, ditto	0 6

ARD YORK—

Per Ft. Cube, Delivered at Railway Depôt.

	£ s. d.
appled random blocks	3 0

Per Ft. Super., Delivered at Railway Depôt.

	£ s. d.
n. sawn two sides landing to sizes (under 40 ft. super.)	2 8
n. rubbed two sides ditto	3 0
n. sawn two sides slabs (random sizes)	1 2
n. self-faced random flags	0 5

SLATES.

Per 1000 of 1200 at Railway Depôt.

In.	£ s. d.
×10 best blue Bangor	13 2 6
×12 ditto	13 17 6
×10 1st quality ditto.....	13 0 0
×12 ditto	13 15 0
×8 ditto.....	7 5 0
×10 best blue Portmadoc.....	12 12 6
×8 ditto.....	6 12 6

In. In.	£ s. d.
20×10 best Eur'kan unfading green	15 17 6
20×12 ditto	18 7 6
18×10 ditto	13 5 0
16×8 ditto	10 5 0
20×10 permanent green	11 12 6
18×10 ditto	9 12 6
16×8 ditto	6 12 6

TILES.

At Railway Depôt.

	s. d.
st plain red roofing (per 1000)	42 0
Hip and Valley (per doz.).....	3 7
st Broseley (per 000)	50 0
. Ornamental (per 000)	52 6
Hip and Valley (per doz.)	4 0
st Bunbon red, rown, or brindled Edw'ds) (per 1000)	57 6
. Ornamental (per 000)	60 0
Hip (per doz.)...	4 0
Valley (per doz.)	3 0

	s. d.
Best "Hartshill" brand, plain sand-faced (per 1000) ...	45 0
Do. pressed (per 1000)	42 6
Do. Ornamental (per 1000)	47 6
Hip (per doz.)...	4 0
Valley (per doz.)	3 6
Staffords. (Hanley) Reds or Brindled (per 1000)	42 6
Hand-made sand-faced (per 1000)	45 0
Hip (per doz.)...	4 0
Valley (per doz.)	3 6

WOOD.

BUILDING WOOD.	At per standard. £ s. d.	£ s. d.
als: best 3 in. by 11 in. and 4 in. by 9 in. and 11 in.	14 0 0 ...	15 10 0
als: best 3 by 9	13 10 0 ...	14 10 0
ttens: best 2½ in. by 7 in. and 3 in., and 3 in. by 7 in. and 3 in.	11 10 0 ...	12 10 0
ttens: best 2½ by 6 and 3 by 6...	0 10 0	less than 7 in. and 8 in.
als: seconds	1 0 0	less thn best.
ttens: seconds	0 10 0	„ „
in. by in. and 2 in. by 6 in. ...	9 10 0 ...	10 10 0
in. by 4½ in. and 2 in. by 5 in.	9 0 0 ...	10 0 0
reign Sawn Boards— in. and 1½ in. by 7 in.	0 10 0	more than battens.
in.	1 0 0	„
timber: best middling Danzig	At per load of 50 ft.	
Memel (average specification)	5 0 0 ...	5 10 0
econds	4 10 0 ...	5 0 0
mall timber (8 in. to 10 in.) ...	3 17 6 ...	4 0 0
mall timber (6 in. to 8 in.).....	3 5 0 ...	3 10 0
wedish balks	2 12 6 ...	3 0 0
ch-pine timber (50 ft. average)	5 5 0 ...	6 0 0

JOINERS' WOOD.	At per standard. £ s. d.	£ s. d.
ite Sea: first yellow deals, 3 in. by 11 in.	24 10 0 ...	25 10 0
3 in. by 9 in.	22 10 0 ...	23 10 0
Battens, 2½ in. and 3 in. by 7 in.	17 0 0 ...	18 0 0
econd yellow deals, 3in. by 11in.	19 0 0 ...	20 0 0
„ „ 3 in. by 9 in.	18 0 0 ...	19 10 0
Battens, 2½ in. and 3in. by 7 in.	14 0 0 ...	15 0 0
hird yellow deals, 3 in. by 11 in. and 3 in.	14 0 0 ...	15 0 0
Battens, 2½ in. and 3 in. by 7 in.	11 10 0 ...	12 10 0
ersburg: first yellow deals, 3 in. by 11 in.	21 10 0 ...	22 10 0
Do. 3 in. by 9 in.	18 10 0 ...	19 10 0
Battens	14 0 0 ...	15 0 0
econd yellow deals, 3 in. by 11 in	16 10 0 ...	17 10 0
Do. 3 in. by 9 in.	15 0 0 ...	16 0 0
Battens	11 10 0 ...	12 10 0
hird yellow deals, 3in. by 11 in.	13 10 0 ...	14 10 0
Do. 3 in. by 9 in.	13 0 0 ...	14 0 0
Battens	10 10 0 ...	11 0 0
te Sea and Petersburg— rst white deals, 3 in. by 11 in.	15 0 0 ...	16 0 0
„ „ 3 in. by 9 in.	14 0 0 ...	14 10 0
Battens	11 10 0 ...	12 10 0
econd white deals, 3in. by 11in.	14 0 0 ...	15 0 0
„ „ 3 in. by 9 in.	13 0 0 ...	14 0 0
Battens	10 10 0 ...	11 0 0

WOOD (*Continued*).

JOINERS' WOOD (*Continued*)—	At per standard. £ s. d.	£ s. d.
Pitch-pine: deals	19 0 0 ...	21 0 0
Under 3 in. thick extra.....	0 10 0 ...	1 0 0
Yellow Pine—First, regular sizes	48 0 0	upwards.
Oddments	32 0 0	„
Seconds, regular sizes	33 0 0	„
Oddments	28 0 0	„
Kauri Pine—Planks per ft. cube.	0 4 6 ..	0 6 0

Danzig and Stettin Oak Logs—

	£ s. d.	£ s. d.
Large, per ft. cube.....	0 3 0 ...	0 3 9
Small „ „	0 2 6 ...	0 2 6
Wainscot Oak Logs, per ft. cube	0 6 6 ...	0 8 0
Dry Wainscot Oak, per ft. sup. as inch	0 0 10 ...	0 1 0
¼ in. do. do.	0 0 5½ ...	—
Dry Mahogany—Houndras, Tabasco, per ft. super. as inch..	0 0 10 ...	0 1 1
Selected, Figury, per ft. super. as inch	0 1 6 ...	0 2 6
Dry Walnut, American, per ft. super. as inch	0 0 10 ...	0 1 0
Teak, per load	18 0 0 ...	22 0 0
American Whitewood planks, per ft. cube	0 5 0 ...	0 6 0

Prepared Flooring, etc.—	Per square. £ s. d.	£ s. d.
1 in. by 7 in. yellow, planed and shot	0 13 6 ...	0 17 0
1 in. by 7 in. yellow, planed and matched	0 14 0 ...	0 18 0
1¼ in. by 7 in. yellow, planed and matched	0 16 0 ...	1 0 0
1 in. by 7 in. white, planed and shot	0 12 0 ...	0 14 6
1 in. by 7 in. white, planed and matched.....	0 12 6 ...	0 15 0
1¼ in. by 7 in. white, planed and matched.....	0 15 0 ...	0 16 6
¾ in. by 7 in. yellow, matched and beaded or V-jointed brds.	0 11 0 ...	0 13 6
1 in. by 7 in. „ „	0 14 0 ...	0 18 6
¾ in. by 7 in. white „ „	0 10 0 ...	0 11 0
1 in. by 7 in. „ „	0 12 9 ...	0 15 0

6 in. at 6d. to 9d. per square less than 7 in.

JOISTS, GIRDERS, &c.

	In London, or delivered Railway Vans, per ton. £ s. d.	£ s. d.
Rolled Steel Joists, ordinary sections	7 10 0 ...	8 0 0
Compound Girders, ordinary sections	9 10 0 ...	10 0 0
Steel Compound Stanchions ...	11 0 0 ...	12 0 0
Angles, Tees, and Channels, ordinary sections	9 10 0 ...	10 0 0
Flitch Plates	9 10 0 ...	9 10 0
Cast Iron Columns & Stanchions, including ordinary patterns ...	7 10 0 ...	8 10 0

METALS.

IRON—	Per ton, in London. £ s. d.	£ s. d.
Common Bars	9 0 0 ...	9 10 0
Staffordshire Crown Bars, good merchant quality	9 5 0 ...	9 15 0
Staffordshire "Marked Bars"	11 0 0 ...	—
Mild Steel Bars	9 5 0 ...	9 15 0
Hoop Iron, basis price	10 0 0 ...	—
„ „ Galvanised.....	17 10 0 ...	—

(*And upwards, according to size and gauge.)

Sheet Iron Black—	£ s. d.	£ s. d.
Ordinary sizes to 20 g.	10 5 0 ...	—
„ „ 24 g.	11 5 0 ...	—
„ „ 26 g.	12 15 0 ...	—
Sheet Iron, Galvanised, flat, ordinary quality—		
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15 10 0 ...	—
Ordinary sizes to 22 g. and 24 g.	16 0 0 ...	—
„ „ 26 g.	17 0 0 ...	—
Sheet Iron, Galvanised, flat, best quality—		
Ordinary sizes to 20 g.	18 10 0 ...	—
„ „ 22 g. and 24 g.	19 0 0 ...	—
„ „ 26 g.	20 10 0 ...	—
Galvanised Corrugated Sheets—		
Ordinary sizes, 6ft. to 8ft. 20 g.	15 0 0 ...	—
„ „ 22 g. and 24 g.	15 5 0 ...	—
„ „ 26 g.	16 15 0 ...	—
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker.....	12 10 0 ...	—
Best Soft Steel Sheets, 2 g. & 24 g.	13 10 0 ...	—
„ „ „ 26 g.	15 10 0 ...	—
Cut Nails, 3 in. to 6 in.....	11 0 0 ...	11 10 0

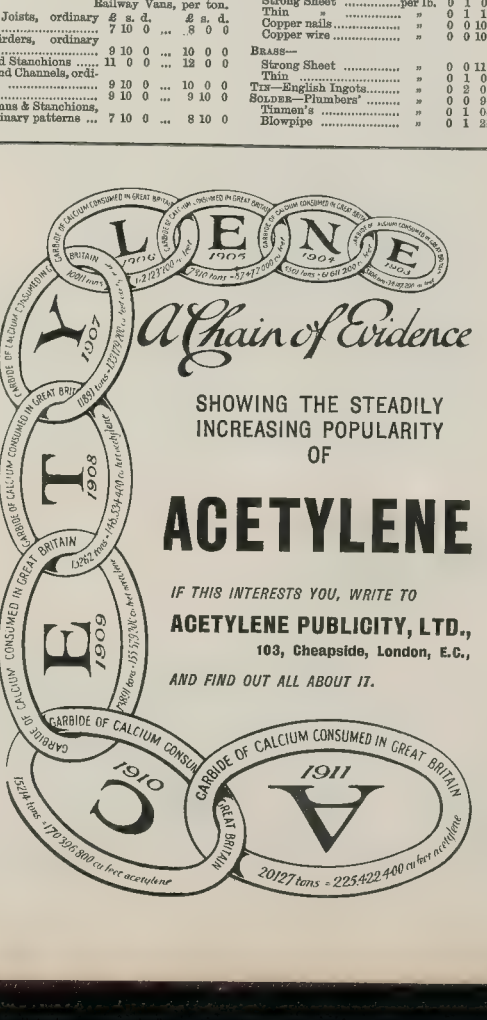
(Under 3 in., usual trade extras.)

LEAD, &c.

	£ s. d.	£ s. d.
LEAD—Sheet, English, 4lb. and up	21 10 0 ...	—
Pipe in coils	22 0 0 ...	—
Soil pipe	25 0 0 ...	—
Compo pipe	25 0 0 ...	—
ZINC—Sheet—	In casks of 10 cwt.	
Vielle Montagne	33 10 0 ...	—
Silesian	33 5 0 ...	—

Zinc, in bundles, 1s. per cwt. extra.

COPPER—	£ s. d.	£ s. d.
Strong Sheet .....per lb.	0 1 0 ...	—
Thin „ ..... „	0 1 1 ...	—
Copper nails..... „	0 0 10 ...	—
Copper wire ..... „	0 0 10 ...	—
BRASS—		
Strong Sheet ..... „	0 0 11 ...	—
Thin ..... „	0 1 0 ...	—
TIN—English Ingots..... „	0 2 0 ...	—
SOLDER—Plumbers' ..... „	0 0 9½ ...	—
Tinmen's ..... „	0 1 0½ ...	—
Blowpipe ..... „	0 1 2½ ..	—



SHOWING THE STEADILY INCREASING POPULARITY OF

ACETYLENE

IF THIS INTERESTS YOU, WRITE TO

ACETYLENE PUBLICITY, LTD.,

103, Cheapside, London, E.C.,

AND FIND OUT ALL ABOUT IT.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

15 oz. thirds	2½d.	26 oz. fourths	3½d.
" fourths	1¾d.	32 oz. thirds	5d.
21 oz. thirds	3½d.	" fourths	4¾d.
" fourths	2¾d.	Fluted Sheet, 15 oz.	3¾d.
26 oz. thirds	4d.	" 21 oz.	4¾d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

⅛ Rolled plate	2½d.	Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white	3¼d.
1/16 Rough rolled and rough cast plate	2¼d.		
¼ Rough rolled and rough cast plate	3d.	Ditto, tinted	5d.

* Not less than two crates.

OILS, &c.		£ s. d.
Raw Linseed Oil in pipes	per gallon	0 4 0
" " " in barrels	"	0 4 1
" " " in drums	"	0 4 3
Boiled " in barrels	"	0 4 3
" " " in drums	"	0 4 6
Turpentine in barrels	"	0 3 0
" in drums	"	0 3 2
Genuine Ground English White Lead,	per ton	28 0 0
Red Lead, Dry	"	24 0 0
Best Linseed Oil Putty	per cwt.	0 10 6
Stockholm Tar	per barrel	1 12 0

VARNISHES, &c.	Per gallon. £ s. d.
Fine Pale Oak Varnish	0 8 0
Pale Copal Oak	0 10 6
Superfine Pale Elastic Oak	0 12 6
Fine Extra Hard Church Oak	0 10 0
Superfine Hard-drying Oak, for seats of Churches	0 14 6
Fine Elastic Carriage	0 12 0
Superfine Pale Elastic Carriage	0 16 0
Fine Pale Maple	0 10 0
Finest Pale Durable Copal	0 18 0
Extra Pale French Oil	1 1 0
Eggshell Plating Varnish	0 18 0
White Pale Enamel	1 4 0
Extra Pale Paper	0 12 0
Best Japan Gold Size	0 10 6
Best Black Japan	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Knotting	0 10 9
French and Brush Polish	0 10 6

TERMS OF SUBSCRIPTION.

"THE BUILDER" (Published Weekly) is supplied DIRECT from the Office to residents in any part of the United Kingdom at the prepaid rate of 19s. per annum, with delivery *by Friday Morning's Post* in London and its suburbs.

To Canada, post-free, 21s. 8d. per annum; and to all parts of Europe, America, Australia, New Zealand, India, China, Ceylon, etc., 26s. per annum.

Remittances (payable to J. MORGAN) should be addressed to The Publisher of "THE BUILDER," 4, Catherine-street, W.C.

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than* 6 p.m. *on Wednesday.* [N.B.—We cannot publish Tenders unless authenticated either by the architect or the building owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is stated, nor any list in which the lowest Tender is under 100l. unless in some exceptional cases and for special reasons.]

* Denotes *accepted.* † Denotes *provisionally accepted.*

BANBURY.—For erection of a house in Broughton-road. Mr. F. J. Cooke, architect, Banbury and Birmingham:—

Frankin, Ltd.	£825 0	J. S. Kimberley, Banbury*	£704 0
Grant & Sons	782 0	W. G. Mold	607 10

DONCASTER.—For erection of new Liberal Club premises, St. James'-street. Messrs. Garside & Pennington, architects, Pontefract. Quantities by architects:—

D. Gill & Son, Doncaster* ... £3,352

GLOUCESTER.—For proposed classroom for handicraft and cookery classes, Ruardean-hill Council School, for Gloucestershire Education Committee. Mr. R. S. Phillips, Architect, Gloucester:—

E. J. Flewelling	£415 0	Dean Forest Contracting Co.	£281 13
W. J. B. Halls	394 0		

GLOUCESTER.—For proposed handicraft and cookery classroom at Churchdown Council School, for Gloucestershire Education Committee. Mr. R. S. Phillips, Architect, Gloucester:—

R. W. S. Merrett	£175 4 1
Kingscott & Winfield	170 0 0
J. Simmonds	165 0 0

LONDON.—For extension of the London Metallic Capsule Company's works, 400, Rotherhithe-street, S.E. Messrs. Joseph & Smithem, architects and surveyors, 83, Queen-street, Cheapside:—

Higgs & Hill, Ltd.	£3,380	W. Johnson & Co., Ltd.	£3,110
C. W. Bovis & Co., Ltd.	3,197	W. J. Fryer & Co	3,093
F. & H. F. Higgs	3,188	W. Downs	3,070
G. E. Wallis & Sons	3,176	A. White & Co.	2,987
		H. J. Williams, Ltd.*	2,957

SIDCUP.—For an addition to Fern Cottage, Half Way-street, Sidcup, Kent, for Mr. C. Egleton. Mr. J. Williams Dunford, architect, 100c, Queen Victoria-street, E.C.:—

J. Dunn	£375	J. W. Holmes & Sons, Catford*	£315
W. T. & J. Cooper	325		

STONEHOUSE.—For erection of a handicraft and cookery centre at the Council school. Mr. R. S. Phillips, Architect, Shire Hall, Gloucester:—

A. S. Cooke	£339 18 6	A. R. Blick & Son	£312 0 0
W. J. B. Halls	335 0 0	Orchard & Peer, Stroud*	285 0 0
Baxter & Son	329 0 0		

WEST HAM.—For internal cleaning and painting and sundry works at the Forest Gate Sick Home, Forest-lane, Forest Gate, E., accommodating 650 persons, for the Guardians of the West Ham Union. Mr. J. Williams Dunford, architect, 100c, Queen-Victoria-street, E.C.:—

W. Shurmur & Sons, Ltd.	£2,877	S. Blow, Ltd.	£1,850
Brand, Pettit, & Co.	2,593	J. W. Jerram	1,827
G. Barker	2,229	A. Webb	1,775
J. W. Holmes & Sons	1,902	H. C. Horswill	1,472
Woollaston & Co.	1,875	C. J. Kemp, Forest-gate*	1,440

WOLVERCOTE.—For erection of additions to school. Mr. S. Stallard, County Surveyor, Oxford:—

Burgess & Son	£2,698 16 9	Kingerlee & Sons	£2,279 0 0
Cullum Bros.	2,690 0 0	Wooldridge & Simpson	2,255 0 0
Wyatt & Son	2,340 0 0	Organ Bros., Oxford*	2,225 0 0
Sims & Son	2,330 0 0	N. Capel & Sons	2,167 14 0
Franklin, Ltd.	2,289 0 0		
Hutchins & Sons	2,287 0 0		
Benfield & Loxley	2,280 0 0		

Ham Hill Stone.
Doulting Stone.
Portland Stone.

The Ham Hill and Doulting Stone Co., Limited
(incorporating the Ham Hill Stone Co. and C. Trask & Son, The Doulting Stone Co.).

Norton, Stoke-under-Ham, Somerset.
London Agent:—Mr. E. A. Williams, 16, Craven-street, Strand.

A NEW BATH STONE CO.

Quarrying the finest Corsham Down Stone.

CONNECTED WITH NO OTHER FIRM.

Address:
BATH & DORSET QUARRIES, Ltd., BATH.

Asphalte. The Seyssel and Metallic Lava Asphalte Co. (Mr. H. Glen), Office, 42, Poultry, E.C. The best and cheapest materials for damp courses, railway arches, warehouse floors, flat roofs, stables, cow-sheds and milk-rooms, granaries, tun-rooms, and terraces. Asphalte Contractors to Forth Bridge Co. T.N. 2644 Central.

SPRAGUE & CO., LTD.,
PROCESS BLOCK MAKERS
of all descriptions.
69 & 70, DEAN STREET, SOHO, W.

JOINERY,
Of every description and in any kind of Wood.
CHAS. E. ORFEUR, LTD.,
ESTIMATES ON APPLICATION.
COLNE BANK WORKS, COLCHESTER.
Telephone: 0135. Telegrams: "Orfeur, Colchester."

PILKINGTON & CO.
(ESTABLISHED 1838),
DEPTFORD WHARF,
190 & 192, CREEK ROAD, DEPTFORD, S.E.
Telephone No.: New Cross 1102 (two lines).

Registered Trade Mark.
Polonceau Asphalte.
PATENT ASPHALTE AND FELT ROOFING.
ACID-RESISTING ASPHALTE.
WHITE SILICA PAVING.
SEYSSEL ASPHALTE (*Direct from the Mines*).

J. J. ETRIDGE, Jr.
SLATE MERCHANTS. LTD

EXPERTS IN
SLATING, TILING.
BEST WORK ONLY.
Telephone 2685 Wall, or write
Bethnal Green Slate Works,
BETHNAL GREEN, LONDON, E.

ALSO AT DEPTFORD, LIVERPOOL, BRISTOL,



GLASGOW, FALKIRK. BELFAST, & DUBLIN.

Chief Offices: 352 to 364, EUSTON ROAD, LONDON, N.W.

THE BUILDER

VOL. CII. No. 3818.

JUNE 7, 1912.

CONTENTS.

PAGE

New Hall at Bedales School, Petersfield ... 655
The Institute Elections and the Compromise 655
Notes ... 657
The Royal Institute of British Architects 658
Ancient Monuments in Middlesex (with Illustration) 660
The Church Building Society: The Craze for Cheapness ... 660
Architects and the Corporate Sense ... 661
The Study of Art and Architecture at Cambridge: The Slade Professor's Proposals 662
No. 60, St. James's-street (with Illustration) 663
Architectural Societies ... 663
The Surveyors' Institution: Visit to Nottingham ... 663
Architects and the Labourers (Ireland) Acts 664
General News ... 665
Correspondence ... 665
Editorial Summary ... 666

PAGE

Meetings ... 666
Competition News ... 666
Notes to Illustrations ... 666
Fifty Years Ago ... 666

Monthly Review of Civic Design:—
The Royal Visit to India: Civic Decorations of Bombay (with Illustrations) ... 667
A Suggested Whitehall Improvement (with Plan) ... 668
A Town-Planning Conference ... 669
Housing Reform ... 670
Notes ... 671

The Building Trade:—
Concrete-Mixers: The Smith Mixer (with Illustrations) ... 672
The Study of Timber ... 672
Labour in the Building Trade ... 673
A Novel School, Croppington ... 673
General Building News ... 674
Projected New Buildings in the Provinces 674

PAGE

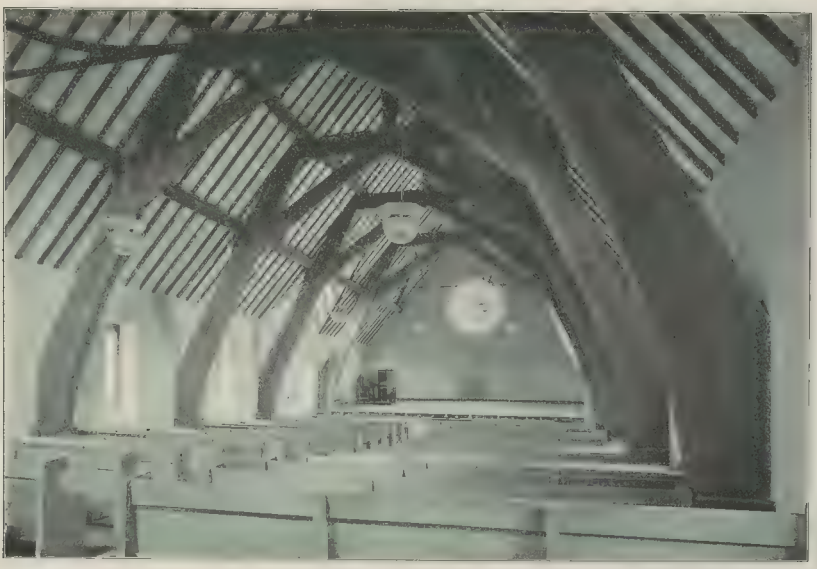
Building Trade in South Africa in 1911 ... 674
Books (with Illustrations) ... 675
Law Report ... 677
Obituary ... 677
Patents ... 677
List of Competitions, Contracts, etc., Open 678
Foreign and Colonial ... 680
Some Recent Sales ... 680
Prices Current ... 680
Tenders ... 681

Illustrations.

Study for a Royal Memorial, Parliament-square, S.W. Messrs. Lanchester & Richards, FF.R.I.B.A.

A Suggestion for Whitehall. From a Drawing by Mr. Adrian Berrington.

Decorations on the Occasion of the Royal Visit to India. Mr. G. Wittet, Architect:—
Reception Pavilion, Bombay.
Processional Road.



New Hall at Bedales School, Petersfield.

Mr. Ernest W. Gimson, Architect; Mr. Geoffrey H. Lupton, Builder.

THE INSTITUTE ELECTIONS AND THE COMPROMISE.

By the time that these lines appear in print the Institute elections will have been decided and the members of Council, as well as those of the various Standing Committees, chosen for another year. We live in somewhat unsettled times, and the architectural body at Conduit-street has not of late years escaped the general feeling of unrest. Whatever may be the cause, the fact remains that guiding principles, established convictions, the straight path of direction, which ought to be followed by all purposeful men and institutions, have in recent times become a little uncertain. To-day is largely the epoch of the open mind and open door: both perhaps desirable things, but when the bolts are not locked o' nights there may be occasion for tremors on the part of the good housewife. When, in fact, the mind becomes too impressionable, too catholic in its views, it provides excellent soil for the seed of the revolutionary propagandist; and in such circumstances individuals as a party may be induced to commit themselves to a course of action which as private persons would be intensely distasteful to them. That is perhaps particularly the case when various antagonistic views meet on the common ground of compromise, and when those who hold them agree to sink personal convictions for the purpose of securing, by the adoption of a middle course, harmony of action. An understanding of this sort is, of course, creditable to all parties, and is often the only way out of an *impasse;* but it has its dangers, and its chief danger is that the party warfare which ought to cover a large area may be confined within narrow limits and decided on a single issue. The compromise which was arrived at a few years ago by two opposing sections of the Council and members of the Institute was of this nature. The canvassing, direct or indirect, previous to the present election indicated that this agreement has come to an end and that we have arrived at another stage of the conflict.

On the face of it, the position of both parties is pretty much where it was before the earlier negotiations; but actually this is far from being the case. Recent events have shaken or modified the convictions of both parties; the danger of a single issue policy in regard to an art and profession which involves so many issues as architecture is now apparent to all, even, we think, to the most sanguinary *sans-culottes* of the early days of the Registration movement within the walls of the Institute. The compromise, and this is its supreme advantage, has provided time for deliberation; it has cleared the air of some of the fog in which the question of Registration was involved. The Institute is, however, certainly committed to the policy, and we have no doubt that the present and succeeding Councils will do their best to influence Parliament to pass an Act which will mitigate the evils engendered by the unfair competition of unqualified men. But the neck-or-nothing policy which was behind the understanding of the compromise is now, we believe, for ever exploded. Registration, yes; but not Registration at any price—not at the sacrifice of what is best in architectural tradition, history, and practice.

Let us hark back a little and see how this matter concerns the Institute. It may help to make the position of both parties to-day a little clearer. That body had probably never attained a higher place in general estimation, whether public or private, when its members a few years ago showed some signs of being influenced by the Registration movement. The idea behind this movement was no new thing; it belongs in principle to schemes which had been discussed by the Institute pretty well since its foundation. The system of examination in architecture, the affiliation of the provincial societies, indeed the very existence of the Institute itself, were in effect an attempt to draw within closer lines architectural practice, and to make its scope more clearly defined and recognised. At the same time the disadvantages of a closed profession were obvious. The arguments advanced in support of this latter view are too familiar to need recapitulation. The main point is that the Institute had succeeded in definitely establishing its own position, and by consistent action in pursuit of the furtherance of architecture it had also established the position of its members. Membership denoted architectural qualifications and status of a reputable character. Students came from all parts of the world—from Australia, New Zealand, India, Canada, and South Africa—to pass its examinations. We all know what sacrifice of time and leisure these studies entailed on many of our younger men at home. Plainly, these qualifications would not have been so eagerly sought for if they had not been universally and amply recognised. Under the operation of the system of examination, therefore, the Institute was gathering into its fold the most promising exponents of the architectural profession; it was gradually closing the door, and it was doing it with wisdom and discretion, not with a bang. But that was only one phase of the Institute's work. As a consulting body and in the pursuit "of the general advancement of architecture," for which it was founded, its operations were extensive, and carried weight with the Government, the London County Council, the City Corporation, the promoters of competitions, and in other quarters where its action might be useful to the cause of architecture. That is to say, the Institute does not exist, and has never existed, for the purpose of promoting one architectural issue at the expense of others. It might be said, speaking broadly, that in seeking for the advancement of architecture it saw the progress of the architect and a more general recognition of his position in the hierarchy of art; but it realised that this could not be accomplished without time, patience, and a steady adherence to a progressive system of training which was becoming every day better organised and more firmly established. To the men who had at heart this traditional view the scheme of wholesale Registration was entirely distasteful. Instead of attaining the millennium, it would seem rather at one blow to shatter an edifice built on the surest foundations and constructed after generations of labour and care. The later phase of the Registrationist movement reversed the older policy; the first principle in its programme was the advancement of the architect. And it is no disrespect and no secret to say that the movement did not start with the men who by common consent were recognised both within and outside the Institute as the foremost in professional or artistic position and ability.

This was the state of affairs before the compromise. We have already attributed the highest motives to both parties who shared in that understanding. And if we ask how apparently irreconcilable views became united in a common programme we have no hesitation in saying that in either case the leading motive was—perfectly justifiably—one of respectable diplomacy. The wholesale Registrationists undoubtedly realised that they had no chance of making progress with a Bill in Parliament with the leading men in the profession against them. As we all know, it is not a difficult matter to block the further consideration of a Bill of this kind. But the Registrationists organised; they formed a strong Committee; at election time they threw over the house-list of the Council and nominated a group of men committed to their policy, and they were successful at the poll. We do not know that this Registrationist Council made much if any headway with their measure or were more successful than their predecessors in giving effect to the broader aims of the Institute. But its election convinced their opponents that the rank and file of members were in favour of the promotion of a Bill, and they were disinclined to act in opposition to so large and apparently convinced body of opinion. So the compromise was effected. And it was effected in this way. Those who were not in sympathy with the movement said, as it were: "If you are successful in getting passed an Act of Registration you will be obliged to include within its operation the type of man whose invasion of the profession is your special grievance; you will be obliged to give professional status to the Jack-of-all trades who cares to tag on to his name the title of architect; to admit the qualifications of those whom it has been the object of the Institute to refuse to recognise as of equal professional status, or indeed as of any architectural status at all. Let us at any rate lessen that evil. You have your own organisation at hand, the oldest and best established in the world, which through prolonged and disinterested service has attained influence and power which have operated beneficially on your behalf and in the cause of architecture generally. Instead, therefore, of committing yourselves to an Act of indiscriminate Registration, let us widen the portals of the Institute and admit a third class of members to be called Licentiates, men of some position who are too elderly or too busy to undertake an examination. You will then gather within your ranks the great majority of architects of creditable practice, who will be controlled by the regulations of the Institute and influenced by its aims. By this means one of the principal objects of Registration will be accomplished, and you will in any case be in a better position to proceed with your Bill." This was the basis of the compromise. It was acted upon. The Institute ranks have been increased by a large number of Licentiates, proposals for a Registration Bill have been submitted to the members, and yet what progress has been made? Very little, we fear. In fact, the difficulties, the pitfalls, which lie in the path of a scheme of this kind, recognised in the first instance by a few men, are now generally admitted by the majority of the members of the Institute. To the enthusiasts of the early days the issue seemed plain sailing if common action could be secured. But the recent discussions at Conduit-street on the question of the amalgamation of the Society of Architects have shown clearly enough that there are other issues of equal, if not of greater, importance; they also plainly demonstrated that members of the Institute, however desirous they may be for Registration, are not inclined to throw away the advantages of a hardly-won and well-established heritage. It has become increasingly evident that if the Institute is to retain its position among artistic and learned societies, that even if it is still to remain in possession of the dignity of its royal charter, the position of its members must be distinguished by more important qualifications than those conferred by an Act which involves vicarious recognition of the title of an architect. The tribulations of the past have made, however, for a better and clearer understanding.

An influential Committee has now been formed to consider the question of Registration in all its aspects, and we have no doubt that it will do its work honestly and well, and that, above all, it will profit by recent indiscretions and precipitate action. We do not wish to anticipate either its conclusions or its programme; but we may be well assured that any scheme which the Committee will ultimately present for approval to the general body will seek to lessen the evils with which it is unavoidably associated. The ultimate advantage of no art or

profession can be discovered in concessions which grant its imprimatur without first seeking to establish, in some sort, the credentials of those who seek it. Registration without qualification is impracticable. If architects are to preserve the respect of the public, of their brother artists and professional men generally, they must maintain a respectable standard of architectural practice and ability. They must, in a word, respect themselves. We have every regard for the disinterested views of many of those who would carry the Act into effect at any present cost for the future advantage of the profession. We do not quite say, with the lady in the old play, "Let posterity shift for itself"; but even in this aspect of the case posterity pays greater respect to ancestors who won their spurs in hard-won battles, and who carried the standard aloft in a great cause, rather than to those who raised their fortunes at the sacrifice of their convictions. However this may be, recent events have shown that in the fight for Registration the real conflict will not take place within the ranks of the profession, but outside.

NOTES.

Regent's Quadrant.

PROFESSOR ADSHEAD, in a letter to the *Daily Telegraph* on the threatened destruction of the distinctive charm of Regent's Quadrant, emphasises the fatal mistake of allowing the buildings to be heightened without giving any corresponding increase of width to the roadway between them. Although this has unfortunately been permitted in the case of the Piccadilly Hotel, he thinks that, "objectionable as it may be to break the continuity of the crescent, to do so would be far better than to aggravate a well-recognised error by persisting in the erection of what, from every point of view, has proved a false elevation." If we understand him aright, Professor Adshead would favour the rebuilding of the rest of the crescent to its present height, leaving the hotel to stand out two stories higher and so break the sweep of the skyline. If we could only bring ourselves to feel that there was the remotest chance that the resultant eyesore would rouse public feeling to such a pitch as to ensure its removal we should be ready to agree with him. There is no doubt this is the sternly logical way of dealing with the question. After all, the width of the street in proportion to the height of the building is an essential point. We fear, however, that, as we have said before, the lowering of the hotel and the rebuilding of the Regent-street front is hardly within the range of practical politics. This is not contemplated by the conditions of our competition, which, judging by the general interest it has excited, should provide some extremely able and interesting solutions of the difficult problems involved. The interest aroused by the attitude of the *Builder* towards the rebuilding of the Quadrant has stirred the daily Press. In the *Daily Telegraph* of Saturday, 1st inst., a sketch appeared which is full of suggestion as to the possible means of meeting the demands of the shopkeepers without sacrifice of artistic effect. The *Daily Telegraph* is to be congratulated upon calling public attention to such an important matter.

The Clergy and Architecture.

THE remarks made by Mr. E. S. Prior, the new Slade Professor of Fine Art at Cambridge, on the use of the capacity of the University to organise art study were of importance if only because of his observations on the relations of the clergy to architecture. "The Cambridge curriculum of theology sends out to nearly half the parishes in England incumbents and curates. Many come immediately into touch with some of the finest architecture and some of the most valuable records of art that our island holds." A knowledge, therefore, of what is in their hands to guard and secure would seem to be a part of their education, but "the tragedy has been that the knowledge has scarcely been given . . . most often not at all." Mr. Prior mentions the large part the clergy, with the best intentions, have played in the destruction of the religious art and antiquities "that 100 years ago our churches possessed," and he makes the practical suggestion that clerical students should take a course of historical English architecture and understand what this meant in churches. The truth of these remarks will not be denied by students of English church architecture who will call to mind cases of misplaced zeal on the part of clerical guardians, and it is to be hoped that the Slade Professor's remarks and his useful suggestion will not be forgotten, but that the proposed course of historical English architecture for clerical students may soon form part of the Cambridge curriculum.

Architects and the Corporate Sense.

THE suggestive paper under this heading which was read by Mr. M. J. Harris before the Transvaal Institute of Architects* is, we understand, the forerunner of an application to Parliament, praying (1) for the extension of the Transvaal Architects Act to the remaining provinces in the South African Union, and (2) for wider powers than are at present held under the Transvaal Act. Included in the author's remarks were some references to the Press attitude in Johannesburg and Victoria to the South African architect, and it is interesting to note that certain Press organs are very critical of the work of the architect. The interest for us in the matter is contained in the information that the South African Press appears to take notice at all, and not whether the criticism is unjust, as is suggested. We are afraid it cannot be said that the Press of this country is given to make much comment "coincident with the close of some public competition," and for our part we should welcome more comment, even though sometimes unjustifiable.

Survey of the Memorials of Greater London.

AS WE notice in our Book Review columns the new volume of the Survey relating to Lincoln's Inn-fields, the opportunity is afforded to call attention to the useful work of the Committee for the Survey of the Memorials of Greater London, especially as we are given to understand that few of the subscribers to the Survey are connected with the building trade. We are glad to notice that the negotiations with the London County Council on the question of its possible co-operation in the work of the Survey have resulted in the completion of a practical working scheme, which has received the official sanction of the Council, and a joint publishing Committee has been formed. The Committee hope that before the conclusion of the present year the second volume of the parish of Chelsea, which is being prepared by Mr. Walter H. Godfrey, will be issued, and already other members of the Committee are completing their respective districts. It should be mentioned that the area over which co-operation with the Council will extend is, at present, limited by the boundaries of the County of London, and such co-operation is only in respect of the parish Surveys. There will still be independent issue by the Committee of their fuller monographs on the more important buildings as time and funds permit. Those on Morden College and Cromwell House, Highgate, are already nearing completion, and will be produced very shortly. The Committee's collection of photographs and drawings has received considerable augmentation during the past year, and upwards of 350 different records have been added in that period. We hope that the work of the Committee will receive the more hearty and practical support of the architectural profession, and that such useful work will not be starved for want of comparatively small subscriptions.

Civic Responsibilities.

THERE is food for thought and comment in the fact that while representatives of most of the Borough Councils of London were discussing at No. 9, Conduit-street the minor problem of street name-plates a tragedy of error was being enacted a few hundred yards away. This "Piccadilly Blunder," as we have called it, has been the subject of fruitless negotiation for nearly a year, and it is probable that the suggestion lately put forward by Mr. John Belcher, R.A., that an arbitrator should be appointed, has been considered already. Whether by arbitration or by the pressure of authority, the new Denman House should be erected in harmony with and to balance the Piccadilly Hotel, which is the overwhelming portion of the block. To attain this end every effort should be made, even at the eleventh hour. As the Borough Councils have seen their way, rightly, to confer on the question of the efficient labelling of our streets, it may be possible for them to take action in combination to ensure the architectural character of the streets themselves. If a united protest by the municipalities could be made it might lead to the adjustment of the present dispute and to the prevention of similar difficulties in future. The present case calls attention to the need of a central authority to which all questions of taste including the fitness or otherwise of architectural works, could be referred automatically for consideration and report.

* See p. 661.

THE NEWER RESPONSIBILITIES OF ARCHITECTS.

AN extra general meeting of the Royal Institute of British Architects was held on Monday at No. 9, Conduit-street, W., the President, Mr. Leonard Stokes, being in the chair.

The minutes having been taken as read, Mr. William Woodward read a paper on "The Newer Responsibilities of Architects—the case of Minter *v.* Waldstein," of which the following is an abstract.—

Having referred to the present-day interference in the performance of his duties that beset the architect as compared with forty or fifty years ago, and to the "rush" now attending work, the lecturer said that the more serious results of this regrettable modern necessity are that architect and builder are made responsible for defects which would not arise if a proper amount of time were allowed. The plaintiff was the well-known builder of Putney, Mr. F. G. Minter; the defendant Professor Waldstein, of the University of Cambridge, his architect being Mr. F. W. Foster. The clerk of works was Mr. L. W. Green. The architects who gave evidence for the plaintiff were Mr. William Woodward and Mr. F. W. Foster; and Mr. H. T. A. Chidgy, the quantity surveyor, also gave evidence for the plaintiff. The architects who gave evidence for the defendant were Mr. John Murray, Sir Alexander Stenning, and Mr. E. B. l'Anson. The contract, which was in "the Institute form," was to make certain alterations and additions to a large country mansion in Cambridgeshire, named Newton Hall. The total cost of the works, including many additions to the works included in the contract, amounted to the sum of about 21,000*l*. The defendant, besides denying that he was liable to pay the sums last certified, pleaded a counter-claim for damages and recovery of certain sums which he asserted were improperly included in progress certificates. Some 400 items were set forth by the defendant as those to which he objected, and the bill of variations on the contract prepared by the quantity surveyor, Mr. Stanbrough, occupied 327 pages.

The author then gave the history of the case (see the *Builder* for the following dates in 1911: July 14, 21, 28; August 4, 11, 18, 25; October 20, 27, and November 17) down to the trial by Mr. Muir M. Mackenzie, and said that some important points, as affecting client, architect, and builder, are involved.

"1. *Dismissal of the Architect.*—Mr. Muir Mackenzie finds that the authority of the architect to give the certificate dated January 20, 1911, had not been previously revoked; that the architect was on that date the architect for the purposes of the contract, and that he had authority to give the certificate. The defendant alleged that the letters of January 19 operated to determine the architect's employment and his authority to give a certificate after that date. Mr. Muir Mackenzie raises the question whether an architect can be effectively discharged from his office by the employer alone, and he quotes cases bearing on the point. It seems that the architect, being the one agreed upon between the parties, cannot be discharged by the employer alone. The defendant placed reliance on Clause 3 of the Articles of Agreement, which provides for the nomination by the employer, subject to objection by the contractor, of a fresh architect in the event of the death of the one named in the contract, or his ceasing to be the architect for the purposes of the contract, but Mr. Muir Mackenzie decided that that clause did not operate. There is an important matter, however, involved in this decision of Mr. Muir Mackenzie's, and that is that an architect's certificate might not be justifiably held to include for work outside the work contemplated in the contract; and I gather that he decides that "in regard to all extra work ordered, either under the contract or in circumstances which created in the defendant a liability to pay for it, the provisions of the contract, as to payment, were to be observed—*i.e.*, that on the one side defendant was not until completion of the whole works liable to pay except on the interim certificates of the architect, and then only for the amount certified, and that, on the other side, the certificates were to include the price of all the work ordered as above mentioned." He decided that the contention failed, which, I presume, means that in this particular case the architect *was* justified in issuing certificates for work which, although not specifically included in the contract, were executed with the cognisance of the employer, and were therefore subject to all the conditions of the contract.

2. *Position of the Quantity Surveyor named in Clause* 13 *of the Contract.*—This clause specifically names a surveyor who is to measure and value all authorised extras and omissions, and provides for a copy of the bills to be given to the contractor. Mr. Muir Mackenzie decides on this point that, where the particular surveyor named in the contract has measured and valued additions for which the defendant was liable, under the contract, or an omission properly authorised, then such measurement and valuation are decisive.

The Clerk of Works.—The clerk of works in this particular case gave many orders and directions, probably by the architect's authority, which were obeyed as usual by the foreman of works. Mr. Muir Mackenzie decides that the clerk of works had no power or authority of himself to authorise or permit the contractor to disregard Clause 7 of the conditions of contract.

The Alleged Defects.—The evidence on these alleged defects was of the most contradictory character. Apart from the other evidence given, that of the architects giving evidence was in direct issue. I, for the plaintiff, stated that with the exception of certain small items of defects in floor partition and roof construction, for which in my opinion the plaintiff was not liable, the defects in the house were those which one expects to find in all new buildings; that these defects were, in this particular case, intensified by the wet season of 1910 (the year in which the work was done), and by the abnormal heat from the abnormal number of radiators which the defendant requested to abnormally warm his house. I further said that the defects due to the plaintiff under his contract could be all made good in a month, and at much less cost than the 500*l*. which was retained in hand, in accordance with the contract, for the very purpose of meeting such defects.

Mr. John Murray, Sir Alexander Stenning, and Mr. E. B. l'Anson, for the defendant, stated that the defects were due to bad materials, bad construction, and bad workmanship, and in violation of the terms of the contract and of the specification. That no such making good as I had mentioned would be sufficient, and that the new building was in a dangerous condition, should be completely gutted, and the interior reconstructed with materials and workmanship in accordance with the contract and specification.

Responsibility.—It is important now to consider upon whose shoulders the responsibility for all these serious allegations should rest, and Mr. Muir Mackenzie decides that, so far as the clerk of works is concerned, he (the clerk of works) had no power or authority of himself to authorise or permit the contractor to disregard Clause 7 of the conditions of contract.

Then, as to the responsibility of the architect for the quality of the timber and general construction of the roofs and floors. Did he by way of authorising or allowing the deviations excuse the plaintiff wholly or partly? In Mr. Muir Mackenzie's opinion the authorities show that, in a contract like this, the power of the architect to order or sanction variations does not empower him to authorise departures from the terms of the contract which involved the substitution, in the whole or part of the work, of "inferior" materials and workmanship for those prescribed and charged for in the contract price, so as to prejudice the strength and stability of the building.

Mr. Muir Mackenzie has arrived at the conclusion that in this case the acquiescence of the architect in the wider spacing of the joists in No. 6 room, and his permission to the builder to supply timber of a description and quality inferior to that which the plaintiff contracted to supply did not absolve the plaintiff from his obligation to fulfil the contract and specification in regard to the timber, or prevent the disregard of the specification and other conditions of the contract from being a breach of the contract, and Mr. Muir Mackenzie decides that in regard to the two matters above mentioned the plaintiff committed breaches of the contract.

Mr. Muir Mackenzie has evidently been at very great pains to arrive at a just decision as regards the roofs. He finds that there are defects in them, and that they are less sound and well constructed than the roofs to which the defendant had a right under his contract, but that the plaintiff is not wholly responsible for the inferior condition, "some of it being the inevitable result of the change of design by the architect and the direction to the plaintiff to use the trusses and materials obtained from the roofs originally designed, and carry out the change of design as best he could," and Mr. Muir Mackenzie had treated the alteration to the twin roof "as part of a duly authorised variation." As regards some of the other matters of complaint, Mr. Muir Mackenzie considers that they were mainly due to the variations introduced by the architect and the manner in which he required them to be carried out. Other alleged defects, which Mr. Mackenzie specifies, have not, he says, been established to his satisfaction.

Mr. Muir Mackenzie next deals with the defendant's attacks on the *joinery* as being bad in material and workmanship. He states his opinion that, as regards the 'quality" of the wood, the onus of proving that it was inferior and unseasoned was on the defendant, and that he has not discharged it.

Power to Order Extras.—Another matter of some importance, raised in this case, was with reference to what were, and what were not, authorised *extras*. The defendant's contention was in effect that no extra works could be charged for unless authorised by writing or drawings signed by the architect, or by a written approval after having been done. The plaintiff contended, in opposition to this, that he (the plaintiff) was entitled to be paid for all additional or extra work or materials which had in fact been ordered or sanctioned by the architect, or by the clerk of works, or by the architect's deputy or assistant, or by the defendant or his wife, or had been rendered necessary in consequence of variations so ordered or sanctioned. On the construction of these clauses Mr. Muir Mackenzie found in favour of the defendant.

A Few General Observations on the Case.—I cannot help expressing my regret that the plaintiff was not allowed to do what he was perfectly willing to do, and in fact was bound to do under Clause 17 of the contract, and that was to go down and make good all defects which had appeared in the house before Mr. Foster was superseded by another architect.

As regards the responsibility for making good defects arising from faulty construction—construction designed or acquiesced in by the architect—it does seems to me most unfair that the result of this should be placed upon the shoulders of a builder.

Mr. Muir Mackenzie has not, I think, laid down any clear and decided opinion as to this, but he rather judges each item on its merits. I have hitherto thought that, as regards defective materials and workmanship, the builder is responsible, but that as regards the mere carrying out of the designs and directions of the architect, the architect or the client was responsible for bad results. H.M. Office of Works deals with this particular matter in a manner to my mind quite fair. There is a clause in their contracts which runs as follows:—"But if any failure shall have arisen in the work, or any part thereof, by reason of a defect in the design of the architect, then the builder shall not be responsible for such failure, and the same shall be made good as extra work under Article 7 of these conditions if so required by the Commissioners."

There can be little doubt that the many actions which have been fought during the last few years have brought to the front responsibilities and troubles never before realised by architects and builders. Our present conditions of contract do not provide in any way clearly for the settlement of these troubles, and it becomes day by day more urgent that these conditions of contract shall be revised, for the protection alike of client, architect, and builder."

Mr. H. D. Searles-Wood
proposed a vote of thanks to Mr. Woodward for the able and impartial analysis of the decision in the case he had dealt with, and he suggested that the paper, as well as other papers relating to the same subject, should be referred to the Practice Committee with a view to that body drawing up a short guide for modern practice.

Mr. H. T. Hare seconded the motion.

Mr. M. B. Adams
said he did not know whether any reference would be permissible to a practice which did not exactly apply to the particular case before them, but with regard to which it appeared to him some measures would have to be taken. He referred to the system now prevailing both amongst architects and engineers for specialists to be called upon to prepare designs for the use of ferro-concrete, and then for the specialists to seek out certain contractors to carry out the work, the designers undertaking to be responsible for any defect which arose from any fault of theirs in the way of design, whilst the contractors were to be liable if it could be shown that there was any deficiency in the materials they supplied or in the manner in which the work had to be carried out. As the result of such divided responsibility the difficulty was to ascertain in actual practice who was really responsible. The specialist designer said: "If I were called on to do this over again I should do it precisely as I have designed it," and the contractor, introduced by the middle man, who was a specialist, said: "My materials are perfectly accurate. If you can find out any point in which they are wrong I will be responsible." He knew of a case in which a structure was erected for a Corporation and it did not properly fulfil the object for which it had been built, and what he had described really took place. It looked as if the matter would have led to litigation at enormous expense, but in the end the employers, the specialist, and the contractor each paid 100*l.* to put the matter right, and probably for that 300*l.* they avoided legal expenses of 2,000*l.* He asked if something could not be done to fix responsibility more closely than this. They might imagine a young architect having to deal with an experienced architect and a very capable specialist, and with the employer coming down on him in regard to responsibilities which he ought never to have engaged in. What he had described was gradually becoming more and more the practice, and it was very desirable that some definite scheme should be decided upon so that the difficulty could be fairly and clearly met.

Mr. G. A. T. Middleton
drew attention to the fact that in the case before them timber had been specified which it was practically impossible to obtain. These antiquated clauses were often found in specifications in the country, although perhaps not so much in London. He would like it impressed on architects all over the country that they should bring their specifications of timber and steel and particularly of cement up to date.

Mr. W. H. White
hoped that the subject raised in the paper that night and in previous papers would not be allowed to drop into obscurity, but that something would be done for them, particularly for the advantage of the younger men. He considered some committee should be appointed by the Institute to revise these obsolete clauses in the specification so as to suit modern practice. They could search the text-books through and through and then find they were deficient in the practical information they required in their everyday practice. In Minter's case and in most contracts there was an arbitration clause, and why such clauses were so weakly drawn as to permit of litigation before there was an arbitration was a mystery to him. If the arbitration clause were so worded as to make an arbitration precedent to legal proceedings heavy expense would be avoided.

The President: I have heard it said it is cheaper to have a law case than an arbitration.

Mr. White said that was one of the points which should be dealt with.

The President: To make the arbitration cheaper than the law?

Mr. White said he thought so.

Mr. W. H. Satchell
said the specification of timber was known by those who understood to be generally hopelessly out of date, and architects generally were blamed for that. He hardly thought that was fair, because if there was one subject more difficult to know about than another it was timber. Until quite recently there was not a single text-book on timber from the timber merchant's point of view. Their offices were inundated with pamphlets, but scarcely one gave the architect any idea of what timber was in the market. Therefore, if the architect specified sizes no longer imported and brands which were not available he could hardly be blamed because a busy architect could not afford the time to go down to the docks and see what was obtainable. If the Institute could in some way convey to those concerned the desirability of informing architects what could be obtained it would be a great advantage, and there would be less excuse for the mistakes which were now made. It was generally specified that the very best timber only should be used, and the same specifically applied to a cathedral and a cottage. Obviously when such a specification came before the Courts the judge did not feel in sympathy with an architect who expected in a close-cut competition job for a small work the same material as would be used where money was no object and where the work was measured and the building was of national importance.

The President asked if it was a fact that seasoned wood behaved more badly than inferior stuff.

Mr. Woodward said that what he meant was this. Where the wood was more seasoned it was more receptive to dampness than wood less seasoned. His experience was that well-seasoned timber sucked up the atmosphere more than other timber.

The President: You would not expect to put wet timber into a building?

Mr. White said the drier the timber the more absorbent it was. He had had the case of an old house which had been painted thirty or forty times. The windows were taken out during the wet season and the moisture got into the house and the panelling absorbed the moisture, and when the rooms got dry the shrinkages were greater than was usually the case in a new building.

The President: It is rather a dangerous theory to encourage young men to put in bad joinery.

Mr. White said it was not a question of bad joinery, but of dry timber in a wet building.

Mr. Woodward said he was working in an old building in the New Forest, and they painted some old panelling which had not before been painted, with the result that there was considerable shrinkage.

The President: Wet makes it expand as a rule.

Mr. Woodward: It did not in this case.

Mr. Searles-Wood said it would expand first and then shrink.

Mr. Saxon-Snell remarked that when timber shrank it also twisted, but good timber only shrank.

Mr. White observed that badly-seasoned timber would give rot, whilst well-seasoned timber, although it would shrink, would not rot.

Mr. Osborne Smith
thought a great deal of the trouble in the case they had heard of was due to the builder unwisely carrying out the instructions of the clerk of works which the clerk had no authority to give. It was the architect's duty to write the specifications and to see that the work was properly carried out, and not leave things to the clerk of works. If the architect did his duty a great deal of trouble would be avoided.

Mr. Langston
did not consider that there were any new responsibilities on architects, but the public were waking up to the defects of incompetent architects. Architects were suffering from their faults, and it behoved them to do better. He would give an instance. They were sitting in a room that evening in regard to which the legislature had laid it down that there should be exit doors, and yet one exit door was locked. Who was responsible for that? Was it they who should sit in judgment on their fellows? Let them raise themselves to do their duty, which was nothing new, but simply a recognition of doing their duty towards their neighbour.

Mr. Geen
agreed that the responsibilities on the architect disclosed by the case dealt with were not new responsibilities, but were as old as the Roman law, and always had been the responsibilities of architects in this country. Touching on the various points raised in the case, Mr. Geen said it would probably be news to some architects that *primâ facie* the architect had no power to order extras, but the owner could give him authority. If it were otherwise it was obvious that the architect would have power to ruin an owner by ordering the most expensive extras. The owner could, of course, give the architect authority to order extras to either a limited or an unlimited amount, and it was the duty of the builder to inquire as to the extent of the architect's agency. If the architect professed to act as the agent of the owner, but had in fact no such authority, then the architect was personally liable. When an owner discharged an architect it was his duty to immediately give notice of the fact to the builder, and it followed that an architect would not be right in giving a certificate after he was discharged. If the builder did nothing when he had notice of the architect's discharge then he acquiesced in the matter.

The President
said the paper had been full of puzzling points. He wished it had never arisen, for it would be much better if they could be avoided. When once they got into the clutches of the law or of the arbitrator it was very difficult to make it clearly understood how the case stood. The result was that an award was given which they could never look upon as a final clearing up of the points involved, because often the judge or the arbitrator had got a little off the lines and they could not make the case fit others which might come after. They were all liable to go wrong and were too obstinate about their rights, but it was much better to deal with such matters in a give-and-take fashion if the owner and builder would agree. After all, a bad job always had to be put right, and it costs more to get the lawyers to put it right. Mr. Wood had suggested that some sort of guide should be compiled to help young men. It might be advisable, but they ought to be careful how they laid down hard-and-fast rules to guide young men, as cases altered with conditions.

The motion having been passed,

Mr. Woodward,
in reply, said he had always understood that the architect had the power as the agent of the employer to pledge that client's credit practically to any amount, and in the case before them Mr. Muir Mackenzie said that if the extra ordered was for the benefit of the structure, then the architect was justified in ordering it. He had inquired over and over again of lawyers who had taken part in their discussions as to this question of agency, and had never been able to get a satisfactory reply as to the general power of the architect to order extras without the cognisance of the employer. Even Mr. Muir Mackenzie left the point very ambiguous. He agreed that it was the variations from the conditions which caused the trouble in this case to arise, and he knew that the clerk of works had no power to order things without the sanction of the architect, and that the builder should not have carried them out, but it was done every day. The value of such discussions as these would be to warn architects that they were far too free and easy in carrying out their works. He hoped that the suggestion with regard to the mediæval character of the timber specifications would be carried out. He did not know where timber came from and did not care, and so long as it was good and sound, healthy timber he let it go in. He agreed with Mr. Adams that there would be trouble with regard to ferro-concrete work, and that the question would arise as to what extent the architect was responsible for the serious shifting about of the contract relations. Mr. Middleton had referred to cement, and there was an enormous amount of so-called Portland cement from Germany and Belgium being used. Architects ought to see that real Portland cement was used. He had been in arbitrations conducted by lawyers and by architects, and certainly the cases were far better understood when conducted by architects. In the case of timber, for instance, if the specification said it was to be Riga timber, the lawyer held that it must

come from Riga irrespective of the question of whether there was any available, whereas the architect used his common sense. He agreed that the architect should write his own specification and not leave it to the quantity surveyor.

The President announced that the next meeting—a business one—would be held on June 10.

REGISTRATION OF ARCHITECTS.

In the Supplement to the last issue of the *Journal* of the Royal Institute of British Architects the following letter appears:

"To the Editor, *Journal* R.I.B.A..

SIR,—We, the undersigned, whose names were appended to a circular issued by the Institute Members' Club under the above heading, wish it to be known that we were not consulted as to the issue of this circular and did not see a copy of it before it was issued.—Yours faithfully,

REGINALD BLOMFIELD,
WILLIAM DUNN,
WILLIAM FLOCKHART,
W. A. FORSYTH,
JAMES S. GIBSON,
WALTER TAPPER,
SEPTIMUS WARWICK,
EDMUND WIMPERIS."

ANCIENT MONUMENTS IN MIDDLESEX.

AT a meeting of the Middlesex County Council, on the 30th ult., a letter was read from the Commissioners of Works inviting the Council to co-operate in the preservation of ancient monuments and historic buildings, and intimating that where the expense of preserving monuments of national importance is heavy it might fittingly be defrayed from national rather than local resources. Acting on this suggestion, the General Purposes Committee made inquiries in the county, and now recommended that the following list of buildings, earthworks, and ancient monuments be forwarded to the Office of Works as worthy of preservation:—

The London Stone.—Said to have been placed on Lammas land at Staines about 1270, with the intention of marking the western boundary of the City of London.

Hogarth's House, Chiswick.—Where Hogarth spent much of the latter part of his life, and where many of his works were produced.

Bury Hall, Lower Edmonton.

Headstone Grange, Pinner.

Grim's Dyke, Harrow Weald.

An Obelisk near the Grove Estate, Little Stanmore.

Lamb's Cottage, Edmonton.

Old Mansion in Pymmes Park, Edmonton.

Salisbury House, Bury-street, Edmonton.

Building at east end of Church-street, Edmonton.

Monument in Acton Park.—Designed as a memorial of James Radclyffe, Earl of Derwentwater.

Garrick Temple, between Thames-street, Hampton, and the river.

The Old Pie House, West-street, Harrow.—Specimen of old domestic building of uncertain date

Tower of St. Mary's Church, Hornsea.

Cromwell House, Highgate.—Erected in the XVIIth century, probably by a member of the Springwell family.

The Treaty House, Uxbridge.

Traces of Roman encampments at Heathrow, Harmondsworth, and at Shepperton.

An ancient barn on Sir Samuel Boulton's estate at Totteridge.

An ancient barn at Harmondsworth.

Agrimensorial Marks.—Stones at Wealdstone, Whetstone, Sudbury, and Bordestone.

Saxon and Danish Moats.—Camlet, Old Bury, Tottenham (three), Hanworth, Pinner, Enfield, Northolt, Alperton, Acton, Ruislip, Down Barn.

THE CHURCH BUILDING SOCIETY:

THE CRAZE FOR CHEAPNESS.

THE Bishop of Chester, who presided recently at the annual meeting of the Incorporated Church Building Society, at Church House, Westminster, stated that modern churches had been so indifferently built that they were falling down. Dry rot frequently appeared in the fabrics of churches and vicarages, foundations were bad, and one vicarage, although it had been built only forty years, had completely fallen down. The services of the Committee of Honorary Consulting Architects were invaluable to them in this connexion. The Committee might also advise them with respect to the positions organs should occupy. The fashion of putting the organ in what Sir Frederick Bridge had described as "meat safes" at the chancel end of the church had had a mischievous effect upon congregational singing.

Mr. Walter Tapper, F.R.I.B.A., a member of the Committee of Honorary Architects, said: "Speaking for your Committee of Architects as a body, I think I may say that they are glad that their duties are in the main confined to seeing that the plans which come before them comply with the excellent practical requirements of your Society, because if minute criticism were expected from them on the æsthetic side I am not sure but that some of them would depart this life at an earlier period than would perhaps be otherwise the case. That many of the designs, if they may be honoured by the title, show clearly enough that there is room for vast improvement cannot be doubted. It may, I think, be fairly assumed that they represent the prevailing ideas regarding church building, and I am bound to say that if the works of the old masters be accepted as a standard by which they should be judged, and no better can, I think, be suggested, the modern plans compare badly with the old ones, and leave little room for congratulation. It may be instructive, if not altogether agreeable, to consider why this is so.

The fine arts do truly reflect the character of the people who produce them, and it may be taken for granted that because our old churches embody the necessary qualities of dignity, repose, restraint, reverence, and modesty, which combine to give them their devotional character, the same qualities were to be found in the people who caused them to be built and in those who designed them.

If, on the other hand, modern architecture be looked at from the same point of view there must surely be very grave doubts whether the same fine qualities prevail to-day.

I think that the lack of fine architecture in this XXth century is not entirely the fault of the architects, and I am sufficiently optimistic to believe that were it demanded it would be supplied. It is the demand which is wanting. There is no lack of inventive power, quite the contrary, but it is applied rather to mechanics of all kinds than to the fine arts, so that the art of fine building, at least so far as our churches are concerned, is, broadly speaking, and by comparison, almost at a standstill, and, in my opinion, this state of things involves considerable moral loss to us, though this deduction may be one on which there might be much argument.

As our efforts are thus directed, so the wealth of the country follows them and we naturally get the cry for cheap churches. Your report draws attention to the distinction between cheapness and proper economy, and wisely so. It is, however, regrettable that economy need be so prominent a requirement in so noble a work as architecture when we consider the wealth of England at the present day.

This requirement of cheapness may well be our undoing, just as easily perhaps as the luxurious tendencies of the age in which we live. Though, for the reasons given, large sums of money are seldom spent on individual churches, yet much is being spent on churches in the aggregate, and it is the essential difference between "cheapness" and proper economy which should be borne in mind. The practical application of the latter in church building should be made by the omission of fussy and meaningless detail and vulgar ornament. mean decoration, painting, furniture, and fittings, and the money thus saved should be devoted to sound building with fair proportions.

Improvement in this respect has been made during recent years in some degree, but it must be admitted that the cheap and nasty church furnishing shops still flourish like green bay-trees, and the handicraftsman who would give thought and care to each individual thing is as one crying in the wilderness.

It became the fashion some fifty years ago to arrive at the cost of a church by reckoning so much per sitting, and 10*l.* was the accepted sum. The fashion still prevails, notwithstanding the great increase in cost of both labour and materials, and the result to-day is a building inferior in some respects even to those of half a century ago. What can be less inspiring to the architect than to be asked to build on such lines? One can hardly imagine those simple old devotional village churches of ours being so erected, to say nothing of the great cathedrals and minsters.

I take this opportunity of pleading for higher ideals in this respect, and suggest that it would be wiser for the architect to be told the amount of the funds available for the structure and be asked to build so much as can be done properly for the money.

Such a course need not lead to extravagance, for it is only fair to assume that architects have some common sense and would understand the prevailing conditions in each particular case. The question of accommodation should not be permitted to dominate the matter; this difficulty can be overcome by some temporary adjunct to the permanent work. I make this suggestion believing that it would tend to better and more honest building, to say nothing of finer architecture.

To build a portion well is surely better than to put up the whole in an inferior manner.



Hogarth's House, Chiswick: From the Garden.

Future generations may add as the opportunity occurs. This is no new-fangled idea, but one adopted in the heyday of church building and with the best results. Churches of fair proportions with all the qualities which go to make fine architecture would once more rise in our midst instead of the many poor, mean, unworthy ones we now so often see. Unconsciously perhaps, but none the less really, these latter must have a demoralising effect on the minds of men. If it could be but more realised that the beauty of our churches and, for that matter, of our homes and general surroundings is as necessary for our better moral welfare as the sun in the heavens, we should be building better things. No one admires the efforts of those responsible for the building and repair of our churches more than architects, and no one realises better the need of encouragement to the parish priest entering upon such an uphill task. It is all the more necessary that funds so hardly gained should be the more wisely administered. Much progress has been made in this respect, but even to-day we find the beauty of our old churches woefully marred. Only last week, in one of the finest churches of the country, I saw the meanest piece of material placed as a dossal, bad material both in texture and colour, and so mean that one would hesitate to use it anywhere. Behind it was a glorious XIVth-century window. Apart from any question of cost, I ask whether as a place to pray in would it not have been well to be content with the fabric itself until something more worthy of the building could have been introduced.

We see the same ill-effects in cheap mural decoration, in bad drawing, in bad figures, and in bad colour, so distracting that a white-washed wall would be much more suitable and a great relief to the eye. If we cannot have the best at the moment, let us be content to wait. So, again, with furniture; a lectern, we will say, is considered necessary, and a brass thing of no merit whatsoever is introduced. Surely it were better to read from a well-printed book held by the hand than to suffer the introduction of foolish-looking or offensive furniture. Such things can have no good influence, I believe, but quite the contrary.

Just recently the Archdeacon of Halifax thought it necessary to call attention to the innumerable badly-painted windows which are placed year by year in the churches of his deanery. Better by far is the simple glazing than such tawdry stuff. If it were not so serious it would be almost humorous to think of what is done to-day in the name of art, and I fear that the standard of taste is not likely to improve until the "man in the street" takes a real interest in architecture, and before that happens he must, I believe, have the same grip of the Faith which enabled our forefathers to build and to adorn their buildings so splendidly."

The Bishop of Manchester complained that cheap sites were chosen in back streets. Other denominations selected the main thoroughfares, but they did not send a clergyman to buy the site. Laymen were empowered to make the purchase, and they did not have to say at the time what the site was required for. He advocated that the question of church sites should be dealt with centrally, and any money advanced to parishes for the building of churches should be by way of loan rather than grant.

ARCHITECTS AND THE CORPORATE SENSE.

AT the monthly meeting of the Transvaal Institute of Architects, held at Johannesburg, on April 19, Mr. M. J. Harris read an interesting paper, entitled "Architects and the Corporate Sense," the President, Mr. H. G. Veale, presiding.

Mr. Harris, who is the Hon. Secretary of the Institute, said: "By the corporate sense in its relation to architects I mean that civic conscience the existence of which in architects is, or should be, betokened by a regard for the duties we owe to one another, to our profession, and to the State; and by a consciousness of what is due to our art, and to architects collectively, by the State and public.

On grounds of historical accuracy some may question the view that the corporate sense is a newly developing quality in our profession, and may urge certain evidences as to the existence of co-operative schools or guilds in the ancient and mediæval periods of architecture. Be that as it may, the architect, as we understand the term, is a comparatively modern development, no longer merely the artist builder directing his skilled craftsmen, but a specialist having many complex responsibilities and faced with a multitude of problems undreamed of in the simpler civilisations of former days. And, similarly, many problems which confront the corporate sense of the modern architect are of a new nature, solution of which cannot be attained by any study of precedent. Any inquiry as to historic precedent for the corporate ideal among architects will thus, if interesting, be of small practical use. It is of more serious import to consider how far the corporate sense is in existence among us.

Of Professional "Ishmaels."

Sociologists place this sense, the civic consciousness, high in the scale of human progress. By analogies drawn from observation of extant savage races, and from the growth of human consciousness in the individual, some have deduced stages of evolution through which prehistoric man advanced towards civilisation. From barbarian beginnings in which the cruder animal instincts and the gratification of personal desires formed man's sole mental equipment, they argue developments in which the love for kindred, for tribe, and for race successively appeared. Without actually adopting any such theories, it is easy to imagine a similar course of evolution in regard to the development of the corporate sense among architects. We are, unfortunately, only too familiar with those instances in our profession where self appears to be the one consideration; too well aware of that attitude which, in effect, cries aloud, "I am the artist, and in art there is My school and none other"; of those instances where our code of ethics and of professional usages have been dishonourably set at naught. Their hand set against their brethren, these are the Ishmaels of the profession—each of them the extant barbarian whose selfish attitude would constitute him the base of the evolutionary argument.

Safeguards of the Code.

It is, however, a satisfactory evidence of the extent to which the corporate sense does obtain among us that throughout the civilised world architects have banded together in associations and institutes such as ours for the furtherance of common professional aims. Standards of qualification have been set up; codes determined embodying, from wide experience, the minimum fees or charges compatible with honourable practice; clearly defined rules have been laid down demanding our proper conduct of the high responsibilities which fall to our lot in discharging the duties we owe to those who entrust us with the direction and care of their enterprise and interests. The recognition of a code of ethics among all artists and professional men is, in fact, universal. If this were not so, if artists and professional men—the seers and prophets of our day—were not alive to the dangers of the increasing commercial tendency of this age, we should all, ere long, be shrieking our wares in the market place and bidding against one another in values of intellect and of worth of soul to obtain the favour of popular patronage. How much intellect and how much soul would survive the market? It should clearly be seen that the code of ethics is a necessity in the highest interests of art and of civilisation.

Such are the grounds on which our associations and institutes are rightly jealous of any infringement upon the safeguards afforded by the code. Ostracism from the ranks of his fellow artists is the extreme penalty meted out to the offender. But, in certain flagrant cases of callous offence, ostracism is obviously no punishment. The law will punish actual crime, but cannot be invoked against those who infringe certain of the professional safeguards. If our previous statement—that these safeguards are necessary in the highest interests of art and of civilisation—be established, then our law is proved inadequate to the needs of our time. It is to the corporate sense among us that we must look for a formulation of those needs that shall inform State and public as to the urgency, upon grounds of national import, of newer legislation. When, by such formulation, our corporate duty has been performed I trust that we shall not need to labour the point in regard to the duty of the State towards furthering and encouraging the honourable civic ideals of associated professional men and artists.

Competition and Public Buildings.

The mention of State encouragement brings us naturally to a consideration of the State policy in regard to public buildings, as affecting the evolution of a national architecture. If we do not feel this question deeply, sincerely, then, indeed, in the corporate sense we must be dead. . . . Those of us whose possession of the corporate sense is not merely fragmental will always hold that public buildings of a country should represent the highest artistic talent in that country, and that that talent should be discovered in every instance, or introduced by means of competition open to every artist. We do not suggest that such competition be limited to the artists of the country, but that only the very highest obtainable talent should suffice. Strange as it may appear to a succeeding generation of artists, our State policy in regard to the design of its buildings has alternated from (in one favoured instance) the bestowal of patronage to the departmental method. More strangely still, the departmental method has been restricted to the designing of its buildings, and has not been extended to their construction, which latter is still carried out under the system of competitive tender by builders. One would have thought it more logical to carry out construction departmentally, and to obtain the designs (in which the personal factor is of vital importance) by the competitive system. A clear case of topsy-turvevdum! And, what is more serious, a clear indication that the Government of our country is unaware of, or indifferent to, the high desirability that its architect citizens be given that incentive to emulation in their art which can be afforded by the holding of open competition whenever one of the public buildings of the country is to be designed; that, in short, the Government of our country is unaware of, or indifferent to, the true need for its encouragement, and not discouragement, in the development of a South African national architecture.

"Majores ad minores," the Government's example has to some extent influenced municipalities. In a recent instance, when several valuable pictures were presented to a municipal art gallery, the donors flouted the entire body of practising architects in this country by an insistence that the building, which was to be erected out of public funds, should be designed (without competition) by an architect having influential practice in London. This by way of encouraging South African art!

The Opponents of Competition.

It would be unreasonable to expect a disinterested view of the competitive system from those who will sacrifice all else for the gratification that is theirs when bestowing patronage, from those who habitually receive such patronage, or from those whose personal advantage is best served by every increase of departmental responsibilities. The opposition to the competitive system, both in this country and elsewhere, is almost invariably traceable to these sources and their tributary influences. Nepotism and court favour are, happily, less evident here than in older countries, but they have made their appearance, and have been justified on grounds of art!

I cannot devote further time to elaborate this aspect of my subject. Much remains to be said as to the manner in which competitions, when held, have at times been shamelessly thwarted by those who nominally were the promoters, and by the faulty awards, for transparently interested motives, of certain assessors. Suffice it now to say, in anticipation of our opponents, that the competitive system, where it has failed in the past, has failed for lack of that proper honest use without which every instrument must fail. And thus we have come to a further demand on the corporate sense among us, requiring the service of our collective and individual influence to arouse public opinion upon the means now adopted in the production of its national architecture.

Education.

But our responsibilities and duties do not end there. We cannot hope for sympathy in our strivings for the highest expression in art unless we carry the understanding of the public as to the aims and advantages of art. Ours should no longer be the "still small voice" which nowadays nobody hears; propagandist programmes and the support of all liberal education schemes, both within and without our profession, seem to be necessary to our progress—nay, to our continued existence. Education within our profession, in order to

maintain a high standard of ability among artists who may be trained within our own borders; education beyond the confines of our profession, the better to counteract the uncertain tendencies of a democracy without culture. It is our duty as architects to see to it that our educational systems shall not produce a race artistically atrophied. South Africans have been decried as an inartistic, unimaginative, and unmusical race. We know it is not so. There is, nevertheless, much to be done in certain quarters to overcome the apathy which owes its rise to an impression that art is the exclusive interest of the lank-haired, the be-spectacled, and the anæmic. We live in a vigorous colonial atmosphere, and, where academic abstractions fail to attract, the methods of the constructive artist may succeed in leading to higher things.

Schools of Technology.

In connexion with the question of education, it would be impossible to pass without appreciative reference to the efforts made by our Government in the institution of the excellent classes now conducted at the various schools of technology and at so-called "trade schools" throughout the country. Care must be taken that the rudimentary instruction there afforded shall never be regarded as in any sense obviating the necessity for apprenticeship, for professional training, and practical experience. If vigilance in this respect be relaxed we must expect to find an abundance of that partial knowledge which is proverbially dangerous—to the detriment of the general efficiency. Nor can appreciative mention be withheld from the individual action of Mr. Herbert Baker in founding a scholarship enabling selected South African students to attend the British School at Rome. It would, of course, be easy to over-estimate the value of classical study; some of the most impressive architecture in the world was produced without the slightest inspiration from the classic tradition, or by men who had never travelled further than a hundred miles from their native town: nevertheless, the source of culture thus made accessible to the more fortunate of our students has opened up certain possibilities for which they, and we, are grateful to Mr. Herbert Baker, who has given out of his success to the honour of the profession to which he belongs.

Influence upon State and Municipal Bodies.

The further duties which devolve upon us in the corporate sense, and to which duties I can only briefly refer, are those of the influence we should exert upon State or municipal authorities in connexion with legislation affecting town planning and cognate matters, and in supporting any one of our number when occasion demands in litigation which may result in precedent affecting the interests or the status of us all.

Referring to the first-named matter, that of town planning, the lack of any corporate power to exert this influence is sadly evident, even in the comparatively young town of Johannesburg. Many a fine street is terminated by a mean vista of hideous structures—I could name many instances—and the worst feature of all is that surviving evidence of the old-time Boer prejudice against the Johannesburg population—the "Fort." The dominant feature of our landscape is the gaol, and we go our daily round and send our children to their schools under that frowning reminder of the punishment that awaits transgression of the law. When our corporate sense obtains its full power we may prevail upon the conscience of those responsible to allow us a better and more inspiring outlook.

Press Attitude.

So far I have mainly dealt with our duty to the State and public. Certain duties of the State, and the attitude of the public as indicated by the action of State and municipalities, have also been considered. I propose to conclude with some considerations as to the attitude of the mentor of the public—the Press. It is distinctly depressing to recall that in all the discussion which has taken place at various times on matters deeply affecting the practice of our art the main attitude of the Press, or, at all events, a large portion of that which comes under our notice in Johannesburg and Pretoria, is distinctly unfriendly to the South African architect. It matters not that he it was who designed, not discreditably we hope, the many fine buildings erected at Cape Town, Port Elizabeth, Durban, and elsewhere throughout the country (to say nothing of Johannesburg and Pretoria) during the past twenty years. Certain of our Press organs are wont to write about our art, deplore that it is not art, to regret that it is so poor, or so unnational, or so uncharacteristic, or so unsuited to our climatic conditions. All of us have seen such comment; its appearance is generally coincident with the close of some public competition or during some discussion when the claims of other than the South African or of other than the luckless competitors are to be advocated; at whose behest the advocacy we can merely conjecture. But is such comment just, is it justifiable on any ground of either patriotism or of art? Let the conscience supply the answer.

We cannot, however, attain our just ends save with the co-operation of a just and honest Press. In the existence of such—"a righteous remnant"—is our hope. The Press, the greatest factor in the evolution of democracy, is the indispensable ally, without whose aid we cannot hope to succeed in our plea to the fair sense of democracy.

When our corporate sense has been endowed with corporate power we shall perhaps have a further means wherewith to persuade Government, municipalities, and people that local art should be fostered and encouraged, not discouraged, as "the visible flower of civilisation, reflecting honour upon the race that has produced it."

THE STUDY OF ART AND ARCHITECTURE AT CAMBRIDGE:

THE SLADE PROFESSOR'S PROPOSALS.

MR. EDWARD S. PRIOR, the new Slade Professor of Fine Art at Cambridge, dealt in his inaugural lecture with the use of the capacity of the University to organise art study.

In Art, he pointed out, there are two sides—the recipient art and the executive art. There is he for whom art is made and he by whom it is made. There are thus two faculties which the University has the capacity of training—that of the public and that of the artist. It must consider that its students will be purchasers as well as purveyors, clients as well as architects. Art study has to teach a man to know art when he sees it and also to teach a man to make art when he can. By instituting art study at Cambridge the University has taken on itself the office of both teachings.

Archæology and art must be coupled together, and for the right use of archæological knowledge in the education of the general student a right understanding of artistic value is necessary and should be taken account of in art study. The lecturer also pointed to what Cambridge has undertaken in its school of Architectural Studies. Among the 4,000 students who are on the books, the University is bound, he said, to get certain natures in whom the potential instincts of the artists develop a passion for making, ordering, and shaping—a passion as natural as that of reproduction. Why in these cases should the potential artist be sterilised because he has come up for a University education? And more, the University will now attract to its curriculum the best kind of artist student—one that is ambitious to face the world as a citizen with a practical public career. He is entitled to claim from the University the full education of his time—the full draught of knowledge that a University can give, its spacious outlook, and the temper of its communal associations. But this being so, the training offered has to be to the purpose—not merely a book knowledge: the A B C of facts; it must be in the craft of the artist's trade. But the student, before establishing his claim as a specialist for architecture, should show that he has interest in the practical forms of art and has the instinct of handicraft. The power of the artist is a distinct physical idiosyncrasy—a predisposition necessary for training in art, and it is cruelty to force it on the unfit. He should, secondly, give proof that he has the capacity for understanding the elements of a practising art. Architectural training is no good as a refuge for the mentally incompetent. When the student understands himself as an artist, the history of art and historic archæology become for him a new thing. The achievements of the past are studied, not as a story, but as an exercise. It is not what was art in ancient times, but the way of it now. Forms and handlings come before him in their evolution, and he tests their achievement by his own experience.

The Slade Professor said that the programme of an archæological and architectural school must be closely condensed for University purposes, but he believed the programme could be regulated by strictly keeping to the principles of practical art instruction and specialising to this end in the direction of the constructional arts. He emphasised that the only just education of the artist, at the start and all through, is making him competent to meet present-day conditions, with the present-day materials of art. He must be equipped from the beginning to take those conditions seriously and to experiment in them. The student of art must start with his handicraft. He must draw and understand what a line means. He must model so as to understand how form is constituted. He must colour and know what tone and shade express. The lecturer went on to say that they wanted in Cambridge continuation studies in archæology and architecture, in which students with the bent of investigation may obtain the habits of observation and comparison on which archæological discovery rest.

The Clergy and Architecture.

There is another special class, for whose needs a school of archæology and architecture ought long ago to have been instituted. The Cambridge curriculum of theology sends out to nearly half the parishes of England incumbents and curates. Many come immediately into touch with some of the finest architecture and some of the most valuable records of art that our island holds. Our ancient cathedrals and parish churches come under the care of Cambridge graduates, who often obtain what is practically the power of ownership to do what they will with the ancient religious art. With them lies often the decision whether the genius of ancient English art shall be preserved or destroyed. A knowledge of what is in their hands to guard and secure would seem a part of their education. The tragedy has been that the knowledge has scarcely been given only by chance, by individual effort, or most often not at all. It is a tragedy that with the best intentions, and often with pathetic exertions to understand, clerical guardians of priceless treasures have been so ignorant (despite a University education) so unstudied in the ideas of religious art, that they have wiped out in the last century a very large part—he believed he should say the greater part—of the religious art and religious antiquities that 100 years ago our churches everywhere possessed. While there are still art treasures for the Church to keep, would it not be to the advantage of the clerical vocation if clerical students took a course of historical English architecture, and understood what this meant in churches? A school of art preservation in connexion with clerical training would also have its proper home in Cambridge in connexion with a continuation School of Archæology and Architecture. In most ages the religious art has been the popular art, and the artist has found his best client in the churchman. But for the last 100 years this alliance has lost its bond. He could count on his fingers the occasions when acknowledged painters and sculptors of the English school have in the last 100 years been allowed to show their art in our cathedrals and churches. For the most part the edifices of public worship take nothing from any genuine artist. Would it not be an advantage for every candidate for Orders to be given the opportunity of associating with and understanding the artist—at any rate to the extent of taking at its worth what in our churches is often degraded stuff?

[We are indebted to the *Times* for the above report.]

LLOYDS' BANK, MIDDLESBROUGH.

The new premises for Messrs. Lloyds' Bank, Ltd., have been erected from the plans of Messrs. Hoare & Wheeler, architects, of London. The front is formed of green Buttermere stone at the base and the upper part is of Stainton stone. On the ground floor is the bank-room, 28 ft. by 23 ft., with a marble floor, private-room, manager's-room, and cloak-room. The upper part of the building has been given up to offices with a separate entrance. The contractor is Mr. Henry McNaughton, of Middlesbrough, and the strong-room is by Milners' Safe Company, Ltd.

No. 60, ST. JAMES'S-STREET.

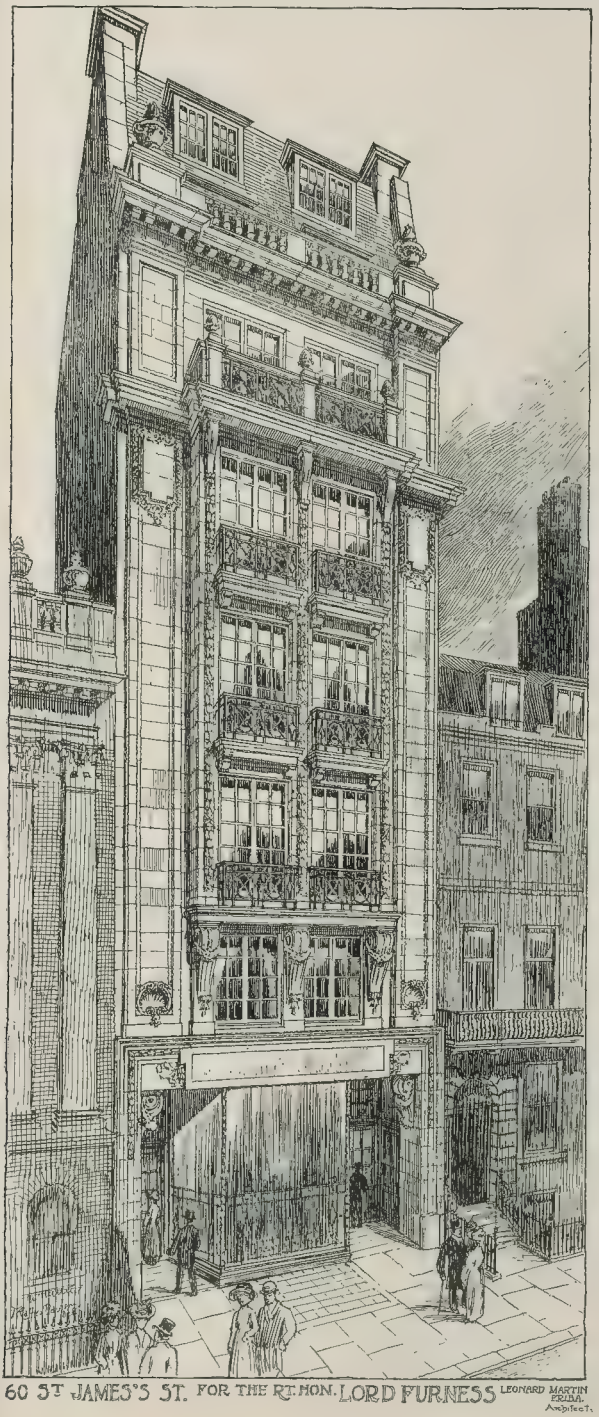
THIS building, which immediately adjoins Brookes's Club, has been erected for the Rt. Hon. Lord Furness as his West-end offices, from the design of Mr. Leonard Martin, F.R.I.B.A., of No. 17, Waterloo-place, Pall Mall, S.W.

Externally, the building is of Portland stone of Renaissance character. The upper floors are arranged as high-class bachelor flats, and are decorated throughout in the same character, the woodwork being of polished mahogany with fibrous plaster enrichments to walls and ceilings. A general kitchen with staff-rooms is arranged in the two floors in the roof for the use of the flats.

The upper part is approached by a separate entrance, with a push-button electric lift to the various floors.

A similar character of decoration is introduced into Lord Furness's offices on the ground floor and basement.

The general contractors were Messrs. G. E. Wallis & Sons, of Maidstone; the carving was by Mr. Mabey, of Vauxhall Bridge-road. The internal fibrous plasterwork was by Messrs. G. & A. Brown, of Hammersmith-road, and the lift was by Messrs. Hammond & Champness.



60 ST JAMES'S ST. FOR THE RT. HON. LORD FURNESS LEONARD MARTIN F.R.I.B.A. Architect.

ARCHITECTURAL SOCIETIES.

Bristol Society of Architects.

The Bristol Society of Architects have instituted a series of Saturday afternoon sketching expeditions during the summer months. The first of these took place to Chelvey and Nailsea Court. The members were received at Chelvey Church by the rector, who gave an interesting description of the building. The Manor House was next visited by the courtesy of Mr. and Mrs. Cottle, the fine old staircase and panelled rooms being greatly admired. Some time was devoted to sketching and measuring the architectural details of the Church Manor and barn, after which the party proceeded to Nailsea Court, the residence of Mr. Charles E. Evans, where the members were welcomed by Mr. and Miss Evans. This delightful old house, with its recent additions and wealth of antiques, is of much interest to the architectural student. Apart from preserving the original building, Mr. Evans has collected and saved from destruction many valuable architectural works of historical importance, most of which have a connecting-link with former owners of the house. Some of these have been incorporated in the new additions, carried out under the supervision of Mr. Arthur Stratton, A.R.I.B.A.

Royal Institute of the Architects of Ireland.

An ordinary meeting of the Council of this Institute was held at 31, South Frederick-street, Dublin, on Monday last. The President, Mr. A. E. Murray, R.H.A., F.R.I.B.A., was in the chair. There were also present: Messrs. W. Kaye-Parry, L. O'Callaghan, H. Allberry, A. G. C. Millar, J. H. Webb, F. Hayes, G. P. Sheridan, F. G. Hicks, Professor Scott, and C. A. Owen, Hon. Secretary.

The minutes of the ordinary meeting of May 6 and of the special meeting of the 16th were read and signed. A large amount of correspondence was dealt with. A discussion arose as to the projected public meeting to be held in connexion with the School of Architecture at the National University, and the committee dealing with the subject were asked to report on the present position of the matter. The question of nominating an assessor for the forthcoming competition for the new Municipal Buildings was under review.

A motion in connexion with the scheme of examination was considered, and referred to the Examination Committee. Professor Scott was appointed to draw up the particulars for the Institute Prize, to be competed for by members of the Architectural Association of Ireland.

THE SURVEYORS' INSTITUTION:

VISIT TO NOTTINGHAM.

THE annual country meeting of the Surveyors' Institution was held at Nottingham on the 30th ult., the Hon. C. H. Strutt presiding at the business meeting.

Mr. Bernard Everard read a paper on the Derwent Valley Water Board's scheme, and the members visited the works the following day.

Mr. G. Turville Brown, in the course of a discussion on Mr. George S. Bragge's paper on the coal and iron industries of Notts and Derbyshire, said that since the Eight Hours Act came into operation the coal trade had been carried on at a loss. Surveyors must be very careful not to make values upon the evidence of coal extraction in some of the older districts.

Annual Report.

At the annual general meeting of the Institution, which was held in London on Monday, the forty-fourth annual report of the Council was presented and adopted. The Council record an increase of 205 members over the total at the end of the Institution year in 1911, making a grand total of 4,705. We take the following extracts from the Report:—

Members will feel a deep sense of personal bereavement in the death of Mr. T. M. Rickman, whose interest in the Institution as Fellow, Examiner, Member of the Council, and as President had been for the last thirty-nine years of the closest nature. Mr. Rickman's colleagues on the Council in particular must miss an influence which has always been directed towards the highest ideals of the profession, both educational and ethical; while many a young surveyor, especially among those who practise in quantities, will feel the loss of a sympathetic friend whose wide experience and sage advice was always at the service of those who needed them.

Reference should also be made to the death of Mr. Arthur Harston, London (1890), whose kindly presence will be much missed at the Institution meetings, where he was one of the most regular attendants.

The main item calling for comment in the balance-sheet for 1911 is the sum of 7,058*l.* paid on account of the building extension referred to later in this Report. This payment was partly provided for by the 2,500*l.* brought forward on deposit at the beginning of the year.

The receipts from the hire of rooms were necessarily affected by the building operations, and fell from 442*l.* to 212*l.*, but there are indications that this loss will be more than made up during the present year.

The Examinations, 1912.

The large increase which was recorded last year in the number of candidates presenting themselves for the Institution Examinations has been continued, the total, 1,223, being 318 in excess of 1911, which in its turn was 152 more than the highest previous record. As then stated, this marked growth in the number of candidates must be attributed largely to a natural desire on their part to qualify for election to the class of professional Associates before the door is closed in October, 1913, to all who have not passed the Intermediate and Final Examinations. Another factor having a considerable influence upon the total has doubtless been the establishment of the great valuation department at Somerset House, the higher posts in connexion with which are only open to those who have qualified by examination, the Institution Examinations being recognised by the Civil Service Commissioners for this purpose.

Among the 1,102 candidates who came up for the Professional Examinations were 102 who had been referred back in their typical subject on a previous occasion and presented themselves for re-examination. Of the twelve "Land Agency" candidates in this category nine passed; of the thirty-four "Valuation" candidates thirty passed: and of the fifty-six "Building" and "Quantity Surveyor" candidates forty passed, thus completing their respective examinations.

Scholarships at the Universities.

The successful candidates for the Institution Scholarships tenable at the Universities of Oxford and Cambridge respectively were: Mr. R. R. Davis at the former, and Mr. B. C. Adkin at the latter. For those in connexion with which the choice of the educational centre is left to the successful candidates, Mr. P. Whalley headed the list, and will hold his at Manchester University, while Mr. T. B. Manson, who came second, has chosen Glasgow University.

The Council would remind members that candidates for these latter scholarships have the advantage not only of selecting their University, but also of deciding upon the course of instruction they will take, subject only to the condition that the course must be one approved by the Council as appertaining to the surveyor's profession.

Publications.

The gold medal for the best paper read at an ordinary general meeting during the session 1910-11 was awarded by the Council to Mr. E. H. Blake for his paper entitled "Some Notes on Highway Law as Affecting Property Owners." The President had a difficulty in deciding which was the best paper sent in to be read at a junior meeting during the present session, and finally bracketed Mr. F. S. Eden and Mr. E. Page as joint winners of the President's Prize. Their respective papers, "The Simplification of Land Transfer" and "Some Notes on Reinforced Concrete Construction," will be found in Part I., Vol. XVIII., of the *Professional Notes*.

The Library.

The library has benefited by a valuable bequest of topographical, architectural, and other books from the shelves of the late Mr. T. M. Rickman. In particular this includes a fine set of John Britton's works on the history and antiquities of the English cathedrals, besides other volumes of a similar character.

There has also been added to the library by purchase an interesting portfolio of drawings, engravings, and lithographs, illustrative of the various structures known as London Bridge from 1209 to 1831. Members who feel an interest in antiquarian London should take an opportunity of looking through these.

The Forestry Museum.

The Forestry Museum has been redecorated, the old exhibits being removed preparatory to some being remounted and others replaced by new specimens. The work of reorganising the collection must necessarily be slow, but it is hoped that by next autumn a number of the new exhibits will be in position. It is proposed that the museum should comprise a typical collection of English timbers, together with specimens of the industries, pests, and other matters connected with English forestry. With this object in view, in addition to the botanical cases, the exhibits dealing with pruning, creosoting, etc., and the collections of seed and cones, the following special exhibits are being installed:—

(1) Examples illustrating wood industries and the commercial utilisation of timber.

(2) A complete exhibit of willows in connexion with the manufacture of cricket bats.

(3) Boards and sections of the various timbers grown in this country.

(4) Models and specimens of fungi affecting trees.

(5) Photographs of notable trees in the British Isles and of good examples of English and Continental forestry.

The cases of injurious insects are being remounted, and by the addition of such further specimens as are needed this section will be brought practically up to date. Specimens of timber used in constructional work, showing the common and botanical names of the tree, together with the alternative names by which the timber is known, will be included. By this means it is hoped as far as possible to cater for the different branches in which members may be interested, and the Council confidently appeal to members to aid in this object by sending to the museum specimens of practical interest in order that it may become thoroughly representative.

The Institution Premises.

The extension referred to in the last annual report has now been completed, the back of the old building having been thrown out over Princes'-mews as far as the new street separating the Institution from the Guildhall of the Middlesex County Council, which is now in course of erection. By this extension the lecture hall has been somewhat lengthened and its acoustic properties greatly improved; the Council chamber has been nearly doubled in size and made more worthy of the Institution; further reading, smoking, and lavatory accommodation has been provided for members on the ground floor; and the secretarial and staff offices have been conveniently placed together at the back of the building, thus allowing a more effective supervision, and adding to the efficiency of the work.

The Council feel that Mr. Paul Waterhouse, the architect, is to be congratulated upon the addition he has made to the building erected by his father; they confidently anticipate the extension will add to the comfort of members and receive their cordial approval.

The lecture hall has been further adorned by the addition of three portraits to those already hanging on its walls; that of the Right Hon. Lord Alverstone, G.C.M.G., Lord Chief Justice of England, by the Hon. John Collier, which was painted on the instruction of the Council to commemorate his lordship's twenty-five years' membership of their body and as some acknowledgment of the obligation under which the Institution stands towards him for the valuable assistance and advice which he has so freely placed at its service during that period. The other two, which were painted by private subscription, are a portrait of Mr. Daniel Watney, also by the Hon. John Collier, and one of Sir Alexander R. Stenning, by Mr. P. Tennyson Cole.

An important departmental committee, under the chairmanship of Sir John Kempe, K.C.B., has been set up by the Treasury to inquire into the changes which have taken place in the relations between imperial and local taxation since the Report of the Royal Commission of 1901.

As a result of the appointment of this committee, a Land Conference was called to consider the effect of an extension of the principle of taxing site values, which it is understood was one of the principal points upon which evidence was taken. All the more important societies connected with urban and rural landed interests were represented, and forms were drawn up with the object of showing actual results in existing cases.

The Hon. Edward Gerald Strutt has been elected by ballot President for the ensuing year, in succession to Mr. W. E. Horne, M.P. The Vice-Presidents for the year were elected as follows:—Mr. Howard Chatfeild Clarke, F.R.I.B.A., Mr. E. B. I'Anson, F.R.I.B.A., Mr. W. E. Woolley, and Mr. John Farrer; and there were added to the Council Mr. J. H. Sabin, Mr. James Inglis Davidson, and Mr. John McClare Clark.

ARCHITECTS AND THE LABOURERS (IRELAND) ACTS.

A CORRESPONDENCE has recently taken place between the Royal Institute of the Architects of Ireland and the Local Government Board for Ireland as to the qualifications of persons employed as architects under the Labourers (Ireland) Acts

Mr. C. A. Owen, B.A., F.R.I.B.A., Hon. Secretary of the Royal Institute, wrote on April 2 to the Secretary of the Local Government Board, Ireland, mentioning that when the rules and regulations under the Labourers (Ireland) Act, 1906, were being considered some correspondence passed between the Council of the Royal Institute of the Architects of Ireland and the Board, when the Council of the Institute pointed out that the draft regulations relating to the qualifications of these persons and the scale of their remuneration were not such as would induce skilled architects to seek employment in connexion with buildings to be erected under the Act. The Council felt it their duty to invite the Board to consider the disastrous results both to the ratepayers and also to the occupiers of the cottages which were bound to follow the employment of unqualified persons as architects. They also wrote in similar terms to the Chief Secretary, who, in his reply, stated that the Board "held" – and he regarded their view as reasonable—that the work of an architect in connexion with schemes under the Labourers Act did not require specialised knowledge. That experience," wrote Mr. Owen, "in the working of the Act has not confirmed this view is shown by the following extract from the *Freeman's Journal* of February 21, 1912:—

"Few Unions in Ireland are better provided with labourers' cottages than the Union of Kilmallock; but a report, which recalls Mr. Birrell's advice to the Councils to be more vigilant as to the character of materials and workmanship employed, indicates that the condition of the houses necessitates a very large outlay in repairs. A meeting of ratepayers passed a resolution, stating 'That we fear the stupendous sum of 140,000*l.* which has been borrowed and spent up to the present in the erection of labourers' cottages has been (inferring from the Inspector's report) wasted to a great extent in the erection of badly-built houses. That the amount of money spent in the repairs of cottages is also something to cause alarm.' The ratepayers suggested that a fully-qualified engineer 'possessing a University degree,' should, in the interests of economy, be appointed to inspect the cottages periodically. The Rural District Council has unanimously adopted the resolution. Twelve or eighteen months ago the Council ordered that a sum of 2,100*l.* should be spent on repairs, but, according to a member of the Council, many of the labourers are sick in consequence of the condition of their houses."

"My Council," proceeded Mr. Owen, "are aware that the experience of the Kilmallock Union is by no means singular; that much dissatisfaction prevails throughout Ireland on account of the excessive annual cost of repairs to the cottages already built, and they therefore desire me respectfully to suggest to your Board that the time has arrived when the regulations dealing with the appointment of architects under the Act may be amended, so that, with skilled supervision, future cottages might be more carefully constructed, and thus diminish the cost of maintenance."

The reply received was as follows, from the Assistant Secretary of the Local Government Board, Ireland:—

"The Local Government Board for Ireland have had before them your letter of the 2nd inst. relative to the qualifications and remuneration of persons employed as architects under the Labourers Acts; and they desire me to direct your attention to the amendment of Rule 50 (f) of the Labourers Order of 1906, as contained in Rule 48 (f) of the Labourers Order, 1912, a copy of which is enclosed for the information of the Council of the Royal Institute of the Architects of Ireland.

Mr. Owen, in the course of his response, wrote:—

"The Council, having compared the rules in the Orders of 1906 and 1912, are of opinion that the amendment of Rule 50 (f) of the Order of 1906 as contained in Rule 48 (f) of the Order of 1912 will not have the effect of ensuring that only skilled persons shall be employed as architects in connexion with schemes under the Act.

The Council have already pointed out that they consider the scale of remuneration as laid down in the Order of 1906 is not such as would induce skilled persons to seek employment as architects, and they (the Council) fail to find in the Order of 1912 any Rule authorising increased remuneration.

The Council are confident that if the remuneration were adequate there would be no difficulty in getting properly qualified persons to act as architects, and they therefore trust that the Local Government Board will reconsider and amend the rules relating to the qualifications and remuneration of persons to be employed as architects under the Act."

The following letter was written, by order of the Chief Secretary, to Mr. Webb, who was Hon. Secretary of the Institute in the year 1907. It is referred to in the second clause of Mr. Owen's of April 2, 1912:—

"Irish Office,
Old Queen-street,
London,
May 27, 1907.

SIR,—With reference to your letter of May 6, enclosing a copy of the correspondence which has passed between the Institute of the Architects of Ireland and the Local Government Boad, I am desired by the Chief Secretary to say that he has given careful consideration to the Institute's representation that the result of the scale of fees proposed for architects' work in connexion with schemes for labourers' cottages is that inferior men are appointed, with results detrimental to the public interest.

In reply, I am desired to say that among the new provisions of the Act of 1906 is that contained in sect. 27, which provides that any person whom a District Council propose to employ as an architect shall satisfy the Local Government Board that he has sufficient knowledge and experience for such employment.

Rule 50 (1) of the Labourers (Ireland) Order, made in pursuance of the Act, prescribes what persons shall be deemed to be eligible for such employment, and recognises as eligible persons other than those who may be Fellows, Members, etc., of any recognised professional association or institute of architects.

The Local Government Board hold, and the Chief Secretary regards their view as reasonable, that the work of an architect in connexion with schemes under the Labourers' Act does not require specialised knowledge. Their experience has shown that excellent work in connexion with such schemes has been done at a moderate cost by men who did not claim in any way to be professional architects. The rule in question was accordingly so framed as not to apply to professional men alone, but merely to secure that the persons appointed should be thoroughly competent to carry out the work which devolves upon an architect in connexion with labourers' schemes.

The Local Government Board inform the Chief Secretary that they know of no case in which a Rural District Council has experienced any difficulty in obtaining competent persons who are willing to carry out the work at the rate of remuneration laid down by the rules. The Board are satisfied that many highly-qualified men have applied to Rural District Councils for employment at less than the maximum fees fixed in the Order. They are of opinion that it would be invidious to give the names of any such persons, and I am to add that it is quite possible that these applicants are not amongst the members of the Irish Institute of Architects.

W. R. DAVIES.

James H. Webb, Esq."

GENERAL NEWS.

The British Museum.

Sir Sidney Colvin, who has for so many years filled with distinction the post of Keeper of the Prints and Drawings in the British Museum, is about to retire from the public service.

Romano-British Sculptures.

Early application should be made to the Secretary of the Society for the Promotion of Roman Studies, at No. 19, Bloomsbury-square, W.C., for specimens of the casts of Romano-British sculpture which are now in course of being issued by the Society purely in the interests of education and archæological study and not as a commercial venture.

London University Site.

At a meeting of the Senate of the University of London, held on the 30th ult., the following resolution was carried:—"That the Senate welcome the efforts of Lord Haldane and of other friends of University education in London to raise funds towards the present and future needs of the University, and have referred to a Special Committee the consideration of the most suitable site for the University. A Committee, consisting of thirteen members, in addition to the three official members was appointed to consider and report on the question of an adequate site for the headquarters of the University.

Photographic Survey and Record of Surrey.

From the report of the Council of the Photographic Survey and Record of Surrey for 1911 we learn that during the past year 296 prints have been received as follows:—From seventeen Survey members, 267; from nineteen non-members, 28; from one professional photographer, 1; total, 296. The records received are classified as follows:—Architecture, 143; art and literature, 74; anthropology and antiquities, 20; natural history, 6; topography and passing events, 53; total, 296. Total brought forward from last report, 4,775. Grand total, 5,071. Six hundred and sixty-four lantern slides have been received during the past year, making a total to date of 1,122. The prints contributed to section of architecture during the year number 143. About one-half of these are of Godalming, Guildford, Eashing, and the immediate neighbourhood of these places. Prints have also been received of Bletchingley, Warlingham, Kenley, Sanderstead, Ockley, Capel, Wonersh, Shere, Chiddingfold, Mickleham, Limpsfield, Merstham, Reigate, Redhill, Earlswood, Ewell, Merton, Walton-on-the-Hill, and Farnham. Not so many details of churches have been contributed as in many former years, but more views of old houses and inns. There are still many churches in Surrey of which details of interiors would be useful. Two records of Wattlehurst Farm, at Ockley, may be mentioned as of more than passing interest. The name denotes the age and construction of this house. Interesting also are several views of old cottages in and around Godalming, and a view of the Crown Inn, Chiddingfold, said to date from 1,350. Among prints which have been added as a result of the Richmond excursion are views of The Trumpeting House, Queensbury House, and Asgill House (these three houses now standing upon the grounds and site of Richmond Palace); also views of Petersham Lodge and Petersham House. The Old Watch House, Ewell, is an interesting record, while an old house in the borough of Farnham, formerly known as the "Goat's Head," is an addition to the collection. This house has been carefully restored, and now exists as a perfect example of a XVIth-century house; there are evidences of a much earlier house, probably XIVth or XVth century. Four examples of Eashing Bridge, one of the most picturesque in Surrey, have been sent in by a member. It may be mentioned that this bridge is now under the care of the Society for the Protection of Ancient Buildings.

Skyscrapers in New York.

The British Consul-General in America, in a report just issued, refers to the scarcity of land in New York consequent upon the city being built upon a long narrow promontory and the building of sky-scrapers as a result. He says: "Land, therefore, which under normal circumstances could only give home or office room to, say, 200 or 300, now gives room to 10,000 or even 14,000. The extra cost in building is more than covered by the increased rates asked and obtained. Sky-scrapers are gradually moving northward and are increasing in numbers in the south, until in the future it is to be anticipated that New York will be a city of sky-scrapers. What will happen then is an interesting subject for speculation. To-day, forming, as they do, a sort of vacuum into which hundreds of thousands of human beings are projected every day at about the same hour, and from which they are ejected every morning, also in crowds, the sky-scrapers have paralysed all efforts to relieve traffic congestion in New York.

"New roads, ferries, railways, subways, and elevated tracks have been made, but as fast as they are completed the growing traffic overtakes their carrying powers and the congestion remains as bad as ever. The making of new ways of communication is limited, the sky-scraper extension is, for the time, unlimited, and therefore it would seem as if the congestion of traffic must become greater than ever, the supply of passengers always exceeding the means of communication. The day apparently must come, and before many years are past, when the sky-scrapers have brought the city to an impasse, when millions will be working where thousands were intended to work, where rates have risen to such a figure that they cannot profitably be made, and when people will begin to find it necessary to carry on their business more chiefly in places situated not on Manhattan Island."—*Westminster Gazette.*

CORRESPONDENCE.

Timber Specifications.

SIR,—It seems to be a general opinion that architects' specifications for the timber used in construction should be brought more "up to date." With this object, I should be obliged if you will insert in your valuable paper the short specification which I enclose, and invite comments thereon for the benefit of all concerned.

A READER.

[The following is the specification referred to. We should be glad to receive the opinions of our readers upon it.—ED.]

"The deals and timber for carpenters' work or carcassing to be as follows:—Sizes 12 in. by 4 in. and under to be sound, bright, square-edged Baltic or White Sea, red or yellow, and larger sizes to be sawn from White Sea larch of best quality baulk timber. The roof boarding and rough boarding in roof gangways to be second quality "Swedish" or second "Finish."

The flooring, where of deal, to be extra first or first quality Swedish yellow. Firsts which do not represent the highest grade—*i.e.*, which have an extra first shipped above them—will not be accepted.

The 1¼-in. flooring on first floor, where of pitch-pine, to be "prime" or "selected prime," free from knots or sap.

The wood for joinery (where not oak) to be Baltic or White Sea, red or yellow, selected from the best quality White Sea or best quality Swedish only. No nominal seconds nor any selection therefrom to be used.

All the panels of doors (which are not of oak) to be Canadian yellow pine, quite free from knots, or American whitewood of similar quality.

All wood to be in long lengths, free from open shakes, large loose or dead knots, or more than a small proportion of perfectly bright sap, and to be thoroughly seasoned. The admissibility of small shakes, knots, and a modicum of bright sap will be considered in relation to the position of such defects and their effect upon the visible finished work."

EDITORIAL SUMMARY.

The leading article deals with the Institute Elections and the Compromise.

In "Notes" columns (p. 657) appear comments on: "Architects and the Corporate Sense"; "Regent's Quadrant"; "Civic Responsibilities"; "The Clergy and Architecture"; "Survey of the Memorials of Greater London."

A meeting of the Royal Institute of British Architects was held on Monday, when Mr. William Woodward read a paper on "The Responsibilities of Architects and the Case of Minter *v.* Waldstein" (see p. 658).

A report of the meeting of the Church Building Society is given on p. 660. A short paper read by Mr. W. Tapper is given in the report.

A paper entitled "Architects and the Corporate Sense," read before the Transvaal Institute of Architects, is given on p. 661.

Some remarks by the new Slade Professor of Art at Cambridge, Mr. E. S. Prior, appear on p. 662, under the title, "The Study of Art."

The annual meeting of the Surveyors' Institution took place on Monday (see p. 663).

In Correspondence column (p. 665) is a letter upon "Timber Specifications."

The Monthly Illustrated Review of Civic Design (p. 667) includes: "The Royal Visit to India"; "A Suggested Whitehall Improvement"; "A Town-Planning Conference"; "Housing Reform"; and Notes.

The Building Trade Section (p. 672) includes: "The Study of Timber"; "Concrete-Mixers"; "Projected New Buildings in the Provinces," etc.

Book notices (p. 675) include: "Byways in British Archæology"; "Amateur Joinery in the Home"; "Pictures by Sir Henry Raeburn, R.A."; "The Parish of St. Giles-in-the-Fields."

MEETINGS.

FRIDAY, JUNE 7.

The Institution of Water Engineers.—Summer general meeting, Cheltenham.

The Institution of Municipal and County Engineers.—Scottish district meeting, Albert Hall, Stirling.

SATURDAY, JUNE 8.

The Institution of Water Engineers.—Summer general meeting, Cheltenham.

The Institution of Municipal and County Engineers.—Scottish district meeting, Albert Hall, Stirling.

Edinburgh Architectural Association.—Visit to Yester House and Castle.

MONDAY, JUNE 10.

Royal Institute of British Architects.—The fifteenth general meeting (business). (1) To receive the Report of the Scrutineers appointed to direct the election of the Council, Standing Committees, etc., for the year of office 1911-1912. (2) To proceed with the election of candidates for membership under By-laws 8 and 9. (3) notices of motion: Mr. Sydney Perks, F.S.A., to move "That a full and proper Report of the debate at the annual general meeting on May 6 with reference to St. Paul's Bridge be printed in the *Journal*." Mr. W. R. Davidge to move "That, having regard to the report of the Honorary Auditors for 1911 and to the state of the Institute finances, it is desirable, in the opinion of this meeting, that a Committee should forthwith be appointed with power to inquire generally into the finances of the Institute and all matters relating thereto. The Committee to consist of three members of the Council and three members of the general body, with power to add to their number; the Committee to have access to all documents and the services of all officers and advisers of the R.I.B.A.; to make any inquiries they may deem advisable, and to report in writing, with any recommendations, to the Council of the Royal Institute; the Report to be issued with or printed in the *Journal* and submitted for discussion at a business or general meeting of the Institute." 8 p.m.

The Incorporated Clerks of Works' Association (Carpenters' Hall London-wall).—Paper by Mr. H. Goodwin Robinson on "Up-to-Date Methods of Waterproofing and Roofing." 8 p.m.

THURSDAY, JUNE 13.

Society of Antiquaries.—8.30 p.m.

BOOKS RECEIVED.

STRESSES AND STRAINS. By F. R. Farrow, F.R.I.B.A. (London: Whittaker & Co. 5s. net.)

BUILDING STRUCTURES IN EARTHQUAKE COUNTRIES. By Ing. Alfredo Montel. (London: C. Griffin & Co. 8s. 6d. net.)

BUTTERWORTH'S WORKMEN'S COMPENSATION CASES. (London: Butterworth & Co.)

COMPETITION NEWS.

Whiteley Park, Surrey.

We are informed that in addition to the award to Mr. R. Frank Atkinson, F.R.I.B.A., second and third premiums have been awarded respectively to Messrs. Collcutt & Hamp, 36, Bloomsbury-square; and to Professor S. D. Adshead F.R.I.B.A., 46, Great Russell-street, London.

University College, Dublin.

Mr. Henry T. Hare, F.R.I.B.A., is the assessor in the competition, limited to architects living and practising in Ireland, for the proposed new buildings for University College, Dublin.

Whitley-road Primitive Methodist Church, Eastbourne.

The competition recently held for this church has been settled in favour of Messrs. George Baines & Son, 5, Clement's Inn, Strand, W.C., who have been appointed architects for the work. The estimated cost of the first portion of the scheme is 2,500*l.*

Workmen's Cottages, Rhos.

The competition for workmen's cottages, Rhos, has been decided as follows:—Mr. J. D. Aifon Jones, 140, Calabria-road, Highbury, London, N., and Mr. T. Vickars Henshaw, 44, Turret-road, Liscard, Cheshire, equal first; and Mr. E. W. Stubbs, Gravshott, Marlborough-road, South Croydon, S.E., second.

Welsh National Memorial Sanatoria.

With reference to our note last week (p. 634), in which we warned intending competitors that no professional assessor had been appointed, the Secretary writes that "the Committee do not desire architects to submit anything in the nature of elaborate plans, but merely what are generally known as pencil sketches, giving a rough outline of what the architect would suggest were he invited to prepare detailed plans. Subsequently, the Committee hope to select not more than six architects to submit competitive designs for the King Edward VII. Welsh National Memorial. In the selection of these gentlemen, the Committee will be to some extent guided by the pencil sketch sent in, and the details accompanying it, together with the experience which the architect may already have had in similar work. Although the 'particulars' sent out contain a mass of details, the important paragraph therein, so far as the present preliminary proceedings are concerned, is the following:—'Sketch plans should be accompanied by a report giving: (*a*) A preliminary estimate of the cost of erection; (*b*) a short explanation of the sketch plans; (*c*) particulars of other buildings, especially sanatoria and hospitals erected in accordance with plans prepared by the architect concerned and under his supervision.' The final selection of the completed plans sent in by the selected architects will be made by the Committee under the guidance of an experienced assessor.

Mural Decorations, Crosby Hall.

The awards in connexion with the various competitions initiated by the Mural Decoration Committee will be announced during the exhibition of designs now to be seen at Crosby Hall, Cheyne-walk. In a later issue full reference will be made to the individual works; meanwhile it may be said that the exhibition is well worth a visit. Apart from the competitive designs, there are works by Mr. John S. Sargent, R.A., Mr. Strang, Mr. Tonks, Miss McNaught, Mr. L. McD. Gill, and other artists.

Reigate Lodge Estate.

The Corporation of the Borough of Reigate invite competitive plans and schemes from architects, surveyors, and others for the laying-out and developing about 112 acres of the Reigate Lodge Estate. Premiums of thirty guineas and ten guineas are offered. A "duly-qualified assessor" is mentioned in the conditions, but his name has not been announced.

Competition Etiquette.

Mr. Henry W. Coussens, A.R.I.B.A., addresses a letter to the *Journal* of the Royal Institute of British Architects, from which we extract the following paragraph:—"In the *Kalendar* there are given the regulations governing architectural competitions, and, as certain of these are stated to be 'essential,' one therefore presumes they must be complied with by promoters before members of the Institute can be allowed to compete. These regulations can be read by all, and are clear enough to be understood by all. In any public competition, therefore, where the conditions of the promoters do not comply with these regulations, surely all members of the Institute should refrain from drawing even so much as a line until such time as the conditions are revised, and certainly in any negotiations that may be carried on with a view to such revision one would expect the Institute to insist that the necessary revision should be made in reasonable time, and thus enable all members to compete who may desire to do so."

King's Heath Baths Competition, Birmingham.

It is stated in the *Journal* of the Royal Institute of British Architects that the Council of the Birmingham Architectural Association have addressed a letter to the promoters of this competition objecting to Clause 4 of the conditions, which reserves to the promoters the right to appoint an independent assessor or assessors, and urging that the usual course followed in public competitions of importance should be observed—viz., that the President of the Royal Institute of British Architects be requested to nominate an assessor. Moreover, that the Council have circularised the members of their Association, asking them to abstain from competing until the offending clause has been amended.

ILLUSTRATIONS.

Study for a Royal Memorial.

THIS study was prepared at a time when the position of the Edward VII. Memorial was not decided on, in order to show the possibilities of Parliament-square as a site, and as a suggestion for a dignified treatment enhancing the surroundings and adequately expressing the characteristic activities of the deceased monarch. The drawing is shown at the present Royal Academy Exhibition.

A Suggestion for Whitehall.

DEVELOPMENTS in the Whitehall district will be proposed shortly, and in our article beginning on p. 668, and with Mr. Berrington's drawing, we anticipate the problem, offering a solution which we hope will be worthy of consideration by the authorities.

The Royal Visit to India.

REFERENCE is made in the article beginning on p. 667 to the temporary buildings and decorations erected on the occasion of the visit of the King and Queen to India. On one of our plates the Reception Pavilion, Bombay, and a Processional Road are illustrated.

FIFTY YEARS AGO.

From the *Builder* of June 7, 1862.

The International Exhibition.

MUCH has been said about the mercenary character of the present Exhibition; and there can be no doubt that the arrangements on this score have opened up opportunities to a whole host of exhibitors, who have never had any other object in view than making the present Exhibition a mere medium of advertisement. Unless under very stringent regulations, this was naturally to be expected in the inferior branches of manufacture. But one did not expect to see the mere trading spirit invade the region of the highest branches of the fine arts. Nevertheless it has done so. Here are models of statues, only plaster models, exhibited for the mere purpose of getting orders. M. B. exhibits several patterns in plaster in this way, ticketed with the price for which they can be had done in marble; another price for bronze; a lower price for the same thing, half-size, and so on. This is really too bad. What should we think of one of our leading painters if he had exhibited an oil sketch ticketed after this fashion:—Mr. P. Q. will execute this subject, size 4 ft. by 3 ft., in his best style, for 200*l.*; less highly finished, for 150*l.*; and half-size for one hundred guineas?



(*Royal Academy Exhibition, 1912*)

STUDY FOR A ROYAL MEMORIAL, PARLIAMENT



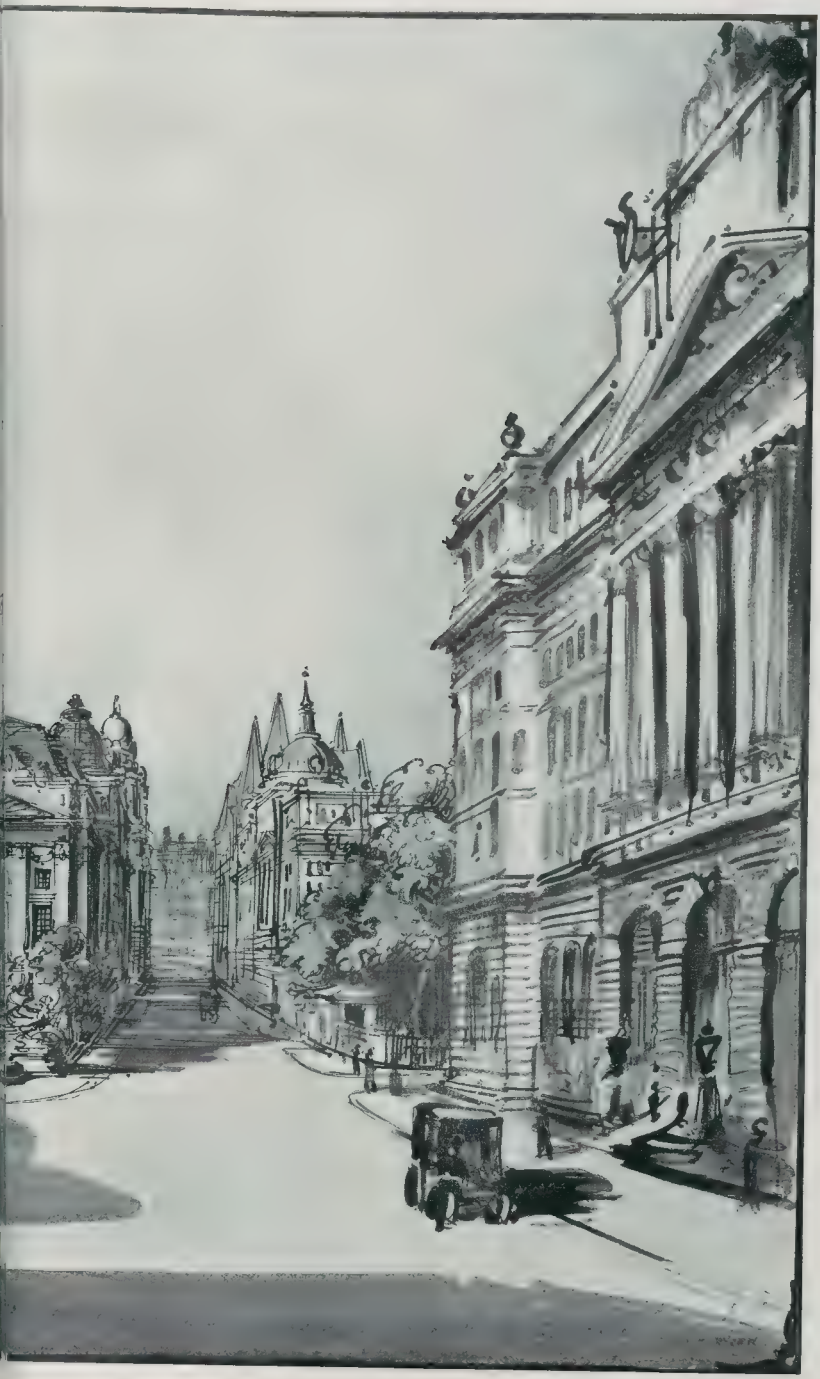
Sprague & Co., Ltd., Printers, 63 & 70 Dean St., Soho, W

V.—By Messrs. Lanchester & Rickards, F.F.R.I.B.A





A SUGGESTION FOR WHITEHALL



Spragu.e & Co., Ltd., Printers, 69 & 70, Dean St., Soho, W.

-VING BY MR ADRIAN BERRINGTON

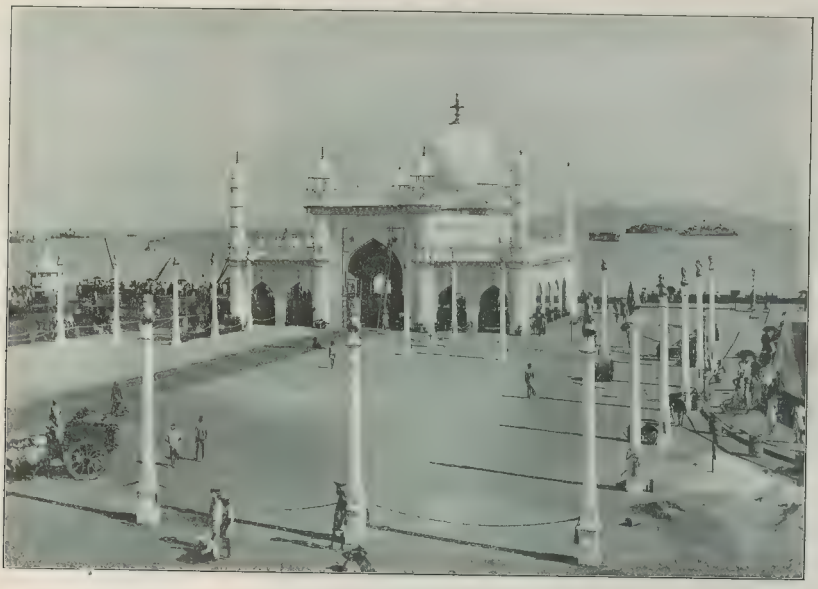


Sprague & Co., Ltd., Printers, 69 & 70, Dean St., Soho, W.

PROCESSIONAL ROAD.

DECORATIONS ON THE OCCASION OF THE ROYAL VISIT TO INDIA.—Mr. G. Wittet, Architect.

MONTHLY REVIEW of CIVIC DESIGN.



Reception Pavilion.

THE ROYAL VISIT TO INDIA:

CIVIC DECORATIONS OF BOMBAY.

THE preparations for the reception of their Imperial Majesties in Bombay were divided into two sections—first, ose undertaken by the Government, and, ond, those undertaken by the citizens of mbay. The Government part consisted of arranging for the landing and reception at the Apollo Bunder, Fig. 1, and the presentation of the address from the Corporation, while the citizens undertook the decoration of the route of the procession through Bombay. Mr. Wittet, Consulting Architect to the Government, prepared the designs for the buildings and general arrangements on the Bunder, in consultation with His Excellency Sir George Clarke, Governor of Bombay, who took a keen personal interest in the work from the outset.

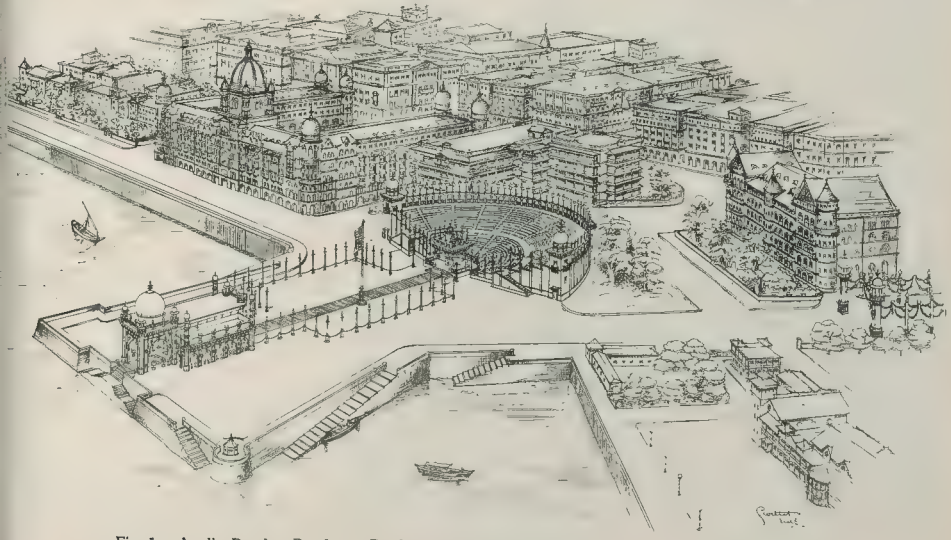


Fig. 1. Apollo Bunder, Bombay: Pavilion and Amphitheatre for the Reception of their Majesties.

Mr. G. Wittet, Architect.



Fig. 2. The Parsee Arch.

At the landing steps a reception pavilion was erected (p. 667 and plate), Saracenic in style, consisting of a domed porch, a central nave, and two side aisles, where the chiefs and high officials were grouped. The structure was white throughout, with the mouldings and ornament picked out in gold. The open space behind the pavilion was lined out with white Saracenic pillars of reinforced concrete surmounted by golden lions enclosing the guard of honour. The enclosed space was covered with white sand, with the red carpet, 15 ft. wide, stretching from the pavilion to the Royal daïs in front of the amphitheatre.

The daïs consisted of a platform 2 ft. 6 in. high, with a canopy over the central portion covered with Royal blue silk surmounted by the Imperial Crown in gold. Round the pierced work parapet of the canopy were twelve banner poles bearing emblematical flags of the Empire.

Two thrones of Indian design and workmanship were placed under the canopy for their Majesties. They were of teak wood entirely gilded; the seats and backs were of cloth of gold, specially woven in Surat with a pattern containing the Royal monograms.

In front of the daïs a great amphitheatre was erected to seat 3,000 people; the walling and towers were white relieved with gold, and the seating and steps were covered with cloth dyed a soft green tone.

The top stage of the amphitheatre was surrounded with an arcade having a mast at each pier carrying a banner and rich flower festoons between.

All the arches of the pavilion and amphitheatre were festooned with garlands and baskets of natural flowers. The buildings were lined out with rose-pink electric lamps and the central open space ringed with amber.

When the Committee of Citizens came to consider the question of street decorations it was thought advisable to endeavour to carry the note which had been begun at the Bunder throughout, and Mr. Wittet was asked to prepare a scheme for the general decorations of the city.

In the scheme as carried out the different leading communities in the city were represented. The road leading from the Bunder was lined out with slender white minarets with gold domes linked together with festoons of leaves and flowers (see plate). These garlands were the only portion of the decorations obtained from home. They retained their bright colours for about a week; after that the Indian sun and dust were too much for them. The minarets were spaced 30 ft. apart, and each bore a 9-ft. banner with an Indian device. At the start of the road were two large minarets with balconies and cupolas, and the vista led up to a great Saracenic arch. A number of roads meet and cross beyond this arch, and that portion was left clear, the decorative treatment again starting where the procession entered Hornby-road. A long avenue of pillars led up to the Parsee arch, a massive structure modelled on restorations of old Assyrian work (Fig. 2). The upper gallery was draped in purple velvet, the main structure was white with green and gold decorations.

Beyond this the route passed between pillars of Hindu design, square on plan, and roofed with conical cupolas characteristic of Jain architecture gaily decorated in primary colours and surmounted with bannerettes. The pillars were in pairs, each bearing a golden elephant on a bracket to take the festoons across the street. At the Municipal Buildings an arch of Renaissance character was erected bearing the arms of the city. At the entrance to the native town four pairs of Hindu pillars were erected. In the narrow streets no decorations were attempted until the entrance to the Mohammedans' quarter was reached. Here four minarets, 50 ft. high, were erected (Fig. 3), with a canopy of green silk with tinsel decorations suspended in the centre. Where the route started to return eight minarets formed a circle round the cross roads linked with banners and festoons. The broad new Sandhurst-road, which the Improvement Trusts have opened from east to west, was treated with minarets, banners, and festoons leading up to the cotton arch, a structure composed entirely of cotton bales and loose cotton to the value of about 12,000*l*. This curious erection, typifying Bombay's chief industry, was not unpleasing from a decorative point of view. Beyond this the treatment of pillars and lining out minarets was carried on with only one variation in the Renaissance pair representing Goa. The long avenue of Queen's-road, where fine trees meet across, was left untouched, the decorative scheme beginning again at the Secretariat in Mayo-road, and sweeping round to the arch leading to the Bunder.

A SUGGESTED WHITEHALL IMPROVEMENT.

THE general growth of the country and of the functions which the State is called upon to perform leads to an inevitable increase in the number of buildings necessary to house the ever-increasing array of Government officials.

Tradition and convenience alike have made Whitehall the centre of Government administration, and offices for this purpose have gradually spread along the western side of the street from Spring-gardens to Parliament-square. This side being now fully occupied, any further space required must be found on the eastern side, where a beginning has been made by the erection of the War Office and the Office for the Commissioner of Woods and Forests.

Extending from Horse Guards-avenue to Westminster Bridge, between Whitehall and the Embankment, is a strip of land the whole of which will probably be acquired in time for Government buildings. Already the northern end adjoining Horse Guards-avenue has, we understand, been acquired, on which a building is to be placed which will lead to the demolition of the old houses in Whitehall-gardens and seriously interfere with the present open space at the back of Gwydyr House.

As it is apparent that the building for which powers are now being sought from Parliament will not be the last in this neighbourhood it would seem more reasonable to look ahead and to make some general scheme embodying the whole of the land between Whitehall and the river, of which the proposed building would form the first instalment, rather than to proceed on the piecemeal method, which has been responsible for so many of our blunders in the past.

In this connexion we naturally recall Barry's fine scheme for the western side of Whitehall, and we cannot help wondering whether a similar scheme produced to-day for the eastern side would have any better chance of being carried out in its entirety. Considering the great advance we have made in recent years, there is surely some ground for hope that public interest may be aroused and that the official minds, who, all unknown to us, seem to sway our destinies in these matters, may be induced to take a wider view of their responsibilities and to realise the effect of their present actions upon the future destiny of London.

It is evident that no treatment of the northern part of this site can be considered adequate unless it preserves the open space in Whitehall-gardens and at the same time provides an adequate architectural finish and frontage line to Whitehall, while taking into consideration any traffic improvement which may be involved; and the general improvement of Whitehall and the district as a whole.

It is suggested that the problem might be considerably simplified and these advantages obtained by creating a new street, as shown in the accompanying plan (page 670) and view (see plate) looking up Whitehall.

This would have the added advantage of opening up a new vista in Whitehall and of providing a site for a monument on the axis of Downing-street and an open vista to the river.

The plan shows the whole of the land between Whitehall and the Embankment devoted to Government buildings, the lay-out of which would be to some extent governed by the necessity of respecting the old Banqueting Hall and New Scotland-yard.

The new street would take up a certain amount of space which might otherwise be used for the new buildings, but to compensate for this projections are shown in the gardens of the Embankment. It is felt that air space is of more value in Whitehall than on the Embankment, where the whole width of the river is available, and that such projections would relieve the monotony and cliff-like appearance of any range of high buildings continuing the frontage line and general height of Whitehall-court and the National Liberal Club.

But, whatever value there may be in this suggestion, it cannot be too strongly urged that no definite steps should be taken towards the erection of a new building without giving due consideration to all the possibilities involved.

A TOWN-PLANNING CONFERENCE.

A NATIONAL Town-Planning Conference, attended by representatives of nearly all local authorities in the North of England and the Midlands, opened in the Association Hall, Manchester, on the 22nd ult. It was convened by the National Advisory Town-Planning Committee. Mr. Alderman W. Thompson, of Richmond, Chairman of the National Housing and Town-Planning Council, presided.

The Chairman (we quote from the *Manchester Guardian*) explained that the Conference had been called to consider how best to put into operation an Act of Parliament which would procure better sanitary conditions and greater amenities for dwellings in the large industrial areas in the North and Midlands of England. In his opinion this was a matter of life and death. In Lancashire alone there were 81,000 deaths every year—a quarter of which at least were preventable—and a corrected death-rate of 19·5 per thousand. In Westmorland the death-rate was 11 per thousand. Why should there be such a difference? It might be said the cause was industrial, but the figures did not bear that out, for there were parts of Lancashire and of Manchester and Liverpool more healthy than Westmorland. It was not the climate or the nature of the people's occupation; it was the condition of the dwellings and the surroundings of the dwellings of the people.

Mr. Henry R. Aldridge, the Secretary, presented a report on the first stage of a town planning scheme, indicating the character and type of the land to be included. One encouraging feature of the movement, he said, was the enlightened attitude of many large landowners. At Sheffield, for instance, owners came forward and even suggested that instead of twenty houses being allotted to the acre there should be only twelve. They were beginning to recognise that as a result of a better spreading of the population much more of their land was likely to come into use and that this was good business.

Replying to a question as to the stage at which jerry-building could be stopped under a scheme, the Chairman explained that once a notice of such a scheme had been given all jerry-building was done at owner's risk. No compensation was payable after formal notice had been given of an application to the Local Government Board for authority to prepare a scheme.

A representative of Great Crosby mentioning that after spending 200*l.* in preparations the authorities of that district had abandoned its town-planning scheme,

The Chairman said that from every point of view this was a "penny-wise-and-pound-foolish" policy. In contrast, he pointed out that at Ruislip they had limited the houses to eight, six, and four to the acre. In only one district were there as many as twelve to the acre, and if Ruislip dropped its scheme to-day they would be at least 40,000*l.* in pocket. They had secured acres and acres of open spaces for nothing. In one instance an American firm of land exploiters had been only too glad to come forward and give 16 acres. A sum of 100*l.* spent to-day in a town-planning scheme meant 100,000*l.* saved in the future.

A representative of Alderley Edge asked for an expression of opinion as to the advisability of that district, and others of its kind, adopting a town-planning scheme. He pointed out that there were some hundreds of acres of undeveloped land, and that the rent of the houses varied as much as from 3*s.* a week to 200*l.* a year.

The Chairman replied that he would certainly say they should waste no time in adopting a scheme, ring round the whole district, and then indicate to the Local Government Board that there was no intention of dealing for the time being with the thickly populated portion.

Mr. Harold Shawcross submitted a report on the second stage of a town-planning scheme, dealing largely with relaxations of by-laws and road-making and other plans. He emphasised the need of following up such schemes by careful oversight, with the object of obviating nuisances such as the erection of ugly tin and wooden structures in back gardens and open spaces; and suggested that in South-east Lancashire there should be a scheme to cover the whole of the undeveloped land.

Mr. Alderman W. Rhodes (Chesterfield), in a paper on the construction of roads under town-planning schemes, suggested that the heavier types of traffic-bearing roads were not needed in residential districts and that in the event of existing industrial conditions, or future developments necessitating heavier roads, the extra cost of them should not be borne by the cottagers, but by the community at large in the town for whose benefit they were intended.

On the second day of the Conference,

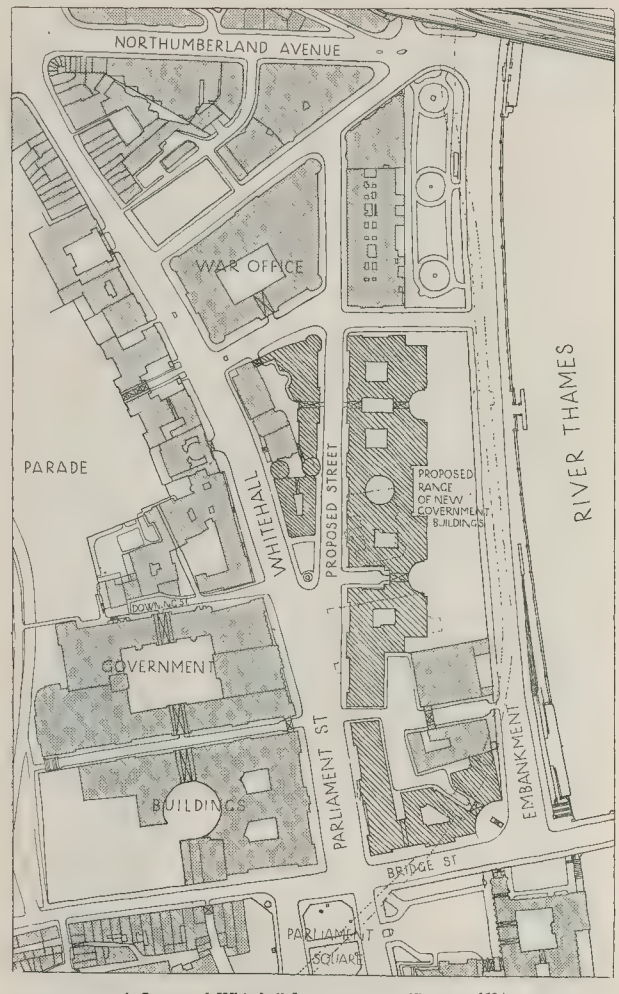
Mr. T. C. Horsfall, in opening a discussion on the need for economy in road-making in town-planning schemes, said that in his opinion the civilised world knew no greater curse than the unnecessarily wide road. There was more misery produced by it in German cities than anything we experienced in our large towns. It was stated that in Berlin there were over 600,000 people living in dwellings of one or two rooms, in each of which rooms there were from five to thirteen people. And those workmen were not the miserably poor people found in the worst slums of our large towns. It was calculated that as a result of their wide streets, necessitating tall houses and very high rents, the Germans were at present paying sixty millions sterling more for their housing accommodation than English people of the same class were paying. It was not correct to say that town-planners were proposing to give a poorer type of street. What they really proposed to do was to give a type of road which at present only the rich man could enjoy—a park road to the park cottage.

Mr. Harold Shawcross emphasised the importance of radial roads. In many Lancashire and Yorkshire towns, he said, the roads on the outskirts were so badly planned that it was frequently necessary to travel 2 and 3 miles to reach a point a mile or two away. This not only caused much loss of time, but led to much unnecessary waste of road surface and work and cost of repair.

Mr. Arthur Bowes, Surveyor to the Newton-in-Makerfield District Council, presented a paper in which he dealt with the importance of prompt



Fig. 3. Minarets, 50 ft. high, and Canopy. (*See page* 668.)



A Suggested Whitehall Improvement. (*See page* 668.)

action on the part of all local authorities in the allocation of roads, so as to avoid having to pay large sums for compensation when the time came for the roads to be actually constructed. The cost of getting rid of the faults of the past in this respect were four times as great as the actual road-making. Moreover, in allocating the roads local authorities improved an estate and were entitled to half the betterment, which went a long way towards paying the cost of the road-making.

Mr. H. Lloyd Parry, Town Clerk of Exeter, contributed a paper on the cost to local authorities of town-planning schemes. Basing his figures on those of nine selected schemes, he estimated that the cost of preparing a scheme was from 100*l.* to 200*l.* for an area under 1,000 acres and 100*l.* per 1,000 acres, or 2*s.* an acre over and above that area. This excluded an expenditure in fees or salary for a town-planning engineer or other expert adviser, and was referable only to a scheme for town extension over an undeveloped area to which the action of local authorities under the Housing and Town Planning Act was mainly limited.

The Chairman, in introducing a discussion on standards of limitation of the number of houses per acre, announced that the Birmingham authorities, by ninety-one votes to three, had decided that in the important scheme for Quinton and Harborne, covering an area of four figures, the average number of houses per acre was to be no more than twelve.

Mr. George Cadbury, of Birmingham, outlined a scheme under which, he said, the working man could be given 60 per cent. more land at a cost of only a penny a week more ground rent. Experiments in Bournville indicated that the value of the small garden thus provided amounted to at least a shilling a week. Working men would be only too glad to get such gardens at their doors, seeing that the residents of some of the worst slums in Birmingham would walk 4 miles, before or after work, many times a week in order to cultivate small allotments.

Mr. E. M. Gibbs, a former President of the Sheffield Society of Architects, read a paper in which he gave some tables of cost showing that landowners could afford, in town-planning conditions, to give four times the extent of land for double the ground rent. Where the ground rent would be 30*s.* with houses numbering forty to the acre, it would be 40*s.* with twenty houses and 63*s.* with ten houses to the acre.

Mr. Pemberton, of Warrington, drew attention to the large number of people whose income did not exceed 1*l.* a week, and appealed for more attention to be devoted towards meeting their housing requirements.

Mr. Henry R. Aldridge explained that Conferences in Denmark, Holland, Belgium, and France which he had attended had come to the conclusion that there were only two alternatives in dealing with this problem of the poorest. Either the community must prevail upon employers to pay reasonable wages sufficient to enable men to live decently and well, or the community must be prepared to provide decent housing accommodation for such people at a loss. The latter was probably the alternative this country would eventually adopt. We were spending a million sterling a year in building sanatoria in which men would be patched up for a few months and then sent back into the very slums in which they contracted the terrible disease of consumption.

Mr. F. W. Platt, Building Surveyor to the Salford Borough Council, in a paper on industrial development advocated more co-operation between adjoining local authorities in order that the residential areas in town-planning schemes should adjoin other residential areas, and not be spoiled by manufacturing areas being run up against them.

A resolution was adopted requesting the Local Government Board to dispense with the serving of notices upon each owner of property at the first stage of a town-planning scheme, and to substitute the giving of notice by advertisements in newspapers, or by posting notices in the districts included in the scheme, notices for the second stage of the scheme to be served as provided by the Act.

It was announced that a series of "municipal visits" to examples of English town-planning and kindred schemes was being organised for July 5 and the following eight days. The places to be visited included the Liverpool town-planning schemes and housing of the poorest, the garden village of Port Sunlight, York's garden suburb of Earswick, Birmingham's town-planning schemes, Bournville, the London County Council, and the Sutton Trust housing schemes, the Rowton Lodging-houses, Hampstead, and the first garden city of Letchworth.

HOUSING REFORM.

MR. EUGENE WASON presided recently at a sitting of the Grand Committee of the House of Commons to which had been referred consideration of the Bill introduced by Sir Arthur Boscawen to provide for the better application and enforcement of the Housing of the Working Classes Acts, and to amend the Small Dwellings Acquisition Act, 1899. Clause 6 relates to the relaxation of by-laws. At the previous sitting Mr. Herbert Lewis (Parliamentary Secretary to the Local Government Board) had moved to insert at the beginning of the clause the following:—"The provisions of any by-laws made by any local authority under sect. 157 of the Public Health Act, 1875, as amended by any other Act, with respect to new buildings or new streets, including provisions as to the giving of notices and the deposit of plans and sections, and any provision in any local Act dealing with the construction of new buildings and the laying-out of new streets, and any by-laws made with respect to new buildings or new streets under any local Act shall not apply in the case of any new buildings being constructed or new streets laid out."

Mr. C. Bathurst moved to amend the amendment with the object of ensuring specifically that the clause should apply to rural districts. The question of by-laws was more serious in many country districts than in urban localities. The by-laws in rural areas were often a greater restriction on the erection of much-desired cottages than any other single factor.

Mr. Burns (President of the Local Government Board) said that the clause applied to both rural and urban districts. He promised to look into the matter and on the Report stage to make it absolutely clear, if it was not already clear. On this understanding Mr. C. Bathurst did not press his proposal.

Mr. Booth then moved to delete the words "new buildings or" at the commencement of Mr. Lewis's proposal. He wished to have the views of the Local Government Board with regard to the proposed weakening of by-laws and undermining of responsibilities of local authorities. The pressure of the Local Government Board hitherto had been to make by-laws more stringent. Were the Local Government Board backsliding?

Mr. Burns said that until this Bill was brought forward it was generally assumed that Clause 4

f the Housing and Town Planning Act of 909 met the case of any unreasonable impedi- ent or obstruction to the building of houses or the working classes due to by-laws. But the romoters of the Bill thought that the power in hat clause was not sufficient to meet all the oints raised since the passing of the Act.

Mr. Jonathan Samuel said local authorities ere exacting in their by-laws because they new that when, in the past, by-laws were x any kind of house was built. Now it was roposed to enable local authorities to relax by- ws in regard to their own undertakings, but o insist on them in regard to the undertakings f local builders. The result would be that eryone who went in for the building of houses ould create an agitation and say: "Why hould I have to spend more than the local uthority? How can I compete with the cal authority?" Pressure would be brought n the members of local Councils in such a case, nd the members would not be able to resist it. he proposed power of relaxation would be ry dangerous. If relaxation was needed would be better for the Local Government oard to produce a new set of by-laws. Then eryone would know what he had to work to.

Sir Arthur Boscawen said our existing slums ere principally due to the fact that in the *azzez-faire* days of seventy or eighty years go anyone could build as he chose. To meet e condition of affairs the by-law system was nvented. But by-laws had been adopted in rtain places which had proved quite unsuitable the locality, and the cost of erecting work- en's dwellings had thereby been enhanced such an extent that it was impossible to them at a rent which the poorest could pay thout imposing a heavy charge on the rates. e wanted to cut that knot. Clause 44 of the t of 1909 helped to some extent, but it put e whole initiative on the Local Government oard to say whether there was an impediment not. Therefore he wanted a local authority have a right to say to the Local Government oard: "We want to supply dwellings, but e by-laws are such that we cannot do it rept at a loss, and therefore we come to n for a relaxation, subject to your approval, the by-laws." Anyone providing houses for e working classes should have the same laxation as local authorities. He welcomed e clause put down by the Government cause of the greater elasticity which it uld give.

Mr. Keir Hardie thought they were in danger ile attempting to meet one evil of creating other and even greater evil. The object emed to be to crowd more houses on the land an the present by-laws would allow.

Lord Henry Cavendish-Bentinck held that ne relaxation was absolutely necessary and was to be laid out on more enlightened es. There was no doubt that the present laws had resulted in overcrowding. Under e existing by-laws forty-five houses to the e could be erected. If, as he believed, amendment would allow an individual association to obtain some relaxation the ividual or association would be able to dimin- the number of houses per acre. The working n wanted a place in the sun, and that was at they were trying to give him.

Sir Randolf Baker said the only valuable ng left in the Bill was the power to alter laws, but if that power was only to go as as was stated in Mr. Lewis's amendment it uld not be sufficient.

Eventually the amendment of Mr. Booth s rejected by twenty-one votes against five.

Sir Randolf Baker next moved to add to Herbert Lewis's amendment "whether a private individual or private individuals order to supply a deficiency of working- ss dwellings in any locality." This would e the same power to a private individual Mr. Lewis's amendment would give to a l authority.

Mr. Rupert Gwynne, in supporting the amend- nt, pointed out that without the provision rate enterprise could not enjoy relaxation by-laws although the local authority might willing to relax them.

Mr. Wedgwood also supported the amend- nt. The present by-laws were issued twenty s ago, and they formed a sort of protective ff in favour of houses built under them. people who had erected houses under those laws—often spending more on the houses n was necessary—had a vested interest in the ation of the by-laws in order to prevent the petition of cheaper houses. They were now adopting a more free-trade view—trying to get more competition in the construction of houses. The present amendment would break down the existing tariff in favour of existing houses.

Lord Henry Cavendish-Bentinck declared that public utility societies had been very much hampered by the jealousy and obstruction of local authorities. He could not see why utility societies should not, with the consent of the Local Government Board, have the right to go ahead with their own plans. He suggested, therefore, that they should be included in the scope of Sir R. Baker's amendment.

Mr. Burns stated that the term "person or persons" would include societies and associations, and that term was therefore substituted in the amendment for the words "private individual or private individuals."

After further discussion Mr. Burns said that in the last ten years under existing by-laws and regulations there had been greater housebuilding for the poor, above all, for the working classes, than in any other country in the world. That was because the schemes had been in advance of the minimum insisted on by the by-laws and regulations of the Local Government Board and of the local authority. The existing by-laws permitted variation, novelty, and great elasticity in laying-out and in the construction of individual houses. Bureaucracy *in excelsis* was proposed. Many new officials would be needed at Whitehall. The effect of the proposal now before them would be increased taxation, endless delay, interference with local authorities, which those authorities would probably resent, and possibly an increase in the number of jerry-builders in local authorities, who might divert this provision to their particular ends in a way which was not now seen. He admitted that Clause 44 of the Act of 1909 was not elastic enough, and he was willing to give exemptions to schemes brought forward by local authorities. There was some reason for giving exemptions to local authorities, because they might be satisfied that they complied with a minimum standard of construction, sanitation, and so forth, but that could not be guaranteed for schemes promoted by private individuals. The amendment if adopted would break down by its weight, its cost, and its delay. He would be false to his duty if he removed the protection afforded by the by-laws of good authorities which were standing up to the jerry-builder and to the man who wanted to create new slums. If the promoters of the Bill accepted the amendment unconditioned and unregulated by strong safeguards, they would defeat their own objects. All the slums of to-day belonged to the non-by-law period.

Sir Arthur Boscawen greatly regretted the non-possumus attitude of Mr. Burns. The objection of the right hon. gentleman was that the proposal would entail on the Local Government Board an enormous amount of cost and of work. Until they had an expert department at the Local Government Board they would never move on in the matter of housing. The chief reason the London County Council had not developed the Tottenham Estate better was the existence of the local by-laws. He supported the amendment.

After further discussion,

Mr. Burns said his position was that he was prepared to consider schemes and plans whether submitted by a local authority, a public utility association, or "a person or persons." He was prepared to give greater elasticity and wider exemptions than now, but he could not accept the amendment of Sir R. Baker.

The amendment was still under discussion when the Committee adjourned until June 6.—*The Morning Post.*

CIVIC DESIGN NOTES.

The Garden Cities and Town-Planning Association. A useful course of lectures on the various phases of town planning has been conducted by the Garden Cities and Town-Planning Association at their offices, 3, Gray's Inn-place since Easter. The last of the series was given by Mr. Raymond Unwin, F.R.I.B.A., his subject being "The Principles of Garden Cities and Garden Suburbs." The paper set out the advantages which may be derived from the Garden City method of lay-out, and the application of those principles to new and old towns. Mr. Unwin emphasised the necessity for keeping a belt of open space around the towns, and urged the federation of small towns, as suggested in Mr. Howard's first proposals. If it was desirable to limit Letchworth to 30,000, then it was still more important to secure belts of open space around our old over-grown towns. The federation of small towns would preserve the belt of land around each, and their combined action would enable them to provide for educational, municipal, and other advantages not possible to the smaller communities. The old towns had open belts to protect them from their enemies; surely it was worth while for the modern town to secure an open belt to protect it from slums, disease, and degeneration. Mr. Unwin dealt from the landowner's point of view with the limitation of the number of houses to the acre, showing how it would be to his advantage, because he would sell twice as much land for this purpose. The cost per plot of an acre of land was not the same thing as the cost of a slice of cake in proportion with the cake, because the slices made up the whole cake; but in cutting up the land large strips had to be taken out for roads, which represented the wastage which was eliminated by Garden City methods. With new tables and diagrams Mr. Unwin showed how his scheme would work out. He also dealt with the question of the selling of 2 acres of land instead of one, and what the owner could afford to sell his land at in that case, showing still further reductions in the cost of development. Another point which was strongly urged was the question of the limitation of the number of houses to the acre, the speaker appealing for a schedule rather than a hard-and-fast rule.

Chair of Town Planning for London. A scheme is now on foot, and is receiving the support of Mr. John Burns, Sir Aston Webb, Sir Philip Magnus, Sir William Collins, and Sir Henry Miers, for the establishment of a Chair of Town Planning at the University of London. It is interesting to note that the idea of a professorship originated with Mr. John Burns, who made the suggestion at the opening of the Town Planning Exhibition, held at Crosby Hall some time ago. Since then, Mr. Herbert Warren, of the Garden Cities and Town Planning Association, has been actively engaged in forming a committee consisting of people representing the different aspects of the question. The Association of Garden Cities, in furtherance of Mr. Burns's suggestion, has now decided to hold an experimental summer school—on university extension lines—of town planning at the Hampstead Garden Suburb during the first fortnight of August. At that school professional men will attend short courses of lectures and also practical demonstrations on how town planning should be carried out by some of the most eminent of English and foreign town planners.

Wandsworth Common Extension. Lord Meath has written to Mr. Edwin Evans, Chairman of the Committee for the Extension of Wandsworth Common by the acquisition of 20 acres of land, saying that he will bring the matter before the Metropolitan Gardens Association. Reckoning the 6,000*l.* which the Parks and Open Spaces Committee of the London County Council have decided to recommend as a grant, only 500*l.* is wanted to complete the fund.

Boys' Garden City, Woodford Bridge. The Boys' Garden City at Woodford Bridge, Essex, which is the latest development of Dr. Barnardo's Homes, was formally opened on the 23rd ult. by the Duchess of Albany.

Mr. W. Baker, addressing the company assembled in the marquee, remarked that already in the twelve detached houses which have been completed in the Garden City nearly 300 boys were accommodated, and money to defray the cost of three more houses which were being built had been provided.

The Duchess of Albany was conducted to the house which has been erected in memory of King Edward VII., and this, at the request of Mr. W. A. Pite, the architect who has designed all the houses in the Garden City, she opened and inspected. Her Royal Highness then visited the swimming-bath.

THE BUILDING TRADE.

CONCRETE-MIXERS:

THE SMITH MIXER.

THIS machine consists of a drum of double conical form, which can be tilted while it is being rotated, the general arrangement of the machine shown by Fig. 1.

Inside the drum are fixed blades in two series, one in each conical projection. The series of blades are disposed in opposite directions and overlap at the middle of the drum.

When the materials for concrete have been placed in the drum they are transferred from each end towards and past the centre alternately and at the same time turned over and over. This transfer of material is caused in part by the spirally arranged blades, and in part by the conical form of the drum. The effect is rapid and thorough mixing.

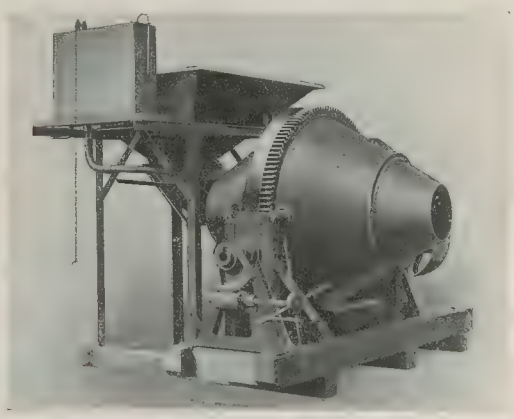


Fig. 1. Smith Mixer with Batch charging hopper.

The guiding and driving surfaces of the drum are on a single ring casting, and the driving gear is attached to a strong cast-iron frame.

Tilting can readily be performed by a hand-operated worm gear without stopping the action of the mixer. In this way the contents of the drum are quickly discharged, and it should be noted that very little power is required to tilt the drum, for the reason that the load is not lifted, but merely swung about its centre of gravity. The larger sizes of the Smith mixer can be supplied with power tilting apparatus providing for partial or complete discharge.

All drums are fitted with drip rings on the discharge end to prevent wet material from running down the cone and over the roller tracks, and the drums are lined at the middle where the large ends of the cones meet. The linings are made to standard size, and can easily be replaced when worn.

The mixer is supplied in the simple form illustrated, or combined with measuring bins, automatic water-tank, and other accessories, and arranged for driving by belt, steam engine, internal combustion engine, or electric motor

Fig. 2 shows a Smith mixing plant as arranged for the preparation of concrete on a large scale.

It is made in various sizes of from 6 cubic ft. to 62 cubic ft. capacity.

The patentees of this mixer are the T. L. Smith Company, of 11, Victoria-street, Westminster, for whom the machine is manufactured by Messrs. Stothert & Pitt, Ltd., of Bath.

BIDFORD-ON-AVON.

A memorial window has been placed in the parish church at Bidford, and is a three-light window in the south aisle, and has been filled in with stained glass, the subject being the Crucifixion. The window was designed and painted by Messrs. F. Holt & Co., of Warwick.

THE STUDY OF TIMBER.

AN interesting and valuable report on the study of timber and forest products in America has been presented to the Forestry Committee of the University of Cambridge by Mr. E. R. Burdon, M.A.,* arising out of a visit to the United States and Canada for the purpose of studying the research work and educational methods of the Forestry Departments and Forestry Schools in those countries in connexion with the study of timber and other forest products. The subject is of considerable importance, and for that reason we are quoting at some length from the admirable report by Mr. Burdon, only remarking that there is little doubt that the establishment of an institution which would assist the study of our wood-using industries would lead to the discovery of new applications for home-grown timbers, encourage afforestation, and benefit both growers and consumers.

According to the author, the most important research work on timber in the United States is that which is being carried on by the Branch of Products of the Forest Service. The main object of this branch is to develop more economical methods of utilising forest products generally, so as to eliminate the enormous waste which occurs not only in logging, but also in conversion into lumber and in manufacture. In pursuance of this object the Products Branch endeavours to organise systematic scientific research and to disseminate information regarding the mechanical, physical, and chemical properties of commercial woods and their products, the utilisation of forest products, the natural and artificial seasoning of wood, wood preservation, wood distillation, the production of paper pulp, naval stores, and other chemical products. It also compiles statistics of production, consumption, prices, and market conditions, investigates commercial methods of manufacture, of grading, and utilisation, and the possibilities of substitution of new species or other materials for woods which are becoming scarce, etc. The range of the investigations of the Products Branch covers every industry which is in any way dependent on the forest for its raw material.

The Products Laboratory is organised into eight technical sections for experimental research and one non-technical section, which attends to general maintenance.

The technical sections are as follows:—

(1) Timber Testing.
(2) Timber Physics.
(3) Wood Preservation.
(4) Wood Distillation.
(5) Pulp and Paper.
(6) Engineering (with Drafting-room).
(7) Chemistry.
(8) Pathology.

The wood-working shop is a carpenter's shop furnished with various machines for sawing, shaping, and dressing wood to the required sizes for experimental work. The shop opens conveniently into the timber-testing laboratory on one side, into the wood-preservation laboratory on the other, and into the yard at the back. The equipment includes circular and band saws suitable for different classes of work, a short log saw-mill and edger, machines for trimming, edging, planing and mortising, wood-turning lathe, work-bench, etc.

(1) Timber-Testing Department.

Here investigations are made into the mechanical properties of wood both before and after manufacture, or preservative treatment, or seasoning.

At present tests are being carried out on the different commercial woods of the United States with a view to determining their relative mechanical properties, *e.g.*, strength, toughness, hardness, etc. A point wherein these tests differ from those generally made by engineers

* Cambridge: At the University Press. Price 6d. net.



Fig. 2. Smith Concrete-Mixing Plant.

that the specimens are collected from the rest, and the history of each, the conditions soil and environment, etc., under which each as grown are known. The structure of each ecimen is noted from microscopic sections ade in another department, and as sufficient ta accumulate attempts will be made to rrelate the structure with the mechanical d physical properties. It is hoped that this ork may in time enable each species to so graded according to structure and rresponding strength that the factor of safety ndered necessary by the tables at present ed by engineers, architects, etc., may be aterially reduced. If by any means it is und possible to do this in such a manner that, examination of the structure, an engineer ay at once know within moderate limits strength of a log the work will be of immense ue. But even apart from this the work l be of service by enabling consumers to dily find substitutes for woods which are oming scarce.

Other tests are being made in this section to ermine the effect which the treatment of od under pressure in the process of preserving on its mechanical properties.

The effects of different methods of seasoning the mechanical properties are also investiated.

(2) Timber Physics Department.

In this section studies are made of the ysical properties of wood and their relation structure. These include determination of specific gravity, specific heat, the effects changes of temperature, pressure and sture on the wood substance and general isture, etc. These researches have a special ring on the artificial treatment of wood the processes of seasoning, fire-proofing, serving under pressure, etc., when it is portant to know the effect of different ssures, the amount of heat required, the gth of time different kinds of wood may be osed to certain conditions, and so forth. results of this work therefore serves as a uable check on the experiments of other artments.

The main equipment of this laboratory consists a very complicated apparatus which was ially designed for studying the problems nected with the artificial seasoning of wood. n this apparatus it is possible to study the ience of variation of one factor while the rs remain constant, and a wide range of ditions in seasoning can thus be controlled.

Wood Preservation and (8) Pathology Departments.

The wood of these two departments is so ly connected that it is simpler to describe r together. The Wood Preservation oratory contains a very complete equipment testing the various problems of wood preation by treating the wood with materials h increase its durability.

ese problems may be divided broadly two classes :—

Those dealing with the preservatives selves, their effect on the wood and their ency in resisting fungi, insects, and fire.

Those concerned with the methods of ng the preservative into the wood.

In the study of the first of these problems preservatives are analysed and fractionally led in the chemical laboratory. The ency of each preservative and its different ons is then tested by subjecting woods ed with them to the action of wood-oying fungi or animals, and noting their ve powers of resistance. The effects of ner on the preservative in the treated mens are also investigated and taken into nt in judging efficiency.

this work the Products Laboratory erates with the Pathological Department Bureau of Plant Industry and also with Bureau of Entomology. A qualified logist from the former Bureau has an in the Forest Products Laboratory, and es the whole of his attention to the tion and study of wood-destroying fungi. cultures of these are made and kept in in large jars, and the resistant power of the vatives is tested by plunging treated hens of wood into these jars.

efficiency of each preservative or of its nal distillates is also tested by making e media of wood-destroying fungi to the preservatives are added in different tage strengths. The extent to which the fungus succeeds in growing in such media affords an indication of the efficiency of the preservative.

Experiments of a similar kind on a larger scale are also being attempted in a fungus pit which has been specially constructed below the floor in one corner of the Wood Preservation Laboratory. This pit contains large chambers in which the temperature and humidity can be regulated, and, when the conditions favourable to the growth of each particular fungus have been ascertained a culture of this fungus is grown in one of the chambers. Specimens treated with different preservatives are then introduced and inspected at intervals to ascertain the resistant properties of the preservative. Up to the present, however, the fungus pit has not worked very successfully, owing to difficulties in regulating the conditions necessary for each particular species of fungus.

(*b*) The equipment for studying the second class of problems, *viz.*, the methods of impregnating the woods with the different preservatives, is very complete.

Other problems, such as the loss of preservatives by evaporation at different temperatures, the relative inflammability of woods, etc., are being investigated with the help of ingenious pieces of apparatus designed for each problem. With this equipment the laboratory is enabled to put any theories which have been evolved through researches on a small scale to a practical test on a semi-commercial scale. In these larger experiments various commercial concerns gladly co-operate with the laboratory, for the work is already proving of immense benefit to railroads, shipping and mining companies, municipal bodies (for street paving), telegraph and telephone companies, farmers, etc. At the present time railroad ties which have been treated in various way in this laboratory are in use on a reserved length of the track of the Chicago, Milwaukee, and St. Paul Railway.

Piles which have been treated to test the possibility of preserving them against marine boring animals have been sunk in the waters of the Gulf of Mexico and the Bay of San Francisco.

In many other parts of the United States these are test tracks, pole-lines, fence-lines, mining props, and greenhouse timbers set out under actual service. The location of all these test timbers is kept on a map at the Products Laboratory, and they are inspected annually by members of the Staff, who keep careful records of the condition of every piece.

(4) Wood Distillation Department.

In this laboratory studies are made of the products obtainable from different woods and the most economical methods of extraction. The equipment consists of one steam distillation and extraction retort, one oil-jacketed destructive distillation retort, and stills for refining. The department also conducts turpentine-distilling operations on a semi-commercial scale in co-operation with a turpentine factory in Georgia, where a fractionating column still has been set up for this purpose.

The work of this department is of high economic importance, for its main object is to find a profitable use for the enormous waste of material which occurs, not only in the forest in hte shape of tops, branches, and stumps, but also in the saw-mills and factories, in the shape of slabs, ends, shavings, and sawdust. The disposal of surplus sawdust over and above that used as fuel is a question which confronts mill-owners in every country, who generally dispose of it in a refuse-burner. Processes for converting it into ethyl alcohol (grain alcohol) or other substances have been attempted from time to time in different countries, but hitherto without enough success to warrant the general adoption by mill-owners. This question is being closely investigated by this department, and designs for an experimental plant to produce ethyl alcohol from sawdust are now being drawn up.

Another line of investigation has been the commercial methods of collecting and refining turpentine, and the improved methods suggested are gradually being adopted by the trade. In this work the department co-operates with the paint and varnish makers to see how far the uses of turpentine and pine-oil can be extended. The question of finding substitutes for the rapidly disappearing long-leaf pine as a source for the production of turpentine is also engaging attention.

LABOUR IN THE BUILDING TRADE.

At the Caxton Hall, Salford, a private Conference of representatives of different building trade unions was held on the 23rd ult., to consider the proposal to amalgamate. There were sixteen delegates present, representing about 180,000 members of these unions in the United Kingdom. Mr. William Thorne, M.P. (Chairman of the Parliamentary Committee), was in the chair, and there were present also Mr. C. W. Bowerman, M.P., and Mr. William Mullin. The Conference had under consideration a scheme adopted by the Operative Bricklayers' Society, and after discussion this was adopted with some slight amendment. The scheme as adopted will be submitted to a further Conference, which is to be held in London on Friday, June 21.

Despite the declaration of the Assistant-Organiser of the Carmen's Union that the building trades are determined to join the strike, a correspondent writes, says the *Westminster Gazette*, that it is hoped that the dispute in those trades is now partially settled. The London Master Builders' Association has met and approved of the action of its Council in a proposed agreement with the Amalgamated Society of Carpenters and Joiners.

The agreement provides for union and non-union men working together and no questions of disability or disqualification being raised in consequence of belonging to a trade society.

All the old rules are to remain in force except that the short hours of the winter will be extended from thirteen to seventeen weeks, and the Association proposes (subject to some greater elasticity than at present exists in the starting and leaving off) to advance the wages from 10½d. to 11d. per hour in September, and to 11½d. in March. It will be remembered that the original demand of the men was for 1s. per hour.

It may be anticipated also that a settlement on somewhat similar lines will be reached with the labourers, who, like the joiners, were asking for an advance of 1½d. per hour.

A NOVEL SCHOOL, CHOPPINGTON.

The new Council school buildings at Choppington, Northumberland, were officially opened on Monday of this week by County Councillor A. McHugh. The school, which is the first of its kind in the country, is a very interesting example of a building where some method of reinforcement had to be employed to counteract, as far as possible, the effect of pitfalls or total demolition from possible colliery subsidence. There are two departments, infants' and mixed, each being a separate building. The former is built to accommodate 168 children and the latter 400. It is in regard to the mixed department that the experiment has been tried. Forming three sides of a square, each side is separate in itself, so that should a subsidence occur in one portion of the building it would not necessarily follow that the whole school would be damaged.

The school, which is of brick, is built in three sections, completely independent of each other, with the foundations and walls reinforced. The mortar courses are reinforced by a wire mesh of best mild steel wire galvanised and having tensional wires running its entire length. The foundations, which are also in three different sections, are reinforced on the Hennebique system.

The school is built with a 9-in. cavity wall in place of an ordinary 14-in., and consists of a 4½-in. outer wall, 1½-in. cavity, and 3-in. brick on edge inner wall.

The classrooms are divided by 2-in. brick on edge walls, with a 3-in. cavity between, and the division walls are 3-in. brick on edge, reinforced.

The cost of the school works out at 11*l.* 16s. per head, and has been erected by Mr. J. Douglass, Hepscott, near Morpeth, from the plans and under the superintendence of Mr. G. Topham Forrest, Lic.R.I.B.A., the Architect to the County Authority.

The following is a list of sub-contractors :—Foundations, Messrs. Hennebique, Ltd.; heating, Messrs. Swinney Brothers, Morpeth; wood-block floors, Messrs. Hollis Brothers, Hull; hardware, Mr. James Gibbons, Wolverhampton; sanitary goods, The Leeds Fireclay Company, Ltd., Wortley, Leeds; folding screens, Messrs. Stones, Ltd., Ulverston; steel wire reinforcement of walls, Messrs. Richard Johnson, Clapham, & Morris, Ltd., Lever-street, Manchester.

GENERAL BUILDING NEWS.

FERME PARK BAPTIST CHURCH AND SCHOOLS, HORNSEY, N.

Additions in the form of classrooms, etc., are being carried out at this building by Messrs. Battley, Sons, & Holness, of 21, Old Kent-road, S.E., the contract amount being 1,311*l.* The architects are Messrs. George Baines & Son, 5, Clement's Inn, Strand, W.C.

NEW CHURCH, EDINBURGH.

The Charteris Memorial Church has just been completed and provides seating accommodation for 427 persons. The basement contains a large hall holding 320 people, with retiring-rooms, and there are also rooms for the caretaker and two rooms and bathroom for the use of the resident surgeon. The plans were prepared by Mr. James B. Dunn, F.R.I.B.A., architect, of Edinburgh.

CHURCH, WOTTON.

The new church of St. Catharine is being erected at a cost of about 7,500*l.*, from the designs of Mr. W. B. Wood, A.R.I.B.A., of Gloucester. At present only the nave, aisles, and base of the tower are to be built, but choir and morning chapels, baptistry, and vestries are to be added later. The contractors for the work are Messrs. J. Byard & Sons, of Gloucester, and Messrs. G. N. Haden & Son, of Trowbridge, are supplying the heating installation.

ST. PETER'S CHURCH, ABERCANAID.

Messrs. Santo, Spencer, & Co., of London, are the contractors for this church, which has been erected at a cost of 2,600*l.*, and provides accommodation for 375 people. The building was designed by Mr. T. Edmund Rees, architect, of Merthyr.

NEW SCHOOLS, MALDON.

The plans for these schools were prepared by Mr. A. S. R. Ley, architect, and the schools will hold 600 children. The contractors are Messrs. Dowsing & Davis, of Romford, and the lighting is by the Maldon Gas Light Company, Ltd.

GLOUCESTER UNITED SCHOOLS.

Increased science accommodation will be provided soon at the Crypt Grammar School. The scheme proposed by Mr. W. B. Wood, A.R.I.B.A., and adopted, will give accommodation for several new laboratories and a lecture-room.

CHILDREN'S HOSPITAL, SUNDERLAND.

Messrs. W. & T. R. Milburn are the architects for this hospital, which was opened last week and erected at an estimated cost of 20,948*l.* The main buildings consist of a central administrative block with two pavilions on each side and accommodation for fifty-four patients. The contractor was Mr Joseph Huntley, builder, of Sunderland.

MARKET IMPROVEMENTS, ABERDEEN.

The reconstruction of the Central Hall in the new Market Buildings, Aberdeen, is being carried out from the designs of Mr. William Kelly, A.R.S.A., of Messrs. Kelly & Nicol, architects, and the scheme provides for the erection of four large pavilions in the centre of the hall and for butchers' shops underneath the gallery. The contractors for the work are Messrs. M'Andrew & Co. for the pavilions, and Mr. Isaac Wishart for the shops.

TRADE NEWS.

Under the direction of Mr. W. C. Hawke, A.M.Inst.C.E., Borough Engineer, Dover, the "Boyle" system of ventilation (natural), embracing Boyle's latest patent "air-pump" ventilators and air inlets, have been applied to Barton-road Girls' School, Dover.

Messrs. Patman & Fotheringham, Ltd., 100 and 102, Theobalds-road, London, W.C., also of Park-street, Islington, N., have secured a large contract for rebuilding Nos. 2, 3, and 4, Tavistock-street, and Nos. 4, 5, 6, and 7, Exeter-street, Covent-garden, W.C., for Mr. George Monro.

The Council Schools, Bont, are being supplied with Shorland's warm-air ventilating patent Manchester grates by Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester.

BRISTOL MASTER BUILDERS' ASSOCIATION.

The annual summer excursion of the Bristol Master Builders' Association will take place on Wednesday, the 19th inst. The party will go by rail to Totnes, thence down the River Dart by boat to Dartmouth, where luncheon will be provided at the Royal Castle Hotel. Members will then have the option of proceeding to Torquay by boat or rail for dinner at the Queen's Hotel, returning by rail to Bristol.

PROJECTED NEW BUILDINGS IN THE PROVINCES.*

ABERYSTWYTH.—Conversion of militia barracks into houses; Mr. Lewis Evans, architect, Aberystwyth.

Abingdon. — Alterations to police-station (730*l.*); Mr. J. F. Hawkins, Surveyor, Bank-chambers, Cross-street, Reading.

Alnwick.—Church hall; Mr. W. Knowles, architect, 25, Collingwood-street, Newcastle-on-Tyne.

Appleby.—Premises; Secretary, Working Men's Conservative Club, Appleby.

Armagh.—Seventy-six houses (11,430*l.*); Surveyor, Town Hall, Armagh.

Ashby.—Church; Vicar of Bottesford, Doncaster.

Ashford.—Additions, school; Mr. W. H. Robinson, architect, Caxton House, Westminster, S.W.

Audlem (Cheshire).—School; Mr. R. P. Ward, County Buildings, Chester.

Barrowford.—Printing works, Ingham and Butterfield streets, for Messrs. T. W. Bateman & Son.

Belfast.—Buildings at Hamilton graving dock for Messrs. Harland & Wolff, Belfast, building, Sydenham-road, for Messrs. T. Anderson, Ltd.

Belfield (Lancs).—Church, St. Ann's Parish (3,500*l.*); Mr. R. B. Preston, architect, Diocesan-chambers, 51, South King-street, Manchester.

Bilton (West Riding, Yorks). — School (1,100*l.*); Mr. W. V. Dixon, Shire Hall, Wakefield.

Birmingham.—Additions to hospital; Mr. W. H. Ashford, architect, 90, New street, Birmingham. Theatre; Mr. G. Cox, builder, Handsworth, Birmingham. Additions to Canning's premises, Constitution-hill; Messrs. Cossins, Peacock, & Bewlay, architects, 85, Colmore-row, Birmingham; Mr. T. Elvins, builder, Naden-road, Soho, Birmingham. Church, Soho-hill; Mr. T. Elvins, builder, Naden-road, Soho, Birmingham.

Chadwell St. Mary.—Special subjects centre at school (2,973*l.*); Mr. G. Brown, builder, Grays, Essex.

Chatham. — School, Ordnance-street; Mr. G. E. Bond, architect, High-street, Chatham.

Cockermouth.—Proposed infirmary, Grecian Villa Estate; Mr. J. H. Musgrave, Clerk, Guardians' Offices, Cockermouth.

Colchester.—School, Hamilton-road; Mr. Duncan Clark, architect, 3, High-street, Colchester.

Coventry.—Proposed pavilion, Spencer Park (900*l.*); Mr. J. E. Swindlehurst, Surveyor, Town Hall, Coventry.

Crewe.—Church, Earle-street (5,000*l.*); Vicar, St. Peter's Church, Crewe.

Darlington.—Picture hall, Gladstone-street; Mr W. H. Hoskins, architect, Coniscliffe-road, Darlington.

Hull. — Bottling stores, Raywell-street; Messrs. Harbron & Robson, architects, 50, Spring-bank, Hull. Stables, etc., Cleveland-street (16,000*l.*); Mr. A. E. White, City Engineer, Town Hall, Hull.

Kells, N.B.—Housing scheme for Urban District Council; Mr. M. Grace, architect, Oldcastle.

Leith.—School on site of North Leith Poorhouse (1,196 places); Leith School Board.

Littleborough.—Additions at Dearnley Mill for Messrs. Ogden & Doodson.

Longford.—Alterations to New Inn for Messrs. Phipps & Co.

Manchester.—Rebuilding premises (10,000*l.*) for Messrs. McConnell & Co., cotton spinners, 90, Henry street, Ancoats.

Merthyr Tydfil.—Library, etc.; Mr Ed. Johnson, architect, St. Mary's-chambers, Monk-street, Abergavenny.

Newcastle-on-Tyne.—Church institute, St. Margaret's; Mr. W. H. Wood, architect, Collingwood-street, Newcastle.

Newmarket.—Technical institute; Mr. H. J. Linzell, builder, All Saints'-road, Newmarket.

Nottinghamshire.—Schools, Brinsley (1,000*l.*) and Selston (4,000*l.*); Mr. L. Maggs, Architect, Shire Hall, Nottingham.

Old Colwyn.—Convalescent home; Mr. C. Cowlishaw, architect, Stafford-street, Hanley.

Penstone.—Offices and public hall (4,000*l.*); Mr. C. Collins, architect, 10, Regent-street, Barnsley.

Pentrecelyn and Tanyfron.—School and school-house (800*l.*); Mr. D. Wiles, architect, High-street, Wrexham.

Plymouth. — Six houses, Mannamead (13,000*l.*); Mr. W. Palk, jun., builder, 48, Calbourg street, Plymouth. Car sheds, etc., Prince Rock; Mr. J. Paton, Engineer, Town Hall, Plymouth.

Redditch.—School (6,450*l.*); Messrs. J. & A. Brazier, builder, Worcester-road, Bromsgrove.

Ripon.—Cabinet-making factory; Mr. T. Stokes, architect, Westgate, Thirsk.

Rochdale.—Extensions to baths, Smith-street (9,500*l.*); Mr. S. S. Platt, Surveyor, Town Hall, Rochdale.

Sheffield.—Enlargement of Union Hospital (20,000*l.*); Mr. A. E. Booker, Clerk, Guardians' Offices, Sheffield.

Smethwick. Extensions to works, Halford-lane, for Messrs. H. Hope & Sons, Ltd.

South Elmsall.—Institute for the Carlton Main Colliery Company.

Stalybridge.—Extensions and alterations to baths (6,400*l.*); Mr. J. N. White, Surveyor, Town Hall, Stalybridge.

Tenbury (Worcester).—Drill hall; Mr. F. Smith, architect, Foregate-street, Worcester.

Uxbridge.—Alterations to school, Cowley-road (544*l.*); Mr. W. S. Fry, builder, Cowley, Middlesex.

Warrington.—The following plans have been passed: Six houses, Cumberland-street, for Mr. A. Wright; additions to tannery, Winwick road and Buckley-street, for Messrs. A. Waring & Co., Ltd.; warehouse, Claude-street, for Messrs. Rylands Brothers, Ltd.

Whitmore Reans -School, etc., Hornden-road (10,395*l.*); Mr. F. J. E. Tooley, builder, 1, Castle-street, Wolverhampton.

Worcester.—Addition, laundry, St. George's square; Mr. A. Parker, architect, Church House-chambers, Worcester. Theatre; Messrs. Rowe & Son, architects, Foregate street, Worcester, Messrs. Stokes Brothers, builders, Worcester.

* See also our list of Competitions, Contracts, etc., on another page.

BUILDING TRADE IN SOUTH AFRICA IN 1911.

THE Imperial Trade Correspondent at Durban (Mr. A. D. C. Agnew) has fowarded an extract from the *Natal Mercury* dealing with the state of the building trade in the Union in 1911. The following figures are given showing the value of the plans passed by the principal municipalities during 1910 and 1911:

—	1910.	1911.
	£	£
Transvaal	3,414,571	2,771,611
Natal	277,961	259,077
Cape Colony	242,725	329,257
Orange Free State	11,215	35,334
Total.....	3,944,472	3,195,279

The figures for the Transvaal show a decrease of 840,960*l.*, which, however, is accounted for by the fact that large Government contracts now proceeding were included in the 1910 figures, and also that there was abnormal activity during 1910 in the outlying mining districts such as Boksburg, Benoni, Germiston, and Krugersdorp. A good feature shown by the returns is the market activity in the coast towns.

The following table shows the values of some of the chief items of building material and requisites imported into the Union of South Africa during 1910 and 1911:—

Articles.	1910.	1911.
	£	£
Bricks for building.....	671	22
Cement	116,811	104,405
Electrical fittings	357,947	259,907
Furniture—		
School and church decorations	13,215	21,024
Other	321,803	410,722
Glass, plate	20,452	25,162
,, window	20,451	21,974
Glassware	50,225	59,960
Girders, beams, joists, etc. (including framework of iron buildings)	91,129	75,382
Galvanised-iron, not corrugated	55,210	83,013
,, ,, corrugated	302,026	365,674
Paints—		
Ochre	8,927	7,725
Turpentine	17,903	21,936
Varnish	24,745	27,362
All other	116,792	120,544
Paper, wall	39,417	35,287
Wood and timber—		
Teak	30,371	16,016
Other manufactured	695,684	640,191
Flooring and ceiling	174,615	187,360
Other planed and grooved ...	29,369	32,048
Houses, frames, and parts thereof	65,434	70,730
Works of art		
Statuary and sculpture ...	1,815	1,823
Zinc and zincware—		
Unmanufactured	170,131	133,262
Manufactured	551	1,785

BOOKS.

yways in British Archæology. By WALTER JOHNSON, F.G.S. (Cambridge: At the University Press. Price 10s. 6d. net.)

t first sight this work appears to be a collection disconnected essays, but, as the author marks in his Preface, they really possess a ong bond of continuity. Running through e whole, implied, when not actually expressed, ll be found an insistence on the principle of Folk-Memory" dealt with in the author's rk under that title. As he says, "This folk-mory—unconsciously for the most part, t sometimes with open ceremony—keeps ve those popular beliefs and practices which o individually called survivals. With some these legacies from the past the present ume deals." Included in the book are two apters on "Churches on Pagan Sites," on "The Secular Uses of the Church bric," and one on "The Orientation of urches"; and these chapters, forming ctically half the volume, are those which ll be of special interest to our readers, much the remainder of the work treating of some-at more familiar themes, and it will thus be n that to a large extent the studies are nected with the church and churchyard. e sections which treat of pagan sites, orienta-n, and burial customs, embody the results observations relating to some hundreds of ldings in all parts of England and Wales. ne of the matters discussed have given rise to much controversy, and, as the author remarks, "to anticipate agreement with all the conclusions would be sheer folly. Nevertheless, it may be claimed that the facts collected have been carefully sifted, the references conscientiously verified, and the opposing theories honestly presented," and with these observations we are in hearty accord, believing that the work will be accepted as a valuable contribution to several interesting subjects.

Amateur Joinery in the Home. By G. ASHDOWN AUDSLEY, LL.D., and BERTHOLD AUDSLEY. Demy 8vo. (London: G. Allen & Co., Ltd., Ruskin House, Rathbone-place, W. Price 4s. 6d. net.)

THIS is another of that useful series of technical and art manuals now being produced by Messrs. Allen & Co., treating of either entirely new technical processes or of old processes under new and up-to-date developments, and supplying handbooks suitable for those who care to engage in industries suitable for leisure hours in the home. The work before us is a thoroughly practical manual on amateur joinery, describing the simple formative processes involving the proper use of the several ordinary tools required. In addition to the illustrations in the text, it contains twenty-one full-page plates of designs for articles of furniture such as the amateur joiner will set himself to construct. In these plates details of construction are shown by elevations, sections, and special enlarged drawings, all of which are drawn to scale. All the plates are described, and suggestions for the most suitable woods and their finishings are given. The designs have been drawn specially for the manual by the authors, who have produced a useful work which should command a large sale.

The Society of Engineers (Incorporated) Transactions for 1911. (London: Published by the Society. 1911.)

ALTHOUGH chiefly interesting to members of the engineering profession, this annual volume contains some papers of direct interest to architects. Such, for example, are: "The Design of Tall Chimneys," by Professor Henry Adams; "Petrol-Air Gas," by Mr. E. Scott Snell; "Drawing Office Organisation," by Mr. F. G. Woollard; and "The Protection of Water Supplies," by Mr. H. C. H. Shenton.

As the proceedings of the Society have been reported in our columns further reference to the contents of the volume is scarcely necessary.

Pictures by Sir Henry Raeburn, R.A. (London: Wallis & Son, The French Gallery, Pall Mall, S.W. Price 10s. 6d. net.)

THIS is a catalogue of the portraits by Raeburn, some thirty in number, exhibited at the one hundredth exhibition at the French Gallery. Some of the pictures illustrate the best work of the artist, and the collection, as a whole, affords a good opportunity of studying the painter's method. The first, and perhaps the last, thought one has in looking at this collection is that Raeburn was a master in producing what is called a speaking likeness, and that he could suggest character in the pose and features of his subjects in an unerring manner. His men, in our opinion, are more convincing than the women, but the collection includes some charming portraits of women as well. Many of the portraits were unknown to the present generation before they were exhibited, and it is a matter for congratulation that they were brought together, and that Messrs. Wallis & Son have issued this admirable catalogue of reproductions and notes.



No. 46, Lincoln's Inn-fields: Balustrading and Plasterwork.

The Parish of St. Giles-in-the-Fields (Part I.). Being the third volume of the Survey of London, with Drawings, Illustrations, and Architectural Descriptions. By W. EDWARD RILEY, Architect to the Council. Edited, with Introduction and Notes, by SIR LAURENCE GOMME, Clerk of the Council. (London: Published by the London County Council. 1912. Pp. 135; 98 plates.)

LINCOLN'S INN-FIELDS, the giant progenitor of a long line of lesser "squares that court the breeze," is the worthy subject of this, the third volume of the Survey of London, issued once more under the auspices of the London County Council. The homely, tree-planted square, as distinct from the bleaker and more grandiose "place" of the Continent, is a peculiarly metropolitan feature of which the Londoner may well be proud, and Lincoln's Inn-fields, with an area equalling that of the base of the great Pyramid, excels them all in architectural and historical interest, as it does in size. The manner of its evolution from the suburban pastureland of Cup Field and Purse Field is well sketched in his introduction by Sir Laurence Gomme, who has turned the iconoclastic rays of scientific research upon his subject, and proved that there is no direct evidence to support the hackneyed assertion that Inigo Jones furnished the design for

the façade of the houses on the western side of the Fields. Whether the design was really from his hands is no more than a matter for conjecture; the precise wording of the charge to the Commissioners appointed in 1618 to lay out the Fields, upon which the statement rests, is that they should take steps that "the said closes and grounds . . . may be framed and reduced both for sweetnes, uniformitie, and comlines into such walkes, partitions, or other plottes and in suche sorte manner and forme both for publique health and pleasure as by the said Inigo Jones (one of the Commissioners) is or shalbe accordingly drawne by way of mapp or ground platt exhibited plained and sett out." In all this the reader will note not one word as to any architectural design, nor were any building operations entered upon till one William Newton acquired the leases of Cup Field and Purse Field, and was granted a licence in 1638 to build thirty-two houses. An agreement, the veritable charter of the London square, was entered into between Newton and the Society of Lincoln's Inn that the "square piece of ground extending from Turn Style Lane to the new buildings neer Queene's Street and from thence to or neere Lowche's Buildings, and from thence to the south-east corner of Lyncolin's Inn wall shall from hence-fourth and for ever hereafter lye open and unbuilt." By 1641 most of the houses on the western side of the Fields, together with some on the south side of Purse Field, composing the western portion of what was afterwards known as "Portugal Row," appear to have been completed. In 1657 arrangements were made to finish the three sides of the Fields, by building on the north and south sides of Cup Field. The agreement concluded with the Society of Lincoln's Inn stipulating that the new buildings should "beare equall proportions in front, height, breadth, strength, and beauty, with the sayd Row called Portugall Row, or in a more firme or beautiful manner." Would that some such condition could have been enforced in the case of Regent-street before it was too late!

The introduction is excellently illustrated by two plans of the square showing the boundaries of the original fields as compared with the present disposition of the houses, and by reproductions from the maps of Hollar, Faithorne, and Morden and Lea, illustrating the progressive development of the site. We have no space here to discuss the point raised by Sir Laurence Gomme with regard to the Wilton House picture of the Fields; it is difficult, however, to believe that it can be anterior to the Canalesque school of Samuel Scott, or that anyone would take the trouble to have the canvas modernised by the painting in of up-to-date figures and accessories.

Turning to the architectural portion of the work, we must congratulate Mr. Riley on the excellence of the drawings and photographs by which it is illustrated; the half-tone blocks in particular mark a distinct advance on those of the previous volumes of the series. We are sorry to be unable to award the same praise to the heraldic drawing of the shields of the more noteworthy occupants of the Fields inserted in the margin of the text, nor is it easy to understand why the plan of the Sardinian Chapel should have been omitted, a plan of at least as much interest as that of an "alteration job" by Sir John Soane. The original XVIIth-century houses which compose the southern part of the western row retain little of their original detail internally, with the exception of the top flight of the staircase of No. 52, with its square ball-capped newels and substantial balustrading, of which a good photograph is given. One of the best houses from an architectural point of view is No. 35, which was erected with its next-door neighbour, since rebuilt, in 1754–5, from the designs of Sir Robert Taylor. Faced with stock brickwork, and devoid of all structural ornament, save for its plain stone string-courses and the dressings of the central window of the principal floor, it is an instructive example of successful astylar treatment, depending for its effect on the proportion and spacing of the fenestration, while fearlessly offering to the eye the repose of blank wall space denied to us by the architect of to-day. The fanciful arrangement of the sash-bars is a rare and pleasant departure from the stereotyped precedent of XVIIIth-century Palladianism. Internally the plan is cleverly dovetailed into that of the house next door, and the finishings throughout are of a most elaborate nature. One of the finest features is the geometrical stair with its wrought-iron balustrade. Newcastle House, now Nos. 66 and 67, was designed by one Captain William Winde, a Dutchman, and was erected during the closing years of the XVIIth century. In 1771 the house was divided into two and remodelled internally, the crowning cornice and central pediment being removed. At No. 56 is a fine mid-XVIIIth-century staircase. Sir John Soane's house, one of the most delightful pieces of planning in London, is adequately illustrated, and a reproduction is given of an interesting drawing, by George Scharf, showing the College of Surgeons in process of transformation by Sir Charles Barry. To each account is appended a list of the former occupiers, and brief notes are given of the more famous names among them. If Mr. Riley's remarks are sometimes rather obvious, we fully recognise that he is writing as much for the layman in matters architectural as for the initiated.

Farm Buildings. By C. EDWARD CURTIS. Illustrated. (London: Vinton & Co., Ltd., Bream's-buildings, Chancery-lane. Price 3s. 6d. net.)

As THE author explains, this little volume is addressed to land owners, their agents and tenants, and not primarily to architects and builders, but we believe it will be of value to architects and builders concerned in the erection of such buildings. The work contains many useful suggestions and hints, and shows a practical knowledge of modern requirements.

The Homeland Residential Guides.

THE Homeland Association, Ltd., have commenced the issue of a new series of guide-books, dealing with various provincial towns from a residential and industrial standpoint. The first town dealt with is Reading, and a great deal of very useful information is given by the author, Mr. A. H. Anderson, both with regard to the town itself and the surrounding district. Reading undoubtedly possesses many attractions as a place of residence.



No. 35, Lincoln's Inn-fields: Rear Room on Ground Floor.

LAW REPORT.

Architect's Fees.

By consent, judgment was entered for the plaintiff for twenty-five guineas and an agreement that the defendant return all drawings, in an action raised by Mr. William Davidson, architect, 54, Queen-street, Edinburgh, against the Rev. Charles Wilton Prangley, Bexwell Rectory, Downham Market, Norfolk, which had been set down for trial on May 1912. The claim was one for fifty guineas for services rendered by the plaintiff in preparing designs for a proposed restoration of Potter Heigham Church, Norfolk, and the defence was that any work which the plaintiff had executed was of the nature of an expectation that he was to be the architect in the event of the restoration being proceeded with. The defendant had accordingly denied employment.

OBITUARY.

Mr. W. Harrison.

The death on May 30, at Bognor, is announced of Mr. William Harrison, in his sixty-seventh year. Mr. Harrison was elected an Associate of the Royal Institute of British Architects in 1882; in 1867 he became a member of the Architectural Association. In 1893 he won the first premium with his designs for the St. Pancras Municipal Buildings in Pancras-road, and was invited to compete for the North London Polytechnic. His designs were placed second in the competition limited to six architects for the St. Giles-in-the-Fields Public Library, High Holborn, twenty years ago.

Mr. D. H. Burnham.

We regret to announce the death of Mr. Daniel Hudson Burnham, which occurred on June 2 at Heidelberg. Born at Henderson, New York, in 1846, he settled in Chicago, and in 1872 established the firm of Messrs. Burnham & Root, the partnership continuing till 1891, since when the firm has been Messrs. Burnham & Co. Mr. Burnham was an honorary graduate of Harvard and Yale, and was elected President of the American Institute of Architects in 1894. He was Chairman of the National Commission for beautifying the city of Washington, and was superintending architect of the World's Fair Exhibition, Chicago, in 1893. Well known in this country, he attended the Town-Planning Conference held in London in 1910, and read a paper on the subject of "A City of the Future under a Democratic Government," his work being well represented at the Town-Planning Exhibition. In our issue of October 29, 1910, illustrations were given of several street plans of Chicago, and buildings designed by the firm. Of the numerous buildings with which Mr. Burnham was associated the following may be mentioned in Chicago:—The Temple, the Masonic Temple, the Illinois Trust Bank, the First National Bank, the Railway Exchange, the Great Northern Hotel, Marshall Field's retail store, and the Ashland, Fisher, Reliance, Rookery, and Stewart buildings. We hope in a future issue to refer to Mr. Burnham's work and the influence it has exerted on contemporary architecture.

PATENTS.

APPLICATIONS PUBLISHED.*

25,415 of 1910.—Henry Carrington James-Carrington: Heating-apparatus of the closed circuit type.

10,692 of 1911.—Alexander Reid Stevenson: Fireplaces.

10,839 of 1911.—Louis de Lenne, Marcellin Langlois, Antoine Sauvage, and George Langlois: Paving and coverings or facings for roads, footways, and other surfaces.

10,846 of 1911.—Franklin Herbert Kalbfleisch: Sizing compound and the production thereof.

* All these applications are in the stage in which opposition to the grant of Patents upon them can be made.

11,647 of 1911.—Charles William Julians and Stuart James Hogg: Manufacture of artificial stone.

11,802 of 1911.—Gustav Knappe: Casement windows.

12,036 of 1911.—Christopher Mountany: Means for and method of distributing sewage and other similar liquids.

13,358 of 1911.—William Stevens Hardman and George Burdett: Ladders.

14,370 of 1911.—Russell Elliot Macnaghten: Top sash-window ventilators.

14,377 of 1911.—Charles Showell: Bolt-controlling mechanism for emergency exist doors and the like.

14,761 of 1911.—Charles William Wood: Door-stops.

15,648 of 1911.—John Archibald Kenrick and Harold Musson Williams: Door closing and checking appliances.

16,471 of 1911.—James Johnston: Window-sashes.

17,342 of 1911.—United Motor Lock and Fittings, Ltd., and William Henry Appleby: Locks and latches.

18,546 of 1911.—Marcar Balaban: Window-sashes and fittings therefor.

19,481 of 1911.—William Davidson Simonton: Securing of escutcheons or keyhole plates.

20,160 of 1911.—Charles Louis Abel Janoyer: Method of setting or placing floor-bridging joists without fastening them on iron joists.

21,150 of 1911.—Julius Zerkowitz: Chimneys.

22,247 of 1911.—Benjamin Willson Smith: Cooking-ranges.

23,106 of 1911.—Joseph Gill: Fastenings for sliding sashes, windows, and the like.

28,288 of 1911.—Alexandro Deprit: Glass mosaics for covering walls and floors and for other similar purposes.

1,247 of 1912.—Joseph Janes: Manufacture of bricks or the like.

2,055 of 1912.—Thomas Malcolm McAlpine: Contrivances for reinforcing structures composed of concrete blocks.

2,570 of 1912.—Thaddious Vensent Elliott: Grates.

2,935 of 1912.—Lew Ogan: Dampers.



No. 35, Lincoln's Inn-fields: Wrought-Iron Panel. (*See page 675.*)

List of Competitions, Contracts, etc.

For some Contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) are advertised in this number:** Competitions, iv.; Contracts, iv. vi. viii. x.; Public Appointments, xvi.; Auction Sales, xxii.

Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Competitions.

JUNE 24. **Reigate.**—CORPORATION FARMHOUSE.—Not to exceed 550*l.* Local architects only. Premium 10*l.* 10s. Particulars from the Town Clerk, Reigate.

JUNE 24. — **Wales.** — TWO SANATORIA. — The Executive Committee of the King Edward VII. Welsh National Memorial invite architects to submit sketches for two sanatoria, one in North and the other in South Wales. Accommodation, 150 and 250 beds respectively. See advertisement in the issue of May 31, and the note in this issue (page 666) for further particulars.

JUNE 26.—**Birmingham.**—BATHS.—Twenty and 10 guineas for second and third designs. Applications for conditions to be sent to the Superintendent Engineer, Kent-street, Birmingham. See note on page 666.

JUNE 28.—**Hale, Cheshire.**—TOWN-PLANNING SCHEME.—Premiums 50*l.* and 25*l.* Particulars from the Council Offices, Hale. See issue of May 24 (page 601).

* JUNE 28.—**Regent's Quadrant.**—DESIGN FOR TREATMENT.—Premiums, 25 guineas, and 26 guineas divided. Adjudicators, Mr. W. Flockhart, Mr. E. A. Rickards, and Mr. Alan E. Munby. See advertisement in this issue for further particulars; also "Competition News," issue of April 19 (page 453), May 3 (page 512), May 10 (page 537).

JUNE 29.—**Reigate.**—LAYING-OUT AND DEVELOPING REIGATE LODGE ESTATE.—Premiums 30 guineas and 10 guineas. Particulars from the Town Clerk, Reigate.

JUNE 30.—**Padiham.**—TOWN HALL, BATHS, ETC. —Premiums 40*l.* and 20*l.* Particulars from Mr. J. Gregson, A.M.Inst.C.E., Surveyor's Office, Padiham.

JULY 1.—**Dusseldorf.**—A plan for the extension of the City of Dusseldorf. Premiums of 1,000*l.* to 375*l.* Conditions on application to the Chief Burgomaster, Dusseldorf. A translation appeared on page 365, September 29.

JULY 1.—**Port of London.**—NEW OFFICES.—Limited to those mentioned in "Competition News," issue of April 12 (page 424).

* JULY 5. — **Conisbrough.** — ADDITIONS TO HOSPITAL.—The Doncaster and Mexbrough Joint Hospital Board invite competitive plans for additions to Isolation Hospital. See advertisements in the issue of May 17 and this issue for further particulars.

AUGUST 6. — **Cardiff.** — FIRE-STATION. — The Cardiff Corporation invite designs and estimates for a fire brigade station in Westgate-street. Mr A. Marshall Mackenzie, assessor. Particulars from the Town Clerk, City Hall, Cardiff.

AUGUST 30. — SAXON SNELL PRIZE. — Fifty guineas, with medal, is offered for essay on "The Lighting, Heating, etc., of an Operating-Room for a General Hospital." Particulars from the Sanitary Institute, 90, Buckingham Palace-road, S.W.

SEPTEMBER 30.—**Dublin.**—UNIVERSITY COLLEGE: NEW BUILDINGS.—Limited to architects in Ireland. Assessor, Mr. H. T. Hare, F.R.I.B.A.

OCTOBER 1. — **Ottawa.** — MONUMENT TO KING EDWARD VII.—Sketch models in plaster to be sent to the Director of National Art Gallery, Ottawa.

NO DATE.—**Jordanhill, Glasgow.**—PROPOSED TRAINING COLLEGE.—Limited to six firms, named in "Competition News," December 1, page 635.

NO DATE. — **Warrington.** — SCHOOL. — The Warrington Education Committee invite competitive plans for the erection of a public elementary school. See advertisement in issue of February 16 for further particulars.

Contracts.

BUILDING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

JUNE 8.—**Lissarda.**—RESIDENCE.—Erection of a curate's residence, etc., at Lissarda, co. Cork. Plans and specification with Mr. James F. M'Mullen, M.R.I.A.I., architect, 30, South-mall, Cork.

JUNE 8.—**Southwick.** — HALL.—Erection of a Public Hall. Plans seen, and particulars from Messrs. Joseph Potts & Son, 57, John-street, Sunderland. Quantities on deposit of 1*l.* 1s.

JUNE 10.—**Bexley.**—ROOM, ETC.—For erection of proposed ironing-room and other works at "Trewint," Cold Blow, Bexley, Kent. Drawings and specification at the home, and tenders to Messrs. J. C. Melliss & Co., civil engineers, 264, Gresham House, Old Broad-street, London, E.C.

JUNE 10. **Bournemouth.**—WALL.—For erection of a brick and concrete boundary wall at the refuse destructor. Particulars, form of tender, and specification, on deposit of 1*l.* 1s., with Mr. F. W. Lacey, M.Inst. C.E., Borough Engineer and Surveyor, Municipal Offices, Bournemouth.

JUNE 10.—**Bruree.**—CREAMERY.—Erection of a creamery near Bruree. Plans and specifications with Mr. Michael White, Loteragh.

JUNE 10. — **Butterknowle.** — HOUSE.—For the erection of a farm-house in Wham-lane, Butterknowle. Plans and specifications with Mr. Joseph Stephenson, East Rowntree Farm, near Hamsterley.

JUNE 10. **Dundalk.**—REPAIRS, ETC. - The Great Northern Railway Company (Ireland) invite tenders for the painting, plumbing, and repairs to their property, Mounthamilton House, Dundalk. Plan and specification at the Engineer's Offices at Dublin and Belfast, and form of tender from Mr. T. Morrison, Secretary, Secretary's Office, Amiens-street Terminus, Dublin. Deposit of 1*l.* 1s.

JUNE 10. — **Huddersfield.**—ADDITIONS.—Erection of an additional story to warehouse, St. Thomas's-road. Plans seen, and quantities from Messrs. Joseph Berry & Sons, architects and surveyors, 3, Market-place, Huddersfield.

JUNE 10. — **Merthyr Tydfil.**—PREMISES.—For pulling down old building and erecting business premises in High-street, Merthyr Tydfil. Plans and specification seen. Quantities, on deposit of 1*l.* 1s., from Messrs. W. M. Lewis & Walters, architects and surveyors, Pontypridd

JUNE 10. — **Pengam.** — OFFICES.—For the construction of offices at Britannia Colliery, Pengam. Plans and specification at the Powell Duffryn Colliery Office, Pengam,

JUNE 10. — **Ulleskelf.** — CHURCH.—Erection of new Wesleyan church at Ulleskelf. Plans and specifications with Mr. Wm. Robson Hindmarsh, architect, Ulleskelf Quantities on deposit of 10s. 6d.

JUNE 11. — **Chesham.**—ADDITIONS.—For alterations and additions to Chesham Post-office. Drawings, specification, and conditions and form of contract at Chesham Post-office. Quantities and form of tender on deposit of 1*l.* 1s. to the Secretary, H.M. Office of Works, etc., Storey's-gate, London, S.W.

JUNE 11. — **Heaton.** — SHOPS. — The North-Eastern Railway invites tenders for the erection of shops for the District Engineer at Heaton, Newcastle-on-Tyne. Plans and specification seen, and quantities from Mr. William Bell, the Company's Architect, Westgate-road, Newcastle-on-Tyne.

JUNE 11. — **Sowerby Bridge.**—HOUSES.—Erection of four houses in Belmont-street, and two houses and shop in Clifton-street, Sowerby Bridge. Particulars from Mr S. Wilkinson, architect, Sowerby Bridge.

JUNE 11. — **Tenby.**—SHED.—The Great Western Railway invites tenders for the erection of a new goods shed at Tenby Station. Plans and specification seen, and forms of tender and quantities at the office of the Engineer at Neath Station.

JUNE 12.—**Caerphilly.** CINEMA.—Erection of a cinema at Caerphilly. Plans and specifications with architects, Messrs. Hinton & Lewis, 22, Cardiff-street, Aberdare.

JUNE 12. — **Dinham.**—COTTAGES, ETC.—Erection of three cottages and homesteads on Holdings, Llanvair Discoed (Dinham). Plans and specification with Mr. C. Reginald Harding, County Land Agent, C.C. Offices, Newport, Mon.

JUNE 12. **Hull.**—BUILDINGS.—For the erection in the Northern Cemetery of cemetery chapel, cemetery lodge, and greenhouse Drawings and specifications seen, and quantities on a deposit of 2*l.* 2s. to Mr. Joseph H. Hirst City Architect, Town Hall, Hull.

JUNE 12. — **Peterston-super-Ely.**—HOUSES.—Erection of two semi-detached houses at Maendy Farm, Peterston-super-Ely, Glam. Plans and specification seen with Mr. W. D. Thomas, architect and surveyor, Tydvil House, Porth, Glam.

JUNE 12. — **Ryton.**—CHURCH.—For erection of Wesleyan church and classrooms, Crookhill, Ryton. Plans and specification seen, and quantities from the architect, Mr. G. Bell, Monument-chambers, 34, Blackett-street, Newcastle-on-Tyne.

JUNE 12. — **Truro.**—ROOF, ETC.—For new slate roof, lavatory accommodation, and other work at St. Mary's Wesleyan Methodist Church, Truro. Plans and specifications with Mr Alfred J. Cornelius, M.S.A., architect, Truro

JUNE 12. — **Ystrad Mynach.**—ADDITIONS.—For the alterations and additions, including skittle alley, etc., to the Constitutional Club, Ystrad Mynach. Plans and specification with the architect, Mr. H. Gabe Jones, Bank-chambers, Hengoed.

JUNE 13. — **Southend.** — ADDITIONS, ETC.—For alterations and additions to the London-road Infants' Council School. Architects, Messrs. Cabuche & Hayward, Hamlet Court-road, Westcliff, Southend-on-Sea. Deposit of 2*l.* 2s.

* JUNE 13.—**Wandsworth.**—LAVATORIES.—The Wandsworth Guardians invite tenders for provision of lavatory accommodation at St. James's branch Workhouse. See advertisement in this issue for further particulars.

JUNE 14.—**Bootle.** — ALTERATIONS.—For alterations to Education Offices. Plans seen, and specifications from the Borough Engineer, Bootle, Lancs.

JUNE 14. — **Kilmallock.** - ALTERATION.—For the alteration of portion of the Workhouse premises into suitable apartments for nurses. Plan and specification by Mr. Hugh W O'Flanagin, B.E., B.A., Cork, may be seen with Mr. J. C. O'Sullivan, Acting Clerk of Union, Clerk's Office, Kilmallock. Deposit of 3*l.*

JUNE 14.—**Liscanor.**—HOUSE, ETC.—Erection of a parochial house and offices Plans and specification with Messrs Anthony Scott & Son, architects, 49, Upper Sackville-street, Dublin.

JUNE 14. — **Winchester.** — ALTERATIONS. — For alterations to No. 14, High street. Plans and specifications with Mr. Thomas Stopher, F.S.I., architect and surveyor, 57, High-street, Winchester.

JUNE 15.—**Carnowen.**—SCHOOL.—For the erection of a National school at Carnowen. Plans and specifications with Messrs Robinson & Davidson, A.R.I.B.A., Richmond-street, Londonderry.

JUNE 15. -**Kirton-in-Lindsey.**—RENOVATION.—For the renovation of the Wesleyan Church at Kirton-in-Lindsey. Plans and specifications with Mr. W. H. Buttrick, P.A.S.I., architect, 107, High-street, Scunthorpe, Lincs.

JUNE 15.—**London.** — ADDITIONS.—For alterations and additions to the Medical Superintendent's House. at the Northern Convalescent Fever Hospital, Winchmore-hill, N. Drawing and specification by Mr. W. T. Hatch, M.Inst.C.E., M.I.Mech.E., Engineer-in-Chief may be inspected at the office of the Board, Embankment, E.C. Deposit of 1*l.*

JUNE 15. **Nethy-Bridge.** — VILLA.—For erection of a villa at Nethy-Bridge. Plans and specifications with Mr. Harry Fraser, Te Roti, Nethy-Bridge Tenders with Mr. Gilbert, architect, The Square, Grantown.

JUNE 17. — **Dutton.** — ADDITIONS, ETC. — For alterations, additions, and repairs to Dutton Lodge, near Warrington. Plans and specifications with Messrs. Wright & Hamlyn, architects and surveyors, Sankey-street, Warrington, and quantities on deposit of 1*l.*

JUNE 17. — **Lisburn.** — PREMISES.—Erection of new premises at Lisburn for the directors of the Ulster Bank, Ltd. Plans and specification with Messrs. Blackwood & Jury, M.R.I.A.I., architects, 41, Donegall-place, Belfast, and quantities obtained from Messrs. M'Carthy & Brookes, 12, Scottish Provident-buildings, Belfast, on deposit of 2*l.* 2s.

JUNE 17. — **Oulton.** — HOUSE.—Erection of a dwelling-house for the Master of Oulton Workhouse, on land adjacent to the Workhouse. Plans and specifications with the architect, Mr. E. C. Allerton, M.S.A., 162, London-road North, Lowestoft.

JUNE 17. **Risca.**—WORKSHOP.—Erection of a manual training workshop at the Pontywaun County School, Risca, Mon. Plans and specification with Mr. John Bain, F.R.I.B.A., County Council Offices, Newport.

* JUNE 18.—**London.** — SORTING OFFICE.—The Commissioners of H.M. Works and Public Buildings invite tenders for new sorting office at Bow. See advertisement in this issue for further particulars.

JUNE 18.—**Tonyrefail.**—PREMISES.—Erection of business premises adjoining Boar's Head Hotel, Tonyrefail. Plans and specification with Mr W D. Morgan, M.S.A., architect, 194, Ystrad-road, Pentre, Rhondda.

JUNE 19.—**Bacton.** -SCHOOL.—For the erection of the Bacton new School. Names to the architect, Messrs. Olley & Hayward, 5, Queen-street, Great Yarmouth. Quantities on deposit of 1*l.* 1s

JUNE 19.—**Bristol.**—ROOMS, ETC.—For erection of engineers' and workmen's mess-rooms, Avon bank; machinery foundations, Temple Back Specification and quantities with Mr. H. F. Proctor, M.Inst.C.E., M.Inst.E.E., Engineer and General Manager, Exchange, Corn-street, Bristol Deposit of 2*l.* 2s.

BUILDING—*continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

JUNE 19. — **Crostwick.**—SCHOOL.—For erection of a new school. Plans seen, and quantities, on deposit of 1l. 1s., from Messrs. Morgan & Buckingham, architects, Upper King-street, Norwich.

JUNE 19.—**Freethorpe.**—SCHOOL.—For erection of a school. Plans seen, and quantities, on deposit of 1l. 1s., from Mr. A F. Scott, architect, Castle Meadow, Norwich.

✱ JUNE 20.—**Chigwell.**—ADDITIONS TO SCHOOL. The Essex Education Committee invite tenders for erection of a manual instruction and cookery room on land adjoining the boys' school at Chigwell. See advertisement in this issue for further particulars.

JUNE 21. — **Bracewell.** SCHOOL.—For erection of a new school. Plans seen, and specifications with quantities from the Education Architect, County Hall, Wakefield. Deposit of 1l

✱ JUNE 21 — **Finchley.** ENGINE-HOUSE, ETC.— The Metropolitan Water Board invite tenders for construction of an engine-house, formation of roads, drainage, and other contingent works at Fortis Green See advertisement in this issue for further particulars

✱ JUNE 21.—**Willesden.**—ENGINE-HOUSE, ETC.— The Metropolitan Water Board invite tenders for erection of an engine-house, drainage, and other contingent works at the Cricklewood Pumping Station. See advertisement in this issue for further particulars.

JUNE 22.—**Evesham.**—SCHOOL.—Erection of a Council elementary school for infants in Chapel-street, Evesham Mr. A. V. Rowe, architect, 30, Foregate-street, Worcester.

JUNE 22. — **Leytonstone.**—SHOPS.—Erection of six shops and premises in High-road, Leytonstone, Essex. Plans and specifications from Mr. P. Cornish architect, 641, High-road, Leytonstone

JUNE 22. — **Verwick.** - VESTRY.—Erection of a new vestry at Siloam, Verwick. Plans, specifications, and information from Mr. J. Teifion J. Williams, architect, Napier-street, Cardigan.

✱ JUNE 24. — **Lichfield.** — MILITARY HOSPITAL (ADDITIONS —The Secretary of State for War invites tenders for additions to the Military Hospital at Lichfield. See advertisement in this issue for further particulars.

✱ JUNE 24 — **Tidworth.** — ADDITIONS AND ALTERATIONS —The Secretary of State for War invites tenders for erection of stables; reappropriation of drill shed and mobilisation store; reappropriation of part of bank block, offices, stores, and regimental shops; addition to officers' quarters; and mess block for four additional officers, at Cissbury Barracks, Tidworth. See advertisement in this issue for further particulars.

JUNE 28.—**Hythe.**—HALL, ETC.—For erection of public hall, police-courts, offices, and other works in Corporation-street, Water-street, and Green-field-street. Plans and specifications seen, and quantities and particulars from the Borough Surveyor, Mr. J. Diggle, A.M.Inst.C.E., Town Hall, Hyde, on deposit of 3l. 3s.

JUNE 29.—**Newton Abbot.** — COLLEGE.—The Governors of Seale-Hayne College invite tenders for erection of proposed College buildings. See advertisement in this issue for further particulars.

NO DATE. — **Alveston.**—COTTAGE.—Erection of a cottage and for additions and repairs to the house and buildings at the Lodge Farm, at Alveston. Plans and specifications with Mr. Francis Peter, Small Holdings Surveyor, Shire-hall, Gloucester.

NO DATE. **Ashton-in-Makerfield.**—ADDITIONS. For additions to the Ashton-in-Makerfield Grammar School. Deposit of 1l. 1s. for quantities to Mr. Richard Pennington, architect, Library-street, Wigan.

NO DATE.—**Batley.**—VILLAS, ETC.—For erection of two detached villas in White Lee-road and four dwelling-houses in Knowles-road. Mr. H. Brearley, architect, 68, Commercial-street, Batley.

NO DATE. — **Ingrave.** — SCHOOL.—Erection of a new school at Ingrave, Essex Deposit of 1l. 1s. Mr. N. J. Dawson, A.R.I.B.A., architect, 17, Duke-street, Chelmsford.

NO DATE.—**Neath.**—REBUILDING.—For rebuilding Glyncorrwg Hotel, Glyncorrwg; Red Cown Inn, Ystalyfera. Plans and specification seen, and quantities from Mr. J. Cook Rees, M.S.A., Arcade-chambers, Neath

NO DATE. — **Newcastle.** ALTERATIONS.—For alterations to East Walker Council School. Quantities, on deposit of 1l. 1s., from Mr. Spurley Hey, Secretary of Education Committee, Education Offices, Northumberland-road, Newcastle-upon-Tyne

NO DATE. — **Rushden.** — HOUSE.—Erection of house, Newton-road, Rushden. Messrs. Talbot Brown & Fisher, architects, Wellingborough.

NO DATE. — **Salisbury.** HOUSE.—For erection of a house at Bouverie-avenue. Particulars from Mr. Fred Bath, F.R.I.B.A., F.S.I., architect and surveyor, Crown-chambers, Salisbury.

NO DATE. — **Southampton.** — ADDITIONS. For additions to Bitterne Schools. Particulars, on deposit of 1l. 1s, from Messrs. Weston & Burnett, architects, 24, Portland-street, Southampton.

NO DATE.—**Tremain.**—HOUSE —For erection of a house at Tremain. Particulars from Mr. J. Jones, architect, Dolwen, Rhydlewis.

NO DATE. — **Wellingborough.** — SCHOOL.—For the enlargement and reconstruction of the elementary school in Park-street, Wellingborough. Plans and specifications at the County Education Offices, Northampton

ENGINEERING, IRON, AND STEEL.

JUNE 10. — **Kettering.**—BRIDGE.—For the construction of a new foot bridge and works at The Plank, Warkton. Plans and specifications with Mr. W. Hadley Darby, Surveyor, Market-street, Kettering.

✱ JUNE 17. — **Grimsby.** —CONSTRUCTIONAL STEELWORK, HEATING, AND LIGHTING — The Grimsby Education Committee invite provisional tenders for constructional steelwork and fixing, fire-resisting floors, flat-roof playground with asphalt finish, heating apparatus, electric lighting and fittings. All in connexion with the new school, Victoria-street, Grimsby. See advertisement in this issue for further particulars

JUNE 19.—**Briton Ferry.**—MAIN.—Erection of overhead main from Villiers-street to boundary at the Grandison Hotel. Specifications and plans seen, and forms of tender from Messrs. Herbert Lewis & Fletcher, consulting engineers, Prudential-buildings, Cardiff.

JUNE 21.—**Gardenstown.**—PIER, ETC.—For extension of east pier, construction of a new pier or breakwater, quay wall, deepening of new harbour area, and cutting through existing west pier and forming entrance to new harbour basin, etc., for the Gardenstown Harbour Trustees General conditions, specification, and form of tender from Messrs. Kyle, Dennison, & Laing, civil engineers, 174, West George-street, Glasgow, or 34, Castle-street, Edinburgh. Deposit of 3l. 3s

✱ JUNE 21. — **Sevenoaks.** — VENTILATION AND HEATING. -The Kent Education Committee invite tenders for certain improvements to the ventilation and heating of the Sevenoaks Council School. See advertisement in this issue for further particulars

✱ JUNE 24.—**Thornton Heath.**—ELECTRIC LIFTS. —The Croydon Guardians invite tenders for conversion of two bed hand lifts into two full automatic press button control electric lifts (alternating current) at Infirmary. See advertisement in this issue for further particulars.

✱ JULY 5.—**Beverley.** — BRIDGE.—The East Riding of Yorkshire C.C. invite tenders for removal of existing bridge across River Hull, near Beverley, and construction of a new opening bridge on the site of existing bridge, etc. See advertisement in this issue for further particulars.

AUGUST 31.—**Reykjavik, Iceland.**—HARBOUR.—Construction of a harbour, including construction of three moles, two steamboat piers, and dredging works. General and special conditions of tender at the Commercial Intelligence Branch of the Board of Trade, 73, Basinghall-street, E.C.

FURNITURE, PAINTING, MATERIALS, etc.

JUNE 10. **Cambridge.**—BLOCKS.—For the supply of about 40,000 Jarrah wood blocks. Particulars from the Borough Surveyor, Guildhall, Cambridge.

JUNE 10. — **Huddersfield.**—PAINTING.—For the internal painting and decorating of the administrative block of the Sanatorium, Mill-hill, Dalton. Specifications and general conditions seen, and quantities and forms of tender from Mr. K. F. Campbell, M.Inst.C.E., Borough Engineer and Surveyor, 1, Peel-street, Huddersfield.

JUNE 10 — **Winchester.**—REPAIRS.—For repairs to the elementary schools in the city. Specifications at the City Surveyor's Offices, Guildhall, Winchester.

JUNE 11. — **Gainsborough.** — PAINTING.—The Gainsborough Working Men's Club and Institute invite tenders for painting and decorating their club. Specifications and particulars from Mr. Thos. E. Patrick, Secretary, 10, Bridge-street, Gainsborough.

JUNE 12.—**Truro.**—PAINTING.—For painting and decorating at St. Mary's Wesleyan Methodist Church, Truro. Specifications with Mr. Alfred J. Cornelius, M.S.A., architect, Truro.

JUNE 12.—**Wigan.**—PAINTING, ETC.—For painting, colouring, limewashing, etc., at the following schools :—St George's, Wheeley Branch, St. John's R.C., St. Patrick's, St. James's (Worsley Mesnes), Pemberton Colliery, St. Cuthbert's, Sacred Heart, Warrington-lane Council. Specification and particulars from Mr. Geo. H. Mockler, Director of Education, Education Offices, Wigan.

✱ JUNE 17. — **Grimsby.** — PATENT CLOAK-ROOM FITTINGS. — The Grimsby Education Committee invite provisional tenders for supply of patent cloak-room fittings at the new school, Victoria-street, Grimsby. See advertisement in this issue for further particulars.

✱ JUNE 17. — **Southall.** — PAINTING, ETC.—The St. Marylebone Guardians invite tenders for painting, whitewashing, repairs, etc., at schools. See advertisement in this issue for further particulars.

JUNE 18. — **Carlisle.**—PAINTING.—For painting and other works at three of the elementary schools. Specification and particulars, on deposit of 10s. 6d., from Mr. Henry C. Marks, M.Inst.C.E., Surveyor, 36, Fisher-street, Carlisle.

✱ JUNE 19. — **Sutton, Surrey.**—CLEANING AND PAINTING.—The Metropolitan Asylums Board invite tenders for cleaning and painting works at the Downs School. See advertisement in this issue for further particulars.

JUNE 22.—**King's Lynn.**—PAINTING.—For cleaning and colouring the interior of the following schools :—St. Nicholas' Schools, Pilot-street; South Lynn All Saints' Schools, South Everard-street; St. Michael's School, Saddlebow-road; cookery centre, St. James'-road. Specifications and particulars with Mr. A. J. Smith, Borough Surveyor, Town Hall, King's Lynn.

✱ JUNE 25.—**Leyton.**—CLEANSING AND PAINTING. —The Leyton U.D.C. invite tenders for cleansing and painting of various schools See advertisement in this issue for further particulars.

✱ JUNE 25. — **Leyton.** — WIRE NETTING, ETC.— The Leyton U.D.C. invite tenders for wire netting, etc., to boundary walls, Downsell-road School. See advertisement in this issue for further particulars.

ROADS, SANITARY AND WATER WORKS.

JUNE 8.—**Willington.**—STREETS.—For levelling, paving, metalling, channelling, and making good the street known as Back Rosedale-terrace, Willington. Specification and quantities with Mr. J. H. Gardner, Surveyor to the Willington U.D.C., Surveyor's Office, Oxford House, Willington, Durham

JUNE 8. — **Whickham.**—STREETS.—For excavating, kerbing, channelling, and paving streets at Dunston and Swalwell. Plans and specifications seen, and quantities obtained from the Council's Surveyor, Mr. J. B. Renton, Council Offices, Whickham, on deposit of 2l. 2s.

JUNE 15. — **Spennymoor.** — WALLS, ETC —For road-making, draining, constructing of boundary walls, fencing, etc., in connexion with the extension of the cemetery. Plans, specifications, etc., seen, and forms of tender from Mr. C. R. Seencer, Surveyor to the Council, Council Offices, Spennymoor.

✱ JUNE 17.—**Grimsby.**—CLOSETS AND URINAL.— The Grimsby Education Committee invite provisional tenders for supply of wash-down closets and urinals at the new Council school, Victoria-street, Grimsby. See advertisement in this issue for further particulars

JUNE 18.—**Wembley.**—ROAD.—For private and public street improvement works. Drawings and specifications with Mr. Cecil R. W. Chapman, the Engineer and Surveyor to the Council, Public Offices, Wembley.

✱ JUNE 25. — **Leyton.** — TAR-PAVING. — The Leyton U.D.C. invite tenders for repairs and redressing of tar-paving to playgrounds at various schools, and tar-paving playgrounds, Sybourn-street Schools. See advertisement in this issue for further particulars

JUNE 27. — **Scunthorpe.** — STREETS.—For the making-up of John and other streets. Drawings and specifications seen, and form of tender with quantities from Mr. C. Curtis Gray, Engineer and Surveyor, High-street, Scunthorpe, on deposit of 2l. 2s.

✱ JULY 4. — **Lymm.** — OUTFALL WORKS.—The Lymm U.D.C. invite tenders for construction of outfall works and stoneware pipe sewers, etc. See advertisement in this issue for further particulars.

Public Appointments.

Nature of Appointment.	By whom Advertised.	Salary.	Application to be in
QUANTITY SURVEYOR	Burnley Corporation	200l. per annum	June 11
INSTRUCTOR OF HANDICRAFT (WOODWORK)	L.C.C.	100l. per annum	June 15
PROFESSOR OF ARCHITECTURE	Manchester Univ. & Ed. Com.	600l. per annum	June 18
ARCHITECTURAL ASSISTANT	West Riding C.C.	120l. per annum	June 24
LECTURER IN ARCHITECTURE	Brighton Education Com.	200l. per annum	June 30
HEAD OF BUILDING DEPARTMENT	Northern Polytechnic Inst.	400l. per annum	No date

Auction Sales.

Nature and Place of Sale.	By whom Offered.	Date of Sale.
*FREEHOLD BUILDER'S WORKS AND PREMISES. At the Mart	J. T. Skelding & Holland	June 10
*STOCK OF GAS LIGHTING ENGINEERS, FARRINGDON-ROAD, E.C. On the Premises	H. Hookey & Co.	June 11
*DEALS, BATTENS, BOARDS, TIMBER, Etc. Great Hall, Winchester House, E.C.	Churchill & Sim	June 12
*BUILDING MATERIALS, CLAPHAM, S.W. On the Site	Hooker & Webb	June 12
*STOCK OF TENT & TARPAULIN MANUFACTURER, 86, BANNER-ST. On the Premises	Fryett, White, & Co.	June 12
*DECORATOR'S & CONTRACTOR'S PLANT, etc.—At 41, High street, Brentwood	H. W. Smith	June 13
*FREEHOLD BUILDING LAND. At the Mart	D. Watney & Sons	June 20
*PREMISES, CITY ROAD.—At the Mart	Ventom, Bull, & Cooper	June 24
*PLANT AND MACHINERY. On the Site	Crasike & Sons	June 26
*FREEHOLD WHARF LAND.—At the Mart	E. Fox & Bousfield	June 26
*FREEHOLD BUILDING PLOTS, EAST SHEEN. Greyhound Hotel, Richmond	Farebrother, Ellis, & Co.	July 12

FOREIGN AND COLONIAL.

City Hall, Montreal, Canada.

According to the *Montreal Daily Witness* of May 2, the plans of the new City Hall and annex have been approved by the Board of Control. The building will have granite foundations and a sandstone superstructure, and will serve as Police Headquarters, Recorder's Court, and Medical Health Department. Tenders for the construction of the building will be invited in the near future, and it is expected that the building will be occupied in a year.

Military Headquarters, South Australia.

The official *Bulletin* of the Intelligence and Tourist Bureau, Adelaide, of April 15, states that complete and modern headquarters for the State Military Department of South Australia are to be erected for the Defence Authorities on the land at Keswick, near Adelaide, which was acquired for the purpose by the Federal Government in 1910. The initial work comprises the erection of the administrative buildings, which are to be constructed of brick with cement stucco, and of barracks for the permanent artillery. When these are completed, officers' quarters and stabling will be erected. The complete scheme, which also includes various stores, railway sidings, etc., will involve a large expenditure.

SOME RECENT SALES OF PROPERTY:

ESTATE EXCHANGE REPORT.

May 14.—By HAWES & Co.

Twickenham, Middlesex.—Colne-rd., copyhold land, 8 acres £1,350
Mereway-rd., Briar Cottage, c., w.r. 11l. 14s. 110
Colne-rd., White House, f., w.r. 18l. 4s. 225
Brentford, Middlesex.—268, 271, and 272, High-st. (s.), c., y.r. 72l. 505
Isleworth, Middlesex.—41, London-rd., f., e r. 30l. 270

May 15.—By WARNER, SHEPPARD, & WADE.

Leicester.—15 and 17, Gallowtree-gate (s.), f. 8,525

May 16.—By OFFIN & RUMSEY.

Corringham, Essex. Reedhams and New Jenkins Farms, 139 acres, f. 2,620

By WHITTINDALE & WATSON.

Barston, Warwick.—Barston Hall and 103 a. 2 r. 14 p., f. 4,900
Malt House Farm, 23 a. 3 r. 30 p., f. 1,400
Pasture land, 10a. 3 r. 18 p., f. 1,565
Balsall, Warwick.—Pasture land, 7 a. 2 r. 23 p., f. 410

May 17. By H. KING & SON.

Clent, Worcs.—Seven enclosures, 58 a. 2 r. 20 p., f. 2,550

May 18.—By ARTHUR RUTTER, SON, & Co.

Little Abington, Cambs.—Bricklayers' Arms b.h. and five cottages, f. 570

May 21.—By WEATHERALL & GREEN.

Crumpsall, Denton, etc., Lancs.—Building land, 15 a. 3 r. 34 p., f. 5,932

May 23. By T. P. & A. SALE.

Bourne, Lincs. Agricultural estate, 1,074 acres, f. 48,612

May 25.—By C. R. MORRIS, SONS, & PEARD.

Taunton, Somerset.—Haydon House Farm, 122 a. 2 r. 20 p., f. 4,975

May 28.—By MADDISON, MILES, & MADDISON.

Rumham, Norfolk.—Suspension Bridge Tavern, f. 2,825

May 29.—By FORTESCUE & Co

Battersea. 172 and 174, Battersea-bridge-rd., f., y.r. 70l. 750

May 30.—By FURBER.

Brondesbury. 1 and 5, Chatsworth-rd., u.t 71 yrs., g.r. 2l., y. and e.r. 15l. 950

By LEOPOLD FARMER & SONS.

Battersea.—York-rd., manufacturing premises and 7, Steelworks-rd., f., p 7,375

By ROBSON & PERRIN.

Edmonton.—111, Church-st., f., y.r. 23l. 250

By HARRIE STACEY & SON.

Walton Heath, Surrey.—The Red Cottages, f., p 1,000

By STIMSON & SONS.

Stepney. 26, Eastfield-st., f., w.r. 33l. 16s 215
Victoria Park.—7, Cadogan-ter., u.t. 41 yrs., g.r. 6l. 6s., y.r. 30l. 225

By WALFORD & WILSHIN.

Penge.—105 and 107, Maple-rd. (s.), u.t. 53 yrs., g.r. 12l., y. and e.r. 72l. £270

May 31.—By G. ERNEST CLARKE & Co.

Walthamstow. 91, Hoe-st. (s.), f., y.r. 30l. 500
Milton-rd., f.g.r. 5l. 5s., reveasion in 92 yrs .. 133
91, Barclay-rd., f., p. 390
95, 97, and 99, Barclay-rd., f., w.r. 81l. 18s ... 605
45 and 46, Queen Elizabeth-rd., u.t. 88 yrs., g.r. 8l. 8s., w.r. 41l. 12s. 150
Leyton.—Wilmot-rd., Maple Lodge, f., y.r. 24l. 265

By W. B. HALLETT.

Minories.—No. 94, The Woolpack p.h., corporation lease, g.r. 15l., fine 105l., y.r. 150l. 2,000

By HALL & NEWMAN.

Poplar.—31 to 37 (odd), Byron-st., f., w. and e r. 133l. 14s. 940
Peckham.—177, St. George's rd. (s.), u.t. 50 yrs., g.r. 3l., gross rental 40l. 175

By WALTER WINDRUM.

Stepney.—36, Emmott st., u.t. 59 yrs., g.r. 4l. 4s., w.r. 37l. 14s. 130
Mile End.—16, Clemence-st., u.t. 48 yrs., g.r. 4l., w r. 42l. 18s. 175
10, Huddart-st., u.t. 62 yrs., g.r. 5l., w.r. 39l. 225

Contractions used in these lists.—F.g.r. for freehold ground-rent; l.g.r. for leasehold ground-rent; i.g.r. for improved ground-rent; g.r. for ground-rent; r. for rent; f. for freehold; c. for copyhold; l. for leasehold; p. for possession; e.r. for estimated rental; w.r. for weekly rental; q.r. for quarterly rental; y.r. for yearly rental; u.t. for unexpired term; p.a. for per annum; yrs. for years; la. for lane; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; cres. for crescent; av. for avenue; gdns. for gardens; yd. for yard; gr. for grove; b.h. for beerhouse; p.h. for public-house; o. for offices; s. for shops; ct. for court.

TO CORRESPONDENTS.

NOTE.—All communications with respect to literary and artistic matters should be addressed to "THE EDITOR" (and not to any person by name); those relating to advertisements and other exclusively business matters should be addressed to "THE PUBLISHER," and not to the Editor.

All communications must be authenticated by the name and address of the sender, whether for publication or not. No notice can be taken of anonymous communications.

The responsibility of signed articles, letters, and papers read at meetings rests, of course, with the authors.

We cannot undertake to return rejected communications; and the Editor cannot be responsible for drawings, photographs, manuscripts, or other documents, or for models or samples sent to or left at this office, unless he has specially asked for them.

All drawings sent to or left at this office for consideration should bear the owner's name and address on either the face or back of the drawing. Delay and inconvenience may result from inattention to this.

Any commission to a contributor to write an article, or to execute or lend a drawing for publication, is given subject to the approval of the article or drawing, when received, by the Editor, who retains the right to reject it if unsatisfactory. The receipt by the author of a proof of an article in type does not necessarily imply its acceptance.

N.B.—Illustrations of the First Premiated Design in any important architectural competition will always be accepted for publication by the Editor, whether they have been formally asked for or not

PRICES CURRENT OF MATERIALS.

*** Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

BRICKS, &c.

Per 1000 Alongside, in River.	£ s. d.
Best Stocks	1 14 0
Picked Stocks for Facings	2 10 0

Per 1000, Delivered at Railway Depôt.

	£ s. d.		£ s. d.
Flettons	1 13 0	Best Blue Pressed	
Best Fareham Red	3 12 0	Staffordshire	3 15 0
Best Red Pressed Ruabon Facing	5 0 0	Do. Bullnose	4 0 0
		Best Stourbridge Fire Bricks	4 0 0
GLAZED BRICKS—			
Best White, Ivory, and Salt Glzd. Str'tch'rs	11 7 6	Double Headers	13 17 6
Headers	10 17 6	One Side and two Ends	17 17 6
Quoins, Bullnose, and 4½ in. Flats	14 17 6	Two Sides and one End	18 17 6
D'ble Stretchers	16 17 6	Splays & Squints	16 7 6

Second Quality £1 10s. per 1000 less than best.

BRICKS, &c. (*Continued*).

	s. d.	
Thames and Pit Sand	6 9	per yard, delivered
Thames Ballast	5 6	„
Best Portland Cement	31 0	per ton, „
Best Ground Blue Lias Lime	19 0	„ „

NOTE—The cement or lime is exclusive of the ordinary charge for sacks.

Grey Stone Lime ..... 13s. 0d. per yard delivered.
Stourbridge Fireclay in sacks 27s. 0d. per ton at rly dpt.

STONE.

Per Ft. Cube.

	s. d.
BATH STONE—delivered on road waggons, Paddington Depôt	1 6½
Do. do. delivered on road waggons, Nine Elms Depôt	1 8½
PORTLAND STONE (20 ft. average)—	
Brown Whitbed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2 3
White Basebed, delivered on road waggons Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2 4½

Per Ft. Cube, Delivered at Railway Depôt.

	s. d.		s. d.
Ancaster in blocks	1 10	Closeburn Red Freestone	2 0
Beer in blocks	1 6	Red Mansfield Freestone	2 4
Greenshill in blocks	1 10	Talacre & Gwespyr Stone	2 4
Darley Dale in blocks	2 4		
Red Corsehill in blocks	2 3		

YORK STONE—*Robin Hood Quality.*

Per Ft. Cube, Delivered at Railway Depôt. s. d.

Scappled random blocks 2 10

Per Ft. Super., Delivered at Railway Depôt.

6 in. sawn two sides landings to sizes (under 40 ft. super.)	2 3
6 in. rubbed two sides ditto, ditto	2 6
3 in. sawn two sides slabs (random sizes)	0 11½
2 in. to 2½ in. sawn one side slabs (random sizes)	0 7
1½ in. to 2 in. ditto, ditto	0 6

HARD YORK—

Per Ft. Cube, Delivered at Railway Depôt.

Scappled random blocks	3 0

Per Ft. Super., Delivered at Railway Depôt.

6 in. sawn two sides landing to sizes (under 40 ft. super.)	2 8
6 in. rubbed two sides ditto	3 6
3 in. sawn two sides slabs (random sizes)	1 4½
2 in. self-faced random flags	0 8

SLATES.

Per 1000 of 1200 at Railway Depôt.

In. In.	£ s. d.	In. In.	£ s. d.
20×10 best blue Bangor	13 2 6	20×10 best Eur'ka unfading green	15 17 6
20×12 ditto	13 17 6	20×12 ditto	18 7 6
20×10 1st quality ditto	13 0 0	18×10 ditto	13 5 0
20×12 ditto	13 15 0	16×8 ditto	10 5 0
16×8 ditto	7 5 0	20×10 permanent green	11 12 6
22×10 best blue Portmadoc	12 12 6	18×10 ditto	9 12 6
16×8 ditto	6 12 6	16×8 ditto	6 12 6

TILES.

At Railway Depôt.

	s. d.		s. d.
Best plain red roofing (per 1000)	42 0	Best "Hartshill" brand, plain sand-faced (per 1000)	45 0
Hip and Valley (per doz.)	3 7	Do. pressed (per 1000)	42 0
Best Broseley (per 1000)	50 0	Do. Ornamental (per 1000)	47 0
Do. Ornamental (per 1000)	52 6	Hip (per doz.)	4 0
Hip and Valley (per doz.)	4 0	Valley (per doz.)	3 6
Best Ruabon red, brown, or brindled (Edw'ds) (per 1000)	57 6	Staffords. (Hanley) Reds or Brindled (per 1000)	42 0
Do. Ornamental (per 1000)	60 0	Hand-made sand-faced (per 1000)	45 0
Hip (per doz.)	4 0	Hip (per doz.)	4 0
Valley (per doz.)	3 0	Valley (per doz.)	3 6

WOOD.

BUILDING WOOD.	At per standard.
Deals: best 3 in. by 11 in. and 4 in. by 9 in. and 11 in.	£ s. d. £ s. d. 14 0 0 ... 15 10 0
Deals: best 3 by 9	13 10 0 ... 14 10 0
Battens: best 2½ in. by 7 in. and 8in., and 3 in. by 7 in. and 8 in.	11 10 0 ... 12 10 0
Battens: best 2½ by 6 and 3 by 6	0 10 0 less than 7 in. and 8 in.
Deals: seconds	1 0 0 less than best.
Battens: seconds	0 10 0 „
2 in. by in. and 2 in. by 6 in.	9 10 0 ... 10 10 0
2 in. by 4½ in. and 2 in. by 5 in.	9 0 0 ... 10 0 0
Foreign Sawn Boards— 1 in. and 1¼ in. by 7 in.	0 10 0 more than battens.
¾ in.	1 0 0 „

WOOD (*Continued*).

BUILDING WOOD (*Continued*)—	At per load of 50 ft.					
	£	s.	d.		£	s. d.
r timber: best middling Danzig	5	0	0	...	5	10 0
or Memel (average specification)	5	0	0	...	5	10 0
Seconds	4	10	0	...	5	0 0
Small timber (8 in. to 10 in.) ...	3	17	6	...	4	0 0
Small timber (6 in. to 8 in.).....	3	5	0	...	3	10 0
Swedish balks	2	12	6	...	3	0 0
tch-pine timber (30 ft. average)	5	5	0	...	6	0 0

JOINERS' WOOD.	At per standard.					
hite Sea: first yellow deals,						
3 in. by 11 in.	24	10	0	...	25	10 0
3 in. by 9 in.	22	10	0	...	23	10 0
Battens, 2½ in. and 3 in. by 7 in.	17	0	0	...	18	0 0
Second yellow deals, 3in. by 11in.	19	0	0	...	20	0 0
" " 3 in. by 9 in.	18	0	0	...	19	10 0
Battens, 2½ in. and 3 in. by 7 in.	14	0	0	...	15	0 0
Third yellow deals, 3 in. by						
11 in. and 9 in.	14	0	0	...	15	0 0
Battens, 2½ in. and 3 in. by 7 in.	11	10	0	...	12	10 0
tersburg: first yellow deals,						
3 in. by 11 in.	21	10	0	...	22	10 0
Do. 3 in. by 9 in.	18	10	0	...	19	10 0
Battens	14	0	0	...	15	0 0
Second yellow deals, 3 in. by						
11 in	16	10	0	...	17	10 0
Do. 3 in. by 9 in.	15	0	0	...	16	0 0
Battens	11	10	0	...	12	10 0
Third yellow deals, 3in. by 11 in.	13	10	0	...	14	10 0
Do. 3 in. by 9 in.	13	0	0	...	14	0 0
Battens	10	10	0	...	11	0 0
hite Sea and Petersburg—						
First white deals, 3 in. by 11 in.	15	0	0	...	16	0 0
" " 3 in. by 9 in.	14	0	0	...	14	10 0
Battens	11	10	0	...	12	10 0
Second white deals, 3in. by 11in.	14	0	0	...	15	0 0
" " 3 in. by 9 in.	13	0	0	...	14	0 0
Battens	10	10	0	...	11	0 0
ch-pine: deals	19	0	0	...	21	0 0
Under 2 in. thick extra.....	0	10	0	...	1	0 0
dlow Pine—First, regular sizes	48	0	0		upwards.	
Oddments	32	0	0		"	
econds, regular sizes	33	0	0		"	
Oddments	28	0	0		"	
uri Pine—Planks per ft. cube.	0	4	6	...	0	6 0
nzig and Stettin Oak Logs—						
Large, per ft. cube.....	0	3	0	...	0	3 9
Small " "	0	2	6	...	0	2 6
Jinscot Oak Logs, per ft. cube	0	6	6	...	0	8 0
y Wainscot Oak, per ft. sup. as						
inch	0	0	10	...	0	1 0
in. do. do.	0	0	8½	...		—
y Mahogany—Honduras, Ta-						
basco, per ft. super. as inch..	0	0	10	...	0	1 1
elected, Figury, per ft. super.						
as inch	0	1	6	...	0	2 6
y Walnut, American, per ft.						
super. as inch	0	0	10	...	0	1 0
k, per load	18	0	0	...	22	0 0
erican Whitewood planks,						
per ft. cube	0	5	0	...	0	6 0

pared Flooring, etc.—	Per square.					
in. by 7 in. yellow, planed and						
shot	0	13	6	...	0	17 0
in. by 7 in. yellow, planed and						
matched	0	14	0	...	0	18 0
in. by 7 in. yellow, planed and						
matched	0	16	0	...	1	0 0
in. by 7 in. white, planed and						
shot	0	12	0	...	0	14 6
in. by 7 in. white, planed and						
matched	0	12	6	...	0	15 0
in. by 7 in. white, planed and						
matched	0	15	0	...	0	16 6
in. by 7 in. yellow, matched						
and beaded or V-jointed brds.	0	11	0	...	0	13 6
in. by 7 in. " "	0	14	0	...	0	18 6
in. by 7 in. white " "	0	10	0	...	0	11 0
in. by 7 in. " "	0	12	9	...	0	15 0

6 in. at 6d. to 9d. per square less than 7 in.

JOISTS, GIRDERS, &c.

	In London, or delivered Railway Vans, per ton.					
	£	s.	d.		£	s. d.
ed Steel Joists, ordinary						
ections	7	10	0	...	8	0 0
pound Girders, ordinary						
ections	9	10	0	...	10	0 0
Compound Stanchions	11	0	0	...	12	0 0
es, Tees, and Channels, ordi-						
ry sections	9	10	0	...	10	0 0
n Plates	9	10	0	...	9	10 0
Iron Columns & Stanchions,						
luding ordinary patterns ...	7	10	0	...	8	10 0

METALS.

	Per ton, in London.					
	£	s.	d.		£	s. d.
mmon Bars	9	0	0	...	9	10 0
ffordshire Crown Bars, good						
erchant quality	9	5	0	...	9	15 0
ffordshire "Marked Bars"	11	0	0	...		—
d Steel Bars	9	5	0	...	9	15 0
op Iron, basis price	10	0	0	...		—
" Galvanised.....	17	10	0	...		—

(*And upwards, according to size and gauge.)

Iron Black—						
inary sizes to 20 g.	10	5	0	...		—
" " 24 g.	11	5	0	...		—
" " 26 g.	12	15	0	...		—
Iron, Galvanised, flat, ordinary quality—						
inary sizes, 6 ft. by 2 ft. to						
ft. to 20 g.	15	10	0	...		—
inary sizes to 22 g. and 24 g.	16	0	0	...		—
" " 26 g.	17	0	0	...		—
Iron, Galvanised, flat, best qualit, —						
inary sizes to 20 g.	18	10	0	...		—
" 22 g. and 24 g.	19	0	0	...		—
" " 26 g.	20	10	0	...		—
nised Corrugated Sheets—						
inary sizes, 6ft. to 8ft. 20 g.	15	0	0	...		—
" 22 g. and 24 g.	15	5	0	...		—
" 26 g.	16	15	0	...		—

METALS (*Continued*).

IRON (*Continued*)—	Per ton, in London.					
	£	s.	d.		£	s. d.
Best Soft Steel Sheets, 6 ft. by 2 ft.						
to 3 ft. to 20 g. and thicker.....	12	10	0	...		—
Best Soft Steel Sheets, 2 g. & 24 g.	13	10	0	...		—
" " " 26 g.	15	10	0	...		—
Cut Nails, 3 in. to 6 in.....	11	0	0	...	11	10 0

(Under 3 in., usual trade extras.)

LEAD, &c.						
	£	s.	d.			
LEAD—Sheet, English, 4lb. and up	21	10	0	...		—
Pipe in coils	22	0	0	...		—
Soil pipe	25	0	0	...		—
Compo pipe	25	0	0	...		—
ZINC—Sheet—	In casks of 10 cwt.					
Vielle Montagne	33	10	0	...		—
Silesian	33	5	0	...		—
Zinc, in bundles, 1s. per cwt. extra.						
COPPER—						
Strong Sheet .....per lb.	0	1	0	...		—
Thin " ..... "	0	1	1	...		—
Copper nails..... "	0	0	10	...		—
Copper wire ..... "	0	0	10	...		—
BRASS—						
Strong Sheet ..... "	0	0	11	...		—
Thin ..... "	0	1	0	...		—
TIN—English Ingots..... "	0	2	0	...		—
SOLDER—Plumbers' ..... "	0	0	9½	...		—
Tinmen's ..... "	0	1	0½	...		—
Blowpipe ..... "	0	1	2½	...		—

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

15 oz. thirds	2½d.	26 oz. fourths	3½d.
" fourths	1½d.	32 oz. thirds.....	5d.
21 oz. thirds.....	3½d.	" fourths	4½d.
" fourths	2½d.	Fluted Sheet, 15 oz.	3½d.
26 oz. thirds.....	4d.	" 21 oz.	4½d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

⅛ Rolled plate	2½d.	Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white.....	3½d.
⅛ Rough rolled and rough cast plate..	2½d.		
½ Rough rolled and rough cast plate..	3d.	Ditto, tinted.....	5d.

* Not less than two crates.

OILS, &c.		£	s.	d.
Raw Linseed Oil in pipes	per gallon	0	4	0
" " " in barrels.....	"	0	4	1
" " " in drums	"	0	4	3
Boiled " " in barrels.....	"	0	4	3
" " " in drums	"	0	4	6
Turpentine in barrels	"	0	3	0
" in drums	"	0	3	2

OILS, &c. (*Continued*).		£	s.	d.
Genuine Ground English White Lead, per ton		28	0	0
Red Lead, Dry	"	24	0	0
Best Linseed Oil Putty	per cwt.	0	10	6
Stockholm Tar	per barrel	1	12	0

VARNISHES, &c.	Per gallon.		
	£	s.	d.
Fine Pale Oak Varnish	0	8	0
Pale Copal Oak	0	10	6
Superfine Pale Elastic Oak	0	12	6
Fine Extra Hard Church Oak.....	0	10	0
Superfine Hard-drying Oak, for seats of Churches	0	14	6
Fine Elastic Carriage	0	12	0
Superfine Pale Elastic Carriage	0	16	0
Fine Pale Maple	0	10	0
Finest Pale Durable Copal	0	18	0
Extra Pale French Oil	1	1	0
Eggshell Plating Varnish	0	18	0
White Pale Enamel.....	1	4	0
Extra Pale Paper	0	12	0
Best Japan Gold Size.....	0	10	6
Best Black Japan.....	0	16	0
Oak and Mahogany Stain	0	9	0
Brunswick Black	0	8	0
Berlin Black	0	16	0
Knotting	0	10	9
French and Brush Polish.....	0	10	6

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than 6 p.m. on Wednesday.* [N.B.—We cannot publish Tenders unless authenticated either by the architect or the building owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is stated, nor any list in which the lowest Tender is under 100*l.* unless in some exceptional cases and for special reasons.]

* Denotes *accepted.* † Denotes *provisionally accepted.*

ABERTILLERY.—For Bryntey Congregational Chapel, Abertillery, for the Trustees. Mr. N. Gasenius Lewis, architect, Abertillery and Ebbw Vale:—

E. J. Skidmore, Abertillery* £1,260

ALDERSHOT.—For re-erection of the Duke of York public-house, Farnham-road. Messrs. H. & G. Simonds, Ltd., Reading. Messrs. Friend & Lloyd, architects, Aldershot:—

Drowley & Co.	£1,650	0	0
Crosby & Co....	1,645	0	0
Martin, Wells, & Co., Ltd. .	1,583	0	0
G. Kemp & Co.	1,489	0	0
T. S. Seward...	1,486	10	0
W. Watson.....	1,467	0	0
W. L. Edgoose	£1,455	0	0
E. C. Hughes...	1,435	17	6
Cæsar Bros. .	1,381	10	0
W. Sanderson	1,364	0	0
F. Knight, Aldershot"...	1,313	0	0



FULNECK.—For new headquarters for the Boys' Brigade. Messrs. Nelson & Birkinshaw, architects, Leeds. Quantities by Messrs. J. Priestley & Sons, Leeds :—

Mason · H. Hutton, Fulneck* .... .. }
Joiners Wilkinson & Sanderson, Pudsey* .. }
Plumber J. Scarth, Pudsey* .. .. } £356 16
Plasterers Wood & Williams, Pudsey* .... }
Slaters F. Thompson, Stanningley* ..... }
Painter J. Driver, Pudsey* .... }

GREAT YARMOUTH —For house, for Mr. P. Hurry Palmer. Messrs. George Baines & Son, architects, 5, Clement's Inn, Strand, W.C. :—

J. Easter, Dene Side, Great Yarmouth* £2,170 15 10

HORNSEY, N.—For additions to Ferme Park Baptist Church and Schools. Messrs. George Baines & Son, architects, 5, Clement's Inn, Strand, London, W.C. :—

—	For the Additional Class-rooms, Etc.	For the Additional Fifth Staircase from the East Side Gallery	Total.
	£ s. d	£ s. d.	£ s. d.
J. Smith & Son, Ltd.	1,197 0 0	205 0 0	1,402 0 0
Patman & Fotheringham	1,185 0 0	195 0 0	1,380 0 0
Mattock & Parsons	1,179 0 0	199 0 0	1,378 0 0
J. W. Jerram	1,175 0 0	200 0 0	1,375 0 0
Herbert & Co.	1,205 9 0	160 6 10	1,365 15 10
W. Lawrence & Son	1,166 0 0	197 0 0	1,363 0 0
Mattock Bros. ...	1,147 0 0	187 0 0	1,334 0 0
Battley & Sons & Holness	1,125 0 0	186 0 0	1,311 0 0

LLANHILLETH.—For extensions to Conservative Club, Llanhilleth, Mon. for the Committee. Mr. N. Gasenius Lewis, architect, Abertillery and Ebbw Vale :

D. Lewis, Aberberg* £110

LLANHILLETH. For additions to Manchester House, Llanhilleth, Mon, for Mrs. Williams. Mr. N. Gasenius Lewis, architect, Abertillery and Ebbw Vale :—

D. Lewis, Aberberg*..... £100

LONDON.—For extension of the boiler-house and other works at the Workhouse, Bancroft-road, E., for the Mile End Board of Guardians. Mr. Edmund J. Harrison, architect, 9, Gray's Inn-square, Holborn, W.C

Johnson Bros....	£2,798
The Fram Steel Construction Co...	2,635
J. Johnston	2,341
R. Woollaston & Co.	£2,304
The General Iron Foundry Co., Upper Thames-street*	2,235

LONDON. – For proposed additions and alterations to the laundry buildings of St. John's-road Workhouse, Upper Holloway, for the Guardians of St. Mary, Islington, N., according to the drawings, plans, and specifications of the Architect to the Guardians, Mr. George Carter, Lic.R.I.B.A., 513, Holloway-road, N Quantities supplied by Mr. H. King, 66, Chancery-lane :—

C. Watts	£3,388
Knight & Son .. .	2,867
W. Lawrence	2,424
McCormick	2,297
Courtney & Fairburn	2,160
Stevens & Sons	2,146
L. Lown	2,129
Webster & Sons	2,053
Webb	£1,950
Whiter .. .	1,938
Sobey	1,915
C. P. Roberts ...	1,910
Dearing & Co. ...	1,891
Rice	1,845
Reason	1,829
Strand Building Co.	1,828

[Architect's estimate, £1,850.]

LONDON. For engineering and other works, alterations, and new machinery, etc , at the Laundry of St. John's-road, Workhouse, for the Guardians of St Mary, Islington, according to the drawings, plans and specification of Mr. H. Lay, Consulting Engineer to the Guardians, 45, Hanley-road, N., and Mr. George Carter, architect, Lic R.I.B.A., 513, Holloway-road, N. :—

Rundell, The Vulcan Engineering Co	£2,415 0 0
Smith & Paget	2,114 0 0
Ashwell & Nesbit	2,008 0 0
Summerscales	1,966 0 0
Tullis	£1,919 0 0
Bradford.....	1,918 0 0
Armstrongs ...	1,909 10 0
Braithwaite .	1,854 6 8
Glover & Hobson	1,464 9 8

[Consulting Engineer's estimate, £1,700.]

LONDON.—For repairing and painting four escape staircases and renewing roof of bridge at the Infirmary, Bancroft-road, E., for the Mile End Board of Guardians. Mr. Edmund J. Harrison, architect, 9, Gray's Inn-square, W.C. :—

Johnson Bros. £247 15 0	
R. Woollaston & Co.	224 0
Finch & Co.	215 0
W. S. Sharpin, Wellington-road, Bow*	£139 19

LONDON —For painting, whitewashing, and cleansing, at the Infirmary, Highgate-hill, N , for the Islington Board of Guardians. Mr. Edmund J. Harrison, architect, 9, Gray's-Inn-square, Holborn, W.C :—

Johnson Bros £1,218 0	
Finch & Co.	952 0
E. Proctor & Sons	799 0
M Fenn	799 0
B. Jewell.	784 4
Stevens & Sons	£720 0
J. Scott Fenn .	688 19
J. Johnston, Limehouse* .. .	688 15

LONDON.—For new bathrooms and lavatories at the Workhouse, Bancroft-road, E., for the Mile End Board of Guardians. Mr. Edmund J. Harrison, architect, 9, Gray's-Inn square, Holborn, W.C :—

B. Goodman & Co. £914 0	
J. Johnston	472 0
G. W. Beale	443 10
Johnson Bros.	439 0
H. Hood.....	423 0
J. Strong & Co.....	£397 0
B. Jewell	393 0
R. Woollaston & Co , Limehouse*	378 0
T. Godwin	355 0

LOWESTOFT -For erection of school at Roman-hill, for Lowestoft Education Committee. Mr. Abel Round, architect, 1, Newhall street, Birmingham

G. E. Hawes & Son, Duke's Palace, Norwich* £6,306

NEWBRIDGE.—For erection of a new chapel and school, etc., for the Trustees. Mr. N Gasenius Lewis, F.I.A.S., architect, Abertillery and Ebbw Vale. Quantities by the architect :—

J. Jenkins, Ltd. £4,995 0 0	
G. F. Leadbeter 4,950 0 0	
E. W. Wilks .. 4,820 0 0	
D. Lewis..... 4,493 4 6	
H. Smith 4,392 0 0	
W. E. Blake, Ltd.	4,300 0 0
R. W. Moon.... 4,197 0 0	
C. F. Morgan .. 4,107 10 0	
D. Davies & Son 4,081 0 0	
H. Thomas & Son	£3,980 0 0
W. A. Linton ...	3,895 0 0
Gay & Head .	3,800 0 0
D. Richards	3,754 0 0
H. J. Herbert & Co.	3,700 0 0
A. S. Morgan, Newport* .	3,620 0 0
A. J. Colborne	3,599 0 0

OTFORD (Kent).—For the erection of a dwelling-house, for Mr. B. B. Harrison. Messrs Hayward & Maynard, architects, 14, John-street, Adelphi

A. Tye	£1,470 0
Davison	1,432 0
Wiltshire	1,379 0
F. Woodhams	£1,229 5
Durtnell*	1,195 0

WETHERAL. -For erection of a detached house. Mr. H. Higginson, Lic.R.I.B.A., architect, Carlisle. Quantities by architect

E. J. Hill . .	£620 0 0
W. Batey & Sons	618 0 0
J. Laing & Son	588 17 7
J. & R. Bell, Nelson-street*	£584 10 6

Ham Hill Stone.
Doulting Stone.
Portland Stone.
The Ham Hill and Doulting Stone Co., Limited (incorporating the Ham Hill Stone Co. and C. Trask & Son, The Doulting Stone Co.).
Norton, Stoke-under-Ham, Somerset.
London Agent :—Mr. E. A. Williams, 16, Craven-street, Strand.

BATH STONE.
QUARRIES AT CORSHAM.
No Increase in Price this Year.
Address
BATH & DORSET QUARRIES, Ltd., BATH.

Asphalte. The Seyssel and Metallic Lava Asphalte Co. (Mr. H. Glen), Office, 42, Poultry, E.C.—The best and cheapest materials for damp courses, railway arches, warehouse floors, flat roofs, stables, cow-sheds and milk-rooms, granaries, tun-rooms, and terraces. Asphalte Contractors to Forth Bridge Co. T.N. 2644 Central.

SPRAGUE & CO.'S, Ltd.,
"INK-PHOTO" PROCESS,
69 and 70, DEAN STREET, SOHO, W.

THE Tariff Committee of the Workmen's Compensation Insurance Companies have decided on further sharp advances in rates, laying still heavier burdens on employers. There is still, however, a strong free market : for particulars, address : The General Insurance Agency, of 166, Piccadilly, W.

Telephone DALSTON 1381
OGILVIE & CO., Many years connected with the late firm of W. H. LASCELLES & Co of Bunhill Row.
Amhurst Works, **DALSTON LANE, N.E.**
EXPERTS IN HIGH-CLASS JOINERY.
ALTERATIONS AND DECORATIONS. ESTIMATES FREE.

J. J. ETRIDGE, Jr. LTD.
SLATE MERCHANTS.
EXPERTS IN
SLATING, TILING.
BEST WORK ONLY.
Telephone 2685 Wall, or write—
Bethnal Green Slate Works,
BETHNAL GREEN, LONDON, E.

ASPHALTE
For Horizontal and Vertical Damp Courses.
For Flat Roofs, Basements, and other Floors.
The best materials and workmanship are supplied by
THE French Asphalte Co.
Whose name and address should be inserted in all specifications.
For estimates, quotations, and all information Apply at the Offices of the Company,
5, LAURENCE POUNTNEY HILL, CANNON STREET, E.C.

EWART'S
Cures in 19 cases out of 20.
"EMPEROR"
Write to-day for Illustrated Catalogue Free to
EWART & SON Ltd.,
346-350, Euston Road, London, N.W.
Established 1834.
Telephone : 2570 North.
SMOKE-CURE

THE BUILDER

VOL. CII.—No. 3619. JUNE 14, 1912.

CONTENTS.

PAGE

THE PARIS SALON ... 683
MIEL HUDSON BURNHAM ... 686
TES ... 686
TURE EXHIBITIONS ... 688
ROYAL INSTITUTE OF BRITISH ARCHITECTS: 688
INNUAL ELECTIONS ... 688
IGHTON, HOVE, AND SUSSEX GRAMMAR SCHOOL (WITH ILLUSTRATIONS) ... 689
HIBITION OF MURAL DECORATION AT CROSBY ALL ... 689
KS ... 690
USES NEAR HATFIELD, HERTS (WITH ILLUSTRATIONS) ... 691
CHITECTURAL SOCIETIES ... 691
ILAND COTTAGE," BEMBRIDGE, ISLE OF WIGHT (WITH ILLUSTRATIONS) ... 692
ILDING ACT ANOMALIES ... 692
NERAL NEWS ... 693
IBUNAL OF APPEAL UNDER THE LONDON ILDING ACT ... 693
T REPORT ... 694

PAGE

LONDON COUNCILS ... 694
CORRESPONDENCE ... 695
EDITORIAL SUMMARY ... 696
MEETINGS ... 696
NOTES TO ILLUSTRATIONS ... 696
COMPETITION NEWS ... 696
FIFTY YEARS AGO ... 696

MONTHLY REVIEW OF CONSTRUCTION:—
MESSRS. WHITELEY'S NEW PREMISES.—I. (WITH ILLUSTRATIONS) ... 697
HY-RIB SYSTEM BUNGALOW AT HOWTH, CO. DUBLIN (WITH ILLUSTRATIONS) ... 701
THE BOVIS WINDOW (WITH ILLUSTRATIONS) ... 703
NOTES ... 704

THE BUILDING TRADE:—
THE INSURANCE ACT.—II. ... 705
STRIKES: COLLECTIVE BARGAINING ... 705
REGISTRATION OF TITLE ... 706
CONCRETE-MIXERS: GASPARY MIXERS (WITH ILLUSTRATIONS) ... 706

PAGE

THE BUILDING TRADE (*contd.*):—
BUILDERS ACCIDENT INSURANCE, LTD ... 706
A BUILDING TRADE UNION ... 707
GENERAL BUILDING NEWS ... 707
PROJECTED NEW BUILDINGS IN THE PROVINCES ... 707

FOREIGN AND COLONIAL ... 708
PATENTS ... 708
LIST OF COMPETITIONS, CONTRACTS, ETC., OPEN ... 709
OBITUARY ... 711
SOME RECENT SALES ... 712
PRICES CURRENT ... 712
TENDERS ... 713

Illustrations.

1852, FLEET-STREET. MESSRS. HOWELL & BROOKS, ARCHITECTS.

MESSRS. WHITELEY'S BUSINESS PREMISES, QUEEN'S-ROAD, BAYSWATER. MESSRS. J. BELCHER, R.A., AND J. J. JOASS, A.R.I.B.A., ARCHITECTS.



Roestock Rise Estate, Hatfield. (*See page* 691.)
MESSRS. Geoffry Lucas, F.R.I.B.A., & Arthur Lodge, A.R.I.B.A., Architects.

THE PARIS SALON.

ONE may say of the Salon—that is, of the exhibition of the Société des Artistes Français—always that t interesting and never that it is bad, er, or good. Such an aggregation of k as is here presented officially must ays be average, democratic, in the e of its having to accept the work all schools save the revolutionary the eclectic, and comparable, if one trouble with comparisons, properly with itself. It can never be very with average achievement as the dard—so much, at any rate, haldom can secure; it can never be d because by the laws of its being it t, for the most part, be mediocre; it must always be interesting as the ator of the level of the artistic mean attained, and considered tolerable by the mass of opinion in the country concerned.

The Royal Academy is, of course, our English counterpart, closely analogous by virtue of similar function. It is assailed with fury, or, as a matter of course, withered by contempt; occasionally it yields some measure of satisfaction to those who pay it the compliment of diligent criticism in the form of a more or less interested defence. Sometimes, as though he would present a paradox for our delight, a person of intelligence will arise and announce that there is really something to be said for it. But above—or perhaps one should say below—all the crackling cross-fire of condemnation and retort, our Royal Academy remains firmly founded, despite its closely bureaucratic control, on a truly democratic basis, and may rest assured so long as it continues to maintain the mean between what those who know better will tolerate and what those who wish worse desire.

So with the Salon; it is interesting as providing just that mean—as indicating always year by year the precise measure in which movements, in their beginning antagonistic, have permeated the mass with the spirit of their doctrines, each one contributing some partial influx to the maintenance of the life of that massed mediocrity they all set out to displace. It is best shown in the painting, of course, which is not here our immediate concern, because movements in painting

are, in these days, more conscious and avowed, and more easily seen and noted, than those, if indeed there be any considerable ones, in other arts. So one may trace things—here something seen first by the Impressionists, there a mere touch of the Post-Impressionists even; in one place a picture which might have been shown at the Indépendants a few years ago, in another the work of an artist who, last year among the Refusées, has deigned once more to put it to the test. And when once allowance is made for the differences between this kind of increment, for the technical dexterity that apparently knows no obstacle, and for the direction of popular appreciation, which runs less to pink prettiness, there is little in essentials to choose between French art in the mass and our own.

The same verdict holds with regard to the sculpture. Those who have been to a Salon in the Grand Palais will know what a preposterous amount of it is presented to the visitor at a glance—*coup d'œil* expressively. Those who have not can perhaps conceive a vision of the whole floor of the Olympia in London or any other erection large enough for a horse-show or a military tournament covered with pieces of all sizes, mostly of marble, all apparently—it is extremely difficult in such collections to look particularly at any one—accomplished, technically, up to the hilt, suave, smooth, pretty sometimes, petty nearly always, and as destitute of even any desire to attain the serene nobility that sculptors can embody, as any collection of modern Italian "real art," all done by hand, in the shop of a Dutch auctioneer. There are exceptions, of course, one or two busts apparently sincere, that will seem better doubtless in quieter surroundings; but of the pieces which might be applied to architecture, which we can think of—that is to say, as fulfilling the great decorative place of sculpture in the realm of the arts—there is little save what might fitly adorn a modern restaurant or casino. One great piece at least is avowedly a stone-carver's model of sculpture to be applied, in this case very much applied, in the modern French manner which we confess to disliking perhaps more than any other feature of this work, as though it were plaster thrown on and modelled in position to the discomfiture of any architectural line which might happen to have existed before. The work is labelled "Maquette demigrandeur du fronton du nouveau Théâtre de Lille." Architects will remember the design by M. Louis Cordonnier. The subject is, of course, "Apollon et les Muses," Hippolyte Lefebvre, the sculptor. The composition is built up of vague forms, ladies—the Muses—all alike save Melpomene, who wears a pained expression, but each with her "property," her functional attribute, emerging from swirling clouds and floating in her drapery. A fixed point is provided in the middle in the shape of a cartouche—its outline suffering somewhat, as does that of everything else, from the supersurgence of clouds—bearing a fleur-de-lis. Above this stands Apollo, very pretty with his lyre. The whole is set above the main cornice, splathers over the attic story, drowning its mouldings. It is nowhere confined. The sky-line—other outline it has none—is shapeless. The conception is restless, insipid. It might have been made as a demonstration to students of what sculpture should not attempt, of all the faults which, granting complete lack of inspiration, it could avoid, of the way in which sculpture forming part of the design of a building should never be allowed to behave. And yet one sees the same sort of thing happening all over modern French work. In their feverish design and facility on paper they put no bounds to the errors rendered possible by the complete subjection of their medium.

There are other examples that may come within the architectural purview, such as a few designs for monuments—the kind of work in which we in this country think of the French as excelling. One is a monument to Michelangelo—impertinent at the best, but here undeniably bad. From a commonplace base, clumsy, cloudy, and bulky forms reminiscent of some of the San Lorenzo figures emerge; while upon it, on a great stallion of the school of Rosa Bonheur, sits Michelangelo himself (one must suppose) looking like nothing so much as a bearded Boer warrior of a former time. There is a monument to Henry Cazales (Jean Lahor), a large slab in which a figure of Sorrow (or his wife) sits by a Hermes—bust of the hero. Trees loom behind. That is to say, the thing is a carved picture of a monument. One looks on the base of the Hermes for a carved representation of still another memorial—for where should this sort of thing, logically, stop? Another aspect is represented by a big piece, "Aux Gloires de Toulouse—Commandé par l'Etat." St. Louis—a pleasant statue—stands above, and four huge figures, shamefully outscaling him, perch uncomfortably upon the four sides of the base. Especially objectionable is the great coarse form of a female, presumably "Fame," since she has a tiny chisel in her hand, sitting in front, with her centre of gravity sadly beyond her control. Another immense composition, "Aux Morts, Aux Exilés: Deux Decembre, 1881," also "Commandé," is beyond our comprehension, and could add nothing to our despair. It belongs to the dramatic category. On the coping of a great plaster wall, perhaps 25 ft. long by 15 ft. high, a savage eagle, with a tablet of the "Loi" in its talon, rails at a desperate-looking Liberty with a broken sword. At either end of the wall are restless groups of suffering humanity—the "Morts" and the "Exilés" in question. We can see no real difference between this combination of the literal and the allegoric—the same which went to the making of the Michelangelo monument, and that to Henry Cazales—and a meticulous model of an old "diligence" in difficulties, which stands near by. It would be better for the nation which produces it had her sculptors to work with pieces of flint and wet their tools with their tears.

As architectural opinion in this country already suspects, French architecture likewise is beginning to suffer from that fatal facility in design and ease in execution which we have been accustomed to envy. Such buildings as the famous Opera House, with its multiplicity of detail, and the Gare du Quai d'Orsay and the Grand Palais des Beaux-Arts with the Pont Alexandre III. close by have become for us types of the great public building as it should be, broadly conceived and generously complete. And from that sound decision there has been a tendency discernible lately to deduce the more debatable conclusion that the details with which such erections are adorned, prolific in invention and perfect in execution as they almost always are, must be worthy to become the source of inspiration for our own work. Well, writing deliberately and thinking not only of the work exhibited in the Salons, but of new buildings to be seen in the streets of Paris, especially in the districts of Passy and the Place de l'Etoile, we may say that French detail has passed the limits of æsthetic rectitude. The contemporary architecture, in the narrow meaning we are accustomed to attach to the word—something, that is to say, chiefly concerned with the façade and immediate appearance of buildings—has nothing in its characteristic aspect that can be pointed out as certainly worthy of our emulation. But, although in its consummate ease and completeness of achievement we find little to admire, there is and be this noted—in its restlessness and gameness for experiment possibility of a development to be watched.

In the Salon of the Société Nationale des Beaux-Arts, in another part of the Grand Palais, there is, for instance, a very detailed set of drawings and photographs illustrating the design and building of a house in the Rue Belliard, close to the Porte.

It is built on a skeleton framework of ferro-concrete. The spaces are filled with walls of hollowed bricks, and the surface is treated with cement planted with light-coloured tiles, in such a way that the darker cement surface shows as a pattern of contiguous stars. The effect, to an English eye, is exceedingly distressing. But there it is—an experiment which could be undertaken only in the atmosphere of abandonment in which the designer of houses is allowed to disport himself—and who can say that it will lead to nothing in the problem before us of the treatment of a concrete surface?

We can take the two Salons—the larger of the Artistes Français and the smaller, but still very large, exhibition of the Beaux-Arts—together as far as the architectural exhibits are concerned, for, although they are very different in the matter of sculpture and painting—the latter, with its aim of a synthesis of the arts, being on a considerably higher plane—as regards architecture little difference can be discerned save that perhaps the Artistes Français is somewhat more advanced and extends a kinder consideration to the sort of experimental work instanced above. Besides the house by M. Deneux, there are two others by M. Vorin—experiments, not apparently executed, of the same kind. One observes, too, a design called the Rendezvous de Société, also of ferro-concrete, and having the upper *salle* considerably larger than the lower, so that in section it has the outline of a rather stumpy tree. In its synthetic

capacity the Beaux-Arts exhibits furniture also. It is in strange colours and has lines not yet clear of the mirage called L'Art Nouveau. Another item is a very clever paper model of a strange, fourfold, turntable airship shed; it is the sort of thing in which the modern Frenchman takes delight. One cannot perhaps commend it as it stands, but as a sign that in France the architect still takes his place as ingenious inventor it is not without significance. In that country he does not wait until the engineer has already "got well away" to exclaim to a callous world that this is really an architect's concern.

There are some designs for small and moderate houses about which we could say little that their designers would be pleased to hear. Our ideals for this sort of work are, and, we cannot help thinking, rightly, so different. The French have, however, what with us is a fault, but with them a quality—the saving grace of restlessness, not unhopeful in these days of flux and social readjustment.

One finds interspersed throughout a considerable quantity of archæological study, of the sort which cannot gain admittance to Burlington House. There we see enough of it dragged into what should be entirely modern design. In France it is undertaken apparently for itself alone. Our great display of church designs at the Academy this year, perhaps, for us, supplies its place. At the Salons there is apparently no such outlet. We remember only two designs for churches in all the collection. So much must be said before we come to that direction of endeavour for which French architects are famous, the aspect of their training from which we really have something to learn—the grand *projet*.

In this country we are becoming tolerably familiar with the *projet*. We see in its prevalence the guiding principle of the education of a French architect. What we do not realise quite so clearly, perhaps, is that the *projet*, the great conception, is the guiding principle of the French nation, and possibly of all Latin countries. It may be the fruit of Roman colonisation. The Romans, with their *projets* for forts, camps, towns, and even countries, subdued and harnessed by a *projet* of Roman roads, may have left it. It is, as far as government or communal impulse can make for it, the principle of the process called civilisation. It is in architectural design just an aspect of the great synthetic impulse which would make order out of chaos wherever it has power. It is, in a phrase, a manifestation of the Classic Spirit—so precariously maintaining its flame on this side of the Channel.

It is difficult for an English eye in looking at these schemes to see more than their overwhelming proof of the vitality of that synthetic concept, so much the very essence of classic design, so absent, it seems, from all considerations limiting the great opportunities which present themselves in our own country. The fatal lack of it is the fault of architects, as a body, not less perhaps, but certainly not more, than of the powers that be and of public opinion. However much we train our men in the handling of great schemes, it can only be to make them ready for opportunities which may never be presented—though there is no reason why their light should be hidden because we have but two very small annual exhibitions of architecture frequented by the public as distinct from the initiate. Here, in the Salons, there are great rooms which make nothing of a grandiose plan 8 ft. square or a section 12 ft. long. The drawings are mostly rendered to the scale of 1 cm. to the metre, which is nearly equal to our usual $\frac{1}{8}$ in. to the foot. They are drawn often with such splash that the part which is actually building has somewhat to be sought for in the confusion of shadows and ground tints which go to make the splendid pattern aimed at as the effect of the sheet as a whole. And so it comes about, as we noted above, for merely visual reasons as well, that the work is often confusing to the English eye.

But see what things they are and how the architect races with the times! We have *Une Ecole Supérieure d'Aviation Militaire* laid out on an actual piece of country, and perhaps eventually to be built. Besides the map and plan there are sectional elevations (10 ft. long) and a great *vol d'oiseau*. All things necessary are provided—barracks, workshops, garages, and grandstands, all grouped to form one comprehensive plan. Then, too, a *Station Militaire, Nautique et Aéronautique*—a great sombre, low-lying fort guarding a harbour and an aeroplane starting-ground behind. These things, too, are architecture, it appears. It is what Professor Geddes would call *geotecture*—changing the face of the globe.

See, too, how they seek occasions—and think of our Soane designs. A composition of *Salles de fête et de Réunion* with a *Jardin d'Acclimatation*. A great bulgy glasshouse like a monstrous balloon with a terrific, difficult but decorative plan. One does not like it; but that is not the point. The circumstance to note is that the furthest vase on some distant balustrade has its place in the scheme and preserves its relation as an integral portion of the whole. There is a scheme for *Une Exposition permanente à la Gloire de la Republique*. The plan is about 12 ft. square—perhaps 15 ft. over all, for they are mounted on strainers with effective grey and generous margins. From the Place de l'Etoile a great avenue cuts to the north-west through the Bois de Boulogne. Close by Longchamps it meets the Seine, and then become a "place," with a prodigious column in the middle and exhibition buildings grouped about it. It is not so well rendered as many of the schemes, but, beyond noting that, criticism halts.

The best scheme exhibited is by M. M. G. Castel. It is labelled "*A la Gloire des Lettres. Les Nouvelles Scènes et Théâtre National de la Comédie Française.*" Besides showing the characteristic grasp and maintaining that relevance to the aspirations of humanity as it is in France, which infuses these designs with something of the warmth of life, M. Castel's set is exceedingly well rendered and loses nothing as a decorative group by being as comprehensible as one could wish. On plan the permanent stage setting of a large open-air "*Théâtre Antique*" backs on to a great arcaded *salle* which forms the connexion between two other theatres *classique* and *moderne*. The stage ends of these two great gables, in the customary manner with enclosed theatres, face the audience in the open air, and augment in a splendid fashion the monumental aspect of that façade. On the other side the auditoria, roofed with flat domes, flank the loggia-like arches of the *salle*, to produce an effect almost of the Renaissance. Two Orders, one subsidiary and included within the other, are woven externally and internally throughout the composition, ensuring a maintenance of constancy of scale seldom seen in designs of such dimensions. Beyond and about are monuments, terraces, and colonnades. The drawings are supplemented by sketches in brilliant colour, showing the author's conception of the profusion of ornament to be employed. If one were to make any criticism the leading suggestion would be that the design lacks that vitalising asperity, that sense of ordination in its so symmetrical façade which one quick touch of asymmetry would provide. True, M. Castel has not omitted it altogether. There are three bull's-eye dormers on the modern theatre, presumably required by the different exigencies of the interior, which the classic theatre has only in a very subdued degree. But that slight difference is, in our view, not sufficient. The forecourt aspect of Versailles is the great exemplar of what one emphatic feature in asymmetry can do.

We cannot leave the exhibition without endeavouring to show, as far as it can enable us to do so, something of the practical outcome which this habit of *projets*, so much "in the air" as they seem to be, undoubtedly produces. This is not a good year for the purpose; there are no really large schemes, as far as one could discover, actually to be built. But there are three sets of drawings—the winner, the third premiated, and an unplaced design—of the competition instituted by the town of Niort, for the erection of a municipal theatre.

Not to take anything for granted, one must note, first of all, the circumstance that the Ville de Niort, a responsible democratic group of people, decided that a municipal theatre was a worthy object of expenditure, and desirable, perhaps even necessary, as a consonance or integral factor of the civic dignity. Only in a country where such a decision on the part of the representatives of the public is in the usual order of things could the problem, when presented, be met with so constant a concurrence of views on the part of competing architects as to the principles on which it is to be solved. As we have said, only three of the designs are exhibited; but they are sufficiently representative. They have certain qualities in common with each other and with most of the other designs submitted, which are of the system of great *projets*, and, secondarily, of the national conditions which demand from the architects, first of all, that they shall conceive with a largeness of spirit and produce, as the great quality, a simple coherence of design.

The site is isolated by the construction of two new streets—anything but an island site is not to be dreamt of in these days on the Continent; it is rectangular and apparently of just sufficient size.

The theatre is, as Continental theatres go, not a large one. The order in which the three designs have been placed is undoubtedly the right order. The assessors looked for the simplest arrangement of certain clearly-recognised elements of theatre design. They were probably not in the least troubled by any of the chaotic divergences in matters of principle which the assessor in this country has to overcome. Obedience to accepted ideals gives to the Continental theatre a constancy of arrangement comparable to that of the Gothic minsters and the Classic temples—a token by which one may know that the theatre is something of a temple, too, and not just a showman's booth.

On plan they are divided into three equal parts:—(1) The stage, with wings and dressing-rooms; (2) the auditorium, with its wide ambulatory on either side; (3) the vestibule and the foyer over it, with the staircases and the galleries. The first is cut off and dedicated to the players; the second holds the audience in the usual way; the third is common to all present, be they of the boxes or the gallery. In elevation these three parts are indicated with an easy truthfulness of architectural treatment necessitated by the requirements of the interior. Through them all, but especially in the winning design, there is that certainty as to first principles, that breadth of conception and unity in treatment which is the result of training in the grand *projet*. And this is the sort of thing they undoubtedly do better in France.

DANIEL HUDSON BURNHAM.

ALTHOUGH it is somewhat difficult for us in this country to appreciate rightly and do full justice to the extraordinary powers of the late Daniel Hudson Burnham, and even more difficult to estimate with any degree of accuracy the precise nature of the position which he occupied in the estimation of his colleagues and fellow-countrymen, we can yet recognise his outstanding abilities and regret the loss to contemporary architecture of a forceful and engaging personality.

It was perhaps his position as Superintending Architect of the World's Fair at Chicago in 1893 which first brought his name into prominence on this side of the Atlantic, but it was his subsequent work as a town-planner, more particularly his fine scheme for the remodelling of Chicago, exhibited at the Town-Planning Conference at the Institute in 1910, that brought him general recognition as an architect of large ideas capable of handling vast and intricate problems in a broad and comprehensive manner.

But, apart from Mr. Burnham's town-planning work and the various official positions which he held from time to time, it would probably be correct to say that to the majority of architects in this country he was known more as a leading representative of a system than as an individual personality. Of recent years the firm of Burnham & Co., of Chicago, has generally been considered one of the most successful of the large firms which are a characteristic feature of architectural practice in America.

The more successful and far-reaching the operations of such a firm the more, perhaps, the personal reputation of its head tends to merge into that of the firm; but there seems little doubt that it was just this method of conducting architectural practice which afforded scope for the supreme organising ability which appears to have been Mr. Burnham's outstanding gift. Although the conditions of practice which prevail in this country do not provide the same opportunities in this direction, yet a man of such ability and character would have made his mark in any circumstances, and would have distinguished himself in any sphere of life into which his inclination or his fate might have led him.

It is by no means easy for us to grasp at once the significance of such a career. It stands for a system which is not ours, for ideals which we do not fully share, and for a method of conducting architectural practice which we do not think capable of producing the very highest results. At the same time, we must realise that it appears exactly suited to the necessities of the case, the needs of a rapidly-expanding country—or Continent rather—in which big schemes have to be rapidly dealt with in a big manner. Also we must ungrudgingly admit that the best work produced by this method has many fine qualities, exhibits high technical knowledge and skill, and is, in many respects, far ahead of similar work produced by the different method obtaining in this country.

Indeed the method of co-operative designing with which the name of Mr. Burnham is associated may prove to have great significance as a step forward in architectural development. When we reflect that all the great masterpieces of antiquity and of the mediæval period are the outcome of collective or co-operative activity, and that the result of such activity was largely impersonal—the expression of the necessities of the programme and of the nature of the building rather than of the personality of its designers—we might be inclined to see in the American method simply a modern application of the same system, which in the course of time may lead to the same high standard of results. Although English architects attach great importance to the expression of the individuality of the designer, yet they cannot forget that this point of view is comparatively modern, that the architect whose work could be easily distinguished by individual characteristics from that of his contemporaries only came into existence at the time of the Renaissance, and that the work done since then under this influence has never risen to quite the same high standard of excellence as that which preceded it. Other influences have no doubt to be borne in mind, but the broad fact remains; and when we come to consider that the whole trend of modern life appears to be towards co-operation of one form or another, the student of historical evolution might naturally be tempted to look upon the individualistic tendencies of the last few centuries as a passing phase in the history of architecture from which the Americans are now returning to the impersonal point of view.

However this may be, it seems only probable that, although at the moment the tendency may be towards the production of great critics rather than of great artists, of architects of sound judgment rather than of imaginative insight and delicate sensibilities, this co-operative designing must have a tendency also towards that general community of thought and feeling which is the first essential of a national and living style of architecture.

Anyone who has had the privilege of visiting Mr. Burnham's office cannot fail to have been impressed by the perfection of his administrative methods or to realise how inseparably his name is connected with a co-operative system which has satisfied the immediate necessities of the present, and may, by a continual evolution of method, equally well serve the more exacting requirements of the future.

NOTES.

The Institute Elections. As we anticipated, the elections at the Royal Institute of British Architects have resulted in a victory for the Registrationists. There was an unusually large poll, and a large poll usually indicates that the electorate, particularly in the Provinces, have been stirred up by the organisers of the Registration movement. We do not see any objection to a certain group of men placing their opinions before the electors, although the result may be that the Council for the time being does not represent a large and influential body of opinion which it will be necessary to conciliate before success in Parliament can be secured even in the early stages of the proposed Bill. In any case, and indeed with any corporate body, it is a pity when only one phase of an important issue is placed before the members at election-time. It would be much healthier if the electors had also before them the views of those who are either opposed to the Bill or see its dangers. Canvassing, however, in any shape or form is so distasteful to many members who accept nomination for a seat on the Council that there has been apparently no attempt to organise the very formidable body of opinion that is opposed to Registration. There are many members who are indifferent to the issue; while there are others who regard the success of Registration as so remote as not to be worth troubling about. So far as we are informed, complete Registration exists only in three European countries—Italy, Spain, and Denmark; not very notable examples perhaps of the vitality of modern architecture. The new Council will no doubt receive before the end of this year the Report of the recently-formed Registration Committee, and will then be in a better position to proceed to take action in Parliament. If the Bill is thrown out, and if the discussion in Parliament provides no reasonable grounds for believing that an Act will ever come into operation, the Institute action will have, at any rate, cleared the air of much false optimism.

The Piccadilly Blunder.

THE opinion is being held more and more widely that the completion of Denman House as at present arranged should not be allowed. As the work is in progress, the necessity for action is urgent. We have referred often and vigorously to the architectural incongruity which is almost upon us, and which if it is completed and until it is taken down will be another blot on London. (We do not refer to the new wing itself, but to its relation to the whole structure.) Municipally speaking, if we may use Lord Rosebery's phrase, the authorities seem to be powerless, and the artistic crime is greater because it is being committed on Crown land. We are sure that if our suggestion of last week were to be carried out, namely, that a Conference be held by the public bodies of London, including officials from the Woods and Forests and some Members of Parliament, the meeting could cause such a pronouncement of censure to be circulated that the public would be awakened effectually before the scaffolding is removed from the building in dispute. The London County Council, we believe, contributed a large sum of money towards the cost of the new Gaiety Theatre. If there is a question of finance in the present situation, the authorities at Spring-gardens would be interpreting the wishes of the ratepayers again by guaranteeing any funds which may be needed to secure the satisfactory completion of the hotel.

Action by the London Society.

THE Earl of Plymouth, Sir Aston Webb, and Mr. D. Barclay Niven, on behalf of the newly-founded London Society, have written to the *Times* protesting against the destined appearance of this Piccadilly façade, and they proclaim the necessity "for some general control over the architecture of our streets." If Sir William Richmond's suggestion to the London County Council of an "Improvements Reference Committee" had been adopted, such a controlling body would have been constituted years ago. The need for municipal machinery for purposes of restraint and arbitration in architectural matters has been proved many times, and if it is secured through the efforts of the London Society that body will have justified its existence at a bound. We hope that the Executive Committee will be able to bring the matter before Parliament, and that the public support which they need to strengthen their hands will be forthcoming.

South African War Memorial.

THE sheets of the book containing the names of those who fell in the South African War, which is to be placed in Cape Town Cathedral, have been on exhibition for a time in one of the galleries of the Victoria and Albert Museum. Since the volume is to consist of some 440 folio pages, the labour involved in its planning and execution has been enormous. It is, therefore, matter for congratulation that it has been undertaken by artists of such standing as Mr. Graily Hewitt, who has been responsible for the arrangement, the writing, and the gilding of the book; and Mr. Allan F. Vigers, who has designed and carried out the illuminated decorations. Mr. Graily Hewitt is one of our foremost scribes, and he has produced a really satisfactory piece of work. He has chosen a clear and beautiful Italian script and has rendered it admirably, with great delicacy and taste. His headings, in large Roman capitals, are masterly pieces of lettering, displaying ingenuity unmarred by any eccentricities. He knows just when to prolong, say, the tail of a Q, or to give it an extra twirl, and how, by skilful management, to compress an awkwardly long word without making it illegible. Mr. Vigers's task has, perhaps, been somewhat more difficult. His colours at first sight strike us as rather crude, and we are surprised to find so few heraldic devices in the adornment of pages commemorating soldiers. But the colours, we learn, have been specially chosen to withstand the climate of Cape Town, and the idea of introducing regimental badges, etc., has been considered and rejected. Their place among the scrollery of the decorations has been taken by birds, beasts, and flowers selected on account of their connexion with the country whence the various regiments are drawn (the thistle and duck for the Gordon Highlanders, hops and an owl for the Buffs, an elephant for the Ceylon contingent, and so forth). It is impossible, of course, to refer to the ornamentation in detail, but we may mention in passing the right-hand member of the title-page, composed of the words of the dedication of the book in gold capitals on a background of grey dots twined about with a delicate design of red strawberries, green leaves, and blue flowers. This recalls, by its delicacy and elaboration, some intricate Oriental work. The heading of the index, too, in different coloured letters on a light scrollwork ground, whose predominant tone varies to harmonise with them, is a very dainty piece of ornament.

Wandsworth Council Baths Committee.

WE regret that there still remains some confusion as to the objects of competition and the functions of an assessor, on what Mr. Renshaw called "such an up-to-date body as the Wandsworth Borough Council." The circumstances surrounding the initiation of a scheme for baths, etc., in Balham, has been brought to our notice. At the instigation of strong petitions a central but back-street site had been secured, and the Baths Committee reported that in the interests of "public health, education, and the general well-being of the inhabitants" they thought the proposed expenditure justifiable. The Council agreed, after discussion, to the competition principle, only to find, within itself, vigorous opposition to the appointment of an assessor, on the ground that such a person might override the views of the Committee. An alderman then remarked that "the idea of the assessor is to advise the Committee, but if the Council think we are competent to do without that advice, I do not think we will press the point." And so accordingly it was not pressed. In the ensuing discussion of cost, consisting, in great part, in the statement of widely varied estimates, it came out that many Councillors thought that as the building was to be in a back street it should be of the cheapest possible description—a sufficiently poor ideal to have for guide. Finally the question of assessor and competition was raised all over again, and the whole matter referred back to the Committee. So they have got no farther. Nor will they to any purpose while such confusion reigns. And it may end in their own surveyor, with the assistance of extra draughtsmen, undertaking the designs, apparently on the ground that there will be no danger of his putting any architecture into it—which is hardly fair even to the surveyor. Surely the result of a competition is to obtain, at a ridiculously low cost, a great variety of the best architectural advice, and the function of an assessor, as one who really knows, to choose the best design for their purpose? The Council can guard itself as to cost.

Street Name-Plates.

OUR opinion on the subject of street labels remains unchanged; uniformity is not so important as legibility. The Conference at the Royal Institute of British Architects, under the Chairmanship of Mr. Ernest Newton, elicited a verdict in favour of the plain cast-iron plate with raised letters in old Roman type. Brightness and boldness are obtained by the lettered tiles used on the Mawdley-buildings in the Waterloo-road, on the Fletcher-buildings near Bow-street, on the dwellings on the Millbank Estate, and elsewhere; but such a form of direction is unsuitable in many cases. We should like to suggest that when the representatives of local authorities meet again to consider how to do this work adequately the allied subject of street nomenclature should be on the agenda. Names that have outlived their original significance, such as Exhibition-road and Lavender-hill, may remain with advantage to prompt the memory, and it may be unwise to attempt the revision to any extent of inscriptions which are established, though inappropriate. But more severe editing of proposed street names, especially in suburban districts, would be beneficial. It would prevent the christening of a mean street with the name of a great art collector and similar inconsistencies.

"Rising Early in the Morning."

MR. ANTHONY HOPE HAWKINS once confessed that for years he had read advertisements of appointments, but had never found himself eligible for a vacant post. Indeed, most conscientious persons who have studied the various requirements have felt that their qualifications, if any, fall short of the desired number or standard. An opportunity occurs now which will appeal to all diffident and self-analysing candidates for advancement. A principal is required for a School of Arts and Crafts, which shall be nameless. "The School includes in its prospectus the work of a School of Art in accordance with the Regulations of the Board of Education, together with Building Subjects (including Building Construction, Builders' Quantities, Wood-Carving, Plumber's Work, Gasfitting, Ironwork, Stone-Cutting, Carpentry and Joinery, etc.); Metalwork Subjects (including Forge Work, Silversmiths' Work, Jewellery and Enamelling, etc.); Applied Mechanics, Magnetism and Electricity, Machine Construction, Art Needlework, Dressmaking,

L

etc." Day and Evening Classes have to be directed, and the salary offered is 300*l.* a year! In these days of enterprising versatility, when the man of modest attainments is outwitted, there should be many to look with approval upon this offer of a sinecure. We can imagine the successful candidate pursuing his congenial work. The morning, perhaps, will be devoted to supervising the wiping of a joint by the students of plumbing, in demonstrating to embryo village blacksmiths the uses of hammer and anvil, and to experiments in concrete reinforcement. In the afternoon the Director will dissect a refractory magneto and transmit the skill of a Nelson Dawson or an Alexander Fisher to those composing the Enamelling Class; and in the cool of the evening the still alert Head will criticise the stitchwork of an embroidered altar-cloth or the cut of a skirt in the Dress Department. And the recreation of the successful applicant! He will be at least a plus man at golf or the marksman of his company.

PICTURE EXHIBITIONS.

THE Goupil Gallery Summer Exhibition is usually in some sort complementary to the exhibition of the New English Art Club; a certain group of the same men is represented at each. A few of the most important subjects at the Goupil Gallery deal with still life, and probably the most notable of these are the "Bowl of Roses" by the late Mr. W. Christian Symons and the piscatorial arrangement by Ribot. These still-life pictures so often wear the air of set studies (as, for instance, in the two pictures of Mr. Wm. Nicholson, "Tulips" and "Orchids") that the quality of Mr. Symons's roses is all the more striking; just arrangement or technical skill, which the picture eminently possesses, is the last thing that occurs to one in looking at the rich leaves of these full-blown, luscious buds. Mr. Nicholson's two subjects are experiments in a black background, and they are both effective. It is curious that the adaptability to decorative purposes of black pigment is not more generally realised by painters. The "Deserted Quarry," by Mr. Wilson Steer, a harmony in red, greens, and yellows, is one of his best pictures; and Mr. Frank Brangwyn in the Venetian "Custom House" employs his bold and rugged methods with greater and more careful elaboration than is quite usual with him. The decorative constructive quality, whether in form or colour, of this work is remarkable even for Mr. Brangwyn. Mr. Augustus John shows two pictures, "Two Children under an Olive-Tree" and "On the Cliff," as well as numerous drawings, which are all perhaps more curious than interesting—the eccentricities or affectations of a talent, typical of the modern spirit in many of its various phases, even in those which to the plain man appear to be the expressions of wilful moods, the moods of a perverse child. Charles Conder was also wilful; but he had not the technical versatility of Mr. John, and he was always consistent to his feeling for style. "La Belle Antonia" is (apart from his decoration of fans) one of his most typical works. The chief attraction of the exhibition is the "Diana" of Matthew Maris and Bellanger. What part Bellanger played in its creation we do not happen to know; but the picture does not suggest a composite work; the figure and the background—Diana is emerging from the forest—equally express the poetic charm of mythological romance. The title was probably an afterthought; but, in any case, this is no obvious placing of the nude model in an unfamiliar *décor*; the figure is an idealised child of its surroundings.

The brilliant drawings in pastel of Léon Lhermitte at Messrs. Tooth's have been followed by the exhibition of the Pastel Society at the galleries of the Institute of Painters. Lhermitte is, of course, an acknowledged master of this medium, and, in view of its growing popularity, we would like to see him represented in one of the National collections. A pastel drawing by Lhermitte is unmistakably a pastel drawing; one could not mistake it for a work in any other material, although his pictures are wrought to the finest point of technical nicety. Many of the exhibitors at the Pastel Society strive after the effect proper to water-colours or oil painting, which is an obvious misuse of the means at their command. Effects can be obtained in pastel which are in a measure denied any other expressions in colour. The three galleries in Piccadilly are so well occupied, and contain so many interesting works, that the practice of the art would seem to be gaining ground. The drawing by Miss Pelling-Hall in the first gallery, "Morning Sun in the Highlands," is not perhaps a direct transcript from Nature, but, what is perhaps more interesting, it shows a certain understanding of the prismatic value of colours that is to be found in some of the French impressionists. This and other "luminous fancies" on the walls indicate that many modern painters who strive above everything by the use of pure colours only to depict objects in brilliant, vibrating light and atmosphere, might find their happiest medium in pastel.

The pictures at the Latin-British Exhibition are a little disappointing. Many of the best artists of the various countries are represented, but, with rare exceptions, they have not sent very characteristic work. The Italian artists provide one of the exceptions. When one heard recently of the Divisionists one imagined that the Futurist movement had been interred prematurely, or that "new movements" in Italy were toppling over each other. But the Divisionist movement is no new thing; it goes back, according to some notes in the catalogue, to 1886; but in France it goes back much farther. We have already referred to the artist's "decomposition of colours" in our brief note on the exhibition of the Pastel Society. The methods of the Italian Divisionists are *au fond* pretty much the same as those of which Claude Monet was one of the earliest, if not the first exponent. Italian Art at the White City is represented by Fornara, Prada, Cesare Magi, the celebrated painter of religious subjects, Gaetano Previati, and other artists. Previati "in the pursuit of light found Divisionism," we are told; he is a mystic and seeks his subjects only in spiritual conceptions, which he portrays in whirling lines of pure colour. Previati in technique gets away from the classical treatment of religious subjects; he is extremely "modern," but his mysticism does not carry him beyond the traditional realisation of the procession to Golgotha. The higher spiritual view to-day would probably see more of triumph than tragedy in this splendid catastrophe.

LIGHTING OF THE HOUSE OF COMMONS.

A report by Mr. E. Treacher Collins, F.R.C.S., upon proposals for lighting the House of Commons has just been officially issued. He and Dr. Parkes inspected the present installation of gas in the debating chamber, which is laid in the roof, and is supplemented with lamps for the back benches. The contemplated installation comprises groups of three metallic filament incandescent lamps with holophane globes and placed over square panes of ground glass, amber-tinted, so as to cut off the ultra-violet rays that irritate the eyes. Mr. Treacher Collins observes that, whereas the gas lighting by lamps on the pillars in front of the back benches is four fifths of one candle-foot, the same amount or more, as he should think desirable, can be obtained with the electrical lighting, and from a better situation, namely, behind the members. He found, too, that the dispersion of light by the holophane globes produced an illumination more uniformly diffused, and more free from glittering points, when the squares in the roof were lighted by electricity instead of gas.

ANNUAL ELECTIONS.

AT the meeting of the Royal Institute of British Architects on Monday, the following elections were announced:—

As *President*.—Professor Reginald Blomfield.

Vice-Presidents.—Messrs. A. W. S. Cross; E. Guy Dawber; George Hubbard; and Ernest Newton.

Past Presidents.—Sir Ernest George and Mr. Leonard Stokes.

Hon. Secretary.—Mr. H. T. Hare.

Representatives of Allied Societies.—C. E. Bateman, Birmingham Architectural Association; J. Brooke, Manchester Society of Architects; A. Clyne, Aberdeen Society of Architects; J. A. Gotch, Northamptonshire Association of Architects; G. Hastwell Grayson, Liverpool Architectural Society; W. Milburn, Northern Architectural Association; A. N. Paterson, Glasgow Institute of Architects; E. R. E. Sutton, Nottingham Architectural Society; A. Lorne Campbell, Edinburgh Architectural Association.

As *Members of Council*.—A. W. Brewill; Max Clarke; T. E. Cooper; William Dunn; F. R. Farrow; W. Flockhart; W. A. Forsyth; J. S. Gibson; H. V. Lanchester; C. S. Peach; Sydney Perks; S. P. Pick; C. H. B. Quennell; E. A. Rickards; W. J. Tapper; W. H. White; E. W. Wimperis; William Woodward.

As *Associate Members of Council*.—K. Gammell; S. K. Greenslade; E. Gunn; A. E. Munby; Septimus Warwick; A. N. Wilson.

As *Representative of the Architectural Association*.—G. C. Horsley.

As *Auditors*.—J. Hudson; W. H. Burt.

The *Art Standing Committee* was elected as follows:—*Fellows*: E. G. Dawber; W. Flockhart; H. T. Hare; G. C. Horsley; T. G. Lucas; Ernest Newton; E. A. Rickards; J. W. Simpson; H. H. Statham; W. J. Tapper. *Associates*: O. M. Ayrton; M. J. Dawson; S. K. Greenslade; J. J. Joass; Septimus Warwick; A. N. Wilson.

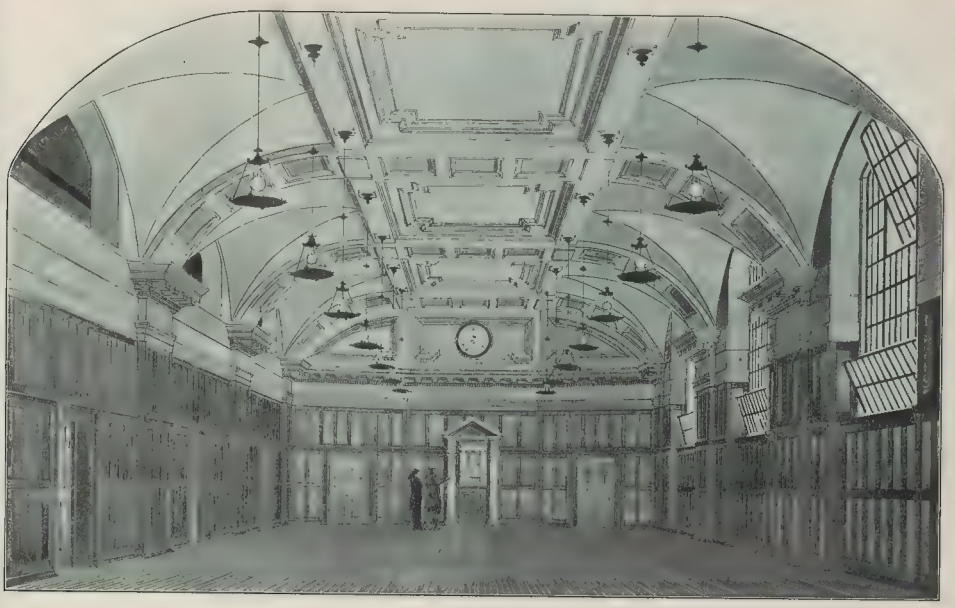
The *Literature Standing Committee* was elected as follows:—*Fellows*: J. A. Gotch; W. Curtis Green; D. B. Niven; G. H. F. Prynne; F. M. Simpson; R. Phené Spiers; C. S. Spooner; C. H. Townsend; E. P. Warren; Paul Waterhouse. *Associates*: Walter Millard; H. Passmore; C. W. Smith; Arthur Stratton; W. H. Ward; H. W. Wills.

The *Practice Standing Committee*.—*Fellows*: W. Cave; Max Clarke; A. W. S. Cross; George Hubbard; C. Stanley Peach; Sydney Perks; H. D. Searles-Wood; A. Saxon Snell; W. H. White; William Woodward. *Associates*: H. W. Cubitt; K. Gammell; E. Greenop; J. N. Horsfield; C. E. Hutchinson; H. Shepherd.

The *Science Standing Committee*.—*Fellows*: H. P. Adams; E. R. Barrow; W. E. V. Crompton; B. J. Dicksee; W. Dunn; F. R. Farrow; E. Flint; H. Gilbert; G. Hornblower; R. Elsey Smith. *Associates*: R. J. Angel; W. R. Davidge; G. L. Elkington; J. E. Franck; C. J. Marshall; A. E. Munby; H. A. Saul; D. L. Solomon; E. W. Wonnacott; M. E. A. Young.

THE BOARD OF ARCHITECTURAL EDUCATION.

The Board of Architectural Education of the Royal Institute of British Architects announce that the designs submitted by the following students, who are qualifying for the Final Examination, have been approved:—Subject I. (b), "A Terrace of Five House," Mr. E. H. Gibson; Subject II. (b), "A Cloister with External Entrance Gateway or Tower to a Collegiate Building," Mr. E. H. Gibson and Mr. Wm. Voelkel.



Brighton, Hove, and Sussex Grammar School: The Assembly Hall.
Mr. S. B. Russell, F.R.I.B.A., Architect.

BRIGHTON, HOVE, AND SUSSEX GRAMMAR SCHOOL.

THE foundation-stone of this building was laid with full Masonic honours by the Duke of Richmond and Gordon, as Provincial Grand Master of Sussex, on the 13th inst.

The silver and enamel trowel used for the ceremony was designed by the architect and made by Mr. James Gibbons.

The building, costing about 20,000*l.*, is being erected by Messrs. Willmott & Sons, of Hitchin and Hornsty, in Kevmer red bricks and Box Ground stone dressings, with Keymer tiles on the roofs, and with Gibbons Steel casements in windows. The floors in ferro-concrete are by Stuart's Granolithic Company, the heating by Messrs. Phillips & Son, and the electric light wiring by Gooding, of Brighton.

The architect is Mr. S. B. Russell, F.R.I.B.A., and the clerk of works Mr. E. Taylor.

EXHIBITION OF MURAL DECORATION AT CROSBY HALL.

UPON the walls of the rebuilt Crosby Hall, situated on the Chelsea Embankment, in the Hall proper, the crypt, and an annexe, is being exhibited until June 22 an interesting collection of mural painting designs. This exhibition—which has been carefully catalogued—may be divided into three groups. Firstly, that which is retrospective in the subject of mural painting since its revival in England and France, illustrated as it is by cartoons and reproductions; secondly, that group which also so illustrated deals with the work executed in our day in schools, libraries, and other institutions—this division includes also some of the pictures and mural designs that are produced for hanging in schools; and, lastly, that group around which perhaps the greater interest centres, composed as it is of competitive designs for the mural decoration of wall spaces of buildings still in course of erection or but recently completed.

It is hoped that by the close of the exhibition the awards will have been made. We take this opportunity to offer our congratulations both to the architects on the one hand and the private donors on the other who have come forward in such ready response to the appeal of the Organising Committee not only to place wall spaces at their disposal, but also funds, supplementing those the Society have already in hand for their execution by the selected artists. We trust that the public spirit here shown by these gentlemen, co-operating with the judicial awards shortly to be made by the Selection Committee, will bear a practical and beneficial result in the adornment of our buildings. When on glancing down the list of the Selection Committee we find included such names as Mr. Charles Aitkin, Professor Brown, Mr. A. H. Christie, Mr. Walter Crane, Professor Geddes, Professor Lethaby, Professor Moira, Mr. D. S. MacColl, Mr. Halsey Ricardo, Mr. John S. Sargent, R.A., Mr. W. Strang, A.R.A., and Mr. Henry Tonks, we have little doubt that the works elected for execution will be worthy of acceptance.



Ceremonial Trowel: Brighton, Hove, and Sussex Grammar School.

Nor must we overlook the fact that this "organised opportunity"—for which many an artist has asked in vain—has not been allowed to pass by those men who have for so long cried out, "Give us the walls and we will paint." For so we judge by the amount of work sent in by those artists. We leave our criticisms of their individual work to follow.

The Society cannot but feel that the experiment—for such it is—is appreciated; and we wish to place on record our appreciation of this most praiseworthy attempt to revive once more in our midst this national art, so long time sleeping.

It has been well said—we think rightly so—that the painter who has grown old in the service of canvas and easel painting should better "work out his own salvation" on that canvas than start anew upon a plaster surface; a man so trained cannot sufficiently rejuvenate his ideas or throw aside with requisite freedom the sophistications that have unconsciously grown up and around him and his experiences. The promoters of this exhibition would seem to have recognised this fact in so offering their advisory remarks and "general considerations or hints for the younger competitors."

The broad lines upon which the whole scheme has been drawn up is tempered, not with a host of binding and unnecessary conditions, but with a hope that the workers competing shall have sympathy with their work. So we find it stated that "wall paintings should appear to be part of a wall and of a room—that is to say, it ought to be possible, at times when one is not looking at them expressly, to regard them as a background or setting. Therefore they should not be too insistent and selfish in their claim on the attention; on the other hand, they ought to be clear and easy to read from the opposite side of the room, not requiring worry and search for their meaning."

And, again, in reference to the relation of colour to colour, that "the prevailing tint and tone of the room will set the key, and the endless colours and tones of those colours possible in a scene, will be reduced to a limited group,

as in a good carpet." "Just as the general effect should not be too assertive for the uses of the room, so the style of mural painting should not be aggressively personal . . . public manners require some sacrifice, and a wall painting should be so conceived that it will be possible for another painter to take up the thread alongside."

So, too, we add that the poster-work method is not necessarily a method best suited for mural painting; wall painting calls for a more spiritual rendering of form and matter than any of the accepted "decorative" poster devices can offer as a resultant.

With all the best will in the world many mistakes in the venture and experiment will be made, and it is not surprising to find that even in this initial stage much of the constructional and organic element is wanting in many of the designs. We realise, of course, that full-size cartoons, however accurately drawn, are, after all, but cartoons, and we must hope that the errors we note, as also those that arise through the misconception of the due relation of a subject to its surroundings, will all be remedied by the time that the artist, so chosen, is empowered to begin. However truthful a cartoon may be in design, the limitations that the material of the wall surfaces, the plaster, and the painting mediums do set have yet to dictate to the artist his final means of expression. As experience begets experience, we look forward to the time when the preliminary cartoons will fade into significance as the painter obtains a greater mastery over his materials.

For mural decoration is nothing if not direct; and the more we realise the but limited usefulness in this respect of a coloured drawing the brighter will glow the colour from our walls: our mural decorations will move us the more.

On reviewing generally the works exhibited we commence with those for the decoration of the Lady Chapel, the Church of St. Jude on the Hill, Hampstead Garden Suburb. "Lambeth" (39) shows a quiet and a dignified treatment of the "Nativity," which centres most appropriately around a majestic figure of "Our Lady." Yet the small figures in the foreground, though in harmony with the spirit of adoration that rightly pervades the design, lack somewhat of repose, and we seem unwillingly familiar with their rather set rendering. "Poles Asunder" (41) has certainly a "constructional" design to show, echoing in many respects the strong directness of the church that he would have contain it. Still, by his treatment the mysticism of the subject unfortunately suffers. Both the designs of "Stata" (18) and "Questa" (36) breathe out the sentiment of the subject of the Nativity and exhale the spirit of the inspired truths. Many of the designs shown—and "Questa," with all his beauty of idea, is here included—are apt to get fussy. An insistence of detail is to be deplored when dealing with such large wall surfaces, nor is it recognised sufficiently as yet that the "altar furniture" also requires to be seen, and that it also introduces a scale of detail that cannot be overlooked. "Medicus" (154) has a strong design of kneeling figures with a star-lit sky much in prominence behind, but we feel that designs so treated are too heavy in tone for the chapel, which, it must be remembered, is lit directly only by windows in the north wall.

For the decoration of the "Projected New Building for the Gallery of Modern Art" at Dublin, "Celt 1, 2, and 3" (29) exhibits a vigorous scene of "the meeting of Cuchullin and Emer." This is full of life and colour, and has strong heraldic qualities. More restrained in feeling and suggesting more the poetry of that country are the designs by "Qualis ab Incepto" (23) and "Paint Bender" (24), who show respectively by "The Coming of St Patrick"—the introduction of Christianity to the overthrowing of paganism—and by "The Sons of Tuirean," whose shouts echo back from the green hills. "Every Cloud has a Silver Lining" (30) submits a design, broad in treatment, which is well modelled by the use of high lights and deep shadows. The work by "King Arthur" (32) we refer to generally later on; but, though we recognise the technical ability, we feel that the art displayed is too conscious and too personal a matter for a public and general adaptation that is required.

Messrs. Crosse & Blackwell's Jam and Pickle Factory competition receives several designs. That shown by "What You Will" (92) in the "Making Jam" and "Making Pickles" contains in it the spirit of work, and the introduction of the appliances of manufacture alongside the "raw" goods is as instructive as it is æsthetically beautiful. "Workmen in Factory Yard" (94), by "From Toil He Wins His Spirits Light, etc.," is a good illustration at the scene of exportation.

It is a matter too controversial here to introduce as to whether a scheme of decoration best fitted to ennoble and to revive the flagging energies of the factory-hand should portray the scene in which that "hand" is engaged in, day in and day out, or whether a scheme by which that worker is "drawn out" from his present surroundings—the squalid surroundings mayhap of his factory life—is not the better. To be introduced to a country that has pure air, freshening breezes, a blue sky, and an horizon is worth a great deal. The design shown by "Homo Homini Lupus" (72) brings us thus into that country, and the sentiment is a healthy one. The drawing needs, however, to be strengthened and freed from a prettiness apparent throughout.

The space offered in "The Vestibule of the Middlesex Hospital" has not produced a very high quality of exhibits. "Tyneside's" "In the Country" (82) is bold in its alignment of his figures in the foreground, and shows a pleasing massing of colour and a beauty of line. "Marjoribanks" has a most able design in "Country Air" (88), but we feel that the "distance," if carried out as there shown, would be too worrying in effect. "Summer" (133), by "Spes," has a pretty dancing group, and is accompanied by a delightfully drawn detail. As a whole, however, it is a "book illustration," and does not suggest a mural treatment.

"St. George and the Dragon" is the competition panel offered by the Cable-street School. The design by "Waste Not, Want Not" (26) is direct and full of life. His "St. George" is vigorous, and he has not confused his subject-matter with excess of detail nor overlooked the usefulness of retaining the simple and light "ground." "Boreas" (34) treatment of the same subject is too mediæval to be of direct inspiration for to-day, and it is too full of small detail; yet with all its defects there is a native simplicity which, beyond all sophistication, is a very precious quality. "Fish" (119) shows a rich treatment, but his cartoon hardly bears out the smaller design, which is in itself inclined to be too complicated.

The exhibition, as above mentioned, includes also a large and interesting loan collection of photographs of mural decorations executed and contemplated. With their valuable exposition of the subject, taken together with the interesting competitive work here briefly criticised, surely the atmosphere shall be created for the fostering of this revival. Is it too much to hope that the public will readily, and soon, respond to the claims the movement—as it spreads—makes upon them and their monetary assistance?

The whole movement is yet in its infancy, and there is a large field yet to be covered. The would-be painters must know the composition of the "pigments" and the consistency of the mediums they are to use; it is most essential that they have a wide knowledge of suitable wall surfaces on which to paint and know in turn their composition. A knowledge of the structural parts of the building to be decorated, a recognition of the individual units which combined give right proportion to the whole, must be theirs. Materials, we repeat, do impose limitations, and often the worth of a painting is the result of that imposition. Yet deeper lies the root of the whole matter; wall painting at present is on the walls of the few because it is not in the minds of the many, and wall painting in England cannot rightly come into its own while it is considered by the nation to be a luxury, seen only upon the walls of a few rich people and occasionally on the walls of a public building. The wall paintings of the present day can only be of real value to the extent in which they reflect the creed of the painter and the beliefs of the nation. The excellence of the paintings and their lasting good lie not in the "talent" of the man or in his technical ability to reproduce another's thoughts in colour, but solely in proportion to the degree of his vitality and masculinity, the largeness of his conception, the firmness of his mental grasp, the long-sightedness of his mental vision, his simplicity, born of self-abnegation for the common weal, his courage and his spirit of adventure that would as willingly beat down the doors of hell as scale the walls of heaven.

The call must come from a people for whom wall painting is a necessity—a call as unconscious and spontaneous as it should be definite.

The nation will only breed its artists and call for their work when the nation realises that it has a soul to save. The whole question of wall painting and its present position to-day is bound up in and forms part of the march of the nation. And it is only logical and more optimistic than pessimistic to suppose that any result worth having can only spring from such a slow-setting foundation.

BOOKS.

The Works of Man. By LISLE MARCH PHILLIPPS. (Duckworth. 1911.)

THIS is, to our mind, a collection of critical writing of considerable importance. To transcribe from the author's Introduction: The aim of the book is easily explained. The author has made no attempt to speak of art from the æsthetic standpoint, as a realisation of the beautiful, and as controlled by principles which have that realisation for their object. His desire has been to confine himself to the consideration of art as an expression of human life and character. Selecting some of the great periods, or creative epochs in the art of the world, he has endeavoured to deduce from them the distinguishing qualities, limitations, and point of view of the races which produced them. The volume is a collection of articles much of the substance of which has appeared in the *Edinburgh* and *Contemporary Reviews*. It contains chapters on the Egyptians, the Greeks, the Gothic, and the Renaissance, with others of more general critical outlook, together with one, closely illustrative of the writer's theme, called "The Art of an Aristocracy," on the style called Louis Seize. There are some matters of detail—his animadversions on the shape of the Egyptian column, for instance—which we would combat. But the book, as a whole, defines an idea which is really so obvious as to be startling—especially, we imagine, to those whom we are accustomed to regard as our teachers. Mr. Reginald Blomfield, A.R.A., Mr. T. G. Jackson, R.A., and Professor F. M. Simpson particularly are taken to task, and it would be exceedingly interesting to hear what these gentlemen would say to the author's criticism of their attitude as expressed or implied in his book. The volume contains stuff which should be in the wallet of every vagrant critic. Such a one, in the wilderness, might even make of it his staff and sole support. No one really interested in architecture should need to read it, but—nearly every one does so need. For those not conscious that our architecture is but precariously grafted on to the civilisation of our time it can do nothing; but for those who feel that the dry considerations of which nearly all contemporary criticism is composed are not everything, or even a beginning, if discussions of art and architecture are to possess any vitality, there is all to justify and much to inspirit and sustain. The author's constant endeavour is to show that the various forms and emotional combinations—what are called the styles—of the tale of whose successive growth and decay the history of architecture is composed, do not draw their sustenance from, and have their origin in, the consideration of abstractions, such as "proportion," "repose," "strength," and the like, which are so often held up as our guidance. He proves conclusively for us, did we need to be convinced, that the mainspring of the life of each style is to be sought in the action of racial character upon the conditions, material and cultural, through which the race must gain expression, and that their architecture is just that expression. He accomplishes his task, not really a difficult one, we think, though we have nowhere seen it so thoroughly performed, with the skill of a practised writer—the knowledge of a man who has seen, rather than merely read about, the world of which he writes. If anyone who reads this notice is ever asked by a layman, as members of the profession so often are, for a book which shall tell him something, not technical, about architecture itself, this is the book to recommend. We propose shortly to publish a speculative article, in which Mr. L. March Phillipps's conclusions will be applied.

Keystones of Building. By MR. F. INIGO THOMAS. (London and New York: John Lane. 8vo. 109 pp. 2s. 6d.)

THIS little book is primarily intended for the building employer, and gives him concisely and clearly an insight as to the architect's point of view. It might be entitled "How to Treat Your Architect," as it points out the many ways in which a client may, although actuated by the best intentions, give his adviser a very bad time.

Needless to say, Mr. Thomas's review of the relationship between architect and client is of little less value to the former than to the latter. It is fully as important for the architect to appreciate the employer's point of view as for the latter to comprehend the architectural aspect, and we can cordially recommend this book, being satisfied that when both architect and client have read and digested its contents the chances of any difficulty or disagreement arising between them are reduced to a minimum.

The processes connected with the building of a country house are examined from start to finish, and the questions likely to arise at every step are reviewed in a brief but incisive fashion. The problems before the employer are fairly and sympathetically dealt with, while at the same time he is given some emphatic hints as to where he may possibly fail in his attitude towards the legitimate claims of his architect.

Butterworth's Workmen's Compensation Cases. Vol. V. Quarterly Advance Sheets; Part II. 1912. Edited by DOUGLAS KNOCKER, Barrister-at-Law. (London: Butterworth & Co. 1912. Pp. 264. 7s. 6d.)

NINE cases in the House of Lords and close on sixty in the Court of Appeal is not a bad record of litigation in two months—March and April, 1912—to have arisen under even a modern Act of Parliament, yet this is approximately the number of cases which are collected in Part II. of the quarterly advance sheets of this well-known set of reports. Modern legislation, almost colloquial in its terms, may save the time of an overworked Parliament, but it occupies the judges, and the law comes to be settled out of the pocket of the private litigant. Questions under the Workmen's Compensation Act, however, can be settled by the Courts, and eventually therefore it is to be hoped that the cases will form the basis of a code which will come to be understood and litigation will be diminished. Parliament nowadays shows a tendency to substitute private hearings before officials for the publicity of the Courts, as is the case under the Finance Act, and then the position of the citizen is even worse, as no decision forms a binding guide to the interpretation of statutes, and the same blunder may be made or the same injustice be perpetrated over and over again.

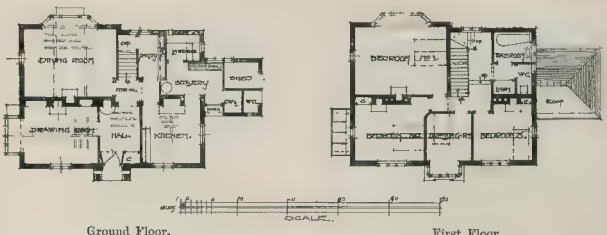
If the cases under the Workmen's Compensation Act be "legion" in number, the public are, nevertheless, afforded every assistance to a knowledge of the law by the reports under review. Each of these advance sheets contains a Table of Cases, a Digest, and an Index to the part itself as well as to its predecessors, and these parts take final shape in an annual volume under distinguished editorship.

The West Country: Somerset, Dorset, Devon, and Cornwall. Edited by PRESCOTT ROW and A. H. ANDERSON. (London: The Homeland Association, Ltd. 1s. net.)

THIS is the 1912 edition of an excellent guide to the West Country, comprising "where to stay, what to see, and where to live," and including special articles on golf, motoring, and fresh-water angling. In addition to some useful practical notes upon West-Country towns, villages, and districts, alphabetically arranged, the book contains some good illustrations and several sketch maps. Altogether the volume is an admirable and handy little work.

Social Guide. Edited by MRS. HUGH ADAMS and MISS EDITH A. BROWNE. (London: Adam and Charles Black.)

AS ITS title implies, this is a guide for those who are desirous of joining in what have become recognised as social functions. A very full diary is given of the events of the year, including all the great sports meetings as well as the more exclusive society gatherings. The information is not confined to doings in this country, but details are given of the "seasons" in Egypt, the Riviera, India, etc. Those possessed of the leisure and means to enable them to take a part in such gatherings will find the book of great service.



Ground Floor. First Floor.

Roestock Rise Estate, Hatfield: Plans of House in centre of group. *(See page 683.)*

Messrs. Geoffry Lucas, F.R.I.B.A., & Arthur Lodge, A.R.I.B.A., Architects.

BOOK RECEIVED.

HUNT'S LAW OF BOUNDARIES, WALLS, AND FENCES. By R. G. Nicholson Combe, M.A., LL.M. (London: Butterworth & Co.)

HOUSES NEAR HATFIELD, HERTS.

THIS group of houses is being built on the Roestock Rise Estate about one mile from Hatfield. They are of Georgian character, and are executed in red-brick hollow walls, with red-tiled roof and white painted windows, etc. The accommodation consists on the ground floor of entrance hall; in the larger centre house this is provided with a fireplace, drawing-room, and dining-room, both having bay windows, china pantry, kitchen, scullery, and offices. On the first floor are three bedrooms, dressing-room, bathroom, lavatory, and linen closet. On the second floor two of the houses have a large room, arranged to take a small billiard-table, bedroom, and box and cistern-room, while the centre house has three bedrooms, etc.

The contractor is Mr. W. J. Richardson, of Park-street, Hatfield, and the architects are Messrs. Geoffry Lucas and Arthur Lodge, of Hart-street, Bloomsbury-square, W.C.

ARCHITECTURAL SOCIETIES.

The York and Yorkshire Architectural Society.

Mr. H. E. Henderson, who has been for some time Hon. Secretary of the York and Yorkshire Architectural Society, and who is leaving for Nairobi, British East Africa, was entertained to dinner in the Windmill Hotel recently by the members of the Association, to which he had rendered many valuable services. Mr. A. B. Burleigh, President, presided, and he was supported by nearly forty members of the Association.

During the evening the Chairman presented Mr. Henderson with a suit-case from the members of the Association, and referred in eulogistic terms to the work which he had done as their Hon. Secretary. They wished him every success in his future career, and they could assure him that they would always retain in their hearts happy recollections of their association with Mr. Henderson.

Mr. Henderson suitably replied, and said that in the new sphere to which he was going he would always look back with pleasure to the many pleasant days he had spent in York and the many friends he had left behind. He thanked them for the hospitality which they had shown him and for the gift which they had presented to him.

A general meeting of the Society was held on June 4, when Mr. H. E. Henderson formally tendered his resignation, which was received with regret.

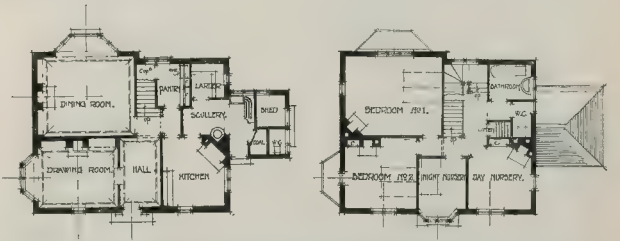
On the proposition of Mr. G. Benson, A.R.I.B.A., seconded by Mr. A. B. Burleigh, Lic.R.I.B.A., Mr. C. M. B. Hinderer was unanimously elected as Hon. Secretary.

Edinburgh Architectural Association.

A party of over thirty of the members of Edinburgh Architectural Association visited Yester House, Gifford, and the old Castle of Yester on Saturday last. The old castle was visited first, and the Goblin Hall, which is alluded to in Canto Third of "Marmion," and is still in a good state of preservation, was viewed with much interest. The mansion-house of Yester stands among finely-wooded grounds near the left bank of Gifford Water, and was built by Adam about the close of the XVIIIth century, but has been greatly altered since then. The public rooms were inspected, and the family portraits. The gardens were afterwards visited.

Architectural Association of Ireland.

A meeting of this Association was held recently at No. 15, South Frederick-lane, the President, Mr. Page L. Dickenson, M.R.I.A.I., in the chair. The minutes of the previous meeting having been read and signed, the President declared the result of the ballot for officers for the ensuing session as follows: President, Mr. George L. O'Connor, M.R.I.A.I.; Vice-Presidents, Messrs. A. M. Reid and F. Sparrow; Committee, Messrs. P. L. Dickenson, N. G. Leask, A. G. C. Millar, H. J. Lundy, C. H. Mitchell, J. E. Burke, R. O'Brien Smyth, J. M. Mitchell, and L. Gieron; Hon. Treasurers,



Ground Floor. First Floor.

Roestock Rise Estate, Hatfield: Plans of End Houses.

Messrs. Geoffry Lucas, F.R.I.B.A., & Arthur Lodge, A.R.I.B.A., Architects.

T. F. Strahan; Hon. Librarian, T. L. Cullimore: Hon. Secretaries, H. Auberry and J. J. Robinson.

The report of the past session was read and adopted. It dealt with the strengthened position of the Association during the year, the membership having increased and the meetings and classes having received more appreciation from the members. Two exhibitions of architectural drawings were held, and the work submitted for the various prizes had greatly improved.

The Treasurer's report was adopted on the motion of Mr. J. H. Webb, who expressed satisfaction at the present financial position of the Society.

The following prizes were awarded: Institute Prize, Mr. A. W. Dixon; Class of Design, first, Mr. A. W. Dixon; second, Mr. C. D. B. Ward.

The President announced that the annual excursion would be held early in July, the venue being Liverpool, and that Professor Reilly, of the University, had kindly offered to act as cicerone. He then read a brief valedictory address, in which reference was made to the possibilities of social and political changes in this country. It was early yet to estimate the effect of the new school of architecture on the National University, and possibly the Association would ultimately find its greatest use in training the students in art.

A vote of thanks to the outgoing President for his address and for his conduct of the affairs of the Association during his year of office was proposed by Mr. O'Callaghan, seconded by Mr. C. H. Mitchell, and carried with acclamation.

The meeting was then resolved into a special general meeting to consider the revised by-laws. These, with a few minor amendments, were passed unanimously.

On the motion of Mr. Craig, the new committee were directed to consider the desirability of incorporating the Association.

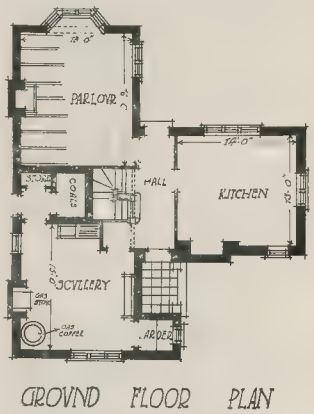
"ISLAND COTTAGE," BEMBRIDGE, ISLE OF WIGHT.

THIS cottage is situated at Lane End, Bembridge, Isle of Wight, overlooking the sea, and is designed as a holiday cottage. The walls are covered with white rough-cast externally, and the whole of the woodwork, both externally and internally, is stained a dark-brown colour, the windows having leaded lights and iron casements. The hall is built with red-brick walls, relieved by tile courses. The kitchen is designed for a dining-room when required, and has a beamed ceiling and red-brick mantelpiece. There are on the chamber floor three bedrooms, bathroom, water-closet, and a heated linen cupboard. The architect is Mr. A. Jessop Hardwick, F.R.I.B.A., of Kingston-on-Thames, the builders being Messrs. Love & Sons, of Bembridge; Messrs. Humphries, Jackson, & Ambler supplying the casements, leaded lights, and special fittings.

BUILDING ACT ANOMALIES.

BY AN ARCHITECT.

YEARS ago, when I commenced practice, I thought I could be certain of being on the safe side in all Building Act questions if I took care to satisfy the District Surveyor. I was confirmed in this view when, on my telling one of those functionaries that I was anxious to conform to his wishes, he replied: "It is not my wishes; it is the Act." (There was only one Act in those days.) But, with more extended experience, I found that, in different districts the surveyors interpreted the same Act in different ways. Then I said to myself: "They cannot all be right, so I am not safe in following any of them. I will read the Act and



"Island Cottage," Bembridge.

form my own interpretation of it." Accordingly I studied the Act, and as fresh Acts were passed I studied them, until now I find myself in more perplexity than when I started.

One question that has puzzled me is: "What is a building?" For example, I thought that, where you have a shop separated from the side entrance and upper part of a house, the shop is a separate building for purposes of the Act; otherwise, why does sect. 5 (20) of the London Building Act, 1894, define a party structure as "a . . . floor or other structure separating vertically or horizontally buildings . . . . approached by distinct staircases or separate entrances from without"? I had a client, Mr. A., who owned two houses side by side, in one of which was a separate shop occupied by a Mr. B. Mr. A. wanted to unite these two houses by forming openings in the party wall above the ground floor, the whole to be for his own occupation, except B.'s shop. Well, of course, I know that buildings cannot, without the consent of the London County Council, be united unless they are wholly in one occupation. But I provided for separating B.'s portion from A.'s vertically by a party wall and horizontally by a party floor. When I had made my drawings I showed them to my friend Quibbles, who is one of the cleverest lawyers in London; and he tells me that there can be no such things as superimposed buildings; that B.'s shop is not a building, but only a tenement, and that consequently the two houses cannot be united without the consent of the Council. He says: "If the shop is a separate building, where is its roof? Where is its open space at the rear 'exclusively belonging thereto'? You have nothing in this Act, as you had in the Act of 1855, to prove that a room or tenement is a building." In vain I attempted to argue about the intention of the Legislature. He says: "You have nothing to do with what they intended; you can deal only with what they did enact." So I must apply to the Council, which is a course involving several weeks' delay. My client cannot wait; I never met a client who could.

Another question that has puzzled me is: "What is a party wall?" For example, my client, Mr. C., has a house, built against a much higher one belonging to a Mr. D. Between these two houses there is but one wall, which rises one story higher than my client's roof. Now, Mr. D. has formed a window in this wall overlooking my client's property. I contend that he has no right to do this, as the wall is a party wall; and in support of my contention I quote sect. 59, which provides that every party wall shall be carried up above the roof of the highest building adjoining to it. But Quibbles says that, in this case, the wall, which stands wholly upon Mr. D.'s land, is a party wall only for that portion of its height or length which is used for the separation of adjoining buildings. He refers me to the definition of a party wall in sect. 5 (16) (*a*), and says that sect. 59 cannot make any portion of the wall party which is not so under the defining clause. Well, then, I cannot compel Mr. D. to brick up his window. But here is another case. I built a studio for my client, Mr. E., one of the best portrait-painters whose works are annually excluded from the Royal Academy Exhibition. I gave him a dormer with a splendid north light, but unfortunately it is within 4 ft. of a party wall. The District Surveyor requires the wall to be carried up 12 in. higher and wider than poor E.'s dormer, which will have the effect of completely blocking his light. I have consulted my friend Quibbles about this, and he says that the wall will have to be carried up "as required by sect. 59." I reminded him of his own opinion in the previous case, and pointed out that the wall, where it rises above the roof, is not used for the separation of adjoining buildings. His reply is that in the previous case the upper part of the wall was the external wall of another building, whereas here it is simply a party wall carried up. Fortunately I can overcome my difficulty by taking down the dormer and reconstructing it of incombustible materials; but I should just like to know if any of my readers can unravel this web of legal contradictions.

No doubt every architect appreciates the importance of carrying up party walls above roofs to prevent the spread of fire from one building to another, and it is in this connexion that I wish to point out an anomaly in the Building Act which, it is to be hoped, will one day be removed by legislation. The anomaly in question arises when contiguous buildings are separated by two walls instead of one, in which case neither wall is required by the Act to be carried up above the roof. What seems to me anomalous also is the rule relating to recesses in party walls. A recess to contain books, for instance, must have a back not less than 13 in. thick to protect the adjoining building from fire, but a recess containing red-hot coals (*i.e.*, a fireplace) need not have a back more than 8½ in. thick. Clients of mine have complained to me of injury to their decorations by heat from a neighbour's fireplace when the brickwork at the back was quite 11 in. thick, if we include the 2 in. firebrick back to the grate. In such cases there was no remedy but by adding brickwork on my client's side of the wall. The greatest danger, of course, arises from kitchen fireplaces; and here I think the law should enforce the provision of a double thickness of brickwork with a ventilated space between



"Island Cottage," Bembridge, Isle of Wight: Front View.

Mr. A. Jessop Hardwick, F.R.I.B.A., Architect.

at the back of every fireplace used for cooking or heating a water supply.

Anomalies arise in certain cases under sect. 12 of the London Building Acts (Amendment) Act, 1905, which requires certain buildings to have means of access to the roof for escape in case of fire. I knew a case in which two contiguous houses had been united by only one opening in the party wall, and that was in the basement story. The houses, being united, were one building for purposes of the Act, and the owners could not be required to provide more than one means of access to the roof. The property was in the hands of trustees, who dared not expend a penny on improvements except under legal compulsion; so they provided a way on to the roof of one house, leaving the occupants of the other in the same danger as before. Under that same Act, is it not also anomalous that, whereas access to the roof must be provided in a building let as offices, to be occupied only by day, no such access is required in a residence where the attic story is crowded with servants in nightly danger of being burnt?

There are anomalies, as it appears to me, in the provisions for payment of fees to District Surveyors. As a professional man I am ashamed to think that my country expects one of my brethren to superintend the construction of overhanging oriel windows for the paltry sum of 5s. per building. I have seen many a building with ten oriel windows, where the surveyor's remuneration was, therefore, at the rate of sixpence for each superintendence of construction. Also, the fees upon complicated alterations to small buildings often appear to me miserably small. On the other hand, the fees upon small alterations to large buildings are, as many of us know, much too high, and are a source of perplexity to builders tendering in competition. It is true that many District Surveyors make considerable reductions in such cases, but it cannot be contended that the system is an equitable one. I was gratified to see that a reform was instituted in Part IV. of the London County Council (General Powers) Act, 1909. Here the fees are on a higher scale than in previous laws, but in the matter of alterations they apply only to the part of the building affected by the work. In some such direction as this I suggest that our Building Acts ought to be amended. T-SQUARE.

GENERAL NEWS.

Professional Announcement.

On and after June 20 the address of Messrs. Cheston & Perkin, architects and surveyors, will be Graham House, 3, Tudor-street, New Bridge-street, E.C. Their telephone number is No. 1854 City.

Mr. Arthur Stratton, F.S.A.

At the meeting of the Society of Antiquaries held on the 6th inst., Mr. Arthur Stratton, A.R.I.B.A., was elected a Fellow. Apart from his educational work at King's College University of London, and elsewhere, Mr. Stratton is known for his contributions to architectural literature.

India's New Capital.

The town-planning experts consulted with regard to the new capital at Delhi have now officially decided against the Durbar site for the permanent capital. They have selected a position in the south-western suburbs of the city, which offers good drainage and a fine prospect. The only objection to it is its distance from the recently selected site of the temporary capital.—*The Times.*

Oxford University and Egyptology.

Mr. Walter Morrison, M.A., Balliol College, has just supplemented his recent gift of 10,000*l.* for the establishment of a professorial pension and with a sum of 10,000*l.* in promotion of the study of Egyptology. A decree will be introduced in Convocation for the establishment and endowment of a Readership with the gift.

Tattershall Castle.

We understand that Mr. William Weir is the architect to whom Lord Curzon of Kedleston has entrusted the direction and superintendence of the restoration work at Tattershall Castle, which will extend to both the inner and outer moats, the reroofing and reflooring of the keep, the reinstatement of the tracery and glazing of the windows, and the replacement of the fireplaces.

Eton Memorial.

The panelling for the central bay of School Hall has now been placed in position. In the centre, above the inscription-panel covering the first stone, is a niche on which rests the marble bust of Queen Victoria presented to the School by Lord Cadogan. On either side are two long panels on which are cut the names and regiments of the 129 Old Etonions who were killed in the South African War. At the sides of the bay are narrow projecting panels enclosing the whole and capped by an enriched cornice and cresting. The work, which is of an elaborate nature, has been carried out in selected Austrian oak by Mr. Herbert Read, of Exeter, from designs by Messrs. L. K. Hall and S. K. Greenslade, the architects to the Memorial Buildings.

Mr. Havard Thomas's "Thyrsis."

We understand that Mr. Max Michaelis, formerly a partner of the firm of Messrs. Wernher, Beit, & Co., has commissioned the artist to execute in bronze his figure of "Thyrsis," whereof the model, in wax, is now exhibited at Burlington House. The bronze statue is intended for the Johannesburg Art Gallery.

A Memorial of the Boer War.

In the Illustration Department of the Victoria and Albert Museum, among examples of ancient MSS., there was shown early in June for a few days the illuminated record of the names of those who died in the South African War, 1899–1902. This work has been written by Mr. Grailly Hewitt, and decorated by Mr. Allan F. Vigers; the pages will be bound by Mr. Douglas Cockerell, and the volume will be placed in the Cathedral at Capetown, on a desk, protected by a grille, executed by Messrs. Omar Ramsden and Alwyn Carr. The whole production will be a fine example of the combination of individual craftsmanship.

The British Fire Prevention Committee.

The Special Commission formed by the British Fire Prevention Committee to study the fire-preventive and fire-service arrangements of Russia returned to London on Monday after visiting St. Petersburg, Moscow, and Warsaw, and attending the International Fire Congress that has been held in the first-named city. The Commission comprised six members. Many works, warehouses, and large buildings were visited, as also the principal fire-stations, waterworks, and other municipal institutions, and an illustrated report will be issued by the British Fire Prevention Committee embodying the results of the Commission's investigations. The work of fire prevention is accorded primary importance in Russia owing to the enormous annual fire loss, stated to be 30,000,000*l.*, and which can be only reduced to any appreciable extent by better building and fire-preventive regulations.

Cambridge University.

Mr. Arnold Mitchell, F.R.I.B.A., architect of the School of Agriculture, has prepared the plans for an addition to that building at a cost of some 12,000*l.* for the fabric, and 3,000*l.* for equipment and fittings, to be defrayed by a Treasury grant from the Development Fund. The extension, nearly 90 ft. in length, will follow the present design. The Drapers' Company have increased their grant towards the building and equipment of the new Laboratory of Experimental Physiology, thus making their total grant in that behalf to amount to 23,500*l.* A site for the buildings is allocated in the Downing College ground, and the Drapers' Company have appointed Mr. T. G. Jackson, R.A., as the architect. The Board of Agricultural Studies will hold on July 9–12 an examination for one "Surveyors' Institution Scholarship," open only to students of the Surveyors' Institution who have not begun residence. The scholarship is tenable for three years, and is of the value of 80*l.* per annum.

British Home for Incurables, Streatham.

The annual Report of the Committee of the British Home and Hospital for Incurables states that 17,525*l.* are subscribed to the Jubilee Building and Pension Funds, and that Mr. E. T. Hall is engaged upon the preparation of plans for the new "Queen Alexandra" wing.

Vandalism or Improvements at Lyme Regis.

A ratepayer of Lyme Regis, in again drawing attention in the columns of the *Times* to the proposed act of vandalism masquerading as a street improvement, to which we have already referred in a previous issue, raises a question which should not be overlooked. "There is a sharp corner," he says, "where Church-street turns into Bridge-street which is concealed from motor drivers approaching from either side." The narrowness of the present approach compels motor-cars to slow down more effectively than any sign, and it is feared that the proposed dividing of this short piece of narrow street will encourage motorists to approach the corner at a higher speed, and so lead to accidents.

Any automatic method of causing traffic to slow down on approaching a danger point is much to be desired, and while the danger point still remains is an advantage not to be lightly thrown away. If the local authorities are convinced that this widening is an absolute necessity, and are determined to remove the old buildings involved, the least they can do is to remove the danger point also. Considering how much old-world features attract the visitors upon whom such towns as Lyme Regis largely depend, their preservation should be a matter of more than ordinary concern to the local authorities. The scheme, however, has been carried by the Borough Council, so any steps to induce them to reconsider the question must be taken immediately.

Commons and Footpaths Preservation Society.

Lord Eversley presided over the monthly meeting of the Commons and Footpaths Preservation Society, held at 25, Victoria-street, Westminster. It was decided to request the Home Secretary to receive a deputation to urge that facilities should be given for the Second Reading of the Society's Rights of Way Bill, which has the support of highway authorities throughout the country. The object of the Bill is to simplify the proof of rights of way by fixing a statutory period of forty years for evidence of user in the case of disputed paths crossing land in limited ownership, and twenty years in other cases. It was stated that the Society was assisting in steps which were being taken to secure the preservation of Leziate Heath, Norfolk, and Hollesley Common, Suffolk, and that 300*l.* was still needed to complete the fund for acquiring Minchinhampton Common, Gloucester, in order that the land might be vested in the National Trust. Advice was also being given in respect of 170 cases of encroachment or obstruction in various parts of the country.

TRIBUNAL OF APPEAL UNDER THE LONDON BUILDING ACT.

AT a sitting of the Tribunal of Appeal under the London Building Act, at the Surveyors' Institution, to consider an application by the London County Council that the Tribunal should state a case for the opinion of the High Court, setting forth the facts and the grounds for their decision in regard to the general lines of building in Wimbledon Park-road and Augustus-road, Mr. Daldy appeared for the County Council, and Mr. Courthope Munro for the London and Westminster Bank.

The case was before the Tribunal on October 27, 1911, and the facts were briefly as follows.—Some years ago the London and Westminster Bank purchased a plot of land in the Wimbledon Park-road at the corner of Augustus-road, with a view to building at some future date. Wimbledon Park-road, from the railway-station to the county boundary, was unbuilt upon, nor was Augustus-road developed. According to the appellant's case, bearing that houses were to be erected in Augustus-road, which would have the effect of fixing the general line of buildings, they commenced to build their bank premises on the corner site. The Superintending Architect subsequently defined the line of building, and for the purpose of doing this in the case of

the Wimbledon Park-road, he took a length of road of about a mile and a half. In the case of Augustus-road he took the line of the houses being erected. The actual result of these two determinations was practically to destroy the bank site, and hence the appeal to the Tribunal. A good deal of evidence was heard, and there was considerable conflict of testimony as to whether the bank building or the houses in Augustus-road were commenced first. In the end the Tribunal confirmed the Superintending Architect's certificate in the Wimbledon Park-road from what were called A to B. In other words, they found that so far as that road was concerned there was no general line beyond the railway-station to the county boundary, thus excluding the bank premises. So far as Augustus-road was concerned, they also confirmed the Superintending Architect's certificate for points A to B, which is to say they found a building line in the road up to the right of way behind the bank premises, but not beyond. This decision excluded the premises of the bank altogether.

Mr. Daldy now asked the Tribunal to state a case on a point of law as to whether the Tribunal were justified in stopping at the point they did in Augustus-road. He contended that by stopping at the point they did the Tribunal had made the small length of Augustus-road, which was the side frontage of the bank, the subject of a general line of building, and had treated it as a "street, part of a street, place, or row of houses." They wanted the High Court to decide whether the Tribunal were entitled so to treat it as a separate street, and if there was any evidence on which they could do it.

Mr. Hudson (Chairman) pointed out that Mr. Daldy was assuming for the purpose of his contention that the Tribunal did treat it as a separate street, but there was nothing in their decision to say that they did so.

Mr. Daldy said it spoke for itself. They wanted to argue that in law it meant a street or part of a street.

Mr. Courthope Munro said his submission was that there was no point of law. It was a question of fact. The Tribunal made two separate orders in the case, and if there was to be a case stated, then it should be as regarded both orders, or otherwise they would be in a hopeless tangle. However important the case might be to the London County Council, yet that did not make it a point of law. The Tribunal was empowered to "confirm, reverse, or vary any order, or make any order they thought fit." In the case before them the Tribunal took the certificate of the Superintending Architect in regard to the Wimbledon Park-road, and they confirmed that order as far as the railway station. Beyond that point to the county boundary the Tribunal said there was no general line of buildings. In the case of Augustus-road the Tribunal also confirmed the Superintending Architect's certificate up to the right of way behind the bank premises, and beyond that said there was no general line of buildings. The Tribunal manifestly had power to do this, and there was no point of law involved.

Mr. Daldy argued that the question of law would be that there was no evidence on which the Tribunal could come to the finding they did. He did not say it was not open to them to treat a long length of road as a separate street, but when it came to a little bit, as in the case of Augustus-road, different considerations arose.

Mr. J. Slater said what Mr. Daldy's contention came to was that they might be right in their decision if the length of the street was long, but wrong if the piece of street was short, although the ground of their decision might be the same.

The Chairman asked if he was right in saying that the point of law, if it was a point of law, arose on this:—(1) Whether the Tribunal was entitled to confirm the Superintending Architect's certificate as between points A and B; and (2) whether the Tribunal was entitled to decide that except as between the said two points there was no general line.

Mr. Daldy assented generally to this proposition.

The Chairman said if there was a point of law the County Council was entitled to ask for a case; but, at the same time, the Tribunal did not want to put on record what purported to be a point of law, but which seemed quite clear. It seemed to him beyond doubt that the Tribunal was entitled to confirm the Architect's certificate.

After further discussion, the Tribunal agreed to state a case in the following terms:—"(*a*) Whether on the facts found by the Tribunal the Tribunal could not lawfully confirm the Superintending Architect's certificates as between the points A and B on the plans annexed to the orders of the Tribunal in Augustus-road and Wimbledon Park-road; and (*b*) whether on the facts found by the Tribunal the Tribunal could not lawfully vary the said certificates by deciding that, except as between the said points, there was no general line of building in Augustus-road between Wimbledon Park-road and Albert-road, and no general line of building in the Wimbledon Park-road between Seymour-road and the county boundary."

Mr. Courthope Munro said his clients felt rather strongly on the matter, as they had already been hung up with regard to that building, and now it looked as if they would be hung up eight or nine months longer.

LAW REPORT.

HIGH COURT OF JUSTICE, CHANCERY DIVISION.
(Before Mr. Justice JOYCE.)

Denman *v.* The Finchley Urban District Council.

THE hearing of the evidence and the arguments of Counsel were concluded in this case last week.

The litigation arose out of the right of plaintiff, Mr. Denman, to connect water-gullies, etc., with the Council's sewer in Clarence-gardens, Dollis Park, and raised an important question to builders and frontagers in the district. Mr. Denman is a builder, and last month sought an injunction to restrain the Council from interfering with his work of joining-up pipes with the sewer in Clarence-gardens. It was then stated that notice had been served upon him under sect. 150 of the Public Health Act, 1875, requiring him to make-up the road. Mr. Denman, being one of the several frontagers, made an arrangement with the other frontagers that he should carry out the work on behalf of all of them. The notice of the Council gave him only six weeks in which to do the work, and when that time had elapsed the work was not completed, the time being quite insufficient. Defendants took up the position that, as the work was not completed within the time, they were entitled to treat the matter as if no notice whatever had, in fact, been given to the plaintiff, and as if his authority to do the work had lapsed. They claimed that they were entitled to do the work themselves and charge the frontagers with the cost of it. The road in question was partly made up, when plaintiff made excavations for the purpose of connecting his surface drains with the sewers. The connexion was, in fact, practically made, and plaintiff contended, if the Council succeeded in sustaining the position they took up in the matter, that the whole of his work done would be destroyed. Plaintiff pleaded that either he should be allowed to make the connexions or the defendant Council.

The result of the controversy was that the Council ultimately agreed to connect up the plaintiff's pipes without prejudice to their legal rights, so that the only issue remaining was, who should pay the costs? To decide the question the matter had to be fully gone into before the Judge.

Mr. Younger, K.C., and Mr. Moritz (instructed by Messrs. Crook, Milnes, & Jones) were Counsel for the plaintiff: Mr. Hughes, K.C., and Mr. Schofield represented the interests of the Council.

Mr. Moritz argued at length that plaintiff had every right to adopt the course he did in requesting the Council to connect up the pipes, and, when they refused, to do the work himself. The Council had not only refused to do the work themselves, or allow the plaintiff, but in addition defendants had held out a threat that if plaintiff persisted in his attitude the Council would not take over the road, however well the work of road-making was done.

Mr. Hughes, on behalf of the Council, put forward three points:—(1) That after the six weeks' time period given in the original notice to plaintiff any licence to interfere with the property (the sewer) of the Council terminated absolutely

(2) That by an arrangement between the parties the notice was abandoned, and any licence given the plaintiff was withdrawn.

(3) Then, assuming that the licence for plaintiff to do the work remained up to a certain date, it was a licence the Council could withdraw, subject to whatever rights the plaintiff had.

The six weeks' period in the notice expired last December, added Counsel, and the parties went on negotiating for months afterwards on the footing that the notice was at an end. In these circumstances the plaintiff was nothing but a trespasser when he broke into the sewer, for he could not justify himself in any way, as there was no licence for him to do it. Therefore, his present action in law was misconceived, and the Council ought to have the costs of this litigation.

Mr. Younger, in reply, submitted that his learned friend's proposition was a very extravagant one when he contended that the notice reserved to the Council the right, after the road had been almost completed, to withdraw the licence from plaintiff, thus rendering valueless the work already expended on the road by the plaintiff, and leaving it in an entirely undrained condition.

His Lordship said it seemed to him that the question he had to determine was this: Was the plaintiff, when the connexion was made on May 4, entitled, as a matter of right, either to make the connexion himself or to have it made? If he was entitled to have the connexion made, then he was in the right. If plaintiff was not entitled, and the Council were in a position to say the plaintiff could not connect the pipes, then the plaintiff was in the wrong.

Mr. Younger: Yes, it would be a technical trespass by the plaintiff.

Mr. Hughes (interposing): I contend that, even assuming the plaintiff was entitled to have the connexion made, he was not justified in doing it himself.

His Lordship did not agree. Here, he said, the plaintiff had tendered the Council the money and asked them to make the connexion, and it did not appear to him (the Judge) that he had to make any distinction whatever as to whether the Council or the plaintiff did it.

Mr. Younger, resuming his argument, said he quite agreed with his Lordship that if the plaintiff had completed the work within the six weeks under the notice served upon him he would have had the right to demand the work to be done by the Council or have done it himself.

Finally his Lordship said he would consider his judgment.

LONDON COUNCILS.

Barking.—A portion of Ripple-road and the present macadam margins of the carriageway in a portion of East-street are to be repaved. The tender of Mr. W. E. Davey, Southend, has been accepted at 1,820*l.* for the erection of an administrative block at the Upney Hospital.

Barnet.—Plans have been passed for Messrs. Lavington Brothers for four houses in Normandy-avenue.

Battersea.—Repairs are to be carried out to the roadways of Ford's-place and Little Europa-place at a cost of 100*l.* The carriageways of six roads are to be repaired with flints at an estimated cost of 750*l.* At a cost of 352*l.* the carriageway of Lavender-gardens is to be made-up with tarred slag macadam.

Berkhamsted.—The Rural District Council has passed plans for Mr. J. G. Williams for the erection of four houses at Tring Station.

Bermondsey.—Plans have been passed for Messrs. F. Smith & Co., Carpenters-road, Stratford, E., on behalf of Messrs. Gilman & Spencer, for the erection of an institute at the rear of Princes-street; also for Mr. G. E. Pengelly, Acting Resident Engineer, Port of London Authority, Surrey Commercial Docks, Rotherhithe, for the erection of a motor ambulance garage at Surrey Commercial Docks.

East Barnet.—Sanction has been received from the Local Government Board to the borrowing of 3,330*l.* for street improvement works in Alverstone-avenue, Cromer-road, Oakhurst-avenue, and Rosslyn-avenue.

East Ham.—A plan has been passed for Mr. F. Hamlett for four houses in Cotswold-gardens. Mr. F. H. Buen has lodged plans for the erection of club buildings in High-street South.

Hackney.—Land in Northwold road has been acquired for the purposes of a branch library, and the Architect has been instructed to prepare plans, etc., of the proposed building. The tender of Mr. George Porter, 54, Millfields-road, Clapton, N.E., has been accepted at 592*l.* 1s. for the supply and delivery of the necessary materials, and for paving the carriageway of part of Cassland-road with old granite setts laid on a bed of Portland cement concrete. The following plans have been passed:—Mr. H. Brooking, on behalf of Mr. A. E. King, buildings, Springfield, Upper Clapton; Mr. F. Collins, ten houses, Springfield-gardens, Upper Clapton; Mr. F. J. Coxhead, maternity hospital on site of Nos. 153-63, Lower Clapton-road; Mr. D. S. Barclay, eight houses, Craven-walk.

Hammersmith.—A portion of Sinclair-road and Maclise-road is to be paved with asphaltic

compound at an estimated cost of 63*l*. Messrs. Prickett & Ellis have lodged plans with the London County Council for a mission hall on the site of Nos. 56 64, Becklow-road. At the last meeting of the Borough Council a motion of Councillor H. T. Johnson was carried to the effect that, in the opinion of the Council, it had become necessary, without further delay, to repave with wood blocks the margins of the carriageways forming the principal tramway routes in the Borough, for the maintenance of which the Council is responsible. It was referred to the Works Committee to consider what steps should be taken to have the work carried out.

Hendon.—A quotation of the Roadament Company, Ltd., has been accepted for laying a trial length of asphalted grouted macadam in Golder's Green-road, at 6s. per super. yard, subject to an agreemens being entered into as to maintenance. Plans submitted by the Surveyor have been approved for making up a portion of Colindale-avenue and the bridge over the Silk Stream, and application is to be made to the Local Government Board for sanction to a loan of 1,534*l*., for carrying out such works. Estimates have been approved for carrying out permanent works at the Retreat and Chequers-alley at an estimated cost of 150*l*. The footpaths in a portion of Parson-street are to be kerbed and paved at an estimated cost of 459*l*. Plans have been approved for making up Rotherwick-road, Golder's Green (the carriageway with tarred macadam), at an estimated cost of 1,956*l*. Widening and improvement works are to be carried out at the junction of Church-road and Brent-street, at an estimated cost of 126*l*.

Heston and Isleworth. Electricity mains are to be extended at an estimated cost of 200*l*. The following plans have been passed: Messrs. P. Chase, Gardener, & Co., houses, Hanworth-road, Hounslow; house, Thornbury-road, Spring-grove, and alterations and additions to No. 96, Bath-road, Hounslow; Messrs. Tapperell & Haase, electric theatre and six shops, Neal's-corner, Hounslow; Messrs. Ash by's Staines Brewery, Ltd., alterations to "Builders' Arms," Derby-road, Hounslow; Mr. A. O. Little, alterations, "Rising Sun" public-house, Cranford-lane, Heston; Messrs. H. Somerford & Son, library, Gumley House, Isleworth; Mr. Frank J. Fisher, alterations to the Ailsa Tavern and Railway Inn, Isleworth. Plans have been by Messrs. P. Chase, Gardener, & Co., for a cinematograph theatre in Staines-road, Hounslow.

Hornsey.—Electricity mains are to be extended at an estimated cost of 4,000*l*. Plans have been passed for Mr. G. W. Booth, Chandos-street, W.C., for carrying out alterations and additions to the "Shepherd's Cot," Shepherd's-hill, Crouch End.

Ilford.—The following plans have been passed:—Mr. A. E. Larner, for Mr. J. Fountain, four houses, Birkbeck-road; Mr. A. T. Haines, four houses, Bradford-road; Mr. A. Grimes, six houses, Francis-avenue; Mr. H. Samsburgh, five houses, Cowley-road; Mr R. R. Shuttleworth, ten houses, Lilac-terrace; Mr. E. T. Dunn, offices, Ilford-hill, five houses, Abbotsford-road, and eight houses, Ashgrove-road.

Islington.—An offer of Messrs. T. Gabriel & Sons, Commercial-road, S.E., at 97*l*. 2s. 6d., has been accepted for the supply of 149,000 creosoted yellow deal blocks for repaving portions of Hornsey-road.

Leyton.—Sewers are to be relaid in various roads of the Borough, and application is to be made to the Local Government Board for sanction to borrow 1,600*l*., the estimated cost of the work. The following plans have been passed:—Mr. J. F. Schofield, gospel hall, etc., corner of Park and Goldsmith roads; Mr. F. J. Coxhead, public hall, Canterbury-road; Messrs. A. & E. Ruggles, three houses, Matlock-road.

Middlesex County Council.—Instructions have been given for the preparation of plans, and tenders are to be invited, for the erection of a school in Bourne-hill, Southgate, for the accommodation of about 800 children.

Poplar.—A plan has been passed for Mr. Albert Phillips for the erection of a cinematograph theatre on the site of Nos. 102-4, East India Dock-road.

St. Pancras.—Electricity mains are to be extended at an estimated cost of 80*l*. A provision is to be made in the next estimates for the repaving of a portion of Gower-street with creosoted deal blocks at an estimated cost of 501*l*.

Southgate.—Wood is to be substituted for granite for the proposed crossings in Green-lanes main road, at an estimated cost of 150*l*. Cannon-road is to be made-up as a new street. The following plans have been passed:—Mr. W. A. Goring, five houses, The Mall; Messrs. W. C. Leak & Son, four houses, Conway-road; London General Omnibus Company, motor garage, Regent's-avenue, Palmer's Green; Messrs. W. S. Simpson & Co., additions at the British Aniline Dye and Chemical Works, Reservoir-road.

Southwark.—Plans have been lodged with the London County Council by Messrs. Field & Sons, 54, Borough High street, S.E., for the erection of a building at the rear of No. 1, Princess-mews, St. George's-road, S.E.

Tottenham.—Barry-avenue and South-grove are to be made-up as new streets.

Watford.—The bridle-path from High street to Albert-road is to be paved with flag paving. The Surveyor has been instructed to prepare plans and estimates for private street works in Field-road, Oxhey-avenue, and Ashby-road. An electricity main is to be laid at an estimated cost of 350*l*. Steps are to be taken for the preparation of plans, estimates, etc., with a view to application being made to the Local Government Board for sanction to a loan of 2,750*l*. for the erection of a Carnegie Library. The following plans have been passed: Messrs. Salter & Co., Rickmansworth, alterations to White Hart public-house, High-street; Mr. J. Bonham, six houses, Bushey Mill-lane; Mrs. Wright, rebuilding warehouse, rear Nos. 157-9, Queen's-road; Mr. T. Callam, four houses, Oxhey-lane; Messrs. Bracey & Clark, three houses, Ashby-road; alterations, Primitive Methodist Church, Queen's road, for the Trustees. A plan has been lodged for a factory on the Cassiobridge Estate for the Baryta Company, Ltd.

CORRESPONDENCE.

The London Building Trades.

SIR,—My attention has been drawn to an inaccurate statement in reference to a matter headed "The London Building Trade Strike Averted," which has appeared in various newspapers, and, in order to remove any erroneous impression, I should be much obliged if you would insert the following official statement in your next issue, viz.:—

No strike notices have been received, nor has any dispute in the trade at present arisen. The London Master Builders' Association, however, has met the representatives of the carpenters and joiners in conference, and agreed to increase the present rate of wages by ½d. per hour in the first week in September, and by a further ½d. per hour in the first week in March, 1913, on the understanding that all other demands made by the carpenters and joiners are withdrawn, and that certain alterations are made in the present working rules.

No negotiations have been entered into with other branches of the trade, but those notices which have been received will be dealt with in due course.

JAMES S. HOLLIDAY,
President, London Master Builders' Association.

Timber Specifications.

SIR,—The specification given in your last issue is a good one, but obviously only intended for work of a very much higher class than the average.

"Finish," of course, should be "Finnish" in first paragraph. Personally, I should leave out the last clause of the last paragraph; and in the first clause of last paragraph should insert 5 per cent. in place of "small proportion."

JOHN E. YERBURY.

SIR,—With the repeal of the timber duties there is no official selection of timber into grades and qualities, and the few stock sizes are now expanded, and scantlings can be obtained from 2 in. by 2 in. to 12 in. by 6 in.

Instead of the ports being few in number, they are now many, and the importer's brands shown by their initials on the ends of the deals are so numerous that it would be impossible to specify with certainty any one of them.

It is therefore necessary to give a general description and specify the country or sea the timber comes from.

Timbers used in buildings have three principal sources of supply.

First, Baltic or Norway ports. This timber—and this includes the sawn scantlings called deals or battens—owing to the cold and stormy climate, is slow grown and of a close texture, and is the best and only timber suitable for outdoor use or as ground joists, or any situation where it is exposed to wet or damp.

As all timber is classed as deal by the trade, it is not necessary to use the botanical names; it is only necessary to specify red or white deal of first quality from Baltic or Norway ports.

In London red deal is called yellow deal. For timber in the log it is usual to specify Memel or Dantzic. Memel is by far the most durable, but is not grown so large as Dantzic.

Second, and by far the largest source of supply comes from the Gulf of Bothnia. Here the nature of the climate, sheltered from the storms and cold, enables a more rapid growth and a softer wood, and as it throws out a large number of branches causes it to be full of knots large and small.

The deals are suitable for any outdoor use, but they and the logs are unfit for use externally or where subject to damp.

It will be sufficient when using this timber to specify what is known as Second Gefle quality, as the brands are very numerous.

Third, White Sea timber. This is a very high-class timber both in red and white, and is the deal most used for good joinery. The knots are small and not numerous, and though sometimes they are dead, this is only the case with overgrown trees.

The white deal stands well, does not warp, and is harder than Baltic deals; and for dressertops and all shelving that requires washing is a favourite wood.

It is usual to specify this as red or white deal of first Onega quality pitch-pine. This is a great favourite, for large scantlings went out of fashion a few years since owing to its failure as ground joists or in damp positions. It is costly to work as joinery. If required for its curl or figure it should be specified, but from unsquared logs, as in the process of squaring the logs for shipment the figured wood is cut away.

Flooring. The 1¼-in. red deal flooring of our forefathers cannot be bettered, and can still be obtained from Baltic ports. Pitch-pine also makes good flooring. Gulf of Bothnia flooring is too soft and knotty.

White Sea white deal flooring is good. Spruce has not been favoured, but I have used large quantities in imported 5-in. widths, and it makes good floors and has been a favourite with my clients, as it looks so clean and it is cheap.

Oak. Architects specify oak, forgetting there are some fifty varieties of this wood on the market. In wainscot oak there are four qualities. It is too long a subject for this letter. I will only say—if you cannot get English use Stetten oak, and never allow American white oak even for sash-frame sills.

Gloucester. ROBERT PHILLIPS.

SIR,—I quite agree with your correspondent, "A Reader," that the usual architect's specification wants modernising. My observations extending for many years on a timber wharf have convinced me that "Baltic" timber is more suitable than "White Sea" for carcassing purposes, being stronger and not so inclined to shake. I should say that unsorted yellow boards of a good Swedish or Finnish shipment would be quite suitable for any roof work.

I am afraid your correspondent would find a difficulty in getting all his flooring of first quality, as the proportions usually shipped by the best shippers are 5 per cent. firsts, 55 per cent. seconds, and 40 per cent. thirds, and many importers do not separate the firsts and seconds when piling away.

With reference to joinery, here again the proportion of first quality deals and battens is small, and consequently there must be a larger quantity of second and third quality used. I submit that for all but the very best work second quality stuff is quite good enough, and many reputable builders even use third.

I take it that the class of building largely determines the class of stuff to be used, and if all architects should insist upon your correspondent's specification it would materially add to the cost of the ordinary building, and there would be a large quantity of second and third quality stuff left on the market.

Three-ply wood is now, I believe, used with advantage in panels, and the price is less than either first quality pine or American whitewood.

If the builder places himself in the hands of a reputable firm of timber merchants, and explains the class of work he is doing, I do not think he will go far wrong.

H. F. PEACOCK.

Victoria Wharf,
Wandsworth Bridge.

EDITORIAL SUMMARY.

The leading article deals with architecture, sculpture, and painting at the Paris Salons.

Our second article is upon the life and work of the late Daniel Hudson Burnham (p. 686).

In Notes columns (p. 686) will be found comments on: "The South African War Memorial"; "Wandsworth Council Baths Committee"; "Street Name-Plates"; "Rising Early in the Morning"; "The Piccadilly Blunder"; "Action by the London Society"; "The Institute Elections."

Some notes on "Picture Exhibitions" are given on p. 688.

The R.I.B.A. Election results appear on p. 688.

An article on the Exhibition of Mural Decorations at Crosby Hall will be found on p. 689

Book notices (p. 690) include: "Butterworth's Workmen's Compensation Cases"; "Keystones of Building"; "The Works of Man."

In "Architectural Societies" (p. 691) brief reports will be found of: "York and Yorkshire Architectural Society"; "Edinburgh Architectural Association"; "Architectural Association of Ireland."

An article on "Building Act Anomalies" appears on p. 692.

In Law Reports (p. 694) a report appears of the case of "Denman *v.* Finchley Urban District Council"—frontager's action against the Council.

In Correspondence columns (p. 695) will be found letters on: "Timber Specifications."

The Illustrated Monthly Review of Construction (p. 697) includes: "New Premises for Messrs. Whiteley's"; "Bungalow, Howth, Dublin"; "The Bovis Window"; Notes, etc.

The Building Trade Section (p. 705) includes: "The Insurance Act"; "Strikes"; "Registration of Title"; "Concrete-Mixers"; "Builders Accident Insurance."

MEETINGS.

SATURDAY, JUNE 15.

The Carpenters' Company, London-wall.—Dinner to the Incorporated British Institute of Certified Carpenters in the Hall of the Company. 5.30 p.m.

TUESDAY, JUNE 18.

Crosby Hall, Cheyne-walk, Chelsea.—Professor Selwyn Image and others will speak on "The Future of Mural Decoration." 8.15 p.m.

THURSDAY, JUNE 20.

The Institution of Municipal Engineers.—Western district meeting at Cinderford

The Society of Antiquaries.—8.30 p.m.

ILLUSTRATIONS.

Nos. 48-52, Fleet-street, E.C.

THE building is designed to accommodate the Norwich Union Fire, Life, and Accident Insurance Societies, and takes the place of similar premises (No. 50, Fleet-street), erected about 1840, after the designs of Mr. Beazley.

Rebuilding has been necessitated by the widening of Fleet-street, where, at this point, some 10 ft. to 12 ft. of depth is taken from the old buildings. In order to provide additional area, the sites on either side of the building have been acquired, and the new building will have a frontage to Fleet-street of about 100 ft.

As will be seen by reference to the plan, the twin archway entrances give access—the one on the east to the Fire and Accident Departments, and the one on the west to the Life Department and to Serjeant's Inn. There is also an entrance from Serjeant's Inn, giving access by the main staircase and lift to the upper floors. The whole of the external elevations, including those in Serjeant's Inn, will be carried out in Portland stone.

The building consists of lower ground, ground, and three floors, with fourth floor over part. The whole of the ground floor and parts of the lower ground floor are required for the general offices; the first floor is devoted to managers' rooms, and board-room, and the greater part of the two upper floors is devoted to surveyors, accountants, inspectors, and others.

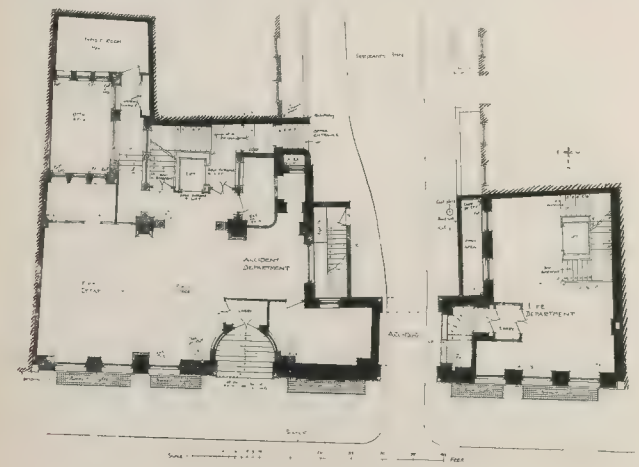
The building will be heated by radiators and ventilated as far as possible without mechanical assistance.

The shape of the site is such that it has been possible to arrange for all the rooms to have windows opening direct to the outer air, the open area at the back being enclosed on three sides only. Thus there is no lighting or ventilation into wells.

The fact that the entrance to Serjeant's Inn was not central on the site raised some difficulty, and an attempt was made to substitute for the present archway an entrance, nearly double the width, in the centre of the elevation, with foot pavements on either side of the roadway under the arch and entrances from the pavements into the offices; but opposition from the occupiers in Serjeant's Inn rendered this scheme so difficult that, although it had been completed, quantities published, and tenders obtained, it was decided to remodel the design, keeping the entrance to Serjeant's Inn in its present position.

Some may think that a valuable improvement has been lost, but as the right of way is a private one it would be difficult to alter it without full consent.

Messrs. Howell & Brooks, 4, Queen Victoria-street, E.C., are the architects.



Nos. 48-52, Fleet-street.
Messrs. Howell & Brooks, Architects.

Business Premises, Queen's-road.

Two of our plates this week are devoted to the building in Bayswater, erected for Messrs. Whiteley, Ltd., by Messrs. Belcher & Joass. The "Elevation to Queen's-road" drawing is shown in the present Royal Academy Exhibition. We refer at length to the building in the article beginning on the next page.

COMPETITION NEWS.

A list of current Competitions is printed on page 709.

Council Offices, Portland.

Mr. A. Needham Wilson was the assessor in this competition. The first premium (50*l.*) was awarded to Messrs. Spier & Beavan, Borough Chambers, Wharton-street, Cardiff, and the second premium (10*l.*) to Mr. Ernest E. Fetch, 20, John-street, Adelphi. The designs were exhibited at the Wesleyan Schools, Portland, on May 30 and 31.

Bandstand, St. Leonards-on Sea.

The competition for a sunk arena and bandstand in the lower Warrior-square Gardens, St. Leonards-on-Sea, has been decided. Mr. H. W. Wills, A.R.I.B.A. was the assessor. The first premium (fifteen guineas) has been awarded to Mr. Philip H. Tree, F.R.I.B.A., 59, London-road, St. Leonards-on-Sea; and the second premium (ten guineas) to Mr. C. G. Boutcher, 40, Great James-street, Bedford-row, London.

Baths at Wombwell.

The first premium (40*l.*) in this competition has been awarded to Mr. Harold Burgess, Queen Anne's-chambers, Westminster, who has been appointed to carry out the work. The second premium (30*l.*) has been won by Messrs. C. Harrison Townsend, F.R.I.B.A., and Arthur F. Bryan, A.R.I.B.A., 32, Queen's-road, St. John's Wood, and the third premium (20*l.*) goes to Messrs. Jas. G. Bowden and C. F. Moxon, of Westminster and Barnsley. The designs are to be exhibited at the Wombwell Library, from June 17 to 22.

Street Name-Plates.

In connexion with the recent Conference on this subject, it is possible that a competition may be held for the provision of a good design for general use.

FIFTY YEARS AGO.

From the *Builder* of June 14, 1862.

Atlantic Telegraph.

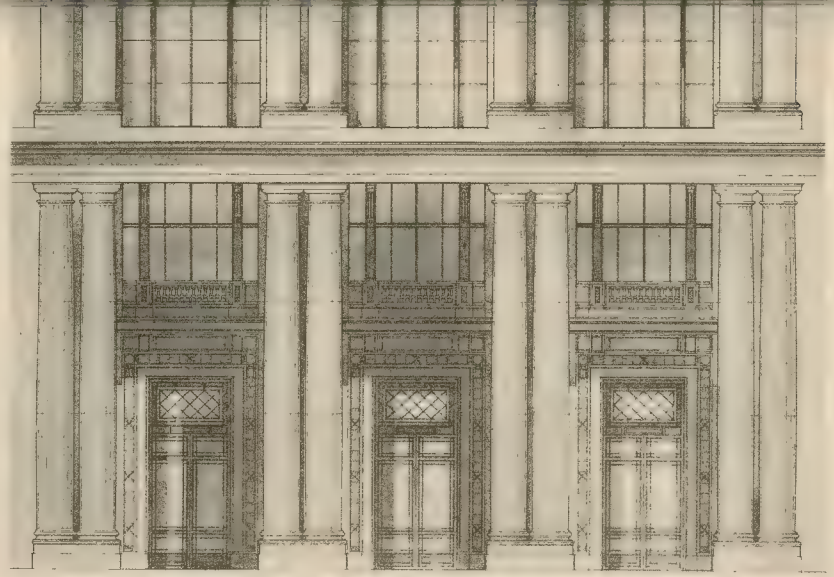
THE amount of assistance which the Government will lend to the company formed to lay a submarine telegraph-cable across the Atlantic has now assumed a definite form. The Government agrees to make a new and more complete survey of the bed of the Atlantic, and will also grant the use of vessels to lay the cable. It appears that the original agreement to pay 14,000*l.* a year to the Telegraph Company so long as the cable is working still exists; and the Government will not, in a pecuniary way, go further than the arrangement.

FLATS FOR WORKING MEN

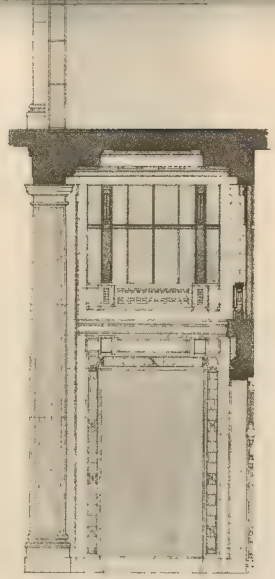
The London Housing Society, Ltd., 49, Euston-road, formed under the Industrial and Provident Societies Act, 1893, for the purpose of providing improved housing accommodation for the industrial classes, are arranging for the further issue of shares. The directors are the Ven. W. M. Sinclair, D.D., late Archdeacon of London, Mr. P. S. Robins, of Messrs. Robins & Hine, surveyors, and Mr. F. Knollys. A new site of over half an acre, with a frontage of 110 ft. to Judd-street, has been acquired recently, and the new buildings will provide accommodation for about 186 families.

WILLIAM WHITELEY LTD.
NEW PREMISES QUEENS ROAD
DETAIL OF CENTRE OF FACADE

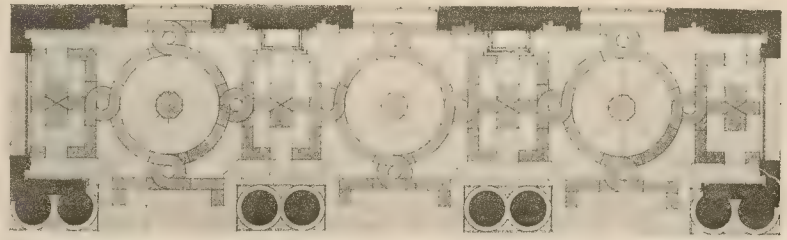




ELEVATION



SECTION



PLAN

JOHN BELCHER R.A. & J.J.JOASS ARCHTS.
9 CLIFFORD STREET W.

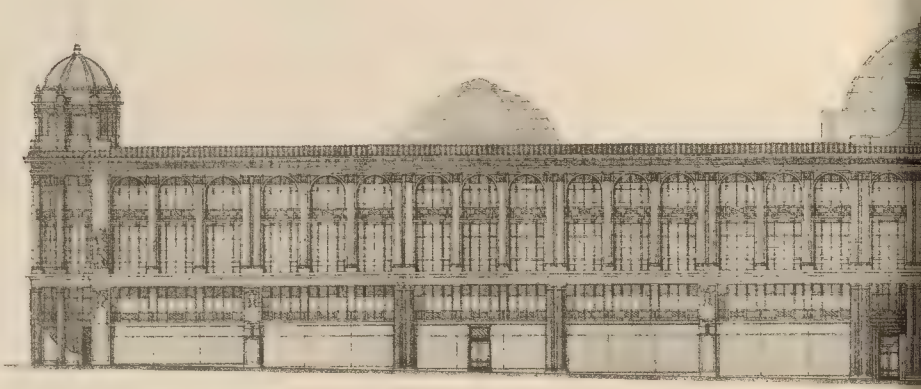
SCALE 0 1 2 3 4 5 10 20 FEET

"INK-PHOTO" SPRAGUE & Co Ltd 69 & 70, DEAN STREET, SOHO, W

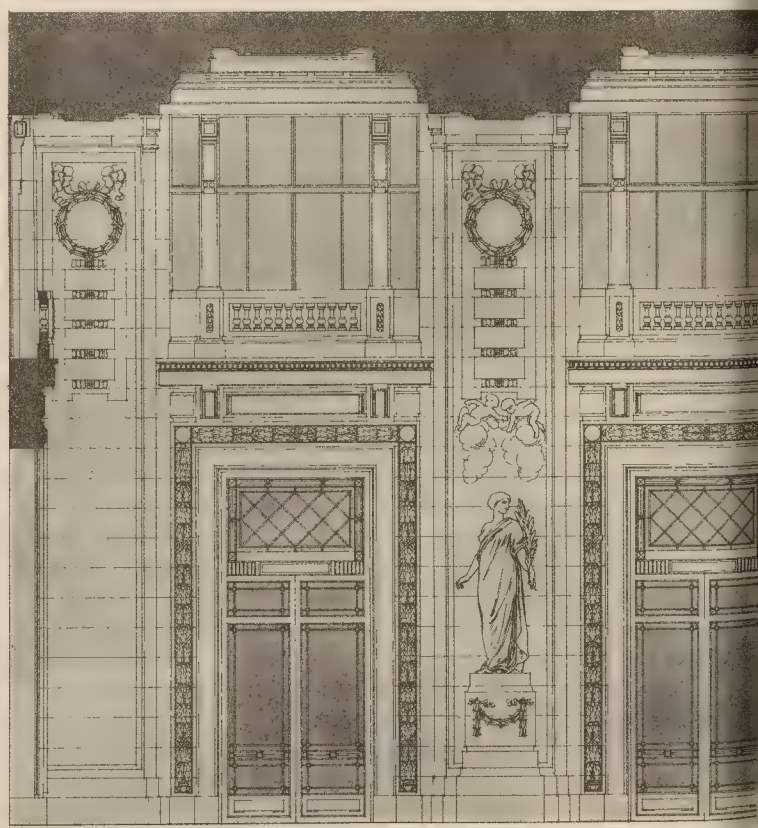
BUSINESS PREMISES, QUEENS ROAD, W.—Messrs. J. Belcher, R.A., & J. J. Joass, A.R.I.B.A., Architects.

WILLIAM WHITELEY LTD.
NEW PREMISES QUEENS ROAD

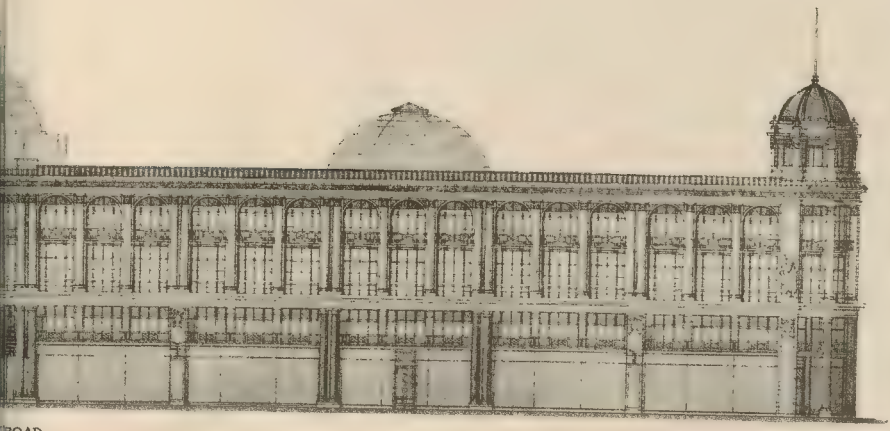
JOHN BELCHER, R.A. & J.J. JOASS ARCHTS.
9 CLIFFORD STREET W.



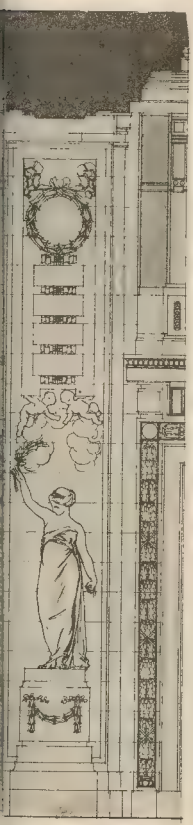
ELEVATION

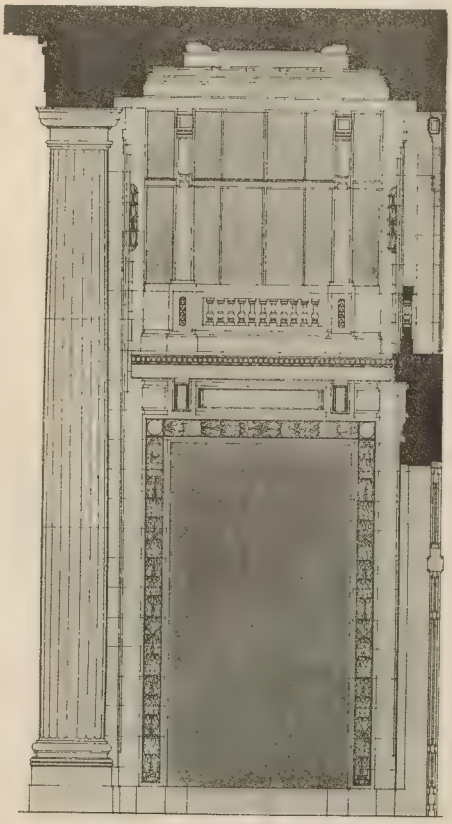


DETAIL OF MAIN ENTRANCE ELEVATION



ROAD





SECTION

OF FNT

"INK PHOTO" SPRAGUE & Co LTD 69 & 70, DEAN STREET, SOHO, W

HER, R.A., & J. J. JOASS, A.R.I.B.A., ARCHITECTS.





"INK-PHOTO" SPRAGUE & Co LTD 69 & 70, DEAN STREET, SOHO, W

48-52, FLEET STREET.—Messrs. Howell & Brooks, Architects.

MONTHLY REVIEW · *of* · CONSTRUCTION.



Fig. 1. Octagonal Hall.

MESSRS. WHITELEY'S NEW PREMISES.—I.

NEARLY fifty years ago the late William Whiteley laid the foundation of the important business still bearing s name by opening a small drapery hop in Westbourne-grove. Successive exten- ons led to the development of the under- king until a long series of shops became ecessary for the conduct of business in that horoughfare.

After a time the demand for additional commodation was met by the erection of a w building in Queen's-road, and in October, 910, the foundation-stone of the building ecently completed in the same road was laid the Mayor of Paddington.

The three blocks of buildings mentioned are hown by the site plan reproduced in Fig. 2, hich is given with the object of enabling the ader to start with a clear idea as to the relative ositions of the three portions.

Part of the old premises in Westbourne-grove e at present occupied, but we understand at the various shops will ultimately be let approved tenants.

The old part of the Queen's-road building as been remodelled inside and connected ith the new premises in Queen's-road. At later date the old part will be provided with w façades on Queen's-road and Douglas-place, estbourne-grove, and the main frontage will en present the appearance shown by the evation on one of the accompanying plates.

Workrooms are provided in the wing pro- ting from the back of the new premises and sidential accommodation for a portion of the aff in a row of private houses in Porchester- rdens.

The new building measures about 360 ft. ng, the total length of 540 ft. being contem- ated by the complete project, this being, of urse, the collective length of the old and w buildings on Queen's-road. The new emises extend back for a depth of 175 ft., proximately, and the main parapet is at the erage height of 70 ft. above pavement level. The building includes four floors and a terrace of open to the public, and a basement devoted accommodation for power plant, machinery, d various administrative departments.

As plans and sections showing the arrange- ment and general design of the interior are not available for publication, it is somewhat difficult to make these features perfectly clear. It is hoped, however, that the following description, read in conjunction with the elevation to Queen's-road and the steelwork plans in Figs. 5 and 6, will be sufficiently intelligible.

The main entrance forming the central feature of the complete project gives access to a spacious vestibule, beyond which is a rotunda of about 53 ft. diameter inside the galleries and extending to the top of the building, where it is covered by a glazed dome of 67 ft. diameter, rising to the height of 150 ft. above street level.

Midway between the rotunda and Porchester- gardens is an octagonal hall, similar in general arrangement to the rotunda and covered by an octagonal glazed dome above main roof level, the hall measuring about 50 ft. by 42 ft. inside the galleries.

At the junction of Queen's-road and Por- chester-gardens there is a secondary entrance beneath the corner turret, this entrance opening into a circular hall, whence the public gain access to the show-rooms beyond. An entrance from Queen's-road opens directly into the octagonal hall, and another is provided about the middle of the Porchester-gardens façade. The staff entrance is at the western end of the same façade.

All four floors of the building are devoted to the numerous branches of commerce under- taken by the firm, and the comfort and con- venience of customers and visitors has been most carefully considered.

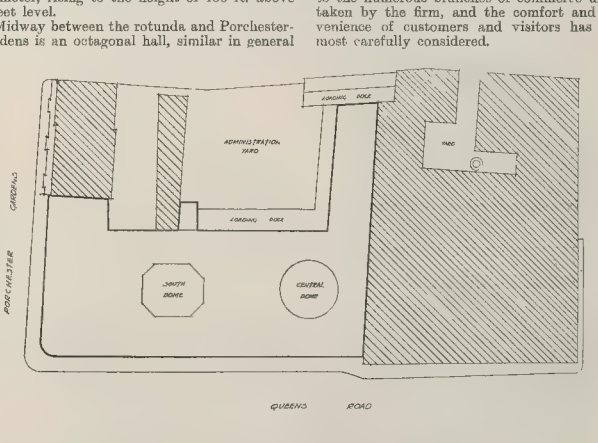


Fig. 2. Messrs. Whiteley's New Premises: Site Plan.

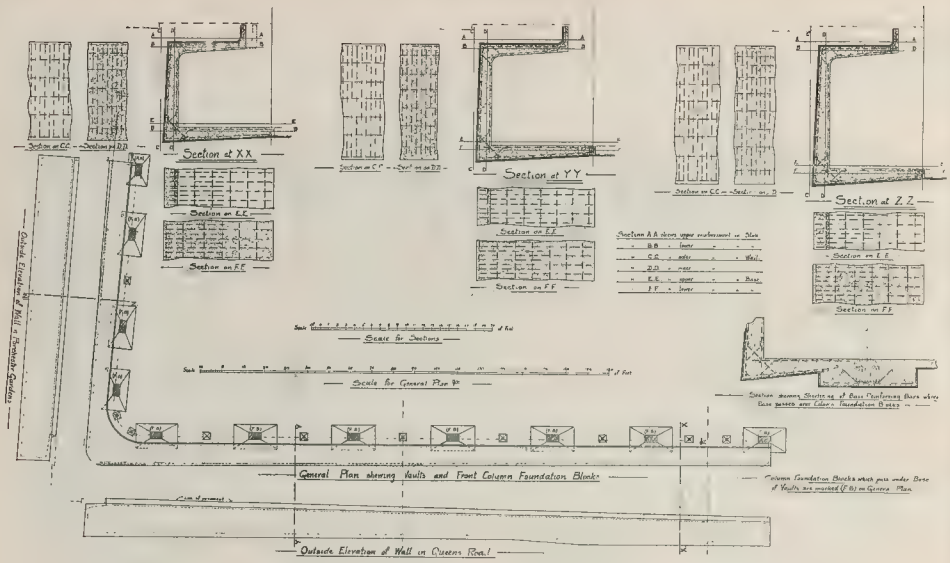


Fig. 3. Part Plan of Footings and Details of Retaining Walls.

Recognising the fact that shopping as regarded by the fair sex is an important function that must not be hurried through or performed without careful deliberation, the management have provided well-appointed refreshment-rooms, with reading and rest rooms for ladies, a recreation-room for children, and a smoking-room and lounge where gentlemen may while away the hours occupied by their wives or lady relatives in the technical details of purchases outside the province of the mere man.

Another attractive feature of the premises is an Italian garden on the terrace roof, which will form a pleasant retreat in summer-time.

As many of our readers are doubtless aware, the new premises were designed by Mr. John Belcher, R.A., and Mr. J. J. Joass, A.R.I.B.A., who have very skilfully reconciled the somewhat conflicting requirements involved by the desire of the firm for a building embodying good architecture with adequate facilities for the display of goods in the shop-windows and elsewhere.

Regarded as a whole, the main front is a harmonious and effective composition marred only by the appearance of inadequate support in the lower story for the line of massive columns above. The architects have evidently made a vigorous attempt to break away from the practice of designing shop buildings so that a monumental structure of masonry has the aspect of resting upon the unsubstantial support afforded by a series of plate-glass windows. In the present case, while the inexorable demands for window space in excess of that dictated by architectural considerations have not been entirely overcome, the bold treatment of the main and corner entrances and the introduction of massive stone columns marking the departmental sections of the establishment are features deserving appreciative notice.

From the standpoint of construction, and therefore from that of architecture, the weakest characteristic of the façade is the manner in which the intermediate upper columns in each bay have the aspect of being carried by a stone beam of 40 ft. clear span, and made up of numerous blocks jointed together. It is perfectly clear that a member of the kind could not possibly perform the duty which it appears to discharge, and so in this respect the architecture of the façade is not in agreement with its ostensible construction.

The main entrance, of which we give enlarged details on our plates, has three doorways approached through four pairs of Cornish grey granite fluted columns 30 ft. high by 3 ft. in diameter. These, together with the moulded caps and bases, the heavy granite piers to the doorways, the polished doorways, and similar granite work in the lower part of the façades were quarried and dressed by Messrs. John Freeman, Sons, & Co., Ltd., of Penryn, the whole of the granite, equal to some 6,500 cubic ft., having been prepared within three months.

The columns are continued upward in Portland stone, which was employed through out the upper part of the façades, and the entrance bay is surmounted by a pyramidal tower.

The Porchester-gardens entrance with granite columns and details is another noteworthy detail, the treatment of the corner harmonising admirably with the design of the dome-covered turret above the main roof.

The granite carving was executed by Messrs. W. Cullis & Co., and the sculptural work in Portland stone by Mr. H. H. Martin, Mr. A. Broadbent, and Mr. J. Crosland McLure.

The Nine Elms Stone Masonry Works, Ltd., and Messrs. Holloway Bros. (London), Ltd., were responsible for the supply and execution of the Portland stonework, the coping to the walls was executed by the Patent Impervious Stone Company, and the geometrical pattern paving at all the entrances was prepared by Messrs. J. Whitehead & Sons, in Penteli and Derbyshire Fossil marbles.

The most striking architectural features of the interior are the rotunda in line with the main entrance, and the analogous octagonal hall between the rotunda and Porchester-gardens. Although openings of the kind extending throughout a building are undesirable from the point of view of fire-resisting construction, it is equally certain that in the present case they lend dignity to the establishment and have the effect of distributing abundant light from the glazed domes above. Moreover, the galleries around the openings are most convenient for visitors, and two

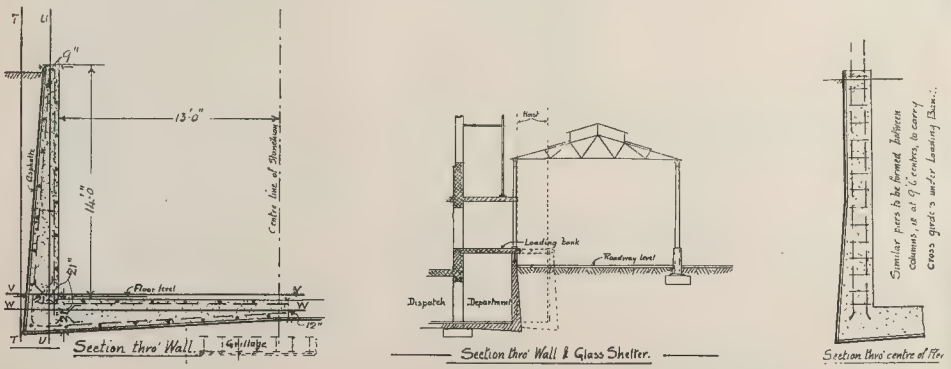


Fig. 4. Section through Back Wall and Yard, and Details of Retaining Wall Construction.

them afford excellent accommodation for the tea-rooms, as shown in Fig. 1, the restaurant being on the upper gallery of the rotunda.

In the rotunda a double staircase of elliptical form, with balcony at the top of the first flight, leads from the ground floor to the first floor. This stairway is in cast-iron and was supplied by Messrs. Walter MacFarlane & Co., the treads being in Penteli marble prepared and laid by Messrs. J. Whitehead & Sons. Two rectangular main stairways were supplied by The Crittall Manufacturing Company, Ltd.

An effective feature of the rotunda and the other hall is constituted by the two series of "Siena" scagliola marble column casings for the steel stanchions extending from the ground floor up to the domes. There are seventy-two of these casings, all fitted by Messrs. Bellman, Ivey, & Carter, Ltd., who also executed the enriched capitals and moulded bases, bronzed with pure copper by special process.

Structurally considered, the new building is of the steel-frame type, the entire weight of the stonework, brickwork, floors, and other details being taken by steel joists, girders, wall lintels, and columns.

The apparently massive stone columns and masonry on the exterior are in reality nothing but architectural masks concealing the actual construction, and the interior walls dividing the building into seven distinct sections, for the limitation of fire risks and for convenience of management, are similarly supported by the steel skeleton.

The finished structure, however, conveys little if any idea of its essential nature. In addition to the materials already mentioned the steel frame is enclosed by large quantities of building materials, including Fletton bricks supplied by the London Brick Company, "Impervit" ivory-glazed bricks and "Shepwood" partition bricks by the Leeds Fireclay Company, Ltd., wall tiles and terrazzo flooring by Mr. Lewis Bennett, roof tiles by the Lavington Brick and Tile Works, and artificial stone in the form of paving and stairs by the Patent Impervious Stone Company. Asphalt for the damp-courses was supplied by Messrs. Lawford & Co., and the plasterwork, covering a surface of about a million square feet, was executed by Messrs. B. H. Johnson & Sons and Messrs. G. & A. Brown, Ltd.

The interior fittings, furniture, and various fixtures were supplied by well-known specialist firms, among whom may be mentioned—Messrs. J. W. Singer & Sons, Ltd., and Messrs. Henry Hope & Sons, Ltd. (bronze doors), the Bostwick Gate Company, Ltd. (folding gates), Messrs. W. T. Allen & Co. (railings), Mr. John P. White (treillage in the restaurant and roof garden), Messrs. F. Sage & Co., Ltd. (bronze shop fronts and fittings in four departments), The Crittall Manufacturing Company, Ltd. (doors and window-sashes), Messrs. Harris & Sheldon (fittings in four departments, including some fine examples of cabinet-work in French walnut), Messrs. Courtenay, Pope, & Co. (fittings in two departments), Messrs. S. Haskins & Bros., Ltd. (various fittings), Messrs. Marsh, Jones, & Cribb (Austrian oak fittings in the book department), the Bath Cabinet Makers Company, Ltd. (various fittings), Milner's Safe Company, Ltd. (locks), Messrs. Carter & Aynsley, Ltd., Messrs. E. Showell & Sons, Ltd., and Mr. James Gibbons (door furniture). No fewer than 2,110 showcases have been placed in the new premises for the display of goods.

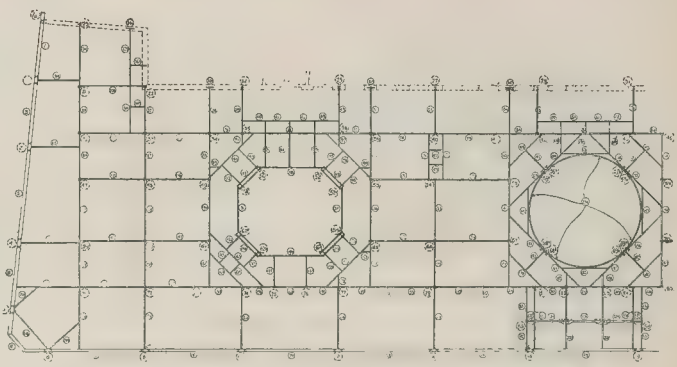


Fig. 6. Steelwork at Upper Floor Levels (Typical).

Foundations and Retaining Walls.

We are informed that the work of excavation on the site involved the removal of more than 90,000 cubic yds. of material, and that some 9,000 cubic yds. of concrete have been used as foundations and otherwise in the basement story.

The bulk of the foundations consist of extensive grillages formed of rolled-steel sections embedded in concrete and intended for the support of the exterior and interior columns by which the load of the building and its contents is transmitted to the ground.

In Fig. 3 may be seen the arrangement of the column footings along part of Queen's-road and Porchester-gardens, but the dimensions there shown were subsequently altered in consequence of the decision to adopt steel grillages in place of reinforced concrete footings, as originally intended.

The same drawing (Fig. 3) contains typical sections of the reinforced concrete retaining walls along the frontages. These comprise three elements—(*a*) an extended base supporting the wall proper and forming part of the basement floor; (*b*) the retaining wall proper; and (*c*) a cantilever projection carrying the street pavement and extending from the kerb to a pavement light outside the building line.

This ingenious application of reinforced concrete was designed by Mr. Alexander Drew, the consulting structural engineer acting with the architects, and was carried out under his direction by Messrs. Holloway Bros., the general building contractors.

Thanks to the small thickness of the retaining wall and of the upper cantilever projection, an important area has been added to the basement floor. The sections show clearly the disposition of the reinforcement and render detailed description unnecessary.

Fig. 4 is a section through the back wall of the new premises, showing the retaining wall construction, providing space beneath the loading platform and accommodation for exterior hoists connecting the dispatch department with the upper stories of the building. The same drawing includes an enlarged section giving details of the reinforced concrete work.

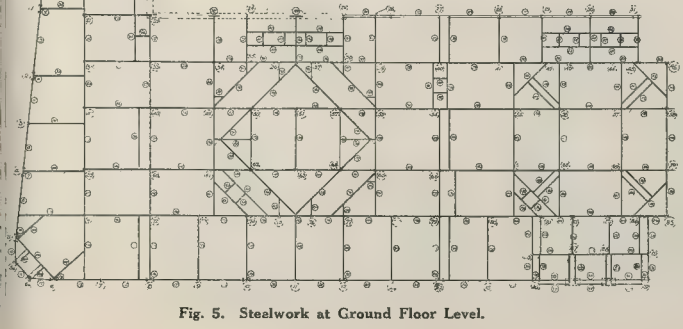


Fig. 5. Steelwork at Ground Floor Level.

Steel Construction.

The whole of the steelwork was designed by Mr. Drew, the consulting engineer, and the contract for supplying and erecting the skeleton of the building was undertaken by Messrs. Dorman, Long, & Co., Ltd., of Middlesbrough.

The steelwork as well as the glazing of the domes was executed by the British Challenge Glazine Company, Ltd., and the steel-frame structure for the exterior lifts and the roofing over the dispatching yard were constructed by Messrs. Powers & Deane Ransomes, Ltd.

Figs. 5 and 6 will serve the purpose of giving a general idea of the main skeleton of the new premises. The former is a key plan of the steelwork at ground-floor level, and the latter a typical plan applying approximately to the upper floors. In these plans and all other drawings prepared by the consulting engineer the beams are denoted by numbers inscribed in a circle, and the stanchions by numbers inscribed in a broken circle. The reference numbers appeared on the corresponding sheets of details wherein the column loads, beam reactions, and other calculated particulars were given for the purpose of facilitating the work of the contractors.

Fig. 6 will enable the reader to trace the positions of the supports for the interior walls dividing the building into the seven distinct sections already mentioned, and is also of interest as showing the nature of the framework carrying the galleries around the rotunda and the octagonal opening fulfilling a similar purpose.

To describe and illustrate the framework adequately would be a somewhat lengthy operation, and the result would probably be wearisome to our readers. Therefore we simply refer to a few specially interesting details of the construction.

In Fig. 7 are shown two plans of the construction which forms a connecting-link between the old portion of the Queen's-road building and what was at first intended to be the end of the new premises. For practical reasons it was afterwards decided to continue the new work so as to include the bay in question. The left-hand plan shows the old party walls and indicates the underpinning necessitated below the basement floor level, and the right-hand plan is typical of the construction in the upper stories. The girders are securely anchored into the party wall by pieces of rolled-steel I-beam, from 3 ft. to 4 ft. 6 in. long, as indicated, and the façade between stanchion No. 19 and the old party wall is of temporary character, having been constructed so that it may be removed without difficulty when the time comes for the building of the new frontages along the old portion of the premises, in accordance with the complete scheme of the architects.

Fig. 8 contains a selection of details showing the methods adopted for supporting the masonry cornice at second-floor level. The part plan

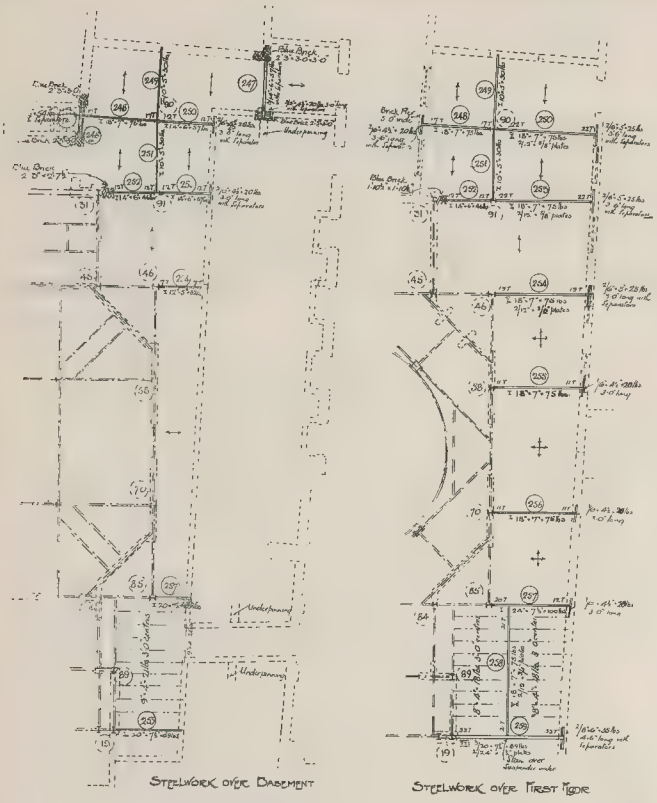


Fig. 7. Plans showing connexion between Old and New Buildings.

at the left-hand bottom corner of the drawing explains the construction above the entrance at the junction of Queen's-road and Porchester-gardens. The corner curve is formed by two channel bars bent to the required shape and connected by diaphragms of I-section at intervals, the curved lintel so constituted being carried at each end by one of the cantilever girders in the façade.

These girders are part of the series extending along both frontages of the premises, the spans ranging from 45 ft. to 55 ft., according to position, and the largest member of the kind weighs over 30 tons. The girders are provided with hangers and brackets for support of the stonework as illustrated in the details reproduced, and the stanchions are fitted with brackets by means of which the column casings are attached in such manner that each piece of stone is directly supported from the steelwork.

Therefore the stone columns, despite their aspect of massive strength, carry no weight, and the individual sections of which they are composed do not even support the weight of sections above them.

Fig. 9 contains a plan and sections giving details of the steelwork at roof level for support of the corner turret and dome, the turret itself being built in masonry. The half plan shows the general arrangement of the steel framing, an interesting feature of this being the manner in which the segment outside the diagonal girder, forming a chord between stanchions Nos. 5 and 6, is carried by suspended cantilevers, as represented in the section on line A–A. This is certainly an unusual, if not entirely novel, application of the cantilever principle in building construction. As elsewhere, the steelwork shown in this drawing is utilised for the suspension of stone by hangers, as well as for its support in the customary way.

Fig. 10 is a section illustrating the methods adopted for supporting the top cornice of the new premises. It will be noticed that the upper courses projecting in cantilever are supported on a block of concrete above the girder and on a block of stone suspended by hangers carried by the same girder, with which are connected anchor straps of copper at intervals of 2 ft. apart for holding down the inner side of the upper courses of the cornice.

The course immediately below the girder represented in section is also suspended from that member by copper straps or hooks at each joint, and, although appearing to act as a support for the cornice, it really has no duty to perform beyond that of harmonising with the general architectural scheme.

The girder is embedded in concrete which is monolithic with that in the "Fram" flooring, the reinforcing bars in this being hooked over the top flange of one of the I-beams in the girder for security of anchorage.

The total amount of metal in the skeleton is approximately 2,500 tons, and the rapidity of construction rendered possible by the steel-frame method of building is denoted by the fact that the structure was formally opened to the public within thirteen months after the laying of the foundation-stone.

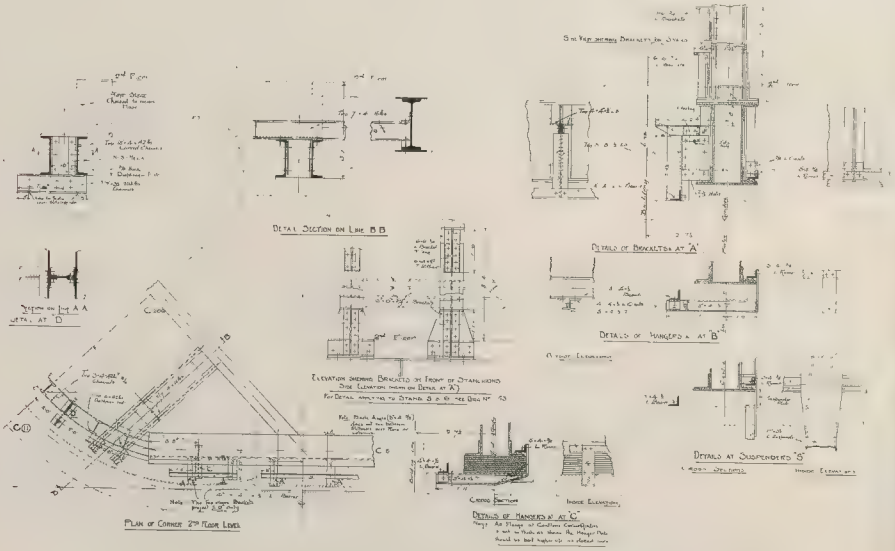


Fig. 8. Details showing methods of supporting Masonry Work.

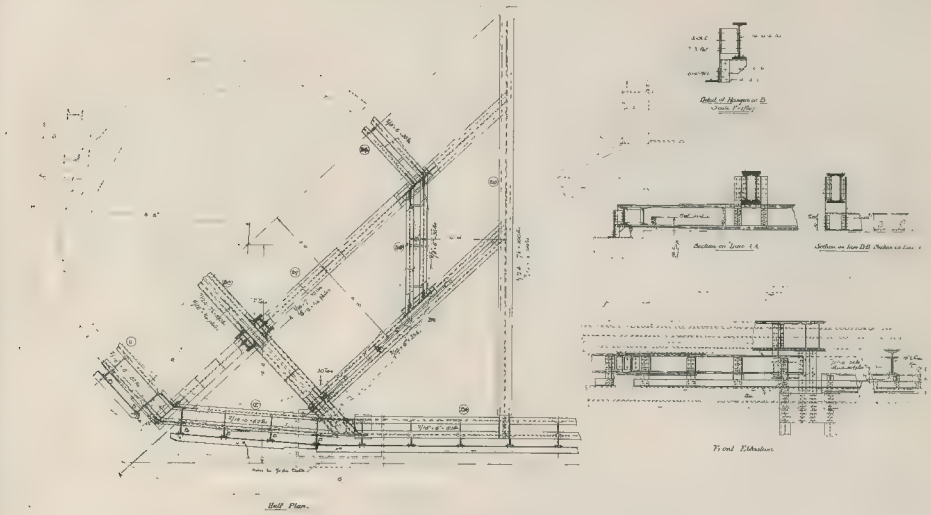


Fig. 9. Plan and Details of Supports for Corner Turret.

Personal.

As mentioned previously, the architects ere Messrs. John Belcher, R.A., and J. J. oass, F.R.I.B.A. Mr. Alexander Drew, I.I.Mech.E., was the consulting engineer esponsible for the design of the steel and einforced concrete work, and for the laying- at of the engineering installations generally, ith the exception of the sanitary arrangements, hich were under the control of Messrs. Corby Boyce, the consulting sanitary engineers.

The quantity surveyors were Messrs. Gleed & elcher and Messrs. Gardiner & Theobald, id the clerk of works was Mr. W. Gunning.

Messrs. Holloway Bros. (London), Ltd., were ie general building contractors. Among the umerous specialist firms acting as sub-con- actors some have been mentioned in the resent article, and others will be referred to succeeding articles dealing with special atures of construction and with the engineering id sanitary equipment of the building.

IY-RIB SYSTEM BUNGALOW AT HOWTH, CO. DUBLIN.

SITUATED at the north-east extremity of ublin Bay, the rocky peninsula of Howth almost entirely surrounded by the sea, and, ving escaped the disfigurements caused rectly and indirectly by railway and tram nes on the southern side of the bay, is well ited for the erection of residential buildings ch as that described in the present article.

The bungalow to which we direct attention is designed by Messrs. Chillingworth & Levie, vil engineers and architects, of Cork, the ntractors being Messrs. Murphy Brothers, the same city.

The foundations are of concrete deposited in nches excavated in the sloping site, and m them rises the superstructure, comprising terior walls and partition walls of cement d lime plaster applied on Hy-Rib steel lathing, th wall columns and main beams of reinforced ncrete, the floors, roof framing, and interior tings being of timber. The Hy-Rib and other nforcement was supplied by the Trussed ncrete Steel Company, Ltd., of Westminster. Figs. 1 and 2 contain elevations and sections, hich serve the double purpose of illustrating e general design and of making clear some tails of the construction.

As shown by Figs. 3 and 4, the bungalow has ree rooms on the ground floor, in addition to mestic offices and servant's bedroom, and three drooms and a bathroom on the first floor.

As we have previously described and illus- ted all varieties of the reinforcement made the Trussed Concrete Steel Company, we d only say of the Hy-Rib lathing that it is duced from sheet steel perforated and nipulated so that each unit of the material comprises a succession of corrugated lathing-panels separated by rigid, high studding ribs of unperforated metal.

The construction of the outer walls of the bungalow will be readily gathered from the following notes.

All the mass concrete in the foundation footings and rising walls to floor or other level consists of concrete mixed in the proportions of 1 part Portland cement, $2\frac{1}{2}$ parts washed sharp sand, and 5 parts of aggregate.

Corner and intermediate wall columns of reinforced concrete include $\frac{5}{8}$-in. and $\frac{1}{2}$-in. Kahn rib bars with circumferential hooping of $\frac{3}{16}$-in. round steel, wired in position at distances of 15 in. apart. The longitudinal bars are embedded in the concrete below wall-plate level to the depth of 15 in. for corner columns, and 12 in. for intermediate columns, as shown by the sectional elevations, Fig. 5.

It should be noted that the circumferential hoops are only used in some of the columns, as represented in Fig. 6 by horizontal lines, the other columns having rib bars alone.

At either side of the columns 6-in. by 2-in. timber uprights are placed, and to these are spiked 6-in. by 2-in. head-pieces.

Where over door and window openings, the head-pieces are supported by the reinforced concrete columns, the space between the frame and head being shuttered by a light board. The timber uprights remain permanently in place, and were employed as shuttering at two sides of the columns.

After the column timbering had been erected, the window and door frames were set in position, and temporary pieces of timber, 5 in. by $1\frac{1}{2}$ in., were fixed at the reveals so as to form with the frame the shuttering at one side of those columns which adjoin doors and windows.

The next operation was to attach the exterior layer of Hy-Rib lathing to the 6-in. by 2-in. uprights by $2\frac{1}{2}$-in. galvanised-iron staples at $10\frac{1}{2}$-in. intervals, and by wiring where the sheets meet at corners and over windows.

When the lathing had been fixed all over the exterior of the building it was rendered on the inside with plaster composed of Portland cement, sand, and lime paste.

Lathing was then similarly attached all over the inside of the enclosing walls to be formed, the lathing then constituting the shuttering for the two remaining sides of the reinforced concrete columns, which were next completed

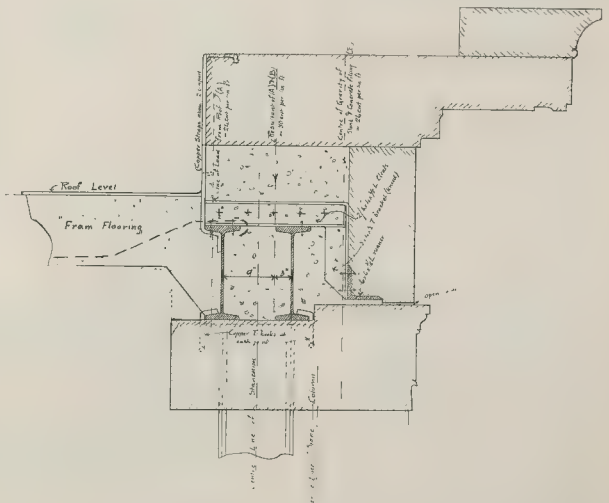


Fig. 10. Method of Supporting Top Cornice.



Fig. 1.

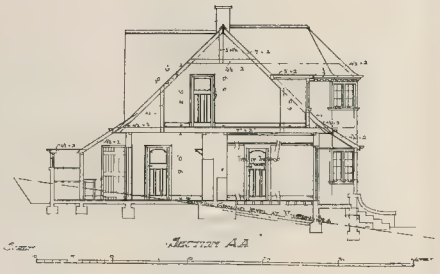


Fig. 2.

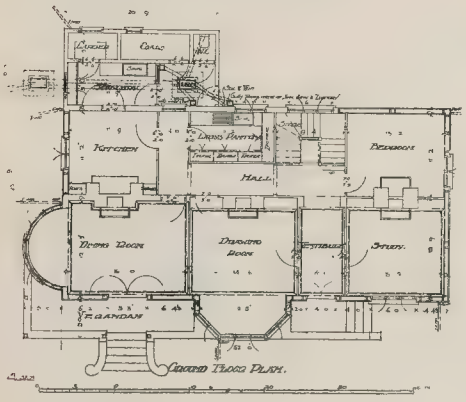


Fig. 3.

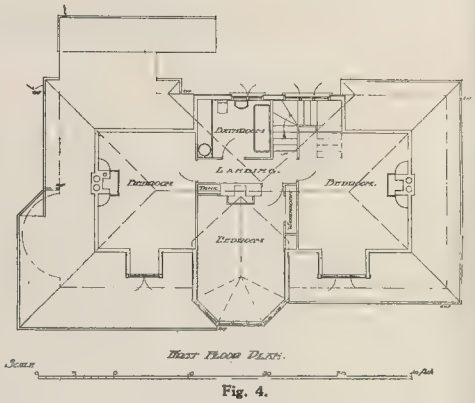
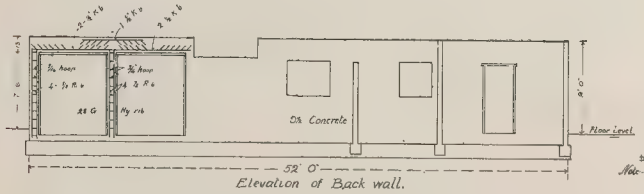
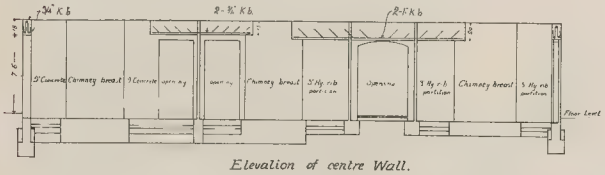
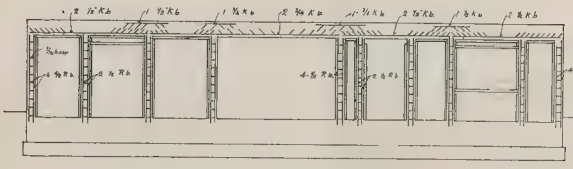


Fig. 4.





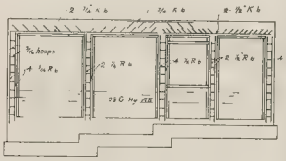


Details of Reinforced Concrete
for
Proposed Bungalow at Howth

Scale of Feet

Note Dimensions of walls columns etc are given on enlargements

Chillingworth & Levie, Civil Engineers & Architects 8 South Mall, Cork



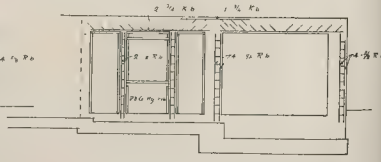


Fig. 5.

Bungalow at Howth.

Messrs. Chillingworth & Levie, Architects.

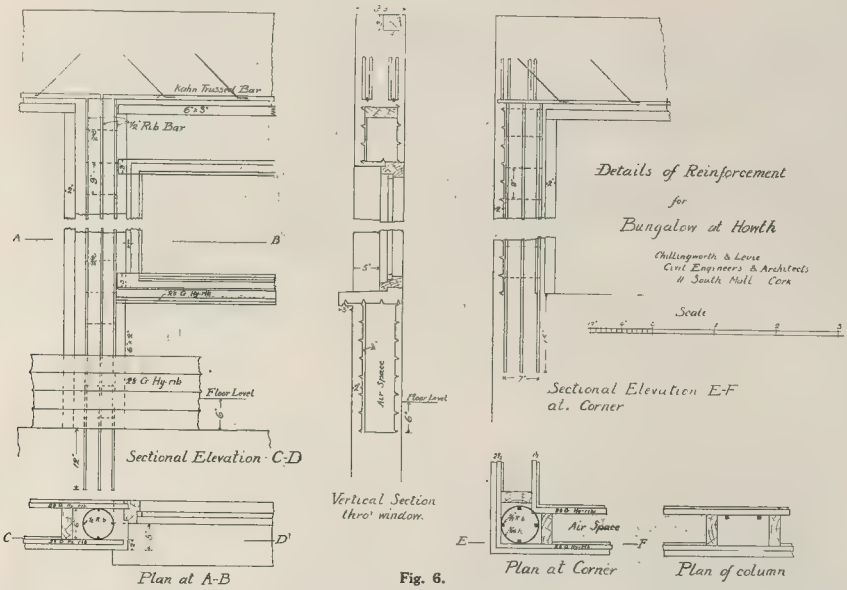


Fig. 6.

y concrete, mixed in the proportions of 1 part Portland cement, 2 parts washed sand, and parts aggregate, and filled in from the top.

The aggregate was carefully selected so as not o exceed ¾-in. diameter, and the columns were nspected by the architects before any of the xterior or interior plastering was executed.

The Hy-Rib lathing only extends to the bottom f the reinforced concrete roof beams shown in ig. 6, these beams being reinforced with Kahn russed bars and moulded in the customary nanner.

The plaster for the inside of the walls and for he first coat of the outside walls was composed f 5 parts Portland cement, 1 part hydrated me paste, and 12 parts sand. After the cement nd lime had been thoroughly mixed to uniform olour, the sand was added, and the whole orked with water until evenly mixed.

The first coat of this plaster, with the ddition of long cow-hair, was applied to the thickness of ⅓ in. on the interior surface of the outer layer of lathing, and to the thickness of 1 in. on the exterior surface. The exterior plastering was scratched over to form a key for the finishing coat, applied as soon as the first coat had set hard enough to hold the second coat, which consisted of 1 : 2 Portland cement mortar 1 in. thick.

The interior layer of lathing was plastered with the cement and lime mortar trowelled to a perfectly smooth finish.

All interior partition walls are solid and consist of Hy-Rib lathing and plaster, the former placed with the ribs vertical.

The sheeting for partitions on the ground floor is let into grooves in the concrete dwarf walls and wired at the ceiling to spikes driven into the joists, or into furring pieces secured to them. On the first floor the sheeting for partitions which follow the direction of the floor joists is let into a rebate cut on the edge of each joist, the joists being doubled under the partitions. In cases where the partitions are at right angles to the joists the sheeting is wired to spikes driven into bridging pieces fixed between the joists for continuous support of the partitions.

The Hy-Rib lathing is stiffened by horizontal rib bars, $\frac{3}{16}$-in. size, spaced 30 in. apart, to which the lathing is wired.

The partitions are finished by plastering on both sides with cement and lime mortar to the total thickness of 3 in. and smoothly trowelled.

Grounds for the attachment of skirting-boards and frieze rails were spiked on both sides of the lathing before the latter was erected, the dimensions of the grounds being 3 in. by 2 in. by ⅞ in.

In solid concrete walls breeze concrete blocks were inserted where required as grounds for the attachment of joinery work.

The hearths on the first floor are of concrete. 3 in. thick, covered with tiles and laid on Hy-Rib sheeting.

The roof of the bungalow is constructed of timber in accordance with the details shown in Figs. 3 and 4, where also will be found particulars of the flooring and fittings generally.

The exterior walls are rough-cast, the mixture being slightly coloured with yellow oxide. The ceilings and exposed soffits of stairs in the interior are finished white in "Marblite" plaster.

The rapidity with which this mode of construction can be carried out is among its advantages, and from the drawings here reproduced the convenience of Hy-Rib lathing for work of the kind can be appreciated.



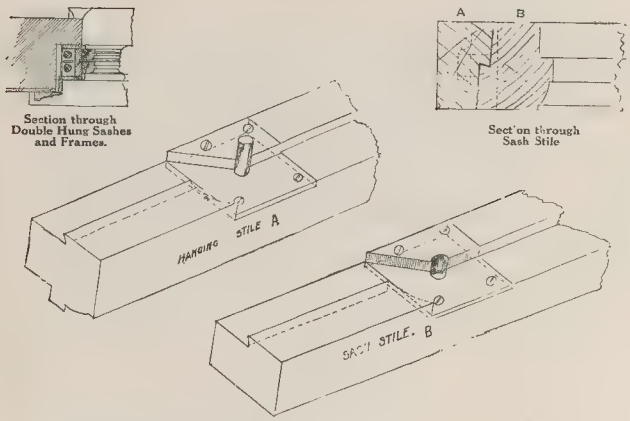
The Bovis Window.

THE BOVIS WINDOW.

WE show on this page a simple method of window construction which enables the outside of double-hung sashes to be cleaned from inside, and also to obtain a perfect form of ventilation.

The system may be explained briefly as follows: The sash stiles are made in two parts, as shown in the section; the slipper stile A is hung in the frame in the usual way, and the corresponding stile B is pivot hung to A with an ingenious stop action pivot which checks the sashes in the required position. The rebated and hook joint between the two makes it perfectly weathertight, and, being bevelled, it prevents friction in opening and closing.

By the very simple expedient of blocking out the head of the frame on the outside and the sill on the inside another considerable improvement is effected, as this causes the top sash when pulled down to clear the bottom sash and then open on its pivots for cleaning, so



Section through Double Hung Sashes and Frames.

Section through Sash Stile

The Bovis Window: Details.

that the necessity for steps to reach the top sash is entirely obviated. A great feature of the arrangement is the entire absence of any loose parts, which are apt to get mislaid; in fact the only fittings required other than the pivots before mentioned are a pair of slides constructed upon the principle of Shadbolt stays, which hold the sash in any position required when used for ventilating. As a result the window is extremely easy to operate, and the simplicity of the construction makes it almost impossible to get out of order.

The invention marks a great advance in window construction and we predict a great future for it, especially as the proprietors, Bovis, Ltd., Upper Berkeley-street, London, W., have wisely decided not to restrict the manufacture of the window to themselves, but only stipulate that, in all cases, the pivots must be procured from them. It is, however, their intention to supply these at such a price as not to make any appreciable difference in the cost of the window.

CONSTRUCTION NOTES.

Sprayed Walls. A RECENT German patent is for plastering walls by spraying. The principal characteristic feature in the invention is that the mortar or plaster is brought under pressure to the place where it is applied, and then sprayed by compressed air upon the surface to be covered. The process is adaptable for making partitions where woven wire is stretched on frames; also for covering walls where "wire lathing" and the like is employed. The mortar or plaster, brought to the proper consistency with water, is pumped through a pipe or hose ending in a nozzle, through the centre of which there is a pipe for the compressed air. The wall thus bespattered with plaster must necessarily be slicked off. Where partitions or thin outer walls are made by plastering on woven wire this is backed up during the spraying by a suitable board or other surface, which is removed as soon as the layer on the front side is sufficiently thick and firm. Then when requisite the other side may be similarly treated. The patent also calls for the use of compressed carbonic acid gas instead of air, the object being to hasten the setting of the mortar or plaster.

Relative Values of Metals for the Water-supply Pipes of Houses. MR. O. KRÖNKE, in the German Journal of Gaslighting, discusses the use of galvanised-iron pipes and zinc pipes as substitutes for lead pipes in house water systems, and arrives at the following conclusions:—As regards the solvent action of water upon galvanised-iron pipes, several micro-photographs are given showing the irregular and blotchy character of the zinc coating produced by different methods as compared with the even character of the surface of a block zinc pipe.

Experiments were made upon the amount of metal taken up by tap water from a block zinc pipe, and the highest amount found after eighteen hours' standing was 3·5 milligrammes per litre, equivalent to 25 grains per hundred gallons. In simultaneous experiments with galvanised piping, it was found that after a few hours only traces in general were taken up from each kind of pipe, but after several days or weeks about twice us much zinc was taken up from the galvanised pipe as from the block pipe.

It is concluded that galvanised pipe is a better pipe than one of lead from the hygienic standpoint, as the amount of zinc dissolved is below the limit of injuriousness. The amounts dissolved depend upon the nature of the water, temperature, and time of contact, and upon the nature of the coating. Block zinc pipes are superior to galvanised pipes in that the surface is uniform in structure, and there is no question of the strength or adherence of the surface coating.

Alnwick Augmented Waterworks. THE Local Government Board have approved the scheme for augmenting the water supply of Alnwick. Copious springs in Alnwick Park, near Hulne Abbey, will be tapped, the water conveyed to Canongate, where it will be pumped into a high-level reservoir near Swansfield Park. The supply into the town will be divided into upper and lower services. The estimated cost of the scheme in round figures is about 7,500*l*. The engineers for the scheme are Messrs. Taylor & Wallin (Mr. Harry W. Taylor, A.M.Inst.C.E.), of Newcastle-upon-Tyne and Birmingham.

Damage to Concrete by Contact with Acids. E. NEUMANN quotes in the *Toninder Zeitung* for 1912 a number of cases in which concrete drains have suffered greater or less damage, some of them in comparatively short periods from the time of their construction. In every case the destructive action was traced to the presence of acid in the water which had obtained access to the drains, either internally or externally.

In one instance the soil—said to be swampy—surrounding the drain contained iron pyrites, and the water became charged with sulphuric acid. (Pyrites heaps are in use in different parts of England as sources of copperas, and the liquid drainage is known to contain free acid by its corrosive action upon iron pipes laid near these heaps.)

In other instances the atmosphere inside the drains became heavily laden with sulphuretted hydrogen, which slowly oxidised to sulphur and sulphuric acid.

Although sulphuric acid was the most frequent and also the most potent destroyer of underground concrete, other mineral and organic acids, such as hydrochloric, oleic, acetic acid, etc., and also carbon dioxide were found to be almost as harmful. Mr. Neumann concludes that the destructive action of acids is due to two causes, viz.: (1) The formation of certain calcium and aluminium compounds, especially calcium sulphate (gypsum), which is accompanied by a large increase in volume: (2) the formation of soluble compounds, especially calcium bicarbonate, which go into solution and cause the concrete to collapse.

The chief remedies proposed are: (1) To provide adequate ventilation inside the drains: (2) to use as basis for the concrete, dense, non-porous clinker poor in lime; (3) to cover the exposed surfaces of the concrete with a coating of tar; or, best of all, for protecting from external agencies, (4) to lay the foundations of the drains upon tar, felt, or asphalt, impervious to acids.

The Softening, Purification, and Sterilisation of Water. IN the eighth research Report of 1912, addressed to the Metropolitan Water Board, Mr. A. C. Houston describes a new method of sterilising water by the addition of excess of lime, and in the case of a hard water of softening it at the same time.

Most of the experiments were made with raw Thames water with the object of sterilising it and only incidentally of softening it. Commercial quicklime containing about 75 per cent. of oxide of calcium was used, and the death of *Bacillus coli communis* in 10 cubic centimetres of water was taken as indicating the destruction of disease germs. It was found that one part of quicklime to 5,000 parts of water had little effect on the *B. coli* present in one hour, but after five hours nearly all the bacilli were killed, and in twenty-four hours they were completely killed in forty-two out of forty-three experiments. The excess of lime present over that required to combine with the free and semi-combined carbonic acid in the water varied from five to ten with an average of seven per 100,000, and it is this quantity which produces the germicidal effect. With water to which was added 1 per cent. of sewage a dose of lime of one in 5,000 killed practically all the *B. coli* in twenty-four hours, but a weaker dose of one in 7,500 was insufficient. It was found that the excess of lime present could be removed by adding to the treated water one-third or more of its volume of untreated water, the free and semi-combined carbonic acid in which neutralises the excess of lime. The effect on the hardness of the water was that, using lime to the amount of ten per 100,000, the total hardness was reduced from 22·36 to 11·03, and using fifteen per 100,000 the reduction was from 23·82 to 8·42.

In using the method on the London water supply, the untreated portion used for removing the excess of lime would be that which had by adequate storage been rendered bacteriologically safe, so that the result would be that the whole water would be safe bacteriologically, and at the same time it would have lost about fifteen parts of its hardness. It would only remain by rapid filtration to secure chemical purification of the water and removal of the precipitated calcium carbonate. When the method is applied to well water the portion of the water used to effect neutralisation of the excess of lime would have to be sterilised previously by chlorine, ozone, or other suitable means. With soft waters the whole of the water would be treated with excess of lime; in this case about two per 100,000 was found to be sufficient, and the excess removed by suitable means—*e.g.*, carbon dioxide or aluminium sulphate.

Injury to Cement "Rendering." WHAT is regarded as possibly a unique experience has been observed in the coating of cement used for rendering watertight a newly-constructed tank at the Newbury gasworks. The tank is to be used for storing tar and ammoniacal liquor; but before putting it to use the "rendering," which apparently was well set, showed defects. These, when examined, were seen to be small holes, through which a yellow gelatinous substance was being forced, assuming curious worm-like shapes and movements on the face of the wall. On closer inspection, and removing by picks the skin of the cement, it was found that grains of oats and other cereals had become mixed therewith and, fostered by warmth and moisture, had begun to germinate.

The source of the mischief is probably grains of horse fodder dropped from the bags of the teams that brought the sand to the site.

THE BUILDING TRADE.

THE INSURANCE ACT.—II.

IN our last article we endeavoured to give employers some idea of their position under Part II. of the Insurance Act elating to Unemployed Insurance by considering to what trades or employments the ct applied, what was a "workman" within is part of the Act, and what were the mounts to be contributed, but other points main to be considered.

The employer, in the first instance, has to pay oth the contributions of himself and the orkman; how is the employer to recoup imself?

Sect. 85, subsect. 3 provides "Except where e regulations under this part of the Act therwise prescribe, the employer shall, in the rst instance, be liable to pay both the contriutions payable by himself, and also on behalf and to the exclusion of the workman, the ntribution payable by such workman, and ubject to such regulations shall be entitled, otwithstanding the provisions of any Act or any ntract to the contrary, to recover from the orkman by deductions from the workman's ages, or from any other payment due from him the workman, the amount of the contributions paid by him on behalf of the workman."

This subsection is rather typical of modern gislation, for it will be seen that it leaves the mployer in uncertainty as to his obligations ntil he has ascertained in what way they are odified by any regulations. Schedule III. ntains "Rules as to payment and recovery contributions paid by employers on behalf employed contributors," but these rules re limited in their application to Part I. of the ct—Health Insurance.

We are not aware that any special regulations ave been issued under this part of the Act lating to this question, so it would appear that he regulations referred to in sect. 85, subsect. (3) re certain general provisions contained in the ct to which we shall refer below, and such as ct. 97 referred to in our former article, but *rimâ facie* the employer is liable, in the first nstance, to pay the workman's contributions, nd he must recover the same from the workman. nder this subsection it will be observed it is rovided that "notwithstanding the provisions f any Act"—*i.e.*, such as the Truck Acts—or any contract to the contrary," the contributions paid for the workman can be deducted om any wages or any other payment due o the workman. This is the only special eans of recovery specified by the subsection, lthough subsect. 4 provides that the employer's ntributions payable on his own behalf all neither be so deducted nor recovered from ie workman by "any legal process." It oes not appear whether, if the employer eglects to stop the workman's contributions ut of his pay, any legal process is open to the mployer for their recovery, so employers on very account should be careful to deduct the ums due from the workman.

There are certain provisions in the Act nabling the employer to obtain a refund, nd we will now consider these sections. y sect. 94 when a workman has been conuously in the employer's service for a alendar year or other prescribed period of welve months and not less than forty-five ntributions have been paid during that eriod, the employer may apply to the Board Trade within one month of the expiration the period for a refund of one-third of the ntributions so paid. The Unemployment nsurance Regulations made April 25 deal ith such applications, and by rule 23 the eriod is defined as the period of twelve months nding on July 14 in any year. By subsect. 2 sect. 94 the Board of Trade may, for the urpose of meeting any change in the period, pply the provisions of the section to a less eriod.

Sect. 96 is of a more complicated character; relates to refunds in respect of workmen orking short time, and it seems to offer a remium to employers who in such circumances have paid contributions without ecovering from the workmen their contributions. he section provides that "if any employer atisfies the Board of Trade that during any period of depression in his business workmen employed by him have been systematically working short time and that during such period he has paid contributions under this part of the Act on behalf of such workmen as well as on his own behalf without recovering such contributions from such workmen either by way of deduction from wages or otherwise than in accordance with regulations made by the Board of Trade, he may claim such a refund of both classes of contribution as in the circumstances may seem just, "provided that, except in a case where the working of short time has been effected by stopping the work for some day in the week which has been usually recognised as a working day of at least four hours in the trade and district, no such refund shall be made in respect of any workman for any week in which the hours of work have exceeded five-sixths of the number usually recognised as constituting a full week's work at that time in the trade and district."

By subsect. (2) the employer can obtain a ruling of the Board of Trade as to whether a reduction of hours he proposes to make will satisfy the section.

This section is full of difficulty and will probably be resorted to very little, for it is not apparent why an employer should go against what has been understood to be the principle of the Act and pay the workmen's contributions himself. The rules made under this section throw no light on its provisions. Whether or not the fact that an employer chooses to work the requisite short time will be accepted as proof of the "period of depression" is by no means clear, but it is rather implied by subsect. (2).

Sect. 99 contains some important provisions with respect to workmen engaged through Labour Exchanges, but as the matters dealt with in the section are largely left to be carried into execution by Board of Trade regulations these regulations have to be considered at the same time. Shortly stated, the section provides that an arrangement may be come to between an employer and the Board of Trade in respect of workmen engaged through a Labour Exchange or in the employer's employ at the date of the arrangement, whereby the duties laid upon the employer under this part of the Act shall be undertaken by the Labour Exchange, and whereby "in respect of such workmen different periods of employment, whether of the same workmen or different workmen, may for the purposes of the employer's contributions, but not for the purpose of a refund of any part of the employer's contributions be treated as a continuous employment of a single workman." The advantages offered by this section are somewhat difficult to grasp.

Under subsect. (2) a workman under such an arrangement can treat all employment by one or more employers as continuous employment and can claim a refund, but in the case of the employer it is specially provided that the section shall not apply to refunds—*i.e.*, that the advantages offered by sect. 94 for continuous employment shall not be applicable. It is somewhat curious that an arrangement which seems optional to the employer alone should be made directly advantageous to the workman, who can exercise no option, an arrangement which may lead to discontent and even strikes, and the section seems introduced in the interest of Labour Exchanges. Except for the saving of some trouble to the employer in licking stamps and collecting "unemployment books," the advantage to the employer seems small. Under Schedule VIII. the contribution for a workman employed for a week is 2½d. (see our last article). If the period of employment is two days or less, for one day the contribution is 1d., for two days 2d. Thus, if different workmen were employed either for one or two days in a week of six days the maximum contribution of the employer is 6d., and the saving to the employer under this section would therefore be 3½d. But this is taking an extreme case of a constant change of workmen, and on the principle of *de minimis non curat lex* this elaborate machinery in respect of small deductions seems almost absurd. Under the rules a sum under this section has to be deposited with the Board of Trade, and by rule 34 the right of deduction of the workman's contributions under sect. 85, subsect. (3) is preserved, "unless the arrangement otherwise provides." In this rule there is also a curious provision that, if in the case of workmen employed through a Labour Exchange by one or more employers the aggregate amount of the deductions made in respect of any workman is in excess of the amount which would have been deducted if he had been continuously employed by one employer, the workman shall be entitled to apply for a refund of the excess.

In our last article we professed our inability to elucidate the complicated provisions of this measure with any satisfactory results, and in the present paper we have been able to do little more than indicate some of the obligations imposed and the rights conferred upon employers under this part of the Act. We have so far confined our observations to the rights and duties of employers and have not referred to the provisions of the Act relating to workmen.

STRIKES: COLLECTIVE BARGAINING.

THE announcement made in the House of Commons by the Chancellor of the Exchequer that the National Council of the National Transport Workers Federation unanimously agreed to a resolution endorsing the principle "of joint boards with monetary guarantees from both sides to ensure the carrying out of agreements" may possibly indicate a new departure in enforcing agreements which represent the result of collective bargaining and prove a means of averting continual strikes. There are, however, many difficulties to be surmounted. The trade unions generally are federated, with the result that if a dispute arises between any employer and his workmen the federations take up the quarrel and in consequence very often a general strike ensues. But the employers, with few exceptions, are not federated, and they exercise no control one over the other. The Government at the moment are advocating a federation of employers as a panacea for the present trouble, and if this course were adopted there would be two federations—one of employers and one of employed—who, it is assumed, would be able to come to agreements binding both bodies by contracts enforceable under penalty.

Such is the scheme, and we offer no opinion either for or against it, but there are obvious difficulties in the way of its accomplishment.

The men are not engaged in complex transactions involving credit and extending over long periods; each individual has only his labour to sell and he joins a union or is compelled to join a union for complex reasons. It is a matter for regret that too often the main reason for his joining is "peaceful persuasion" and the refusal of the unions to allow him to dispose of his labour unless he does join.

With employers it is different. They are in a sense not such free agents. They are hemmed in by the obligations of their contracts and trade rivalry with firms not in this country.

If they are to form federations, are they to exert "peaceful persuasion" on recalcitrant members? If a firm breaks away from the federation, what possible means can be exerted to bring it into the federation. A firm cannot be deprived of sick pay or strike benefit. Lastly, even were such federations possible in future, would not such a policy lead to the creation of huge trusts—a thing any Government would strongly discourage? Federations of employers on one side and of workmen on the other as long as things go well might come to arrangements, but what would be the condition of affairs in times of industrial war? There seemed to be an impression in the House that the Trade Disputes Act would prevent any agreements with monetary guarantees from being enforced. We think this is a misapprehension of the terms of that Act; but another point is of greater importance, which is that the provisions of that Act apply equally to unions of employers as to unions

of men, and the Courts have no jurisdiction over either in respect of torts committed in contemplation or furtherance of trade disputes. In the case of two federations pitted against each other in industrial warfare, the terms of this statute would permit a condition of affairs which would disgrace any civilised State.

REGISTRATION OF TITLE.

THE Land Registry has issued a Memorandum "on the facilities afforded by the Land Transfer Acts for cheapening and simplifying dealings with land."

Our readers are already aware that this is a highly controversial subject, but for further information we can refer them to the Report of the Royal Commission, which we commented upon in our issue of March 31, 1911.

Of course, the registration of "absolute title" is that which confers the greatest advantages, but we notice that in this Memorandum it is only defined in general terms as meaning "a safe holding title," which conveys little either to the mind of the layman or the lawyer, and it is a significant fact that, according to the Memorandum, but between 2,000 and 3,000 such titles have been entered since 1908.

The other forms of registration of title, "good leasehold title" and "possessory title," have far less advantages. The former merely guarantees the leaseholder's title to the lease, and the latter does little more than secure the form of conveyance, the accuracy of plans, etc. Registration of possessory title is that which has alone been made compulsory in the County of London. The Memorandum points out that there is no reason why nine-tenths of the purchases registered in London should not be registered with absolute title, as the ordinary titles favoured by solicitors would generally suffice. Land owners and lawyers, however, never care to go beyond what is absolutely necessary

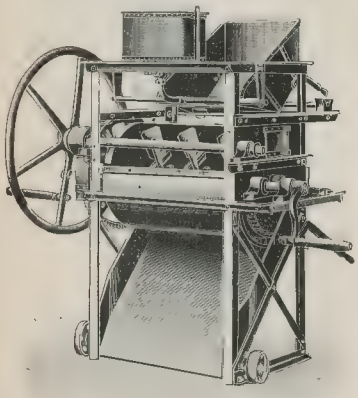


Fig. 1. Tilting Trough Mixer, operated by hand.

in relation to titles to land, for, of course, minute examination may result in some flaw being discovered, and, besides, there is the additional expense. It is urged that registration cheapens land transfer, but to the purchaser of land this is a somewhat abstract advantage. If he intends to hold the land it is a matter of indifference to him whether when the land eventually comes to be sold the purchaser will incur a little less cost. If, however, he is buying to sell, an easily investigated title may slightly enhance the value of the land, but to such a small degree that the purchaser is hardly likely to consider it in naming a price he will give. In the Report of the Royal Commission it was stated that the justification for compulsory registration was that it was for the good of the community that the transfer of land should be facilitated. The individual owner can hardly be expected to consider this aspect of the question, and the new land valuation has thrown so many difficulties in the way of a speedy and inexpensive transfer of land and buildings that it can only be concluded that the Government has lost sight of the principle aimed at by the Land Registration Acts.

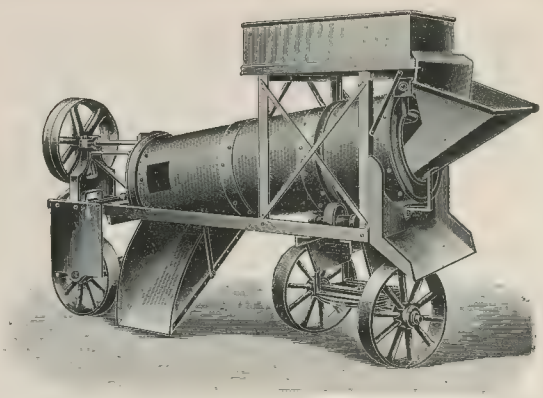


Fig. 2. Drum Mixer, operated by power.

It is stated in the Memorandum that the object of the Acts was registration with absolute title, yet it is also admitted that it would be obviously impracticable to compel registration of absolute title in all cases, and hence that compulsory registration has been limited to possessory title and therefore has not yet effected much relief as regards land transfer. This is perfectly true; and the Memorandum aims at encouraging land owners voluntarily to go further, but for the reasons given above we hardly think that the system will prove popular.

CONCRETE-MIXERS:

GASPARY MIXERS.

IN order that our readers may have before them for comparison with British types of concrete-mixing machines some particulars of German plant for the same purpose, we now give illustrations and brief notes on some of the machines made by the firm of Dr. Gaspary & Co., of Markranstädt, near Leipzig.

Fig. 1 shows a tilting trough mixer operated by hand, also supplied with fast and loose pulleys for operation by belting. If desired, the machine can be arranged so as to permit a barrow to be run under the trough to receive the mixed concrete.

The trough is fitted with paddles; the materials are tipped into the trough from a loading box, and water is supplied from an automatic tank.

This machine is made in three sizes with the effective capacities of 2·25, 2·9, and 3·5 cubic ft. per batch, and it is recommended for use in the manufacture of cement goods where small quantities of well-mixed concrete are required. The materials are mixed dry and then wet.

Fig. 2 illustrates a continuous type rotary drum mixer made in three sizes of from 4 to 6·5 cubic yds. capacity per hour.

This is a well-known form of mixer and need not be described in detail. It is supplied by Dr. Gaspary & Co., either on wheels as shown or without wheels for stationary use.

Fig. 3 represents a simple type of the funnel dish mixer, another continuous machine made in eleven sizes ranging in capacity from 1½ to 24 cubic yds. per hour.

The hoppers, for reception of cement, sand, and aggregate, are placed above the trough, which is provided with a mixing screw, the proportions of the materials being regulated automatically by a special device in each hopper, operated by gearing connected with the driving shaft.

Machines of the larger sizes can be supplied on wheels for transport from place to place, and fitted with hoisting apparatus and other accessories.

The Gaspary "Universal" continuous mixer has a rotating drum and mixing paddles moving in a direction opposite to that of the drum, but by reversing a lever the drum and paddles can be caused to move in the same direction. This and the measurement of materials are special features of the machine, which can be used as a batch mixer if desired.

Another type of the "Universal" mixer made for batch mixing only has an open trough fitted with revolving blades.

The "Universal" mixer is made in sizes capable of turning out from about 160 to 1,440 cubic ft. of concrete per hour.

BUILDERS ACCIDENT INSURANCE, LTD.

AT the thirty-first ordinary annual general meeting of the Builders Accident Insurance, Ltd., held at Nos. 31 and 32, Bedford-street, London, W.C., Mr. T. F. Rider (Chairman of the company) presided, and moved the adoption of the report and accounts for last year. He said that the increase in premium income over 1910 was about 800*l.*, which would have been considerably more but for the decreased amount of wages insured in consequence of slackness in trade. The dividends on investments were the same, but the interest on deposits was less in consequence of the lower bank rate prevailing last year than in the previous one. Turning to the other side of the account, the sum paid in settlement of claims, commission, and expenses was nearly 30,000*l.*, of which more than 16,000*l.* represented cases arising in previous years, and the trouble and expense of dealing with which—and in fact with all claims—became increasingly difficult. The development of industrial disease, notably that of lead poisoning, was one cause of a large increase in the number of claims, which, so far as the latter case was concerned, had now reached the point of practically insuring almost every painter's life.

Mr. H. H. Bartlett seconded the motion, which was adopted.

On the motion of Mr. E. M. Sharman, seconded by Mr. E. Rider, the retiring directors, Mr. H. H. Bartlett, Mr. F. J. Dove, and Mr. T. F. Rider were re-elected; and on the motion of Mr. Vigor, seconded by Mr. Deputy Pitman, the directors' fees were fixed at the same amount as last year.

Mr. F. L. Dove, L.C.C., was then elected a director of the company. Mr. Charles Fox was re elected auditor.

Votes of thanks to the Chairman for presiding and to Mr. C. M. Brown, the Secretary,

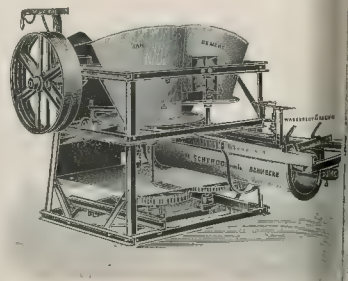


Fig. 3. Funnel Dish Mixer.

nd staff for their efforts during the past year ere accorded, and the proceedings terminated. The report mentions that after allowing sum for depreciation of investments of 91*l.* 9s. 11d., the funds of the Association tand at 20,793*l.* 10s. 5d., as against 0,505*l.* 17s. 10d. at December 31, 1910.

A BUILDING TRADE UNION.

A REPRESENTATIVE meeting of the building rade unions has been called by Mr. C. W. owerman, M.P., for June 21, to be held in ondon, for the purpose of considering a eport, recommending the amalgamation of the rade unions of the building industry. The nion is to be called the Amalgamated Build- ng Workers' Union, and its objects will be umite all workmen in the present building ade unions into one union, embracing the hole of the workers with a view (1) to main- in a fighting organisation, working to nprove the material conditions of the workers the building trade; to take joint action ith other similar unions in the furtherance the interests of the workers, nationally and sternationally, believing that the interests of wage workers are identical. (2) The rstematic organisation of propaganda among e workers, upon the necessity of becoming rganised on the industrial field, upon the asis of class instead of craft; and organise ir industry as workers instead of by sections craftsmen. It is also to provide for trade rposes a uniform scale of benefits, and the malgamation of the friendly society benefits to a separate account.

GENERAL BUILDING NEWS.

PARISH CHURCH, ABERDEEN.

The John Knox Parish Church has been lected at a cost of about 7,000*l.* from the signs of Messrs. Wilsons & Walker, archi- cts. The building has seating accommoda- on for 1,800 people, and below the church is large hall, which will hold between 700 and 0 persons. The contractors for the work re:—Masons, Messrs. Findlay & Henderson; rpenters and ironwork, Messrs. Leslie & ay; slaters, Messrs. Archibald & Leslie; lumber and gasfitter, Mr Worling, Gallow- te; plasterer, Mr. William Masson; inters, Messrs. Gordon & Watt; electric ghting, Aberdeen Electrical Engineering mpany. heating, Messrs. Mackenzie & oncur, Edinburgh.

CHURCH, PENDLETON.

Mr. F. C Oakley is the architect for the w church which is being erected to take the ace of St. Anne's Church, which is now too all for the district. The new building will at 500 people, and the organ and other ings from the old church will be used in the nishing of the new building.

NEW AISLE, CAERWENT CHURCH.

The new aisle in Caerwent Church, which is recently been dedicated, was built from designs of Mr. G. E. Halliday, F.S.A., chitect, of Cardiff, and the work was ecuted by Mr. W. Clarke, of Llandaff.

GIRLS' SECONDARY SCHOOL, LANCASTER.

These new buildings, which are being erected a site in Dallas-road, Lancaster, have been signed by Mr. Henry Littler, the County chitect, and the estimated cost of the ection of the school is 15,325*l.* The school ovides accommodation for 282 girls in nine ssrooms, and there are also cookery, science, d chemical departments.

TRAINING COLLEGE FOR THE POTTERIES.

t is proposed to erect a Central School of ience and Technology at Stoke-on-Trent, at estimated cost of 20,000*l.*, and the plans the building have been jointly prepared Mr. J. Hutchings, the Staffordshire County chitect, and Mr. S. B. Ashworth, Architect the Stoke-on-Trent Education Committee. e school will be primarily for the instruc- n of students in pottery, mining, and general ience, but provision will be made for future ensions for instruction in mechanics, ctrical engineering, and other crafts. The ntract has been secured by Mr. Thomas dwin, builder, of Hanley.

TOWN HALL, HULL.

The members of the Hull City Council met the Council Chamber of the new Town Hall the first time on Thursday in last week. e building, which is not quite completed, estimated to cost about 150,000*l.*, and has n designed by Mr. T. E. Cooper, F.R.I.B.A., of London. The Law Courts upy one-half of the building, and the other it will contain the municipal administrative artments.

TRADE NEWS.

Under the direction of Mr. Thomas Davidson, A.R.I.B.A., Great Ormond-street, W.C., Boyle's latest patent "air-pump" ventilators have been applied to Torquay Municipal Buildings, Torquay.

The new schools, Birlingham, are being supplied with Shorland's patent exhaust roof ventilators by Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester.

In addition to having recently supplied two of their D. O. Boyd double-ward stoves with porcelain-enamelled casings and ventilators to the new Isolation Hospital, Shepton Mallet, Messrs. O'Brien, Thomas, & Co., of 17 and 18, Upper Thames-street, E.C., and Excelsior Works, Rollins-street, Old Kent-road, S.E., have just supplied four of their D. O. Boyd single-fire independent ward stoves with descending flues and porcelain-enamelled canopies, etc., to the new Sanitary Hospital, Boscombe, Bournemouth. Several of their improved pattern grates have also just been supplied to the Kingston Union Infirmary.

PROJECTED NEW BUILDINGS IN THE PROVINCES.*

BIRMINGHAM.—Premises, Bracebridge-street; Messrs. Crouch, Butler, & Savage, architects, 39, Newhall-street, Birmingham. Bakeries, Goode-street; Mr. Victor Peel, architect, 15, Temple-street, Birmingham. Factory, Soho; Mr. T. Silver, architect, 120, Soho-hill, Handsworth, Birmingham. Hotel, Bule-street; Mr. J. Turton, builder, 1, Wheelers-road, Birmingham.

Blaina.—Enlarging Blaina and District Hospital; Mr. E. A. Johnson, architect, St. Mary's-chambers, Abergavenny.

Blyth (Northumberland).—Drill hall (3,000*l.*); Messrs. Graham & Hill, 6, Eldon-square, Newcastle-on-Tyne.

Bolton.—Additions to Sunnyside Mill, St. Helen's-road, Daubhill, for Messrs. Tootal, Broadhurst, Lee, & Co., Ltd., cotton goods manufacturers; extensions to Mortfield Bleach Works for Messrs. T. E. Smith & Son.

Bo'ness.—Offices, East Pier-street, for the Bo'ness Investment Company, Ltd.

Bordesley Green (Birmingham).—Factory; Mr. W. H. Gibbs, builder, King's Heath, Birmingham.

Brampton. Residence; Mr. T. W. Dickinson, architect, Scarborough.

Bridlington.—Houses, Watson's-walk; Mr. E. R. Matthews, Surveyor, Town Hall, Bridlington.

Bristol.—Children's home, Fishponds; Mr. J. Bevan, architect, Liverpool-chambers, Corn-street, Bristol.

Bromley.—Proposed baths (12,000*l.*); Mr. S. Hawkings, Engineer, Town Hall, Bromley. Roman Catholic School, Freelands (120 places); Rev. Walter Cooksey, Bromley.

Burslem.—Alterations and additions to workhouse (2,865*l.*); Mr. G. M. Sambrook, builder, care of the Clerk, Guardians' Offices, Burslem.

Burton Latimer.—Public hall, etc., The Cross; Secretary, Co-operative Society, Burton Latimer.

Burton-on-Trent.—Drill hall; Mr. G. Hodges, builder, Homington-street, Burton.

Bury.—Offices, Roach Bank Mills, for Messrs James Kenyon & Sons, Ltd., cotton spinners.

Castletownbere. — Twenty-nine houses (4,850*l.*); Surveyor, Rural District Council Offices, Castletownbere.

Catshill.—School (500 places); Mr. A. W. Priestley, Shire Hall, Worcester.

Chelmsford. Empire, Springfield-road, for the Chelmsford Empire and Hippodrome Company, Ltd.

Chorley.—Additions at bleach works, Lower Healey, for Mr. J. T. Holt.

Coventry.—Three branch libraries (8,638*l.*); Mr J. E. Swindlehurst, Surveyor, Town Hall, Coventry Silk mills; Mr. H. Quick, architect, 64, Hertford-street, Coventry.

Cowes.—Drill hall; Messrs. Nair & Bucknill, architects, Portland-place, Southampton.

Crowland (Lincs).—Twenty houses; Surveyor, Rural District Council Offices, Crowland.

Daisyfield (Bury).—Extensions and alterations to Egyptian Mills, Wellington-street, for Messrs. Milnes Brothers & Hoyle, cotton goods manufacturers.

Devizes.—Conversion of premises, Market-place, into picture hall; Messrs. W. E. Chivers & Sons, builders, Devizes.

Dumfries.—Motor works for Messrs Arrol-Johnston, motor-car builders, Paisley.

Dunblane.—House. St. Margaret's-drive; Messrs. Christie & Davidson, architects, Post-Office-buildings, Dunblane, Perthshire.

Dundee.—Enlargement of St. Patrick's Roman Catholic School (4,000*l.*); the Trustees. Offices, King-street, for Messrs. Low & Bonar, jute goods merchants, 5, King-street, Dundee. Proposed school for cripples; Dundee School Board.

Dunfermline.—Enlargement of Opera House; Mr. H. Hare, Oldham.

Durrington (Salisbury).—Church; Messrs. S. Hyde & Son, architects, Eniswell-street, Worthing.

Earlstown.—School, Paterson-street (10,145*l.*); Messrs. D. A. Ablett & Sons, builders, 2-8 Sovereign-road, Wigan.

Eastbourne.—The following plans have been passed:—Addition, Catholic Church, Meads-road, for the Rev. P. Lynch; Mr. F. A. Walker, architect. Alteration, The Lamb Inn, for Messrs. Harvey & Son; Mr. A. Ford, architect; Messrs. M. Martin & Sons, builders. Addition, The Hydro, Mount-road, for the Hydro Hotel Company; Mr. J. W. Woolnough, architect; Mr. Thos. Dunlop, builder. Six houses, East Dean-road, for Mr. J. Vine, Mr. W. R. Box, architect; Mr. J. Vine, builder. Alteration, The Lion Inn, Seaside, for Messrs. Harvey & Son; Mr. A. Ford, architect. Addition to ice works, Beach-road, for the Eastbourne Ice Company; Mr. G. Wood, builder. Addition, 45, Terminus-road, for the Eastbourne Artisans' Dwellings Company; Mr. A. Ford, architect. Three houses, St. Anthony's-hill, for Mr. J. T. Wenham; Mr. A. Ford, architect.

East Cowes.—Proposed enlargement of Isolation Hospital (1,300*l.*); Isle of Wight Joint Isolation Hospital Board.

Eccles.—Plans have been passed for a picture house in Eldon-place, Patricroft, for Mr. N. H. Hacking, architect; and for eight houses in Unicorn and Harrison streets, Peel Green, for Mr. Henry Pennington.

Edinburgh.—Church hall, Juniper-green (3,000*l.*); Mr. J. G. Adams, architect, 34, St. Andrew's-square, Edinburgh. Alterations at Belfrage court, Lauriston-place, for Mr. Thomas Stewart; alterations at 41 and 45, Warrender Park-road, for Martin's Bakery, Ltd.

Elton (Bury).—Additions to ironworks, Back Crostons-road, for Messrs. J. H. Ridley & Co., works, Woodhill-road, for Messrs. Ashworth & Parker, steam-engine manufacturers, Ormond-street, Bury.

Exeter.—School, Merivale; Mr. W. Morris, architect, Richmond-street, Exeter.

Gainsborough.—Workmen's dwellings (3,600*l.*); Mr. S. W. Parker, Engineer, Urban District Council Offices, Gainsborough.

Glasgow.—Hall and offices; Trustees, United Free Church, London road, Glasgow. Theatre, St. George's-road; West-End Playhouse, Ltd., 219, St. Vincent-street, Glasgow. Buildings, Queen-street; Mr. David Mason, warehouse man, 123, Argyle-street, Glasgow.

Gloucester.—School, West Dean; Mr. R. S. Phillips, architect, The Cross, Gloucester.

Gravesend.—Extensions to "Bon Marché," New-road and Princess-street, for Messrs Delarue & Carden.

Great Barr.—School; Mr. G. Balfour, County-buildings, Stafford.

Great Bridge School; Mr. A. Long, architect, New-road, West Bromwich.

Greenock.—School; Mr. Wm. R. Glen, architect, Glasgow.

Grimethorpe.—Twenty-six houses, opposite Brierley Cemetery, for the New Holroyd Colliery Company.

Grwynno Valley.—150 200 houses, stores, mission hall, etc.; Engineer, Abertillery and District Water Board, Newport, Mon.

Haltwhistle.—Laundry for the South Tyne Laundry Company.

Hamilton.—Hall, etc., Auchingramont-road (1,200*l.*); Trustees, St. Mary's Episcopal Church, Auchingramont-road, Hamilton.

Haslingden.—Extensions to Holme Spring Mill for Messrs. L. Whitaker & Sons.

Hauxton.—School; Mr. A. Dunn, architect, St. Peter's-churchyard, Lincoln.

Hayes.—Extension to school, Clayton-road (4,500*l.*); Mr. W. J. Dickens, builder, 19, Broadway, Ealing, W.

Hebden Bridge.—Dyeworks, Eaves Bottom, for Messrs. W. Clay, Son, & Co.

Hertford.—Improvements to county hospital (10,000*l.*); the Governors.

Heysham.—Alterations to premises, Heysham-road, for the Lancaster Co-operative Society.

Heywood.—Cinematograph theatre for the Empire Theatre Company (Heywood), Ltd.

High Wycombe.—Extension to grammar school; Mr. A. Vernon, architect, 41, High-street, High Wycombe.

Holmfirth.—Enlargement of Hinchliffe Mill School (1,300*l.*); Mr. W. V. Dixon, Shire Hall, Wakefield.

Hove.—Cookery and laundry centre, Connaught-road Girls' School (1,000*l.*); Mr. H. H. Scott, Surveyor, Town Hall, Hove. The following plans have been passed:—Twelve houses, St. Leonard's-avenue, for Mr. G. M.

* See also our list of Competitions, Contracts, etc., on another page.

Jay on behalf of Mr. W. Chadwell; three houses, Ferndale-road, for Mr. W. H. Overton, for Mr. J. C. E. Glover; motor garage, Holland-road, for Mr. T. Taverner.

Hoyland.—Enlargement of school, Kingstreet, and alterations to school, Hoyland Common (940*l.*); Mr. D. Paul, Town Hall, Hoyland.

Idmiston.—School (975*l.*); Mr. W. S. Harris, builder, Salisbury.

Kendal.—Picture hall; Mr. J. Stalker, architect, 57, Highgate, Kendal.

Kenfig Hill.—Baptist church (3,500*l.*); Messrs. Jones & Evans, architects, Port Talbot; Mr. H. Thomas, builder, Porth.

Kenton.—Four houses; Mr. Edward Mackie, estate agent, London and North-Western Railway Company, Euston-station, N.W.

Kilbowie.—Extensions to factory (20,000*l.*); Singer Sewing Machine Company, Ltd., 22-5, St. Paul's-churchyard, E.C.

Killarney.—Housing scheme; Mr. G. A. E. Hickson, architect, Killarney.

Kimblesworth.—Six houses, Kimblesworth Colliery, for the Charlaw and Sacristan Collieries, Ltd.

Kirby Moorside (Yorks).—Church institute (1,300*l.*); Messrs. W. Rickaby & Sons, builders, Tinley Garth, Kirby Moorside.

Kirkham.—Cottage homes (7,000*l.*); Mr. F. H. Brown, Clerk, Fylde-gardens' Offices, Kirkham.

Lambourn.—Six houses; Mr. W. S. Raine, Surveyor, Rural District Council Offices, Hungerford.

Leagrave.—School (3,379*l.*); Mr O. P. Drever, builder, 69, Round Hill road, Kettering.

Leek.—Mill for Messrs. Clemesha Brothers, Ltd., silk manufacturers; Messrs. Sugden & Son, architects, 13, Derby-street, Leek.

Leigh.—Swimming-baths (5,000*l.*); Mr. T. Hunter, Surveyor, Town Hall, Leigh.

Llangefni (Anglesea).—Offices (3,676*l.*); Mr. W. E. Jones, Surveyor, County Council Offices, Llanfair P.G.

Louth.—Sunday-school (1,500*l.*); Trustees, Wesleyan Church, Louth.

Lowestoft.—School (4,594*l.*); Mr. C. Roper, builder, Waterworks-street, Ipswich.

Macclesfield.—School, Duke-street; Messrs. Whittaker & Bradburn, architects, King Edward-street, Macclesfield; Messrs. E. & A. Frith, builders, Catherine-street, Macclesfield.

Northampton.—Plans have been passed as follows:—Seven houses, Raymond-road, for Messrs. E. D. Sharman & Son; four houses, Glasgow-street, for Mr. G. J. Fisher; eight houses, Knights-lane, for Mr. W. S. Brown.

Nottingham.—Church, Sherwood-rise; Mr J. Wright, builder, Wilford-crescent, Nottingham.

Nuneaton.—Additions to workhouse; Messrs. T. Smith & Son, builders, Coton-road, Nuneaton.

Perry Bar.—School; Mr. G. Balfour, County-buildings, Stafford.

Perth.—Tenements of shops and houses, High-street, for Messrs. Stewart & Templeton.

Pits-o'-th'-Moor (Bury).—Weaving mill, Dealstreet, for Mr. E. G. Burtenshaw, Manchester.

Pontardawe.—Offices (3,380*l.*); Messrs. Thomas Brothers, builders, Pontardawe.

Pontypool.—Houses (3,870*l.*); Messrs. Bailey Brothers, builders, Pontnewynydd. Houses (9,782*l.*); Mr. W. H. Campbell, builder, Pontypool.

Poole.—Enlargements at workhouse; Mr. P. E. L. Budge, Clerk, Guardians' Offices, Poole.

Port Seton.—Golf club house; Mr. A. M. Hardie, architect, 20, George-street Edinburgh.

Reading.—Jam factory; Mr. F. Harris, architect, Balloon-street, Manchester.

Redditch.—Factory for Messrs. Terry, spring manufacturers; Mr. F. Baylis, architect, Unicorn-hill, Redditch; Messrs. G. Huins & Son, builders, Lodge-road, Redditch. Printing works; Mr. F. Baylis, architect, Unicornhill, Redditch.

Riddrie (Lethamhill).—Houses for workingclasses; Surveyor, Mr. A. B. M'Donald, Town Hall, Glasgow.

Saffron Walden.—Hall and bakery (625*l.*); Mr. D. Robinson, builder, Stanstead.

St. Austell.—Additions, workhouse infirmary (2,000*l.*); Mr. B. C. Andrew, architect, Biddicks court, St. Austell.

Salford.—Proposed electric theatre on site of Everard-street Recreation Ground, Ordsall-lane, for Messrs. Morrison & Stevens. Alterations to buildings, etc., at Electricity Works (1,370*l.*); Messrs. W. Thorpe & Son, builders, 380, Chester-road, Old Trafford, Manchester. A plan has been passed for alterations and additions to premises, Liverpool-street, for the Bradford Dyers' Association.

Sedgley (Staffs).—Extension to gasworks (4,500*l.*); Surveyor, Mr. F. W. Turton, Urban District Council Offices, Sedgley.

Sevenoaks.—Cookery centre; Mr. W. H. Robinson, architect, Caxton House, Westminster, S.W.

Sheffield.—Extensions to workhouse hospital (20,000*l.*); Mr. A. E. Booker, Clerk, Guardians' Offices, Sheffield. The following plans have been passed:—Additions to school, Cheadle-street and Borough-road, for Trustees. Wesleyan Reform Union; eighteen houses, Harrogate and Myton roads, for Mr. F. H. Mellor; warehouse, Fife-street, for Messrs. E. J. Stringer & Co.; additions to offices, Spring-street, for Messrs. J. Eshelby & Sons; three houses, Portsea-road, for Mrs Lee; alterations to buildings, Stubbin-lane, for Trustees, Firth Park United Methodist Church; thirteen houses, Arlington street, for Mr. A. Donnellan; house and children's hospital, Nursery and Johnson streets, for the Children's Hospital Board; synagogue, Lee Croft, for Mr. D. Isaacs; cinematograph theatre, Westbar and Paradise streets, for the Don Picture Palace Company, Ltd.; four houses, Exley-avenue, for Mr. G. Exley; additions, Victoria Hotel, Savile-street East and Norroy street, for Messrs. D. Gilmour & Co., Ltd.; two houses and alterations to premises, Elmham-road, for Messrs. W. & E. Sadler; six houses, Warminster-road, for Mr. A. S. Woodhead; warehouse, Main-road, Darnall, for Mr. D. Mullins; addition, premises, Staniforth-road, for the Brightside and Carbrook Co-operative Society, Ltd.; thirty-seven houses, Banner Cross-road and Button Hill-road, for Mr. W. Ramsay; parish hall, Claywood road, for Vicar and Wardens, Sale Memorial Church; seven houses, Jenkin-lane, for Mr. G. E. Pye; house and school, Buckenham and Maxwell streets, and additions, school, Whitby-road, for Sheffield Corporation Education Committee; seventeen houses, High-lane, for Mr. J. H. S. Randall; cinematograph theatre, Attercliffe Common, for the Sheffield Picture Palace Company, Ltd.; four houses and motor garage, Springhill-road, for Mr. G. Barber.

Sherborne (Dorset).—Housing scheme (3,190*l.*); Messrs. Guppy & Son, Bristol-road, Sherborne.

Southend-on-Sea.—School (16,777*l.*); Mr. A. E. Symes, builder, Carpenters-road, Stratford, E.

Stoke-on-Trent.—School, Penk-hill; Mr. S. B. Ashworth, architect, Town Hall, Hanley; Messrs. Ball & Robinson, builders, Trentbridge, Stoke-on-Trent. Factory, Etruria; Messrs. Maddock & Son, architects, Albion-place, Hanley.

Stretford.—Plans have been passed as follows:—Factory, Chester-road, for the Veno Drug Company, Ltd.; twenty-two houses, Norwood-road, etc., for Mr. Joseph Holt; four houses, Park-road, for Mr. H. C. Jones; picture pavilion, Cornbrook-street, for Messrs. Bliss & Morris. Infants' school, Trafford Park; Mr. E. Woodhouse, architect, 83, Mosley-street, Manchester.

Swansea.—Police-court; Mr. E. Morgan, architect, Wind-street, Swansea.

Swinton.—Reception wards (9,100*l.*); Mr. J. Macdonald, Clerk, Guardians' Offices, Manchester.

Torquay.—The following plans have been passed:—Additions to premises for Cockington Constitutional Club; alterations to premises, Albert-road, for the Torbay Mill Company; extensions to car shed for the Torquay Tramway Company; five houses, Windsor-road, for Mr. H. Cruse.

Wallasey.—Proposed Town Hall (80,000*l.*); Mr. W. H. Travers, Surveyor, Urban District Council Offices, Wallasey.

West Bromwich.—School; Messrs. Wood & Kendrick, architect, High-street, West Bromwich. Factory; Mr. W. E. Jones, builder, Walsall-street, West Bromwich.

Winsley (Bradford-on-Avon).—Additions, sanatorium; Mr. W. S. Skinner, architect, Orchard-street, Bristol.

Wolverhampton.—Extension, drill hall (1,500*l.*); Mr. C. Cowlishaw, architect, Stafford-street, Hanley.

Wythall (Bromsgrove).—Mission church hall; Rev. E. H. Phillips, Wythall.

THE SEVERNE ESTATES AT HALL GREEN AND WARLEY, BIRMINGHAM, AND ULLESTHORPE, LEICESTERSHIRE.

Mr. Howard Frank, Messrs. Knight, Frank, & Rutley, in conjunction with Messrs. Grimley & Son, offered at Birmingham recently the above estates, when a total, for twenty eight lots out of thirty-seven offered, of 26,033*l.* was realised. Hall Green, an important building estate of 419 acres, was first submitted as a whole and not sold; the estate was then offered in lots, when twenty-two lots out of twenty-nine were sold for 19,103*l.*, the prices realising over 160*l.* an acre. The Warley estate of 85 acres, with rent roll of 216*l.* per annum, was Warley farm, of 43½ acres, made 2,600*l.*, and the Ullesthorpe estate, of 402 acres, with rent roll of 415*l.* per annum, which was offered in four lots. Manor farm, of 235 acres, realised 3,900*l.*

FOREIGN AND COLONIAL.

Trade Conditions in Nova Scotia and New Brunswick.

Building throughout the Province of Nova Scotia has been brisk, and the brickyards have been working to full capacity. Several new industries were started during the year, and a carriage company at Kentville added an automobile branch. Building operations in New Brunswick generally have been active throughout the Province, especially so in Campbellton. Moncton also has had an active year in building, the completion of the Intercolonial Railway workshops, the commencement of the Grand Trunk Pacific workshops, and the erection of several factory buildings, street car buildings and dwellings, having given a considerable amount of work.

Building, etc., Works, Ceylon.

The *Ceylon Observer* (Colombo) of April 25 publishes particulars of the extraordinary expenditure of the Public Works Department of Ceylon for 1912-13, the chief items being as follows:—

Public works, Rs. 2,585,151. New public works and buildings, Rs. 625,636; additions and improvements to buildings, Rs. 480,949; road construction and improvement works, Rs. 632,777; construction and repair of bridges, Rs. 329,440; miscellaneous works, Rs. 493,659. Irrigation, Rs. 320,531. Railways, Rs. 1,684,890. New machinery for Locomotive Department, Rs. 65,375; new 60 ft. turntables, Rs. 41,124; new engine shed and yard at Nawalapitiya, Rs. 75,000; laying of 80 lb. rails on Polgahawela-Kurunegala section and on Northern line, Rs. 367,559. Provision amounting to Rs. 5,716,633 has been made on account of works chargeable to surplus balances, including a sum of Rs. 1,235,000 to be expended on the deepening of Colombo harbour. Rupee = 1s. 4d.

PATENTS.

APPLICATIONS PUBLISHED.*

3,586 of 1911.—Robert Thomson: Column and floor or beam connexions.

8,843 of 1911.—Thomas Butler Nelson: Combined cooking-stove, water-heating, and steam cooking devices.

8,972 of 1911.—Vincent Boudkewitch: Apparatus for fire extinguishing.

11,597 of 1911.—George McBride: Cement pipes and means for manufacturing same.

11,717 of 1911.—Charles Landale: Stone cutting machines.

12,523 of 1911.—The British Reinforced Concrete Engineering Company and Gilbert Stanley Heathcote: Means for reinforcing concrete structures.

13,899 of 1911.—Emil Sprenger: Method of and apparatus for mixing binding-agents and other substances with granular material.

13,911 of 1911.—Ellis Smith: Tops for chimneys, ventilating-shafts, and the like.

15,788 of 1911.—Robert Thomson: Piles, piers, wharves, and like structures.

20,447 of 1911.—Hugo Heydenreich: Apparatus for finishing walls and ceilings.

22,871 of 1911.—Henry Mercer Girdwood: Safety device for teagle openings in factories, warehouses, ships, and the like.

26,042 of 1911.—Alphonse Theyskens: Locking devices for sliding doors.

28,622 of 1911.—Georges Theodore Vallee: Paving-block destined to prevent the deterioration of footpaths and of tramways by the pressure of the woodpaving of roadways.

199 of 1912.—Hermann Wagner: Double window.

705 of 1912.—Bert Arthur Linderman: Dovetailing machines.

1,316 of 1912.—Edgar Frankignoul: Internal driving shoe for tubular piles.

LONDON ASSOCIATION OF MASTER STONEMASONS.

Mr. Walpole Collins has resigned the position of Hon. Secretary and Treasurer of the London Association of Master Stonemasons, which he has held since the Association was founded three years ago. Mr. Frank Mortimer, of 414, Hoe-street, Walthamstow, has been elected as his successor.

* All these applications are in the stage in which opposition to the grant of Patents upon them can be made.

List of Competitions, Contracts, etc.

For some Contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) are advertised in this number:** Competitions, iv.; Contracts, iv. vi. viii. x.; Public Appointments, xvi.; Auction Sales, xxii. Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Competitions.

JUNE 24. **Reigate.**—CORPORATION FARMHOUSE.—Not to exceed 550*l.* Local architects only. Premium 10*l.* 10s. Particulars from the Town Clerk, Reigate.

JUNE 24.— **Wales.** — TWO SANATORIA. — The Executive Committee of the King Edward VII. Welsh National Memorial invite architects to submit sketches for two sanatoria, one in North and the other in South Wales. Accommodation, 150 and 250 beds respectively. See advertisement in the issue of May 31 for further particulars.

JUNE 26.—**Birmingham.**—BATHS.—Twenty and 10 guineas for second and third designs. Applications for conditions to be sent to the Superintendent Engineer, Kent-street, Birmingham.

JUNE 28.—**Hale, Cheshire.**—TOWN-PLANNING SCHEME.—Premiums 50*l.* and 25*l.* Particulars from the Council Offices, Hale. See issue of May 24 (page 601).

* JUNE 28.—**Regent's Quadrant.**—DESIGN FOR TREATMENT.—Premiums, 25 guineas, and 25 guineas divided. Adjudicators, Mr. W. Flockhart, Mr. E. A. Rickards, and Mr. Alan E. Munby. See advertisement in this issue for further particulars; also "Competition News," issue of April 19 (page 453), May 3 (page 512), May 10 (page 537).

JUNE 29.—**Reigate.**—LAYING-OUT AND DEVELOPING REIGATE LODGE ESTATE.—Premiums 30 guineas and 10 guineas. Particulars from the Town Clerk, Reigate.

JUNE 30.—**Padiham.**—TOWN HALL, BATHS, ETC. —Premiums 40*l.* and 20*l.* Particulars from Mr. J. Gregson, A.M.Inst.C.E., Surveyor's Office, Padiham.

JULY 1.— **Dusseldorf.**—A plan for the extension of the City of Dusseldorf. Premiums of 1,000*l.* to 375*l.* Conditions on application to the Chief Burgomaster, Dusseldorf. A translation appeared on page 305, September 29.

JULY 1.—**Port of London.**—NEW OFFICES.—Limited to those mentioned in "Competition News," issue of April 12 (page 424).

JULY 5. — **Conisbrough.** — ADDITIONS TO HOSPITAL.—The Doncaster and Mexbrough Joint Hospital Board invite competitive plans for additions to Isolation Hospital. See advertisements in the issues of May 17 and June 7 for further particulars.

AUGUST 6. — **Cardiff.** — FIRE-STATION. — The Cardiff Corporation invite designs and estimates for a fire brigade station in Westgate-street. Mr A. Marshall Mackenzie, assessor. Particulars from the Town Clerk, City Hall, Cardiff.

AUGUST 30. — SAXON SNELL PRIZE. — Fifty guineas, with medal, is offered for essay on "The Lighting, Heating, etc., of an Operating-Room for a General Hospital." Particulars from the Sanitary Institute, 90, Buckingham Palace-road, S.W.

SEPTEMBER 1.—**Goole.** MUNICIPAL OFFICES.—Premiums 30*l.* and 15*l.* Particulars from Mr. R. Tyson, Council Offices, Goole.

SEPTEMBER 30.—**Dublin.**—UNIVERSITY COLLEGE: NEW BUILDINGS.—Limited to architects in Ireland. Assessor, Mr. H. T. Hare, F.R.I.B.A.

OCTOBER 1. — **Ottawa.** — MONUMENT TO KING EDWARD VII.—Sketch models in plaster to be sent to the Director of National Art Gallery, Ottawa.

NO DATE.—**Jordanhill, Glasgow.**—PROPOSED TRAINING COLLEGE.—Limited to six firms, named in "Competition News," December 1, page 635.

NO DATE. — **Warrington.** — SCHOOL. — The Warrington Education Committee invite competitive plans for the erection of a public elementary school. See advertisement in issue of February 16 for further particulars.

Contracts.

BUILDING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

JUNE 14.—**Aberdeen.** HOUSE, ETC. Building new dwelling-house and making alterations on offices at Mains of Byth Croft; and making alterations on the dwelling-house and farm offices at Mains of Byth. Plans, specifications, and general conditions of contract with Messrs. Davideon & Garden, 12, Dee-street, Aberdeen.

JUNE 14. **Aldershot.**—WORKS.—For works at the cemetery lodge. Specifications and particulars from Messrs. Friend & Lloyd, architects, Aldershot.

JUNE 14. **Lurgan.**—WALLS, ETC. For building concrete walls and foundations; also filling in of site at Donacloney Factory, Lurgan. Plans and specification with Messrs. Hobart & Heron, architects, Scottish Provident-buildings, Belfast.

JUNE 15.—**Ide.**—REPAIRS, ETC. For repairing boundary wall, alterations, painting, and papering of the school house. Specification at the School, Ide.

JUNE 15. **Lancaster.** HALL.—For erection of new lecture-hall, Gregson Memorial. Plans and specification with Messrs. Austin & Paley, architects, Lancaster. Quantities from Messrs. Wright & Son, surveyors, Lancaster.

JUNE 15.—**Trowbridge.** —REPAIRS, ETC.—For repairs and renovations at the Trowbridge Newtown Council School. Specification and form of tender from Mr. W. H. Brown, Correspondent, County Offices, Trowbridge.

JUNE 16.—**Crossabeg.**—CHURCH.—Erection of a new church at Crossabeg, Co. Wexford. Plans and specification with Messrs. William H. Byrne & Son, architects, 20, Suffolk street, Dublin. Quantities by Messrs. Morris & Co., Harcourt-street, Dublin.

JUNE 17. **Aberdeen.**—ADDITIONS.—For additions to offices, City Hospital. Plans and specifications seen, and schedules from Mr. J. Rust, City Architect, 224, Union-street.

JUNE 17. **Aberystwyth.**—SHELTER.—For the erection of a shelter on Rofawr. Plans and specifications with Mr Rees Jones, Borough Surveyor, Corporation Offices, Smithfield-road, Aberystwyth.

JUNE 17.—**Burton-on-Trent.**—HOME, ETC.—Erection of new receiving home for children in Belvedere-road. Plans, specification, and quantities by the architect, Mr. Thomas Jenkins, Lic.R.I.B.A., of Arcade-buildings, Station-street, Burton-upon-Trent. Deposit of 1*l.* 1s.

JUNE 17.—**Cardiff.**—CASES.—For erection of two bookcases in the Reference Library. Specification from the Librarian, Central Library, Cardiff.

JUNE 17.—**Coventry.** ROOF.—For construction of a roof over purifiers at Foleshill Gasworks. Form of tender, with drawings, specification, and quantities, from Mr. F. W. Stevenson, Engineer and General Manager, Gasworks, Coventry. Deposit of 2*l.* 2s.

JUNE 17.—**Hollybush.** HOUSES.—Erection of twelve houses, for the Banalog Building Club, Hollybush, Mon. Plans and specifications with Mr. Ralph Simmonds, architect, Royal-chambers, Blackwood, Mon.

JUNE 17. **Redruth.**—COTTAGES.—For erection of forty-eight cottages at Close Hill, Redruth Plans and specification with Mr. Sampson Hill, architect, Green-lane, Redruth.

JUNE 17.—**Resolven.**—HOUSES.—For erection of fourteen houses at Melincourt, Resolven. Plans and specifications with Mr. G. A Treharne, engineer and architect, Belmont, Aberaman, Aberdare.

JUNE 17. **Risca.**—SHOP.—Erection of a manual training workshop at the Pontywaun County School, Risca, Mon. Plans and specification with Mr. John Bain, F.R.I.B.A., County Council Offices, Newport.

JUNE 18. **Bradford.**—HOUSE.—Erection of a house off Highgate, Heaton, Bradford. Plans seen, and quantities from Messrs. T. H. & F. Healey, architects, 42, Tyrrel-street, Bradford.

JUNE 18.—**Grimsby.**—SCHOOL.—For erection of new Council school, Victoria-street, Grimsby. Plans seen, and specifications from Mr. Herbert C. Scaping, architect, Court-chambers, Grimsby.

JUNE 18. **London.** —OFFICE.—Erection of Bow new sorting-office. Drawings, specification, and conditions and form of contract with Mr. J. Rutherford, 23, Carlisle-place, London, S.W. Quantities and forms of tender on deposit of 1*l.* 1s.. from the Secretary, H.M. Office of Works, etc., Storey's-gate, London, S.W.

JUNE 18 **Pinchbeck West.**—ALTERATIONS.—For alterations, etc., at the Church of England schools, Pinchbeck West. Plans and specifications seen, and quantities, upon a deposit of 1*l.* 1s., from Mr. W. H. H. Davis, F.A.S.I., architect and surveyor, 6, Double-street, Spalding.

JUNE 18.—**Thainstone.**—RESTORATION.—For restoration of farm offices at Cairnhall, Thainstone, Kintore. Plans and specifications at the farm. Messrs. Wilsone & Duffus, advocates, 7, Golden-square, Aberdeen.

JUNE 18.—**Wallsend.**—(TOILETS.—For the removal of privies and ashpits, and erection of water-closets. Plans and specifications with the Borough Surveyor, Town Hall, Wallsend. Form of tender on deposit of 1*l.* 1s.

JUNE 18.—**Wallsend.**—URINAL.—For the construction of an underground ferro-concrete urinal (Hennebique system) in Sycamore-street, Wallsend. Plans and specifications with the Borough Surveyor, Town Hall, Wallsend.

JUNE 18.—**Whitley.**—CHAPEL, ETC.—Erection of chapel, mortuary, entrance lodge, and boundary walls for the Council's new cemetery Drawings, specification, and conditions of contract by Mr. Edward Cratney, architect, 88, Station-road, Wallsend-on-Tyne. Deposit of 2*l.* 2s.

JUNE 19. — **Darlington.**—PICTURE-HALL.—Erection of a new picture-hall in Northgate and Gladstone-street, Darlington, for the Criterion Living Pictures, Ltd. Plans, specification, and general condition of contract seen, and quantities from Messrs. Hoskins & Brown, architects, Court-chambers, Darlington.

JUNE 19.—**Garstang.** BOARD-ROOM.—Erection of new board-room and offices. Plans seen, and quantities, with form of tender, on deposit of 1*l.* 1s. Mr. Chas. Thornton, Clerk, Town Hall, Garstang.

JUNE 19. **Southport.** WORKSHOPS, ETC The Lancashire and Yorkshire Railway invite tenders for the erection of workshops, stores, etc., for the Electrical Department, Southport Plans seen, and quantities and specification at the Engineer's Office, Hunt's Bank, Manchester.

JUNE 20. **Ballynahinch.** — PREMISES.—For rebuilding premises at Ballynahinch. Plans and specification with Messrs. Hobart & Heron, architects, Scottish Provident-buildings, Belfast.

JUNE 20.—**Chigwell.**—ROOMS, ETC.—Erection of a manual-instruction and cookery room on land adjoining the boys' Council school at Chigwell. Plans and specifications with Mr. Herbert J. Goodwin, Clerk to the Committee, Education Offices, Loughton.

JUNE 20. **Hull.**—PARTITIONS. Erection of the fixed portion of nine partitions at five schools, and also the enlargement of cloakroom at the West Dock-avenue School. Plans, specifications, and conditions of contract seen, and form of tender from Mr. J. T. Riley, Secretary of Education, Education Offices, Albion-street, Hull.

JUNE 20.- **Wanstead.**—CENTRE, ETC.—Erection of a manual-training and cookery centre, etc., on the school garden site in Cambridge Park. Drawings and specifications with Mr. George J Davis, Clerk to the Sub-Committee, Council Offices, Wanstead, N.E.

JUNE 21. **Bletherston.**—HOUSE.—For erection of a dwelling-house for the farm of Whitebrook. Plans and specifications with Messrs. D. E. Thomas & Son, architects, 17, Victoria-place, Haverfordwest.

JUNE 21. **Finchley.**—HOUSE, ETC.—The Metropolitan Water Board invite tenders for the construction of an engine-house, formation of roads, drainage, and other contingent works at Fortis-green, Finchley, Middlesex. Drawings, conditions of contract, and specification at the Offices of the Board (Chief Engineer's Department), Savoy-court, Strand, W.C. Deposit of 10*l.* for quantities, etc.

JUNE 21 **Laleston.**- HOUSES.—For erection of four houses at Laleston, near Bridgend. Plans and specifications with Messrs. George F. Lambert & Son, architects and surveyors, Prudential-buildings, Bridgend, and quantities on deposit of 1*l.* 1s.

JUNE 21. **Willesden.**—ENGINE-HOUSE ETC - The Metropolitan Water Board invite tenders for the construction of an engine-house, drainage, and other contingent works at their Cricklewood pumping-station, Willesden, Middlesex Drawings, conditions of contract, and specification at the Offices of the Board (Chief Engineer's Department), Savoy-court, Strand, W.C. Quantities, etc., on deposit of 10*l.*

JUNE 22.—**Colchester.** STORE. For construction of a coal store at waterworks, Balkernehill. Specification, with quantities, from Mr. C. H. Bland, Waterworks Superintendent, Town Hall, Colchester.

JUNE 22. **Donington, etc.** COTTAGES. Erection of cottages at Donington and Moulton. Plans and specifications seen, and quantities, on deposit of 2*l.* 2s., from Mr. W. H. H. Davis, P.A.S.I., architect and surveyor, 6, Double-street, Spalding.

JUNE 22. — **Verwick.** — VESTRY.—Erection of a new vestry at Siloam, Verwick. Plans, specifications, and information from Mr J. Teifion J. Williams, architect, Napier-street, Cardigan.

JUNE 22. — **Wotton-under-Edge.** — RETORT-HOUSE.—Erection of a retort-house and furnace arches at the gasworks. Plan and specification at the registered offices of the company at Wotton-under-Edge.

JUNE 24. **Coventry.**—MORTUARY.—Erection of public mortuary situate on Pool Meadow, at the rear of the Central Fire Station, Coventry. Drawings, specification, form of tender, and quantities from Mr. J. E. Swindlehurst, City Engineer and Surveyor, St. Mary's Hall, Coventry, on deposit of 1*l.* 1s.

BUILDING—*continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

JUNE 24.—**Fourlanes.**—HOUSES.—For erection of a block of ten houses at Fourlanes, near Redruth. Plans and specifications with Mr. H. Andrew, Polgear, Fourlanes; or Mr. A. O. Andrew, 10, Menecage-street, Helston.

JUNE 24. **Keighley.**—EXTENSIONS.—For alterations and extensions to the baths in Albert-street. Drawings, quantities, and particulars from the architects, Messrs. J. B. Bailey & Son, Scott-street, Keighley.

JUNE 24.—**Laurencetown.**—TOWER.—For building a tower at Tullylish Catholic Church, Laurencetown, Co. Down. Plans and specification with Messrs. Hobart & Heron, architects, Scottish Provident-buildings, Belfast. Quantities from Messrs. M'Carthy & Brookes, surveyors, Scottish Provident-buildings, Belfast.

JUNE 24. **Lichfield.**—ADDITIONS.—For alterations and additions to the Military Hospital, Lichfield. Plans, specification, and conditions of contract with the Director of Barrack Construction, 80, Pall Mall, London S.W., or at the Barrack Construction Office, Lichfield Barracks. Quantities on deposit of 10s.

JUNE 24.—**Porth.**—ADDITIONS.—Erection of additions and alterations to Bethlehem C.M. Vestries, Pontypridd-road, Porth, Glam. Plans and specification with Mr. W. D. Thomas, architect and surveyor, Tydvil House, Porth.

JUNE 24. **Tidworth.**—STABLES, ETC.—The erection of remount stables (twenty stalls), reappropriation of drill-shed for vehicle-shed and mobilisation store, reappropriation of part of bank block for squadron offices and stores and regimental shops, and additions to officers' quarters and mess block for four additional officers at Assaye Barracks, Tidworth, in the Southern Command. Plans, specification, and condition of contract at the Office of the Director of Barrack Construction, 80, Pall Mall, London, S.W., or at the Barrack Construction Office, Tidworth. Deposit of 10s.

JUNE 25.—**Reading.**—COVERING. The Great Western Railway invite tenders for the erection of a platform covering at Reading. Plans and specification seen, and forms of tender and quantities at the Office of the Engineer at Paddington Station, London.

✱ JUNE 25. **Walthamstow.**—ADDITIONS TO SCHOOLS.—The Walthamstow Education Committee invite tenders for alterations and additions at Queen's-road and Blackhorse-road schools. See advertisement in this issue for further particulars.

JUNE 25 **Whiteabbey.** HALL. For erection of a Masonic hall. Plans and specifications seen, and information from Mr. David Coote, 6, Lewis-street, Belfast.

✱ JUNE 27.—**Fulham.**—REPAIRS, ETC.—The Fulham Guardians invite tenders for erection of linen stores and bathroom, and providing maple and other floors at the Infirmary. See advertisement in this issue for further particulars.

JUNE 27.—**Hereford.** ADDITIONS.—For the conversion of the present infants' department into a boys' department, and additions, Lord Scudamore's Council Schools, Hereford. Drawings with the architects, Messrs. W. W. Robinson & Son, 10, King-street, Hereford. Quantities on deposit of 2l. 2s.

✱ JUNE 27. **Southampton.**—TEMPORARY IRON SCHOOL.—The Southampton C.C. invite tenders for a corrugated-iron temporary Council school at Bitterne. See advertisement in this issue for further particulars.

✱ JUNE 28. **Winchcomb.** ALTERATIONS AND ADDITIONS.—The Winchcomb Guardians invite tenders for alterations and additions at Workhouse Infirmary. See advertisement in this issue for further particulars.

JUNE 29.—**Bexhill.**—REINSTATEMENT. The proprietors of the Kursaal, Bexhill-on-Sea, invite tenders for the reinstatement of the wall to the gardens, and stormwater duct, the whole to be in concrete supported by six mild-steel stanchions. Plans, conditions, and specification from Mr. Louis Burn, A.M.Inst.Mech.E., consulting engineer, 6, Holborn-viaduct, London, E.C. Deposit of 10s.

JUNE 29. **Newton Abbot.** COLLEGE. The Governors of the Seale Hayne Agricultural and Technical College, Newton Abbot, Devon, invite tenders for the erection of the proposed College buildings near Newton Abbot. Specification, plans, conditions of contract, and form of bond with the Architect to the Governors, Mr. A. F Gutteridge, 9, Portland-street, Southampton. Quantities on deposit of 2l. 2s.

JUNE 29.—**Treorky.**—HALL, ETC.—Erection of a hall, etc., Station-road, Treorky, for the workmen of Parc and Dare Pits (Ocean Collieries). Plans and specifications seen, and quantities, on deposit of 2l. 2s., from Mr. J. Rees, architect, Pentre.

✱ JULY 1. **Hendon.**—PUBLIC MORTUARY, ETC.—The Hendon U.D.C. invite tenders for the erection of a public mortuary, etc. See advertisement in this issue for further particulars.

JULY 1. **London.**—LAUNDRY.—Erection of a public laundry, with necessary equipment, at the rear of the Kensal-road Baths. Forms of tender and specification from the Borough Surveyor, Town Hall, Paddington, W.

✱ JULY 1.—**Peterborough.**—EXTENSION OF POST-OFFICE.—The Commissioners of H.M. Works and Public Buildings invite tenders for extension of post-office. See advertisement in this issue for further particulars.

JULY 2.—**Whitley Bay.**—SCHOOL.—For erection of a new secondary school. Specification and quantities, on deposit of 2l. 2s., to Mr. C. Williams, Secretary to the Education Committee, The Moot Hall, Newcastle-on-Tyne.

✱ JULY 3.—**Aylesbury.**—EXTENSION OF POST-OFFICE.—The Commissioners of H.M. Works and Public Buildings invite tenders for extension of post-office. See advertisement in this issue for further particulars.

✱ JULY 4.—**Banstead.**—MANUAL TRAINING ROOM.—The Managers of the Kensington and Chelsea School District invite tenders for building of a manual training room at their school, Banstead, Surrey. See advertisement in this issue for further particulars.

✱ JULY 5. **Bedford.** EXTENSION OF POST-OFFICE.—The Commissioners of H.M. Works and Public Buildings invite tenders for extension of post-office. See advertisement in this issue for further particulars.

✱ JULY 16.—**London, S.W.** EXTENSION OF OFFICES. The Commissioners of H.M. Works and Public Buildings invite tenders for extension of the new public offices, Westminster (superstructure). See advertisement in this issue for further particulars.

NO DATE.—**Belfast.**—ALTERATIONS.—For alterations at No. 6, Wellington-place, Belfast. Plans, etc., with Messrs. Patterson & Grahame, architects, Scottish Provident-buildings, Belfast.

NO DATE. **Blaenrhondda.** HOUSE.—For the erection of a manager's house at Blaenrhondda, for the Fernhill Collieries, Ltd. Name and address, with 1l. 1s. for quantities, to Mr. R. S. Griffiths, M.S.A., architect and surveyor, Tonypandy.

NO DATE.—**Burnley.** MILL.—For proposed new mill at Hessandford, Burnley, for the Ferndale Mill, Ltd. Mr. Richard Jaques, A.R.I.B.A., architect, Nelson.

NO DATE. **Camberley.**—CHURCH.—Erection of a new Wesleyan church at Camberley. Plans by Messrs. Gordon & Gunton, FF.R.I.B.A., architects, Finsbury House, Blomfield-street, London, E.C. Names to the joint architect, Mr. A. N. Dungay, M.S.A., of Camberley and Alpha-chambers, Alexandra-road, South Farnborough, with deposit of 10s. 6d.

NO DATE.—**Cambridge.** CHURCH.—For erection of new Wesleyan church and premises at Cambridge. Architects, Messrs. Gordon & Gunton, Finsbury House, Blomfield-street, London, E.C.

✱ NO DATE. **Cardiff.** WORKMEN'S HOUSES. Tenders are invited for erection and completion of about 500 workmen's houses. See advertisement in this issue for further particulars.

NO DATE. **Evenwood.** CHURCH.—For erection of a Primitive Methodist Church at Evenwood, near West Auckland. Quantities from Mr. T. W. T. Richardson, M.S.A., architect and surveyor, 57, High-street, Stockton-on-Tees.

NO DATE. **Falmouth.** STORE. The Falmouth Gas Company invite tenders for building a quay and coal store adjoining their present works. Particulars from Mr. H. H. Hoare, Manager, Gasworks, Falmouth.

NO DATE. **Morecambe.** GREENHOUSE. Erection of a large greenhouse at 36, Ashton-road, Morecambe, E.E. Particulars from Mr. S. L. Galloway, architect, 505, Manchester-road, Bradford.

NO DATE. **Redcar.** COURT-HOUSE.—For the erection of a proposed new court-house. Names to the County Architect, Mr. Walter H. Brierley, 13 Lendal, York.

NO DATE. **Ridgeway.** SCHOOL.—Erection of schoolrooms at Ridgeway. Plans and specifications with Mr. Frank Windle, 183, Chatsworth-road, Chesterfield

NO DATE.—**Salisbury.**—GALLERY. Proposed picture gallery in Chipper-lane, Salisbury. Plans and specification with the architect, Mr G. L. W. Blount, 39, High-street, Salisbury. Quantities on deposit of 1l. 1s.

NO DATE. **Staple Hill.**—FACTORY.—The United Corset Company invite tenders for the erection of a corset factory at Staple Hill. Plans, specifications, etc., with Mr. Henry M. Bennett, architect, Old Bank-chambers, Corn-street, Bristol.

NO DATE.—**Thomastown.**—HOUSES.—Erection of twelve houses at Thomastown, near Bedwas, Mon. Plans and specification with Mr. J. Lewis Hughes, architect, Glyn-Derwen, Ynyshir, Glam.

NO DATE.—**Ystrad Mynach.** HOUSES.—For building nine houses at Ystrad Mynach, for the Bedlwyn Building Company, Ltd. Plans and specification with Mr. Alec S. Cameron, architect, 1, Glanant-street, Aberdare.

ENGINEERING, IRON, AND STEEL.

JUNE 15.—**Greenock.** WIRING, ETC.—For the wiring and fitting-up of electric lighting installation in the higher grade, Holmscroft, and Mearns-street schools, Greenock. Specification, with quantities and form of tender, from Mr. A. F. Niven, Clerk, School Board Offices, Municipal-buildings, Greenock, on deposit of 10s.

JUNE 17.—**Hastings.**—HEATING.—For installing hot-water heating system at the Waterloo-place Council School. Specification and drawings seen, and form of tender from the Borough Engineer, Town Hall, Hastings.

JUNE 19.—**Swinton.**—LIGHTING.—For electric light installation at the refuse destructor, stables, etc., including steam-driven generator. Specification and particulars from Mr. W. T. Postlethwaite, Clerk, Council Offices, Swinton.

JUNE 19.—**Wirral.**—WELL.—For the construction of a new artesian well, with deep well pump, at the Workhouse. Specification and particulars from Messrs. John H. Davies & Sons, architects, 14, Newgate-street, Chester.

JUNE 21.—**Glasgow.**—PLANT.—For erection of an aeration and filtration plant at Gorbals Baths. Specification and plans from the General Manager, Corporation Baths Department, 38, College-street.

JUNE 21 **Sevenoaks.**—HEATING, ETC.—Improvements to the ventilation and heating at the school. Specifications by the Committee's Architect, Mr. Wilfrid H. Robinson, of Caxton House, Westminster.

JUNE 24.—**Thornton Heath.** LIFTS.—Conversion of two bed hand lifts into two full automatic press-button control electric lifts (alternating current) at Infirmary, Mayday-road, Thornton Heath, Surrey. Specification, with plan and form of tender, from Mr. Henry Berney, architect, 104, George-street, Croydon. Deposit of 5l. 5s.

FURNITURE, PAINTING, MATERIALS, etc.

JUNE 14. — **Preston.** — DECORATING. — For decorating the Isolation Hospital, Deepdale, Preston. Specification, conditions, form of tender, and information, on deposit of 10s. 6d., from the Borough Engineer and Surveyor, Town Hall, Preston

JUNE 14.—**Preston.** PAINTING.—For painting, etc., Grange Farm, Freckleton. Specification, conditions, form of tender, and information from the Borough Engineer and Surveyor, Town Hall, Preston. Deposit of 10s. 6d.

JUNE 17. **Aberdeen.**—PAINTING.—For the painting and outside painter works of the Marine Hotel, Muchalls, and houses, etc., in the village. Mr. Thos. Fotheringham, Factor, 352, King-street, Aberdeen.

JUNE 17.—**Bristol.** PAINTING.—For the painting, colouring, etc., of certain schools. Specifications and conditions of contract from Mr Peter Addie, Exchange, Corn-street, Bristol Deposit of 1l. 1s.

JUNE 17. **Inishowen.**—PAINTING.—For painting the exterior wood and iron work, and repairs and whitewashing at the Workhouse. Specification with Mr. Robert Moore, Clerk of Union Workhouse, Carndonagh

JUNE 17.—**Southall.**—PAINTING, ETC.—For painting, whitewashing, repairs, etc., at the St Marylebone Schools, Southall. Specification and form of tender from the architect, Mr. A. Saxon Snell, F.R.I.B.A., 9, Bentinck-street, Manchester-square, W. Deposit of 5l.

JUNE 18.—**Carlisle.** PAINTING.—For the painting and other works required at three of the elementary schools. Specification and particulars from Mr. H. C. Marks, M.Inst.C.E., Surveyor, 36, Fisher-street, Carlisle. Deposit of 10s. 6d.

JUNE 18. **London.** PAINTING.—For painting and other works to Workhouse in Poland-street W. Specification seen, and quantities from the architect, Mr. W. Lockwood, 12, Sherwood-street, Piccadilly-circus, W. Deposit of 3l. 3s.

JUNE 19. **Stroud.**—PAINTING, ETC.—For works of repair, painting, etc., at Parliament-street Council School, Stroud; Castle-street Council School, Stroud. Specifications, on deposit of 1l. 1s., from Mr. R. S. Phillips, Architect, Shire Hall, Gloucester.

✱ JUNE 19.—**Sutton, Surrey.**—CLEANING AND PAINTING.—The Metropolitan Asylums Board invite tenders for cleaning and painting works at the Downs School. See advertisement in this issue for further particulars.

JUNE 20. **London.** PAINTING.—For cleansing and painting at the Nurses' Home, at 10 and 11, Amphill-square. Specification, on deposit of 1l. 1s., to Mr. J. E. P Hall, Clerk to the Guardians, Town Hall, Pancras-road, W.N.

JUNE 20. **London.** PAINTING.—For internal cleansing and painting and other works at North Infirmary, Parkhurst Park-hill, N. Specifications and particulars from Mr. J. E. P. Hall, Clerk to the Guardians, Town Hall, Pancras-road, N.W. Deposit of 5l.

JUNE 21. **Chartham Downs.** REPAIRS, ETC For repairs, plastering, and painting to ward D, female, at the Kent County Asylum. Quantities, on deposit of 2l. 2s., from Mr. W. J. Jennings, architect, 4, St. Margaret's-street, Canterbury.

JUNE 21. **Pentre.**—PAINTING.—For painting and colouring schools during midsummer Specification seen, and conditions of contract and form of tender from the architect, Mr J Rees, Hillside Cottage, Pentre

JUNE 24.—**Beckenham.** RAILINGS, ETC. For the supply of wrought-iron railings and gates for Kelsey Park Grounds. Plans, quantities, specifications, and form of tender from Mr. John A. Angell, Surveyor, on deposit of 2l.

JUNE 25.—**Australia.**—RODS, ETC.—Tenders will be received by the Supply and Tender Board, Adelaide, South Australia, for the supply and delivery of 42,000 ft. of point rods, with plugs, collars, and cotters; also 500 extra collars. The specification and form of tender from the Supply and Tender Board, Office, Adelaide.

JUNE 25. **Chorley.** PAINTING. For painting, etc., at the Isolation Hospital, Heath Charnock. Mr. R. E. Stanton, Clerk, 14, High-street, Chorley.

✱ JUNE 25. **Lambeth.**—PAINTING, ETC. The Lambeth Guardians invite tenders for alterations and external painting at the Relief Station, West Norwood. See advertisement in this issue for further particulars.

✱ JUNE 27. **Fulham.** PAINTING, ETC. The Fulham Guardians invite tenders for repairs, painting, distempering, etc., at Receiving Home for Children, Parson's Green, the Nurses' Home, Workhouse, and Infirmary, Fulham Palace-road. See advertisement in this issue for further particulars.

✱ JUNE 27. **London. E.**—PAINTING, ETC. The Stepney Guardians invite tenders for interior painting and distempering at Workhouse Infirmary, St. Leonard-street, Bromley-by-Bow, E. See advertisement in this issue for further particulars.

ROADS, SANITARY AND WATER WORKS.

JUNE 14.—**Llwynypia.**—SEWER.—For laying cast-iron pipe sewer and stoneware pipe sewer at Llwynypia. Plans seen, and forms of tender from the Engineer and Surveyor, Council Offices, Pentre, Rhondda, on deposit of 1l. 1s.

ROADS, etc.—*continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

JUNE 17. **Epsom.** ROADS.—For making-up Grove-road and Hadfield-road. Plans and specification with the Surveyor of Highways, Mr. T. E. Wane, Waterloo-road, Epsom.

JUNE 17.—**Rothwell.**—SEWER. For 220 yds. of sewer at Rothwell Haigh, and for a short length at Stourton, with necessary manholes, etc. Particulars and plans with Mr. J. Southwart, Surveyor to the Council, Council Offices, Rothwell. Deposit of 1*l.* 1s.

JUNE 17. **Tendring.**—FLINTS.—Supply of five barges of Kentish flints. Mr. A. J. H. Ward, Clerk to the Council, 42, Church-street, Harwich.

JUNE 18. **Soyland.**—GRANITE.—For 380 tons of 2-in. broken granite and 100 tons of 2-in. tarviated granite. Mr. W. Whitehead, Surveyor, Council Offices, Elland-road, Ripponden.

JUNE 18.—**Wembley.**—STREETS.—For private and public street improvement works. Drawings and specifications with Mr. C. R. W. Chapman, Engineer and Surveyor, Public Offices, Wembley. Quantities, with forms of tender, from Mr. F. W. Rodd, Clerk, Public Offices, Wembley.

JUNE 19.—**Bexley.**—PAVING.—For about 3,500 yds. super. tar-paving footpaths. Specification from Mr. W. T. Howse, Surveyor. Deposit of 1*l.* 1s.

JUNE 19.—**Birkenhead.** FLAGGING, ETC.—For the flagging, paving, channelling, and sewering of various passages. Plans and specifications seen, and form of tender, with quantities, from Mr. C. Brownridge, M.Inst.C.E. Borough Engineer and Surveyor, Town Hall, Birkenhead. Deposit of 10s.

JUNE 19.—**Southampton.** DRAIN.—For laying a 6-in. subsoil drain at the Isolation Hospital. Particulars and conditions of contract from the Borough Engineer, Municipal Offices, Southampton. Deposit of 10s.

JUNE 20.—**Rishworth.**—SEWAGE.—For excavating and laying of 9-in. sewers with top water drains, from Booth Wood to Turner Wood Bottom. Plans and sections seen, and quantities from Messrs. Richard Horsfall & Son, surveyors and architects, 22A, Commercial-street, Halifax.

JUNE 20.—**Wigston Magna.** ROAD For sewering, making-up, repairing, draining, etc., of Granville-road, Wigston Fields. Plans and specifications seen, and quantities, with form of tender, from the Surveyor's Office, Station-road, Wigston Magna. Deposit of 1*l.*

JUNE 22.—**Bexhill.**—ROAD.—For the making-up of about 1,300 ft. of proposed new road in extension of North-street. Plans and specifications seen, and quantities and forms of tender from Mr. George Ball, M.Inst.C.E., Town Hall. Deposit of 1*l.* 1s.

JUNE 22.—**Birmingham.**—ROAD.—For the reconstruction of Robert-road, Small Heath. Drawings seen, and specification, quantities, and form of tender, on deposit of 1*l.*, from Mr. Henry E. Stilgoe, City Engineer and Surveyor, The Council House, Birmingham.

JUNE 22.—**Hollington.** WALL, ETC.—For taking down and rebuilding old churchyard wall; also an addition of 61 yds. new walling. For particulars apply to Mr. H. N. Philips, The Long Close, Hollington.

JUNE 24.—**Brighouse.** PAVING. For the paving of a portion of the Bradford-road. Plans seen, and specifications and quantities from Mr. S. S. Haywood, Borough Engineer and Surveyor, Municipal Offices, Brighouse. Deposit of 1*l.* 1s.

JUNE 24.—**Bury St. Edmund's.** MATERIALS For supply of broken material. Conditions of contract, with specification and form of tender, from Mr. W. L. Jenkins, A.M.Inst.C.E., P.A.S.I., County Surveyor, Shire Hall, Bury St. Edmund's.

JUNE 24. **Denton.**—SEWAGE.—For the construction of about 1,260 yds. of 12-in. stoneware pipe sewer and other works in Thornley-lane, Denton. Drawings and specifications seen, and form of tender from the Surveyor to the Council, Town Hall, Denton, near Manchester. Deposit of 1*l.* 1s.

JUNE 24. **Laurencekirk.** SEWAGE.—For proposed sewage-purification works. Form of tender, specification, and quantities from Messrs. Bruce & Proudfoot, civil engineers, Cupar. Deposit of 1*l.*

★ JUNE 24. **Southampton.**—MAIN SEWERAGE AND SEWAGE DISPOSAL.—The S. Stoneham R.D.C. invite separate tenders for main sewerage and sewage disposal works at Bitterne Manor, Southampton. See advertisement in this issue for further particulars.

★ JUNE 25. **Clapham Common.**—WOOD-PAVING.—The Wandsworth B.C. invite tenders for wood-paving and other works in Long-road. See advertisement in this issue for further particulars.

★ JUNE 25.—**Lambeth.**—FLUSHING SINKS.—The Lambeth Guardians invite tenders for provision and fixing of flushing sinks at the Infirmary, Brook-street, Kennington, S.E. See advertisement in this issue for further particulars.

JUNE 25.—**London.** PAVING. For paving with granite setts the breasts of the carriageway in Stanstead-road, Catford. Contract and plan seen, and forms of tender, specification, etc., at the Town Hall, Catford (Surveyor's Department).

JUNE 25.—**Newport Pagnell.**—SEWAGE.—For laying cast-iron and stoneware sewers, and the construction of sewage-disposal works, comprising engine-house, sedimentation tanks, storm-water tanks, filters, and other works at Olney, Newport Pagnell. Drawings, specifications, form of tender, and quantities from the Engineer, Mr. John Chadwick, Bletchley, Bucks, on deposit of 3*l.* 3s.

JUNE 26. **Bedford.**—PAVING, ETC.—For paving and road-making in Kingsley-road, Bedford. Drawings and specifications seen, and quantities, forms of tender, and information from Mr. N. Greenshields, A.M.Inst.C.E., Borough Engineer, Town Hall, Bedford.

JUNE 26. **St. Austell.** PIPES.—For supply of glazed stoneware socket drain pipes. Particulars from Mr. A. J. Blight, Highway Surveyor, Treloweth, St. Austell.

JUNE 29.—**Harrow-on-the-Hill.** GRANITE.—For supply of broken granite and ¾-in. granite chippings, and coarse and fine gravel. Mr. J. Percy Bennetts, Surveyor to the Council, Harrow.

★ JULY 1. **Hendon.** ROAD-MAKING, ETC. The Hendon U.D.C. invite tenders for kerbing, channelling, paving, road widening, metalling, etc. See advertisement in this issue for further particulars.

★ JULY 3.—**Hove.**—NEW SEWERS. Tenders are invited for constructing new sewers within the Borough of Hove. See advertisement in this issue for further particulars

★ JULY 4. **Lymm.**—OUTFALL WORKS. The Lymm U.D.C invite tenders for construction of outfall works and stoneware pipe sewers, etc. See advertisement in this issue for further particulars.

★ NO DATE. **Cardiff.**—MAIN ROADS AND SEWERS. Tenders are invited for laying down main roads and sewers for a housing scheme near Cardiff. See advertisement in this issue for further particulars.

NO DATE. **Coppull.** SEWER.—For laying a sewer, about 160 yds. Plans, etc., at Springfield House, Coppull.

Public Appointments.

Nature of Appointment.	By whom Advertised.	Salary.	Application to be in
*HEAD OF BUILDING DEPARTMENT	Northern Polytechnic Inst.	400*l.* per annum	No date
*DRAUGHTSMAN	Glamorgan C.C.	140*l.* per annum	No date

Auction Sales.

Nature and Place of Sale.	By whom Offered.	Date of Sale.
*GOODWILL, STOCK, AND PLANT—On the Premises at Rye Harbour	Fuller, Horsey, Sons, & Cassell	June 20
*BUILDERS' MERCHANT'S STOCK At 42, Jewry-street, Winchester	H. W. Smith	June 25
*PLANT AND MACHINERY.—On the Site	Craske & Sons	June 26
*FREEHOLD PROPERTY, STREATHAM COMMON—At the Mart	Edwin Fox, Bousfield, Burnetts, & Baddeley	June 26
*BUILDING MATERIALS, CAMBERWELL-GATE, S.E.—On the Site	Veryard & Yates	June 27
*FREEHOLD BUILDING ESTATE, HARROW-ON-THE-HILL—At the Mart	Humbert & Flint	July 17

OBITUARY.

Mr. S. Smirke, F.R.I.B.A.

The death, on June 5, at his residence in St. John's-road, Richmond, Surrey, is announced of Mr. Sydney Smirke, aged seventy years, formerly of Teddington, and of Craig's-court, Charing Cross. Mr. Smirke was the son of Sydney Smirke, R.A., Gold Medallist, 1860 (*obiit* 1870), and nephew of Sir Robert Smirke, R.A., Gold Medallist, 1853 (*obiit* 1867), Sir Edward Smirke, the antiquarian (*obiit* 1875), and Richard Smirke, the antiquarian and draughtsman (*obiit* 1815)—the sons of Robert Smirke, the painter, who died in 1845. Mr. Sydney Smirke was elected a Fellow of the Royal Institute of British Architects in 1888, and served upon the Literature Standing Committee for several sessions. He was a member of Council, Architects' Benevolent Society, and retired by rotation in March, 1904; in 1887 he became a member of the Architectural Association.

Mr. E. J. Milner Allen.

We regret to announce the death from pneumonia of Mr. Edmund John Milner Allen, after an illness extending over only a few days, at the age of fifty-two. After studying at the Royal Academy of Arts, where he was a Silver Medallist in 1880, he was elected Associate of the Royal Institute of British Architects in 1882 (extra Silver Medallist, Soane Medallion, 1883), and commenced practice in 1884. In addition to numerous and varied works, both alone and with the late Mr. Arthur B. Gibson, he was joint architect, with Mr. J. W. Simpson, of the Liverpool City Hospital (South); the Victoria Institute, Worcester; the Glasgow Fine Art Galleries, Kelvingrove Park (admittedly one of the finest specimens of modern architecture in Great Britain); and the Cartwright Memorial Hall, Bradford.

Mr. R. Morham.

The death, on June 5, at his residence, No. 13, Lauder-road, Edinburgh, is announced of Mr. Robert Morham, aged seventy-three years, who in 1873 was appointed City Architect and Superintendent of Works to the Edinburgh Corporation, and in May, 1903, retired from that office, through superannuation. Mr. Morham, a native of Edinburgh, received his professional training in the offices of the late David Rhind and David Bryce, and for a few years practised in London with Mr. W. Eden Nesfield. When twenty-seven years of age he returned to Edinburgh and became chief assistant of Mr. David Cousin, then the City Architect. Mr. Morham's principal work for the Town Council comprised the extension, initiated in 1896, of the City Chambers; the central fire-station; Colinton Mains Fever Hospital for 600 patients; shelters, pavilions, and promenades in West Princes-street Gardens, and in West Meadows and Saughton and Roseburn Parks; New North Bridge and other improvements; the new bridge from Gorgie-road to Saughton Park, constructed wholly of reinforced concrete, and the Waverley and Gorgie Corn and Cattle Markets, with new abattoirs, roads, etc. (1907-8); the public baths (1893-4); the West Port police and fire stations (1883); Portobello baths, and Simon-square, St. Leonard's, and Stockbridge baths and washhouses, and Dalry baths (1901-7); extension, for 125,000 volumes, of the Public Library, George IV. Bridge, and Maconochie's Close, Cowgate (1902-3); Morningside branch public library (1904-5); public library, police-courts, and alteration and conversion of the municipal buildings, Portobello (1906); Bowl House, West Meadows, mortuary and disinfector buildings, High Schools yards, and electricity power-station, Macdonald-road (1903-5); Stockbridge and Torpichen police and fire stations (1906-8); alterations and improvement of the committee-rooms, City chambers (1905); and the North

Berwick Infectious Diseases Hospital (1900). In 1906 Mr. Morham, jointly with Mr. Pittendrigh Macgillivray, R.S.A., prepared plans for the new art school; he also made plans, in 1904, for the Usher Hall. He read a paper, "Suggestions on Fever Hospital Construction," to the Congress at Aberdeen of the Royal Institute of Public Health, reported in our columns of August 18, 1900.

Mr. H. C. Whaite, R.W.S.

Mr. H. Clarence Whaite, of Kensington, who died on June 5 at his country home, Tyddyn Cynal, in Conway, was born in 1828 in Manchester, where he entered the School of Design. He then studied in Lee's School, Newman-street, London, and the Royal Academy. For many years he was a regular contributor of landscapes to the Royal Academy and the Manchester Royal Institution Exhibitions; he was founder and first President of the Royal Cambrian Academy, and a co-founder, and latterly President, of the Manchester Academy of Fine Art. The mountain scenery of North Wales supplied many a subject for his pictures, which since his election into the Royal Water-Colour Society were, for the most part, painted in that medium.

Mr. C. R. Wells.

The death took place recently, at his residence, 226, Westmorland-road, Newcastle, of Mr. Charles R. Wells, a retired builder and contractor, who had reached the age of eighty-two years. Mr. Wells was a native of Cromer, Norfolk, and went to Newcastle between fifty and sixty years ago. He commenced building in the west end when that portion of the city comprised green fields, and erected houses in Park-road, Bell terrace, and Choppington-street, eventually finishing on the Beech-grove estate. He had lived in retirement about sixteen years.

SOME RECENT SALES OF PROPERTY:

ESTATE EXCHANGE REPORT.

May 8. By KNIGHT, FRANK, & RUTLEY.

Pendleton, Lancs.—Pendleton Estates (f.g. rents and chief rents) £79,000

May 22.—By STOOKE & SON.

Bosbury, Hereford.—Lower Cold Green Farm, 99 a. 1 r. 26 p., f. 4,125

May 28.—By KNIGHT, FRANK, & RUTLEY.

Corwen, Merioneth. Rog Estate (outlying portions), 1,728 acres, f. 39,178

May 30.—By MORRIS, MARSHALL, & POOLE.

Guilsfield, Montg.—Three farms, etc., 361 acres, f. 6,270

By LAWRENCE & SON.

Cookham, Berks. -Arable land, 6 a. 2 r. 5 p., f. 850
Six cottages, f., w.r. 62l. 12s. 750
Holly Lodge and Ship Orchard, f. and l. 2,000
Riverdene, f.g.r. 50l., reversion in 62 yrs. 1,000
Pasture land, 6 a. 3 r. 3 p., f. 690

May 31.—By H. & R. L. COBB.

Lynsted, Kent.—Lewson Farm, 48 a. 1 r. 31 p., f. 2,000
Teynham, Kent.—Arable land, 29 acres, f. 1,550
House and five cottages, plot of land, f. 1,010
Lower Newlands and Nichol Farms, 212 a. 3 r. 22 p., f. 10,450
Marsl. land, 31 a. 2 r. 12 p., f. 750
Borden, Kent.—Arable land, 8 a. 3 r. 7 p., f. 345
Bredgar, Kent. -Arable land, 12 a. 0 r. 29 p., f. 250
Stockbury, Kent.—Beaux Aix Farms, 141 a. 3 r. 37 p., f. 1,600

By NASH, SON, & ROWLEY.

Layston, Herts. Part of Corney Bury Estate, 393 acres, f. 8,597

By WINTERTON & SONS.

Lichfield, Staffs. 38 to 46 (even), George-la., f., w.r. 81l. 4s. 930
29, Market-st. (s.), f., y.r. 105l. 1,500

June 1. By BIDWELL & SONS.

Ancaster, Lincs. Willoughby Hall Estate, 1,204 acres, f. 25,925

By J. CUMBERLAND & SONS.

Thurleigh, Beds.—Agricultural estate, 1,932 acres, f. 26,660

June 3.—By GILBERT & HOW.

Stroud Green.—10, Ferme-park-rd. (s.), u.t. 66 yrs., g.r. 14l., y.r. 70l. 750
Crouch End.—65, Crouch-hill, u.t. 62 yrs., g.r. 8l. 10s., p. 335

By HOLCOMBE, BETTS, & WEST.

Bayswater.—30, Queen's-rd., f., y.r. 80l. 1,500

By WILKINSON, SON, & WELCH.

Hove, Sussex. 53, York-rd., u.t. 40 yrs., g.r. 15l. 2s. 6d., y.r. 55l. 330
13 and 14, Farm rd., u.t. 39 yrs., g.r. 18l. 8s., y.r. 85l. 540
19 and 20, Farm rd., u.t. 42 yrs., g.r. 10l. 8s., w.r. 78l. 320

June 4.—By EDWIN, FOX, BOUSFIELD, BURKETTS, & BADDELEY.

Kensington.—17, High-st. (s.), f., y.r. 200l. 5,300

By STANLEY PARKES & BROWN.

Enfield. 20, Essex-rd., f., y.r. 27l. 10s. 385
Tottenham. 151, Northumberland-park, f., y.r. 37l. 10s. 475

By THOMAS, PEYER, & MILES.

Snodland, Kent. Rising Sun p.h., f., y.r. 25l. 2,550

By T. B. WESTACOTT & SONS.

Kentish Town.—17, Bartholomew-villas, u.t. 49 yrs., g.r. 7l., y.r. 48l. 450
103, Islip-st., u.t. 37 yrs., g.r. 8l. 8s., e.r. 42l. 235

By WILLIAMS & WILLIAMS.

Ealing.—46, The Mall (s.), f., y.r. 150l., also f.g.r. 36l. 10s., reversion in 92 yrs. £2,550

By KNIGHT, FRANK, & RUTLEY.

Stittenham, Yorks.—Stittenham Estate, 1,637 acres, f. 35,750

By N. EASTON & SON.

Preston, Yorks. Longsight Farm, 154½ acres, f. 4,200

Burton Pidsea, Yorks.-Red House Farm, 231 acres, f. 5,350

New Holland, Lincs. -Albert House Farm, 29 a. 2 r. 6 p., f. 1,510

June 5.—By BEARD & SON.

Bayswater.—231, Westbourne-gr. (s.), u.t. 31 yrs., g.r. 8l. 10s., y.r. 80l. 700
Colville-mews, freehold workshops, p. 700

Harlesden.—170, 172, 174, 182 to 194 (even), High-st., u.t. 68 yrs., g.r. 65l., y. and w.r. 357l. 14s. 2,360

1, Nightingale-rd., u.t. 69 yrs., g.r. 6l. 10s., w.r. 44l. 4s. 195

Contractions used in these lists.—F.g.r. for freehold ground-rent; l.g.r. for leasehold ground-rent; i.g.r. for improved ground-rent; g.r. for ground-rent; r. for rent; f. for freehold; c. for copyhold; l. for leasehold; p. for possession; e.r. for estimated rental; w.r. for weekly rental; q.r. for quarterly rental; y.r. for yearly rental; u.t. for unexpired term; p.a. for per annum; yrs. for years; la. for lane; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; cres. for crescent; av. for avenue; gdns. for gardens; yd. for yard; gr. for grove; b.h. for beerhouse; p.h. for public-house; o. for offices; s. for shops; ct. for court.

TO CORRESPONDENTS.

NOTE.—All communications with respect to literary and artistic matters should be addressed to "THE EDITOR" (and not to any person by name); those relating to advertisements and other exclusively business matters should be addressed to "THE PUBLISHER," and not to the Editor.

All communications must be authenticated by the name and address of the sender, whether for publication or not. No notice can be taken of anonymous communications.

The responsibility of signed articles, letters, and papers read at meetings rests, of course, with the authors.

We cannot undertake to return rejected communications; and the Editor cannot be responsible for drawings, photographs, manuscripts, or other documents, or for models or samples, sent to or left at this office, unless he has specially asked for them.

All drawings sent to or left at this office for consideration should bear the owner's name and address on either the face or back of the drawing. Delay and inconvenience may result from inattention to this.

Any commission to a contributor to write an article, or to execute or lend a drawing for publication, is given subject to the approval of the article or drawing, when received, by the Editor, who retains the right to reject it if unsatisfactory. The receipt by the author of a proof of an article in type does not necessarily imply its acceptance.

N.B.—Illustrations of the First Premiated Design in any important architectural competition will always be accepted for publication by the Editor, whether they have been formally asked for or not

PRICES CURRENT OF MATERIALS.

*** Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

BRICKS, &c.

Per 1000 Alongside, in River. £ s. d.

Best Stocks 1 14 0
Picked Stocks for Facings 2 10 0

Per 1000, Delivered at Railway Depôt.

£ s. d.	£ s. d.
Flettons 1 13 0	Best Blue Pressed
Best Fareham	Staffordshire... 3 15 0
Red 3 12 0	Do. Bullnose..... 4 0 0
Best Red Pressed	Best Stourbridge
Ruabon Facing 5 0 0	Fire Bricks ... 4 0 0

GLAZED BRICKS—

Best White,	Double Headers 13 17 6
Ivory, and Salt	One Side and two
Glzd. Str'tch'rs 11 7 6	Ends 17 17 6
Headers 10 17 6	Two Sides and
Quoins, Bullnose,	one End 18 17 6
and 4½ in. Flats 14 17 6	Splays & Squints 16 7 6
D'ble Stretchers 16 17 6	

Second Quality £1 10s. per 1000 less than best.

	s. d.	
Thames and Pit Sand	6 9	per yard, delivered.
Thames Ballast	5 6	" "
Best Portland Cement	31 0	per ton, "
Best Ground Blue Lias Lime	19 0	" "

NOTE—The cement or lime is exclusive of the ordinary charge for sacks.

Grey Stone Lime ..... 13s. 0d. per yard delivered.
Stourbridge Fireclay in sacks 27s. 0d. per ton at rly dpt.

STONE.

Per Ft. Cube.

	s. d.
BATH STONE—delivered on road waggons, Paddington Depôt	1 6½
Do. do. delivered on road waggons, Nine Elms Depôt	1 8½
PORTLAND STONE (20 ft. average)—	
Brown Whitbed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2 3
White Basebed, delivered on road waggons Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2 4½

STONE (*Continued*).

Per Ft. Cube, delivered at Railway Depôt.

	s. d.		s. d.
Ancaster in blocks..	1 10	Closeburn Red	
Beer-in blocks	1 6	Freestone	2 0
Greenshill in blocks	1 10	Red Mansfield	
Darley Dale in		Freestone	2 4
blocks	2 4	Talacre & Gwespyr	
Red Corsehill in		Stone	2 4
blocks	2 3		

YORK STONE—*Robin Hood Quality.*

Per Ft. Cube, Delivered at Railway Depôt. s. d.

Scappled random blocks 2 10

Per Ft. Super., Delivered at Railway Depôt.

6 in. sawn two sides landings to sizes (under 40 ft. super.) 2 3
6 in. rubbed two sides ditto, ditto 2 6
3 in. sawn two sides slabs (random sizes) 0 11½
2 in. to 2½ in. sawn one side slabs (random sizes) 0 7
1½ in. to 2 in. ditto, ditto 0 6

HARD YORK—

Per Ft. Cube, Delivered at Railway Depôt.

Scappled random blocks 3 0

Per Ft. Super., Delivered at Railway Depôt.

6 in. sawn two sides landing to sizes (under 40 ft. super.) 2 8
6 in. rubbed two sides ditto 3 0
3 in. sawn two sides slabs (random sizes) 1 2
2 in. self-faced random flags 0 5

SLATES.

Per 1000 of 1200 at Railway Depôt.

	£ s. d.		£ s. d.
In. In.		In. In.	
20×10 best blue		20×10 best Eur'ka	
Bangor	13 2 6	unfading green	15 17 6
20×12 ditto	13 17 6	20×12 ditto	18 7 6
20×10 1st quality		18×10 ditto	13 5 0
ditto.....	13 0 0	16×8 ditto	10 5 0
20×12 ditto	13 15 0	20×10 permanent	
16×8 ditto	7 5 0	green	11 12 6
22×10 best blue		18×10 ditto	9 12 6
Portmadoc.....	12 12 6	16×8 ditto	6 12 6
16×8 ditto	6 12 6		

TILES.

At Railway Depôt.

	s. d.		s. d.
Best plain red roof-		Best "Hartshill"	
ing (per 1000)	42 0	brand, plain sand-	
Hip and Valley		faced (per 1000)...	45 0
(per doz.)	3 7	Do. pressed (per	
Best Broseley (per		1000)	42 6
1000)	50 0	Do. Ornamental (per	
Do. Ornamental (per		1000)	47 6
1000)	52 6	Hip (per doz.)...	4 0
Hip and Valley		Valley (per doz.)	3 6
(per doz.)	4 0	Staffords. (Hanley)	
Best Ruabon red,		Reds or Brindled	
brown, or brindled		(per 1000)	42 6
(Edw'ds) (per 1000)	57 6	Hand-made sand-	
Do. Ornamental (per		faced (per 1000)	45 0
1000)	60 0	Hip (per doz.)...	4 0
Hip (per doz.)...	4 0	Valley (per doz.)	3 6
Valley (per doz.)	3 6		

WOOD.

BUILDING WOOD.	At per standard.					
	£	s.	d.	£	s.	d.
Deals: best 3 in. by 11 in. and 4 in. by 9 in. and 11 in.	14	0	0	... 15	10	0
Deals: best 3 by 9	13	10	0	... 14	10	0
Battens: best 2½ in. by 7 in. and 3in., and 3 in. by 7 in. and 8 in.	11	10	0	... 12	10	0
Battens: best 2½ by 6 and 3 by 6...	0	10	0	less than 7 in. and 8 in.		
Deals: seconds	1	0	0	less than best.		
Battens: seconds	0	10	0	"		"
2 in. by in. and 2 in. by 6 in. ...	9	10	0	... 10	10	0
2 in. by 4½ in. and 2 in. by 5 in.	9	0	0	... 10	0	0
Foreign Sawn Boards—						
1 in. and 1¼ in. by 7 in.	0	10	0	more than battens.		
¾ in.	1	0	0	"		

	At per load of 50 ft.					
Fir timber: best middling Danzig or Memel (average specification)	5	0	0	... 5	10	0
Seconds	4	10	0	... 5	0	0
Small timber (8 in. to 10 in.) ...	3	17	6	... 4	0	0
Small timber (6 in. to 8 in.).....	3	5	0	... 3	10	0
Swedish balks	2	12	6	... 3	0	0
Pitch-pine timber (50 ft. average)	5	5	0	... 6	0	0

JOINERS' WOOD.	At per standard.					
White Sea: first yellow deals,						
3 in. by 11 in.	24	10	0	... 25	10	0
3 in. by 9 in.	22	10	0	... 23	10	0
Battens, 2½ in. and 3 in. by 7 in.	17	0	0	... 18	0	0
Second yellow deals, 3in. by 11in.	19	0	0	... 20	0	0
" " 3 in. by 9 in.	18	0	0	... 19	10	0
Battens, 2½ in. and 3in. by 7 in.	14	0	0	... 15	0	0
Third yellow deals, 3 in. by 11 in. and 9 in.	14	0	0	... 15	0	0
Battens, 2½ in. and 3 in. by 7 in.	11	10	0	... 12	10	0
Petersburg: first yellow deals,						
3 in. by 11 in.	21	10	0	... 22	10	0
Do. 3 in. by 9 in.	18	10	0	... 19	10	0
Battens	14	0	0	... 15	0	0
Second yellow deals, 3 in. by 11 in	16	10	0	... 17	10	0
Do. 3 in. by 9 in.	15	0	0	... 16	0	0
Battens	11	10	0	... 12	10	0
Third yellow deals, 3in. by 11in.	13	10	0	... 14	10	0
Do. 3 in. by 9 in.	13	0	0	... 14	0	0
Battens	10	10	0	... 11	0	0
White Sea and Petersburg—						
First white deals, 3 in. by 11 in.	15	0	0	... 16	0	0
" " 3 in. by 9 in.	14	0	0	... 14	10	0
Battens	11	10	0	... 12	10	0
Second white deals, 3in. by 11in.	14	0	0	... 15	0	0
" " 3 in. by 9 in.	13	0	0	... 14	0	0
Battens	10	10	0	... 11	0	0
Pitch-pine: deals	19	0	0	... 21	0	0
Under 2 in. thick extra.....	0	10	0	... 1	0	0
Yellow Pine—First, regular sizes	48	0	0	upwards.		
Oddments	32	0	0	"		
Seconds, regular sizes	33	0	0	"		
Oddments	28	0	0	"		
Kauri Pine—Planks per ft. cube.	0	4	6	... 0	6	0
Danzig and Stettin Oak Logs—						
Large, per ft. cub e.....	0	3	0	... 0	3	
Small " "	0	2	6	... 0	2	
Wainscot Oak Logs, per ft. cube	0	6	6	... 0	8	

WOOD (*Continued*).

JOINERS' WOOD (*Continued*)—	£ s. d.	£ s. d.
y Wainscot Oak, per ft. sup. as inch	0 0 10 ...	0 1 0
⅜ in. do. do.	0 0 8½ ...	—
y Mahogany—Houndras, Tabasco, per ft. super. as inch..	0 0 10 ...	0 1 1
Selected, Figury, per ft. super. as inch	0 1 6 ...	0 2 6
y Walnut, American, per ft. super. as inch	0 0 10 ...	0 1 0
ak, per load	18 0 0 ...	22 0 0
nerican Whitewood planks, per ft. cube	0 5 0 ...	0 6 0
epared Flooring, etc.—	Per square.	
1 in. by 7 in. yellow, planed and shot	0 13 6 ...	0 17 0
1 in. by 7 in. yellow, planed and matched	0 14 0 ...	0 18 0
1¼ in. by 7 in. yellow, planed and matched	0 16 0 ...	1 0 0
1 in. by 7 in. white, planed and shot	0 12 0 ...	0 14 6
1 in. by 7 in. white, planed and matched	0 12 6 ...	0 15 0
1¼ in. by 7 in. white, planed and matched	0 15 0 ...	0 16 6
⅝ in. by 7 in. yellow, matched and headed or V-jointed brds.	0 11 0 ...	0 13 6
1 in. by 7 in. " "	0 14 0 ...	0 18 6
⅝ in. by 7 in. white " "	0 10 0 ...	0 11 0
1 in. by 7 in. " "	0 12 9 ...	0 15 0

6 in. at 6d. to 9d. per square less than 7 in.

JOISTS, GIRDERS, &c.

	In London, or delivered Railway Vans, per ton.	
olled Steel Joists, ordinary sections	£ s. d. 7 10 0 ...	£ s. d. 8 0 0
ompound Girders, ordinary sections	9 10 0 ...	10 0 0
eel Compound Stanchions	11 0 0 ...	12 0 0
ngles, Tees, and Channels, ordinary sections	9 10 0 ...	10 0 0
itch Plates	9 10 0 ...	9 10 0
st Iron Columns & Stanchions, including ordinary patterns ...	7 10 0 ...	8 10 0

METALS.

	Per ton, in London.	
ON—	£ s. d.	£ s. d.
Common Bars	9 0 0 ...	9 10 0
Staffordshire Crown Bars, good merchant quality	9 5 0 ...	9 15 0
Staffordshire "Marked Bars"	11 0 0 ...	—
Mild Steel Bars	9 5 0 ...	9 15 0
Hoop Iron, basis price	10 0 0 ...	—
" " Galvanised	17 10 0 ...	—
(*And upwards, according to size and gauge.)		
est Iron Black—		
Ordinary sizes to 20 g.	10 5 0 ...	—
" " 24 g.	11 5 0 ...	—
" " 26 g.	12 15 0 ...	—
est Iron, Galvanised, flat, ordinary quality—		
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15 10 0 ...	—
Ordinary sizes to 22 g. and 24 g.	16 0 0 ...	—
" " 26 g.	17 0 0 ...	—
est Iron, Galvanised, flat, best quality—		
Ordinary sizes to 20 g.	18 10 0 ...	—
" " 22 g. and 24 g.	19 0 0 ...	—
" " 26 g.	20 10 0 ...	—
alvanised Corrugated Sheets—		
Ordinary sizes, 6ft. to 8ft. 20 g.	15 0 0 ...	—
" " 22 g. and 24 g.	15 5 0 ...	—
" " 26 g.	16 15 0 ...	—
est Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	12 10 0 ...	—
est Soft Steel Sheets, 2 g. & 24 g.	13 10 0 ...	—
" " " 26 g.	15 10 0 ...	—
at Nails, 3 in. to 6 in.	11 0 0 ...	11 10 0
(Under 3 in., usual trade extras.)		

LEAD, &c.

	£ s. d.	
EAD—Sheet, English, 4lb. and up	21 10 0 ...	—
Pipe in coils	22 0 0 ...	—
Soil pipe	25 0 0 ...	—
Compo pipe	25 0 0 ...	—
NC—Sheet—	In casks of 10 cwt.	
Vieille Montagne	33 10 0 ...	—
Silesian	33 5 0 ...	—

Zinc, in bundles, 1s. per cwt. extra.

PPER—			
Strong Sheet	per lb.	0 1 0 ...	—
Thin "	"	0 1 1 ...	—
Copper nails	"	0 0 10 ...	—
Copper wire	"	0 0 10 ...	—
RASS—			
Strong Sheet	"	0 0 11 ...	—
Thin "	"	0 1 0 ...	—
S—English Ingots	"	0 2 0 ...	—
LDER—Plumbers'	"	0 0 9½ ...	—
Tinmen's	"	0 1 0½ ...	—
Blowpipe	"	0 1 2½ ...	—

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

oz. thirds	2½d.	26 oz. fourths	3½d.
" fourths	1¾d.	32 oz. thirds	5d.
oz. thirds	3½d.	" fourths	4½d.
" fourths	2¾d.	Fluted Sheet, 15 oz.	3½d.
oz. thirds	4d.	" 21 oz.	4½d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

Rolled plate	2½d.	Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white	3½d.
Rough rolled and rough cast plate	2¼d.		
Rough rolled and rough cast plate	3d.	Ditto, tinted	5d.

* Not less than two crates.

OILS, &c.

		£ s. d.
Raw Linseed Oil in pipes	per gallon	0 4 0
" " " in barrels	"	0 4 1
" " " in drums	"	0 4 3
Boiled " in barrels	"	0 4 3
" " in drums	"	0 4 6
Turpentine in barrels	"	0 3 0
" in drums	"	0 3 2
Genuine Ground English White Lead, per ton		28 0 0
Red Lead, Dry	"	24 0 0
Best Linseed Oil Putty	per cwt.	0 10 6
Stockholm Tar	per barrel	1 12 0

VARNISHES, &c.

	Per gallon. £ s. d.
Fine Pale Oak Varnish	0 8 0
Pale Copal Oak	0 10 6
Superfine Pale Elastic Oak	0 12 6
Fine Extra Hard Church Oak	0 10 0
Superfine Hard-drying Oak, for seats of Churches	0 14 6
Fine Elastic Carriage	0 12 0
Superfine Pale Elastic Carriage	0 16 0
Fine Pale Maple	0 10 0
Finest Pale Durable Copal	0 18 0
Extra Pale French Oil	1 1 0
Eggshell Flating Varnish	0 18 0
White Pale Enamel	1 4 0
Extra Pale Paper	0 12 0
Best Japan Gold Size	0 10 6
Best Black Japan	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Knotting	0 10 9
French and Brush Polish	0 10 6

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than* 6 *p.m. on Wednesday.* [N.B.—We cannot publish Tenders unless authenticated either by the architect or the building owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is stated, nor any list in which the lowest Tender is under 100*l.* unless in some exceptional cases and for special reasons.]

*Denotes *accepted.* †Denotes *provisionally accepted.*

ABERAMAN.—For alterations and additions to the workmen's hall and institute, for the Committee. Mr. R. H. Willson, architect, 21, Lewis-street, Aberaman. Quantities by the architect :—

D. Davies	£1,400 0	J. Morgan & Sons, Ltd., Aberdare*	£1,057 18
T. Davies	1,397 0		
D. Rees	1,353 0		
J. Jones	1,110 0		

Constructional Steelwork.

A. D. Dawnaif & Sons, Cardiff and London* £500

BARLESTONE.—For Council school for 150 scholars, for Leicestershire County Council Education Committee. Mr. Ernest G. Fowler, Architect, County Education Office, Leicester. Quantities by the Architect :—

W. Moss & Son	£1,665 0 0	Clark & Garrett	£1,401 0 0
J. Cole & Sons	1,540 0 0	Beck & Gibbs	1,398 12 6
J. C. Kellet & Son	1,450 0 0	E. Fox	1,369 0 0
Wileman & Gauge	1,417 0 0	B. Shipman, Ratby, Leicester*	1,355 0 0

BROADWAY.—For the erection of cottages at Broadway, under the Housing and Town Planning Act, for the Evesham Rural District Council. Messrs. Dicks & Waldron, architects and surveyors, Journal-buildings, 1, Market-place, Evesham :—

	For Thirty Cottages.	For Sixty Cottages.
H. Morgan	£6,354 11 0	£12,709 10 0
Tilt Bros.	6,127 10 0	12,242 10 0
J. Smith	5,923 0 0	11,837 0 0
H. James	6,175 0 0	11,634 19 4
R. Bowen	5,900 0 0	11,600 0 0
G. Henson & Son	5,642 0 0	11,239 0 0
A. Cliff & Co.	5,490 0 0	10,850 0 0
Kirk & Randall	5,475 0 0	10,838 0 0
Espley & Co., Ltd.	5,200 0 0	10,350 0 0
G. Lough	5,079 0 0	10,111 0 0
J. Bridgwater	4,775 11 6	9,422 13 0
G. Field, Blackheath†	4,667 16 8	9,325 13 4

CAMBRIDGE.—For alterations and additions to Pampisford Hall, Cambridgeshire, for Mr. James Binney, J.P. Mr. Sidney French, M.S.A., Lic.R.I.B.A., architect, Cambridge :—

Coulson & Lofts	£2,112	Bell & Sons, Cambridge*	£1,950
J. Brignell	1,995		

CAMBRIDGE.—For new garage, for Messrs. King & Harper, Bridge street, Cambridge. Mr. Sidney French, M.S.A., Lic.R.I.B.A., architect, Cambridge :—

Coulson & Lofts	£4,342	J. Brignell, Cambridge*	£3,594
Bell & Sons	4,050		
Clark & Sons	3,900		

CAMBRIDGE.—For private house, for Mr. Sidney French, architect, Cambridge. Mr. Sidney French, M.S.A., Lic.R.I.B.A., architect, Cambridge :—

J. Brignell, Cambridge £950

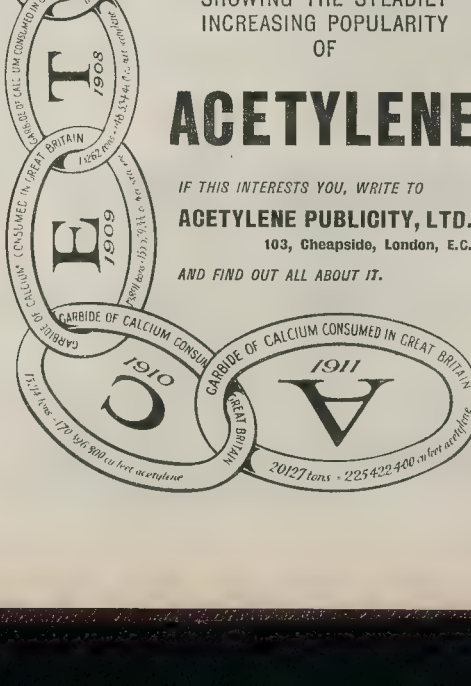
CROYDON.—For the erection of a block of shops in the Brigstock-road, Croydon. Mr. Ernest A. Tyler, surveyor, 11, Queen's-walk, Ealing :—

E. W. Gadd	£1,825 0	J. C. Isaacs	£1,400 0
H. E. Percy	1,750 0	S. Hathaway	1,360 0
G. Wade	1,399 10	Green*	1,320 0

[Architect's estimate, £1,350.]

DURHAM.—For erection of a new church institute. Mr. W. H. Wood, F.R.I.B.A., architect, Newcastle-on-Tyne :—

C. W. Gibson, Durham* £1,073



EXETER.—For erection of new art-room, cloakroom, and other work at Episcopal Modern School. Mr. James Jerman, F.R.I.BA., Architect to the Education Authority, Exeter. Quantities by the Architect:—

Woodman & Son	£887 0 0	A. E. Eveleyn	£743 0 0
W. G. Coles	853 10 0	J. Stephens	742 10 0
E. Mudge	804 10 0	W. Brealey	735 0 0
M. T. Sleeman	791 17 6	G. Seller & Son	732 0 0
Ham & Passmore	790 0 0	G. Herbert	719 19 0
Soper & Ayers	787 19 0	L. Smale, Exeter*	684 10 0
T. Hooper	784 0 0		
Nestrell, Austin, & White	762 0 0		

FROME.—For erection of a pair of villas at Dommett's-lane, for Mr. G. Bennett. Mr. W. Cecil Glass, architect, 9, The Bridge, Frome. Quantities by the architect:—

R. Butcher & Son	£994 16 0	C. Barnes & Sons	£893 1 9
Hodder & Son	950 0 0	H. Barnes & Son, Frome*	880 11 9
Chislett & Son	900 0 0		

HAMPSTEAD.—For the erection of a new police-station and Petty Sessional Court-house at Hampstead. Mr. J. Dixon Butler, F.R.I.B.A., Surveyor to the Metropolitan Police, New Scotland-yard, S.W. Quantities by Messrs. Thurgood, Son, & Chidgey, 8, Adelphi-terrace, Strand, W.C.:—

W. Willett	£17,900	G. Trollope & Sons	
J. Jarvis & Sons, Ltd.	17,800	& Colls & Sons, Ltd.	£16,750
W. Pattinson & Sons, Ltd.	17,455	Sabey & Son, Ltd.	16,720
Holloway Bros. (London), Ltd.	16,930	F. & H. F. Higgs	16,712
J. Willmott & Sons	16,914	Prestige & Co., Ltd.	16,696
Killby & Gayford, Ltd.	16,862	Perry & Co. (Bow), Ltd.	16,580
G. E. Wallis & Sons	16,854	J. Grover & Son	16,432
		W. Moss & Sons, Ltd.	16,290

HAYES.—For extension of the Clayton-road Council School, for the Middlesex County Council. Mr. H. G. Crothall, Architect to the Education Committee:—

W. J. Renshaw	£5,021	Fassnidge & Son	£4,663
Mattock Bros.	4,894	J. Dorey & Co.	4,652
Knight & Son	4,853	W. Lacey	4,644
Fairhead & Son	4,784	W. Lawrence & Son	4,642
C. E. Kearley	4,727	A. & B. Hanson	4,589
A. Monk	4,710	W. J. Dickens†	4,500

† Recommended for acceptance.

KNOTTINGLEY.—For erection of seven dwelling-houses in Aire-street. Messrs. Garside & Pennington, architects, Pontefract. Quantities by architects:—

Bricwork: W. A. Easton, Halton, near Leeds	£742 13 6
Woodwork: T. G. Wright & Sons, Castleford	357 11 0
Plasterer: T. W. Senior, Pontefract	69 10 0
Slater: G. Spurr, Pontefract	67 10 0
Plumbers: Forster & Son, Castleford	71 4 5
Painters: H. Butter & Son, Pontefract	20 0 0

LEICESTER.—For house, Letchworth-road, Western Park, Leicester, for Mr. Henry Hancock. Mr. H. Bland, surveyor, 37, Dains Hill-road, Leicester:—

Haskard, Rudkin, & Bick	£1,039	Bradford	£907
Phipps	945	Potter	880
		Richardson	869

[All of Leicester.]

LINCOLN.—For extending the casualty department at the County Hospital, for the Governors. Mr. W. G. Watkins, architect, Silver-street, Lincoln. Quantities by the architect:

S. & R. Horton	£714 19	L. E. Close & Son	£670 0
Hakes Bros.	697 10	Wright & Son*	659 10
Thornhill Bros.	670 5		

[All of Lincoln.]

LLANDAFF.—For the erection of a new infants' Council school at Llandaff, for the Glamorgan County Council. Mr. D. Pugh-Jones, M.S.A., County Architect, Cardiff:

S. Shail, Llandaff* £3,818

OGMORE VALE.—For the erection of a new girls' Council school for 300 at Aber, Ogmore Vale, for the Glamorgan County Council. Mr. D. Pugh-Jones, F.S.I., County Architect, Cardiff:—

W. A. Jones, Bridgend and Barry* £4,282 12 9

OGMORE VALE.—For the erection of a new mixed Council school at Fronwen, Ogmore Vale, for the Glamorgan County Council. Mr. D. Pugh-Jones, F.S.I., County Architect, Cardiff:—

W. A. Jones, Bridgend and Barry* £4,580 6 7

PACKMOOR.—For erection of six dwelling-houses at Thomas-street. Mr. W. P. Deane, architect, Norton, Stoke-on-Trent:—

W. Lovatt	£1,173 0	Colclough & Breeze	£999 0
W. Sherratt	1,090 0	J. Lockett, Tunstall*	945 10
H. Brereton	1,020 0	Dawson & Brereton	927 14
Gaulton & Hitchins	1,020 0		

PONTARDAWE.—For erection of union offices in Holly-street. Mr. J. Morgan, architect, Herbert-chambers, Pontardawe:—

Walters & Johns	£4,772 17 5	W. J. Griffiths	£3,817 13 1
R. Wilkins & Sons	4,438 0 0	J. Bowen	3,775 0 0
W. & J. R. Watson	3,900 0 0	D. Jenkins	3,750 0 0
Mathias & Davies	3,884 14 4	W. H. Evans	3,698 19 5
G. Davies	3,818 13 1	A. Seaton	3,537 15 0
		Williams Bros.	3,495 9 0
		J. Arnold	3,380 16 0
		Thomas Bros., Pontardawe*	3,380 0 0

PONTYCYMMER.—For the erection of a retaining wall and levelling part of playground at Ffaldau Council School, Pontycymmer, for the Glamorgan County Council. Mr. D. Pugh-Jones, F.S.I., County Architect, Cardiff:

W. A. Jones, Bridgend and Berry* £432

PONTYPOOL.—For erection of new offices and club premises, for the Conservative Associations. Mr. A. Gordon Babbidge, architect, Pontypool, Mon:—

W. Branch	£1,305 0 0	W. Mears, Aberaychan*	£975 0 0
W. H. Campbell	1,249 7 6	Bailey Bros.	968 0 0

TILBURY (Essex).—For the erection of a cookery, manual, and housewifery centre at Tilbury, Essex, for the Essex Education Committee. Mr. Christopher M. Shiner, A.R.I.B.A., architect and surveyor, 7, Adam-street, Adelphi, W.C. Quantities by Mr. G. Silvester, F.S.I., Adelphi, W.C.:

A. H. Fryd	£3,387 15	J. Chessum & Sons	£3,180 0
Foster & Sons	3,379 0	W. E. Davey	3,092 10
W. Potter	3,280 0	Brown Bros.	3,017 0
Dowsing & Davis	3,230 0	G. Brown*	2,973 0
H. J. Carter, Ltd.	3,194 0	Bruty & Son	2,937 18

WIMBLEDON.—For conveniences, Wimbledon Common, for the Wimbledon and Putney Commons Conservators. Messrs. Percy H. Clarke & Son, architects and surveyors.

H. J. Tydeman	£352 0	T. Holloway	£305 0
W. J. Harris	349 15	H. Daken & Co., Ltd.	298 0
J. Barker & Co., Ltd.	330 0	J. Parsons	297 0
Strand Building Co.	325 0	J. Burgess & Sons, Wimbledon*	267 0
Chambers & Co.	325 0		
S. R. Spinner	312 0		

WAKEFIELD.—For erection of fourteen dwelling houses in Club-terrace and thirteen six-roomed houses in Railway-view, Fitzwilliam. Messrs. Garside & Pennington, architects, Pontefract. Quantities by architects:—

W. Mason & Sons, Woodhouse-lane, Leeds* £6,060

Ham Hill Stone.
Doulting Stone.
Portland Stone.
The Ham Hill and Doulting Stone Co., Limited (Incorporating the Ham Hill Stone Co. and C. Trask & Son, The Doulting Stone Co.).
Norton, Stoke-under-Ham, Somerset.
London Agent:—Mr. E. A. Williams, 16, Craven-street, Strand.

BATH STONE.
QUARRIES AT CORSHAM.
No Increase in Price this Year.
Address:
BATH & DORSET QUARRIES, Ltd., BATH.

Asphalte.—The Seyssel and Metallic Lava Asphalte Co. (Mr. H. Glen), Office, 42, Poultry, E.C.—The best and cheapest materials for damp courses, railway arches, warehouse floors, flat roofs, stables, cow-sheds and milk-rooms, granaries, tun-rooms, and terraces. Asphalte Contractors to Forth Bridge Co. T.N. 2644 Central.

SPRAGUE & CO., Ltd.,
PHOTOLITHOGRAPHERS,
69 and 70, Dean-street, Soho, W.

THE Tariff Committee of the Workmen's Compensation Insurance Companies have decided on further sharp advances in rates, laying still heavier burdens on employers. There is still, however, a strong free market; for particulars, address: The General Insurance Agency, of 166, Piccadilly, W.

J. J. ETRIDGE, Jr.
SLATE MERCHANTS. LTD.
EXPERTS IN
SLATING, TILING.
BEST WORK ONLY.
Telephone 2685 Wall, or write
Bethnal Green Slate Works,
BETHNAL GREEN, LONDON, E.

PILKINGTON & CO.
(ESTABLISHED 1833),
DEPTFORD WHARF,
190 & 192, CREEK ROAD, DEPTFORD, S.E.
Telephone No.: New Cross 1102 (two lines).
Registered Trade Mark.
Polonceau Asphalte.
PATENT ASPHALTE AND FELT ROOFING.
ACID-RESISTING ASPHALTE.
WHITE SILICA PAVING.
SEYSSEL ASPHALTE (*Direct from the Mines*).

"Drop Dry" Glazing
ECONOMICAL, EFFECTIVE. THE PERFECT SELF-SUSTAINING BAR.
COPPER AND ZINC ROOFING.
The most Efficient and Economical System in the Kingdom.
Telegraphic Address: "COURTEOUS, LONDON."
DESIGNS AND ESTIMATES FREE ON APPLICATION.
Telephone: North 3032 (4 lines).
F. BRABY & Co., Ltd. Chief offices: **352-364, Euston Rd., London, N.W.**
Works: LONDON, LIVERPOOL, BRISTOL, GLASGOW, FALKIRK.

THE BUILDER

VOL. CII.—No. 3820. JUNE 21, 1912.

CONTENTS.

	PAGE
The Architect in Utopia	715
Notes	716
Picture Exhibitions	717
Temporary Exhibition Buildings	718
The Architectural Association: Second Summer Visit (with Illustration)	718
Messrs. Whiteley's New Premises.—II. (with Illustrations)	719
General News	722
Competition News	722
Books	723
Fifty Years Ago	723
Editorial Summary	724
Meetings	724
Correspondence	724
Intercommunication Column	725
Notes to Illustrations	725
Monthly Historical Review:—	
The "Altare della Patria" of the Victor Emmanuel Monument at Rome: II. The Monumental Art of Arturo Dazzi (with Illustrations)	727
The Architecture of Portugal.-IV. (with Illustrations)	729
Egyptian and Syrian Exploration	730
Notes	731
The Building Trade:	
Co-Partnership and Labour Unrest	732
Concrete-Mixers: The Ransome Mixer (with Illustrations)	732
Building Act Anomalies	733
The Incorporated British Institute of Certified Carpenters	733
The British Fire Prevention Committee's Tests	733
National Insurance Act	734
General Building News	
Applications under London Building Acts, 1894 to 1909	734
Projected New Buildings in the Provinces	734
Metropolitan Asylums Board	735
Metropolitan Water Board	735
Patents	735
Adelphi Hotel, Liverpool.—III.: Engineering Equipment (with Illustrations)	736
Mural Decoration	739
The London County Council	739
List of Competitions, Contracts, etc., Open	740
London Councils	742
Obituary	742
Some Recent Sales	742
Prices Current	743
Tenders	745

Illustrations.

Victor Emmanuel Monument, Rome. Design for the "Altare della Patria," by Signor Arturo Dazzi.

"Oldcastle," Dallington, Sussex. Mr. Ernest Newton, A.R.A., Architect.

St. James's Church, Alperton. Mr. W. A. Pite, F.R.I.B.A., Architect.

House at Ashstead, Surrey. Mr. A. C. M. Edwards, A.R.I.B.A., Architect.



Manchester Old Town Hall: Scheme for Re-erection of part of the Façade at Platt Fields. (*See page* 716.)

Drawn by Mr. Edgar Wood, F.R.I.B.A.

THE ARCHITECT IN UTOPIA.

IT is sometimes said that the architect of to-day—who is innocent of so many unjust charges laid at his door—is too much wrapped up in the past, that his tastes and his studies alike tend to make him little more than a pedantic copyist of historic buildings.

For once one feels inclined to admit the impeachment, albeit with the usual reservations. So-called architectural "revivals" have a way of repeating themselves with tiresome monotony—the Neo-Classic, the Gothic, the Italian Renaissance, the Queen Anne, and so on—till one can almost prophesy the date when the next Gothic Revival is due. And woe-be-tide the man who refuses to recognise those waves of popular taste, for one must be as up-to-date with architectural modes as any slave of fashion with her fluctuating head-gear.

Meanwhile most of us emulate the ostrich in our outlook on the universe. We bury our heads in Gibbs's "Rules for Drawing" or Paley's "Gothic Mouldings" just as drowsy dons dull their perceptions in musty combination rooms while the world rattles on unheeded outside.

Aeroplanes and wireless messages are whirling round us, industrial upheavals shake the ground we stand upon. The Futurists shout and scream with pen and brush—and we take no interest in their doings.

Not very long ago, in an architectural contemporary, one of our younger writers broke the spell, like the Prince in the fable, and ingeniously discussed the position of our art from the convenient view-point of an aeroplane!

Surely it is time that we took stock of another eventuality which is becoming more feasible in the minds of some talented folk nowadays—that strange dim shadow of a universal Utopia forming the inspiration of so many interesting books during recent years.

Let us, then, play for a while at the children's eternal game of "Supposing."

There is no more gifted exponent of this game than Mr. H. G. Wells, and, though he may interest us in his tales of Mars and of the Moon, he is never so enthralling as when he takes a look ahead in this strange and wonderful world. In one of his most popular books he outlines his theory of the ideal Socialist

State, gathering up the many divergent threads of various thinkers before him.

Reading this "New Worlds for Old" the selfish thought came into the present writer's head that it was difficult to foresee how his own profession would be affected if a wave of some magician's wand suddenly landed Utopia in our midst. Would architecture gain or lose by the sudden transformation? Will it gain or lose if the ideal State is to come in the slow processes of many years?

On the one hand, we have the idealists, enthusiastic and confident, assuring us that Utopian England will become very nearly an Earthly Paradise, a long succession of spacious vistas and ordered cities; on the other, we find the cynics with their prophecies of deadly uniformity. The Right to Work—the opportunity for genius—is a plank in every idealist's platform, while his critics never fail to remind him that genius will be stifled and swamped in the awful monotony of an official-haunted existence.

Now in the actual progress of architecture at the present moment may be seen all the beginnings of a more scientific civilisation. In its widest aspect it becomes what we of to-day have learned to call town planning, and town planning has rapidly taken its place among the concrete facts of modern life. It is indeed a tacit recognition by all political parties of the advisability of the State undertaking a reform which has previously only been dabbled in by a few public-spirited landowners and employers of labour in this country. And this is neither more nor less than an admission of the Socialist doctrine in one direction.

Mention of building by-laws would bring one down from the clouds with a clatter and a rush, but even these barbarous efforts—savouring of bumbledom and the old vestry days—show that a need is felt for controlling the individual in the interests of society. In the same way might be mentioned a whole list of those increasing restrictions upon architecture which are in the main for its own good and which are nevertheless capable of considerable modification.

So that any development of control in the future could have no very alarming possibilities in store for us—rather a gentle tightening of the screw upon the extremist, the unqualified man, and the jerrybuilder, all of them probably the better for it.

The change would indeed be far more marked in the status or condition of the architect himself than in the abstract side of his craft. Architecture would probably progress rapidly in many ways with the elimination of the speculator and the State regulation of the greater part of building. An enormous demand would arise for small houses planned on the latest hygienic lines, tastefully designed, and situated with a view to convenience and fresh air. A new type of model flat would probably be evolved with facilities for communal cooking, while the public buildings in every centre of population would be as numerous as they were magnificent.

All of which is eminently satisfactory as a general proposition, and moreover is eminently reasonable. Call it Socialism if you like, call it civic pride, or democracy. There is no doubt that England of to-day in order to beautify her cities needs, above everything else, more of this keen corporate spirit to replace the trumpery selfishness of the suburban Londoner and the clutching rapaciousness of the alien speculator.

"The modern architect knows," writes Mr. Wells, "we might build ourselves perfectly clean, smokeless, magnificent cities to-day, as full of pure water as ancient Rome, as full of pure air as the Engadine, if private ownership did not block the way."

Yes, and the modern architect—Socialist though he be—knows that for the major part of his income he is dependent on that same system of private ownership!

Will he find his niche in Utopia as one of that vast army of officials whom most cities of Socialism forecast in their warnings, or will his independence be preserved? Is this new Earthly Paradise to be a bureaucracy or a happy hunting-ground for wayward genius? Who, in fact, will be the architects and how will their work be carried on?

Mr. Ramsay Macdonald, another well known authority, takes the extreme case of a poet and defends the position of this worthy person in the ideal State as being on the whole better than it is at present.

One confesses to a certain scepticism in regard to the financial position of the versifier of to-day, and would rather discuss a more ordinary being—the practising architect. He cannot display his plans in quite the same way as the poetaster declaims his verses to a gathering of immortals such as Mr. Macdonald describes in the Golden Age of the Edinburgh Select Society.

He will probably be reduced to a choice of two evils in place of his present condition of alternate boot-licking and futile attempts at competitions. He may become a public servant, or he may remain in a mild and emasculated way a private adventurer. Public service for architects is, of course, no new thing, and the conditions of this class are not likely to change very radically. Entrance will probably be entirely by competitive examination, and there will be less difference between the salary of the Superintending Architect and his juniors than now prevails, but the chief alteration will be in the immense increase of work which will come under the *ægis* of the municipality or the local authority. Dairies, bakeries, coal offices, and breweries will be designed by these new city architects of to-morrow, while railway-stations will also be a national affair. The new civil servant may have to work harder than his prototype of to-day, and he will probably be better educated both generally and technically for his work, but he will remain a comfortable, easy-going, perhaps enviable person with his pension and a jog-trot life.

Socialist writers, however, are generally in difficulties about the man who is not a State official. They all agree that ability will be recognised and honoured, every man getting his fair chance. Carried to its logical conclusion, this axiom implies a public competition—perhaps an international competition—for every scrap of building that is proposed. Then, of course, the best man wins, and what is more he goes on winning, so that we get no nearer to universal brotherhood. The second-best man remains second-best, and receives a small premium; while the man placed fifth gets nothing at all, and back we come to earth. It might be possible to penalise a man who wins too many competitions, making him "go back to the beginning," as in some old-fashioned parlour games of hazard.

Socialism is to destroy our modern competitive system, we are told, and yet in some mysterious way to ensure the triumph of genius and virtue, though the two seldom go hand-in-hand. It is to be the day of the virtuous small man, as Mr. Wells calls him, in a virtuous small house, and the millionaire "must come down to a simpler and in many material aspects less distinguished way of living."

Architecture in Utopia would undoubtedly advance enormously. With the ordered magnificence of Paris we should combine the charm of the Garden Suburbs already so rapidly springing up, and a modified form of that restraint which prevents London County Council tenants from keeping rabbits in their drawing-rooms would do us little harm.

But for the architect himself, with his curiously blended repertoire of talent and servility, an unknown future opens, and we agree with Mr. Wells and Mr. Macdonald that much work is necessary to render Socialism a practical proposition in matters of detail.

NOTES.

Manchester Old Town Hall.

THE efforts of Mr. Edgar Wood, the ex-President of the Manchester Society of Architects, and of numerous architects and other public-spirited citizens who have followed his initiative, have resulted in the decision of the City Council to rebuild the façade of the Old Town Hall in one of the public parks of the city. It seems incredible that a prosperous community like Manchester will not be at the public expense to retain so fine a specimen of its architecture as was the Old Town Hall, but that a condition of its rebuilding should be that half the cost should be privately contributed. It is, therefore, the greater honour to those of its citizens who answered Mr. Wood's appeal and have saved the façade in the face of the passivity of an indifferent public. It is a pity, however, that having decided upon the rebuilding of the façade, the Council has been hampered by an indifference no longer passive, and prevented from carrying out the scheme well. When, after much consideration, an excellent site had been decided upon—the spacious area of Platt Fields—and the dignified scheme which we illustrate on p. 715 prepared by Mr. Edgar Wood, there appeared numbers of angry residents in the district so jealous of their open spaces that the colonnade as an entrance gateway on a frontage hundreds of yards wide was described as blocking the view; and an ignorant opposition to what was really an ideal site, with arguments which would have applied equally well to Decimus Burton's arch or the Arc de Triomphe, was allowed to prevail. A much inferior site has been found in Heaton Park, near a new lake in process of construction. It

is now to be hoped that the opportunity thus presented of bringing the lake and the façade into one scheme of formal treatment will not be lost. Then Manchester will not only have preserved the best work of the finest period of her architecture, but she will have redeemed from utter dulness the very uninteresting sheet of water and some of the other incongruities of Heaton Park, and have made its surroundings more worthy of the stately mansion hard by.

The University of South Africa.

NOT the least potent evidence of plutocratic existence will be forthcoming to posterity from the endowments created by the millionaires of the present day. We have in mind the bequests of the late Lord Wandsworth and Mr. William Whiteley. The latest example of public-spirited forethought is provided by the legacy of a quarter of a million pounds sterling left by the late Sir Julius Wernher to the Union of South Africa to assist in building and endowing a University at Groot Schuur, near Cape Town, where, it will be remembered, Mr. Herbert Baker built a home for Mr. Cecil Rhodes, himself a wise contributor, notably in the case of Oriel College, Oxford, to the cause of scholarship. Sir Julius Wernher, who, a year or so ago, was awarded the Gold Medal of the Institution of Mining and Metallurgy for his services in connexion with technological education, also left over 100,000*l.* to the Imperial College of Science and Technology, South Kensington. Added to the Alfred Beit funds for the furtherance of education in South Africa, the Wernher bequest will enable the University to be established on a firm foundation, and we look forward to the possibility of a competition for the design of a building worthy of the future needs of the country. Sir Julius, we believe, materially assisted the project of founding an Art Gallery at Johannesburg, now realised in the building designed by Mr. Lutyens. He certainly gave to the new institution many works of art in co-operation with Mr. Otto Beit, Sir Lionel Phillips, Mr. Michaelis, and others; while in our own National Gallery he has filled a blank space by the presentation of Watteau's "La Gamme d'Amour." By such memorials the far-seeing financier who died last month helped to guarantee the progress and enlightenment of mankind, and in using his wealth so wisely he justified his accumulation.

The Advertisements Regulation Act.

IT is announced in the *Times* that the Local Government Committee of the London County Council are recommending the Council to frame a by-law prohibiting the exhibition of any advertisement within 40 yds. of 108 scheduled open spaces in such a way as to be visible from such open space, and in a second schedule thirty open spaces are specified from which it is proposed to protect the views from disfigurement by advertisement. We welcome this action on the part of the Committee, but it may well be asked, why has any step in this direction been so long deferred? Section 2 of the Advertisements Regulation Act, 1907, provides that a local authority in seeking by-laws under the Act shall provide for the exemption of any hoarding and similar structures in use for advertising purposes, and of any advertisements exhibited at the time of making the by-law for a period of not less than five years. The Act was passed in August, 1907, and we understand that there has never been any difficulty in framing by-laws with reference to specific places or spots, although there has been difficulty in protecting the scenery generally along our roadsides. Seeing the long period that must elapse before the by-laws where made can purge our scenery from existing disfigurements, it is difficult to see why nearly five years have been allowed to elapse before making by-laws which cannot be fully operative for a further period of five years. Mr. Richardson Evans has already stated that the Japanese have shown more enterprise than our own local authorities in dealing with this question.

PICTURE EXHIBITIONS.

AMONG modern art crazes there is none perhaps which can be justified upon more reasonable grounds than the craze for the Russian ballet. To artists, of all kinds, and more especially, we daresay, to those who practise architecture, it has been a source of pure delight. The dancing, perfect as it is after the traditional Italian manner, forms only part of an ensemble in which design, decoration, colour, and costume equally share. The pleasure to the architect is in the artist's realisation of appropriate and harmonious surroundings for the action and movement of the stage, which, in a certain degree, also provides an interesting problem, even in the most prosaic aspects of the more serious art of architecture. The names of the various dancers—Nijinksy, Karsavina, Pavlova—have become as familiar to London audiences as those of the actors who have won their Knightly spurs in British comedy; but the name of the designer of the scenery and costumes of such brilliant fantasies as Schéherazade and Cléopatre was practically unknown. It can remain so no longer. M. Léon Bakst is neither Futurist, Divisionist, Troglodyte (if we may include the latest exponent in new movements!), nor Russian dancer, but his drawings now on exhibition at the galleries of the Fine Art Society will secure attention for all that. He is, we presume, a Slav; his feeling for colour and form is Oriental—that is to say, it is decorative and sensuous without being decadent. His work may be compared in some of its aspects to the productions of both Beardsley and Mr. Gordon Craig; it possesses the decorative quality of the one and the romantic feeling of the other, while technically it is free from the mannerisms which are so often mistaken for style in art, but which are more frequently due to the artist's limitations as a colourist or draughtsman. M. Bakst's imaginative conceptions are not limited by any lack of technical training or facility in handling his materials; his artistic range is extensive, and he is a master in the interpretation of the decorative forms of Eastern and ancient art. A good deal will no doubt be heard of him within the next few weeks.

The name of Alphonse Legros is probably better known than his work; it is largely connected with art teaching. Although a Frenchman, the greater part of his life was spent in England. He was eminently successful, we understand, as a teacher; the quality of his pictures suggests that his professorial influence must have been also eminently individual. Legros's art was not affected by his residence in England; its essence and spirit were always French. He was somewhat of a mystic, keenly in sympathy for the most part with the men of the Barbizon school. The memorial exhibition of the work of Alfred Stevens recently held at the Tate Gallery has now been followed by a similar exhibition devoted to the work of the later artist. It would be impossible perhaps to get together a more adequately representative collection of his work than the Director of the Tate Gallery has secured on the present occasion. Legros's practice of oil painting was, we should infer, somewhat intermittent. The sixty examples on view cover dates as distant as 1853 and as recent as 1905; a certain uniformity of idea runs through the whole series, just as a consistent outlook on life and nature is expressed in all his art, while his execution, always intensely sincere, shows a variety of influences. Legros as a painter, as an etcher, as a sculptor is sombre; his sympathies in regard to various aspects of life leave him, even in his landscapes, a little sad. But he is never sentimental; his feeling for the poor, for the peasant, for the children of toil was too profound to contain any mawkish element. Probably his period of highest achievement in oil painting was between the years 1865 and 1890. "Le Baptême," which belongs to 1869, the "St. Clement of Alexandria" (1870), and "The Pilgrimage" (1871) must, at any rate, be counted among his best work. His etchings are more generally familiar than his oil paintings, while his portraits and drawings of heads remain masterpieces in their kind, both in regard to execution and the interpretation of the character of his subjects.

The International Society provides a large and representative exhibition of contemporary British landscape in the second instalment of their annual show at the Grafton Galleries. It is a little curious, however, that a small water-colour by the first President of the Society, Mr. Whistler, should be relegated to a place below the line, while numerous landscapes by Mr. Walter Greaves are given places of distinction—to which, be it said, their merit certainly entitles them. Past contemporary masters, if we can use the expression, are represented by Watts, Cecil Lawson, and Buxton Knight, while among the modern men we find Mr. Hughes Stanton, Mr. Rothenstein, Mr. Lavery, and many others well represented. Mr. Cayley Robinson's "Dawn" shows very distinctly the influence of Puvis de Chavannes. We were glad to notice two pencil drawings by Professor Selwyn Image, whose pencil and water-colour, or tinted, drawings are seen too rarely at general exhibitions. There are also some landscapes by Legros which go to supplement the collection at Millbank. The exhibition contains much brilliant work, but, as a whole, it is disappointing. Probably this large array of landscapes wanted some relief, or else the various works were conceived, with some rare exceptions, without the decorative quality which makes landscape in a promiscuous collection possible. The repetition of pretty much the same sort of effect, however various the means, makes for a restless, unsatisfactory kind of dulness if the visitor cannot find other qualities for admiration than the merely technical in his voyage of discovery.

APPOINTMENTS VACANT.

A meeting will be held on Thursday, July 11, for the election of a Diocesan Surveyor or Surveyors for the Diocese of London. Particulars may be obtained from Mr. F. H. Lee, No. 1, The Sanctuary, Westminster, S.W.

The London County Council invites applications by June 22 for the following positions:—Teacher of Architectural Drawing for one evening a week at Camberwell. Applicants must be skilled draughtsmen and be architects in practice. Fee, 12s. 6d. an attendance. Teacher of Architectural Design and History of Architecture on two evenings a week at Putney. Fee, 15s. an attendance. Candidates must have had teaching experience and be architects in practice

TEMPORARY EXHIBITION BUILDINGS.

YEAR by year more consideration is being given to the design and construction of temporary exhibition buildings, and the standard is undoubtedly being raised. In these days of rush and bustle the thinking public are learning more and more to appreciate the old-world feeling of repose which permeates any studied representation of mediæval buildings, streets, and market-places, even though they be carried out in nothing more massive than slabs of fibrous plaster. And this harking back to the olden days in exhibition grounds is not confined to England. We well remember "Old Düsseldorf," at the Brussels Exhibition of 1910, to say nothing of earlier attempts on the Continent, and great expectations are aroused by the announcement that at the International Exhibition of the Building Trades to be opened at Leipzig in May, 1913, numerous buildings representing the city at the time of the War of Liberation will be erected. The old gates and fortresses, and the old Plassenburg, as well as many other streets and courts, will be seen once more. Provided these "structures" are entrusted to men of scholarly knowledge and artistic feeling, the result should be well worth seeing, and a visit to Leipzig should be instructive, seeing that the exhibition will apparently afford a wide range of interest to all concerned with the constructive and decorative arts.

At Earl's Court, at the present time, may be seen in "Shakespeare's England" what can be done in the way of reproducing old architecture in plaster, aided by a judicious use of colour. Some of the "Tudor buildings" there set up are quite excellent, and, as far as we know, ahead of anything that has been previously attempted in this country as regards thoughtfulness of detail.

In the matter of scale only do they disappoint, and to one who is familiar with the originals, be they in the streets of some busy town or hidden away in the wilds of the country, it is at first sight somewhat disconcerting to find that the scale has been reduced, doubtless owing to the exigencies of exhibition building. Nevertheless, there are Tudor houses in "Shakespeare's England" which even the expert can look upon with pleasure, and which cannot fail to enlighten the public mind and to be something of a revelation to those who have not the opportunity to see the originals for themselves.

We hope to illustrate some of these ingenious reproductions of old work in a subsequent issue.

THE ARCHITECTURAL ASSOCIATION:

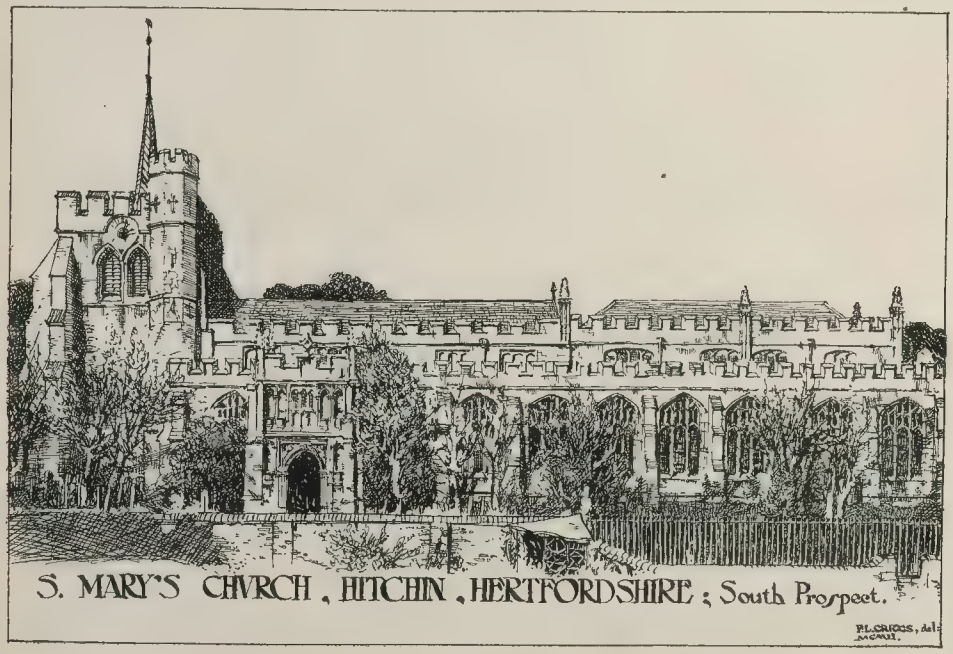
SECOND SUMMER VISIT.

A LARGE number of members left King's Cross on the 15th inst. for the all-day visit to Hitchin and neighbourhood, under the guidance of Messrs. Walter Millard and Geoffry Lucas. On the way from the station to the town the Girls' Grammar School, built in 1908 by Mr. Edward Burgess, of Leicester, was seen in passing. This is a fine block which masses well from the entrance lodge, but the daring change in storiation on either side of the central feature of what at first glance seems a symmetrical front is startling. The detail is good and quiet and the materials pleasing. Descending "Windmill Hill," whence a fine panoramic view of this typical country town may be had, a visit was paid to St. Mary's Church, where Mr. Millard, with the aid of careful plans prepared from time to time by himself and Mr. Lucas, explained the growth of the existing fabric. It appears to be almost entirely of XVth-century date, but a careful analysis assisted by excavation at several points during the course of recent reparations convinces Mr. Millard that the nave and tower occupy the position of a church of the mid-XIIth century, and that at the angles of the nave walls and in the base of the tower, portions of this structure remain. The tower arch and its strengthened abutments are of the XIIIth century; the nave arcade and aisle walls follow next in date, apparently the early XIVth century, the angles of the original east end being perhaps of similar age, though an additional bay was projected eastward, without moving the altar, in the XVth century, when also the chancel arcade was rebuilt, practically all the windows in the church were remodelled, and the fine north and south porches built, giving an appearance of XVth-century character to the whole building. The broad low proportions of the tower, with its typically Hertfordshire leaded spirelet, give a strong note of character. The nave was restored by Sir Gilbert Scott, and the chancel (rather destructively) by Sir Arthur Blomfield, who built a false inner roof and crammed the altar back against the east wall.

A short time remained for a walk round the streets of the old town; this is not the place for an historical description—interested readers may discover this (and admire some fine drawings by Mr. F. L. Griggs) in "The Royal Manor of Hitchin and its Lords Harold and the Balliols." A flying visit was paid to the new Town Hall—an early work of Mr. Lucas, in conjunction with the late E. W. Mountford.

After luncheon at the "Sun," a drive of about three miles brought the party to Poynder's End, a good-sized house by Mr. Lucas. Perched on the swelling crest of a considerable hill overlooking a wide stretch of country, the prospect thus commanded has had some influence on the planning. The house is quite informal in design, a freely developed picturesqueness and interesting detail giving it its architectural qualities. The principal rooms face south-east, on which front overlooking the garden are three spacious two-storied bays (unevenly spaced) and a shady loggia. The living hall at the north end is a charming room, white panelled and with broad open fireplace. Its massive chimney and an additional lead-covered bay at the north-west angle group well on the end overlooking the hillside. Future extension at this end was contemplated in planning. A very massive staircase is a striking feature of the interior.

Near at hand is Temple Dinsley, where, on the nucleus of a pleasant little Georgian house Mr. E. L. Lutyens has grafted a mansion quite in his best manner. The attractive name of course suggests the previous existence of a Preceptory of Knights Templars, but of this no trace remained. Mr. H. W. Tompkins F.R.Hist.S., writing in 1902, described the house as "just such a homestead as an Englishman might be expected to love." It is that still, though more than three times the size of the house he saw, but it is something more—it is a work of which all Englishmen might reasonably be proud. Mr. Lutyens' absolute mastery of material is nowhere better seen, nor is the plan lacking. Simplifying and remodelling the old house, which remains intact as a centre block to the new, Mr. Lutyens has projected a long wing one room thick on either side, making an H plan with the old house slightly lengthened each way as the cross-piece



S. MARY'S CHURCH, HITCHIN, HERTFORDSHIRE; South Prospect.

FL. GRIGGS, del. MCMXII.

the projections partly enclosing a forecourt (completed by walls and railings) on the south or entrance front, and a terrace overlooking gardens on the north. The principal new rooms are in the west wing, and their articulation to the old plan is at once simple and ingenious. A wide corridor from the staircase hall leads to an octagonal garden hall in the centre of the new west front, which is axial with the old kitchen-garden. Right and left of this open the drawing-room and smoke-room, the former with white-painted panelled walls and flush cabinets between the windows and the latter more boldly panelled in unpainted pine, limed and dull polished. The other new wing and the buildings to the eastward are chiefly occupied by the kitchen and servants' quarters, and in this direction a further extension just completed gives a nursery wing above an open arcaded basement. On the upper floor of the new wings are several bedrooms; a most beautiful bed of Mr. Lutyens' design fitly occupies one of them. After an exhaustive inspection of the interior an all too brief time remained for the beauties of the garden and exterior. The breadth and restraint which have been imparted to the new fronts and the slender means by which the whole effect is obtained make one marvel. Taking as units the suggestions offered by a rather unusual angle treatment of the old house, and its well-proportioned sash windows, Mr. Lutyens by mere disposition of masses and by the aid of some fine chimneys achieves his result—a thing as perfect in its way as can be imagined. By the kindness of Mr. Fenwick, members were allowed the free run of the house, and Mr. Thomas, with Messrs. Butt and Barnard, had brought drawings which, with their explanations, increased the interest of the visit. A large new block of farm buildings near by was hastily inspected before the return to Hitchin, where, after a walk round Mr. Phillips's antique furniture galleries at the Manor House, Bancroft, members returned to town with a consciousness of time well spent.

MESSRS. WHITELEY'S NEW PREMISES.—II.

(*Continued from page* 701.)

Fire-Resisting Construction.

Protection of Steelwork.—The exterior stanchions are encased in approved fire-resisting materials to the minimum thickness of 4 in., in accordance with the requirements of the London County Council, the nature of the materials employed varying with the position of the members to be protected. Interior stanchions are covered to the same thickness, as suggested by the County Council in view of the large areas of the various shops.

The girders are embedded in concrete, monolithic with that in the hollow block and reinforced concrete flooring.

Flooring and Terrace Roof.—All the suspended floors in the building, as well as the terrace-roof and the protection of the steelwork generally, were executed by the Fram Steel and Fireproof Construction Company, Ltd., of Westminster.

The floors represent a combination of hollow blocks and reinforced concrete. The blocks are of clay, carefully moulded and burnt, and have ribbed surfaces to furnish a key for the surrounding concrete and for plastering on the soffit. The blocks are situated in the lower part of the floor to conduce to lightness of construction, and to reduce the conduction of sound. Tensile stress is taken by steel rods embedded in the concrete or mortar joints between the blocks, and compressive stress is taken by the concrete above the hollow blocks, suitable provision being made in the form of stirrups for web stresses.

The concrete in the joints of the blocks is of superior quality, which is also employed in the compression area to the requisite depth for resisting the stress developed. In places where the floor spans are small the uniform thickness of 12 in. adopted is made up by a filling of low-grade breeze concrete deposited above the better class material required for withstanding compression.

The hollow blocks are arranged in different ways according to circumstances, some being placed side by side, and others in rows consisting of blocks laid flat alternating with blocks on end.

In some of the largest panels the joints are reinforced in two directions as an additional assurance of strength and safety.

The floor spans are of considerable extent, many of them measuring nearly 32 ft. square, and the largest 45 ft. by 30 ft.

The suspended floors and flat roof, which is constructed in accordance with the same method, represent an area of more than 5 acres, and were constructed in less than six months.

In order to achieve this result it was necessary for the contractors to work day and night for a period of about two months, one serious difficulty which had to be surmounted having been the delivery of materials with almost clocklike regularity, as in consequence of limited storage facilities it was impossible to keep supplies on the site in quantities providing for more than a few hours' work.

During the period of greatest pressure upwards of 2,000 sq. yds. of flooring were completed each week, involving the use of 25,000 hollow blocks and seven barge loads of sand and ballast, besides large quantities of cement and steel.

Division Walls and Fire Doors.—Owing to the fact that the cubical contents of the seven departments amount in each case to more than 700,000 cub. ft., it was necessary for the division walls to be 14 in. thick to satisfy the County Council, the steelwork being encased to the thickness of 4 in., as previously stated.

As openings through the division walls were absolutely necessary for the convenience of business, although contrary to ideal principles of fire-resisting construction, special care was taken by the architects to provide effective means of preventing the spread of fire from department to department in case of need.

As a first precaution, the steel framed bronze doors were fitted with Luxfer fire-resisting glazing, consisting of small panes of glass in copper framing, the same system of glazing having been adopted for the fanlights. Although not capable of prolonged resistance, this glazing would certainly withstand considerable heat for a reasonable time.

A further safeguard adopted for isolation purposes was the employment of fire doors and rolling shutters on both sides of every opening.

In the case of the smaller openings, tin-clad doors supplied by Messrs. Mather & Platt, Ltd., were fitted on each side, with an ample air space between them, the doors having spring hinges arranged so as to shut automatically in the event of fire breaking out.

The wider openings are protected by rolling doors or shutters supplied by the Wilson Rolling Shutter Company. This type of fire door construction was invented by Mr. J. G. Wilson, of New York, and provides an air lobby between the door or shutter on each face of the wall. The opening in the wall is always wider than the doorway and extends from the floor to the ceiling. A pair of light wing walls are built out from the opposite faces of the main partition wall as shown by the details below. The wing walls span the entire opening and the parts above the door openings are carried on lintels.

The roof of the lobby is of fire-resisting material, with an outlet at one end for the escape of excessive heat and smoke, and acting as a ventilator under normal conditions.

The rolling doors travel in metal guides at the sides of the opening, and are fitted so that they cannot be directly attacked by fire. The form of the guides ensures the close contact of the doors with the fire-resisting surface of the wall, and immediately above them are the metal housings for the support of the horizontal winding rollers.

The shafts on which the rolling doors are hung are hollow, and contain counterbalancing springs which hold the doors in the normal position, and when the springs are thrown out of action the doors close automatically. The springs are controlled by a flexible metal connexion having a fusible link, as shown in the plan. In case of fire, the link fuses, causing a tumbler to fall and thereby to throw out the control of the corresponding spring, with the result that the door closes by its own weight.

The doors can be mechanically operated by means of a key shaft extending through both walls and fitted with gearing as represented in the section.

Fire-Resisting Glazing.—Although the shop fronts are of plate-glass, the windows are enclosed by fire-resisting casings with Luxfer fire-resisting glazing, so that if a fire were to break out in any window enclosure the flames would not readily extend into the shop, as happened in the case of the Clapham Junction fire.

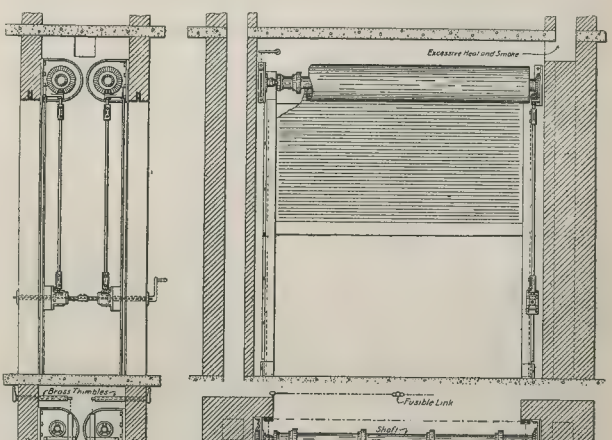
The Luxfer system of glazing has been applied also to all the windows throughout the establishment.

The domes comprise an inner and an outer shell, both glazed with armoured glass by the Challenge Glazing Company, Ltd., by whom also the steel framework of the domes was constructed. The domes comprise some 40,000 sq. ft. of glazing.

Some armoured glass roof lights have been fitted by Messrs. J. A. King & Co., Ltd., and the work executed by the Luxfer Company includes patent lantern lights, skylights, pavement lights, and lights in the fire-escape balconies.

Fire-Escape Stairs.

Apart from the safeguards provided by fire-resisting construction and fire-protection appliances, the new building is fitted with exterior balconies and escape stairs. These are accessible from every floor, and should afford ample means of escape in the event of an outbreak of fire.



Wilson Rolling Shutters.



Doors between the Departments at Messrs. Whiteley's New Premises.
(Showing Luxfer Glazing.)

The balconies and stairs were supplied by the St. Pancras Ironwork Company, Ltd., the treads and risers being of iron, perforated for the passage of light to adjacent windows, with the exception of those in situations where light is not a matter of importance or where non-slippery treads are required. The construction is in accordance with the regulations of the London County Council throughout.

Fire Protection Appliances.

Electro-Pneumatic Fire Alarms.—For the detection and notification of fire in any department of the building a complete system of the fire-alarms has been installed by the Acro Fire Alarm, Ltd., of London.

The installation comprises a system of small diameter copper tubing run in circuits along the ceilings all over the premises and connected with an indicator board on the ground floor.

In the event of fire the increased temperature of the atmosphere causes the air in the tubes to expand, and the pressure thereby created acts upon a sensitive diaphragm on the indicator board, making an electrical contact which denotes by an indicator the exact position of the outbreak, sets alarm bells ringing, and gives warning at the offices of Messrs. Whiteley in Queen Victoria street.

The alarm system is applied to the forty sections into which the building is divided, and includes about eight miles of copper tubing.

The apparatus is arranged so that gradual increases of temperature such as may be due to warm weather shall not be capable of operating the signals, and provision is also made to obviate false alarms due to sudden temporary rises of temperature. It also includes a testing device enabling the management to ascertain periodically whether the system is in proper working order.

Sprinkler Installation.—An extensive system of Grinnell sprinklers, supplied by Messrs. Mather & Platt Ltd., of Salford, has been fitted throughout the building.

The installation comprises about 3,500 automatic sprinklers supplied with water either from storage tanks, with the capacity of 6,660 gallons, or from the mains of the Metropolitan Water Board.

The horizontal lines of pipes are suspended from the ceilings in the basement and on the top story, and elsewhere are laid beneath the floor surfaces. These pipes are connected with the rising mains supplied with water at sufficient pressure to keep the entire system charged, except in sections where the Grinnell dry pipe system has been adopted as a precaution against frost.

The sprinkler valves are kept closed by a solder link, the melting-point of which is such that the metal will fuse at the temperature of 155 degrees Fahr.

Sprinkler branch pipes project from the inner face of the two domes at frequent intervals, and in addition there is a ring main around the outside of each dome, so that the whole of the glazing can be kept flooded with water in case of fire, the same arrangement being available for cleaning purposes. The ring mains are supplied with water from 2½ in. diameter service pipes.

Hydrant System.—In addition to the sprinkler installation the building is protected by a hydrant system, comprising rising mains of large diameter, with valves and hose-pipes ready for use for every floor. There is a rising main close to each of the staircases and the hydrants can be supplied with water either from the mains of the Metropolitan Water Board or from the steam fire pump in the engine-house. The system was installed by Messrs. Mather & Platt, Ltd., of Salford.

Lightning Protection System.—The lightning conductors on the new building were fitted by Messrs. Richard Anderson & Co., of Leadenhall-street, E.C., as briefly described below.

To the base of the steel flag-staff surmounting the tower over the main entrance a conductor of 1½ in. by ¼ in. copper cable was connected by means of bolts and solder. From the flag-staff the conductor was led to the back of the building and thence down the steel supports of stairways to earth, terminating with a 3-ft. square copper plate sunk to depth sufficient to bring it into contact with moist earth, and embedded in wood charcoal.

Two copper four-point terminals were attached to each end of the exterior lift building at the back, and connected up to the above-mentioned conductor, similar connexions being made between the main conductor and the rotunda dome and railings.

At the top of the timber flag staff on the corner turret a ball pointed air terminal was fixed with a conductor of 1½ in. by ¼ in. copper cable, carried along the parapet wall to the rear of the building, passing to earth down the steelwork of stairways, and terminating with a copper plate bedded down in the same manner as that for the conductor from the main flag-staff.

In each case the steelwork of the stairways was properly connected up to the copper conductor.

Four-point air terminals were fixed at the ends of the exterior lift building and on the ventilation head, and connected up to the conductor from the turret flag-staff, the steelwork of the octagonal dome and railings being also connected to the same conductor.

The dimensions of the main conductors were governed by the long horizontal runs on the roof, necessitated by the circumstance that the only place available for earthing was at the rear of the premises.

Lifts and Parcels Conveyors.

The new system of shopping prevailing in modern establishments of the type represented by the premises of Messrs. Whiteley entails the need for mechanical aids to locomotion such as will enable visitors to gain access to the upper floors without the labour of climbing stairways.

With this object in view ten passenger lifts have been installed in addition to eight goods lifts, two kitchen service lifts, and a very complete plant for the mechanical handling of goods and parcels, all these appliances being operated by electricity supplied from the generating station on the premises.

Lifts.—All the lifts were supplied by Messrs. R. Waygood & Co., Ltd., of London, and are of their most recent patterns

The ten passenger lifts are constructed to travel at the speed of 250 ft. per minute with a load of 20 cwt.

The cars are built of ornamental ironwork specially designed by the architects to harmonise with the interior fittings of the building, and the sides are closed with glazed panels.

In order to obviate crowding the cars are of spacious dimensions, each measuring 6 ft. by 5 ft. in plan. The guide rails for the cars and the counterbalance weights are of heavy section round steel bars, turned in the lathe to ensure smooth working, the cars and weights being fitted with adjustable gunmetal guides to work against the rails.

Beneath each car is attached a safety apparatus, to which the cables are fixed, this apparatus working in connexion with a patent slack cable gear on the crown bar above the car.

The appliances come into action automatically if any rope breaks or stretches unduly, or if any obstruction is encountered either by the car or by the counterbalance weight, the effect in any of these occurrences being to cut off from the machinery, and at the same time to prevent the descent of the car.

Special speed governors are also provided for operating the safety gear in case any lift should descend at excessive speed owing to any cause.

Mechanical and electrical locking gear is fitted to the gates at all landings to prevent the lifts from being started unless the doors are shut and to prevent the doors from being opened unless the cars are opposite the landing.

Each car is operated by means of a self-centring detachable handle, so designed that in the event of the attendant omitting to turn it to the "off" position when arriving at the top or bottom of the travel all current is automatically cut off, and in case the attendant should relax his hold of the handle the latter would automatically spring to the "off" position and thereby stop the car.

The winding gears are constructed with steel worms cut from the solid and worm-wheels with phosphor-bronze rims and teeth to ensure smooth and steady running, and the gears are fitted with double ball thrust bearings.

Each machine includes a winding-drum with two steel wire cables for the car and separate cables for the counterbalance weight, and has an automatic electric brake arranged so as to come into action automatically in case current should fail from any cause. The electric motors for operating the lift gears are of 17-brake-horse-power with the overload capacity of 50 per cent.

The eight goods lifts range in capacity from 10 to 20 cwt., and are constructed for operation at speeds of from 125 to 250 ft. per minute, the cages being from 6 ft. by 4 ft. to 8 ft. by 6 ft. 6 in. in plan.

These lifts have steel guides and guide rails and safety apparatus similar to those adopted for the passenger lifts, and are operated by handles in the same way. The gears are of different design, but the safety appliances are of the same type as for the passenger lifts. The cages are of steel with plain wood panels.

Inclined Parcels Hoist.—Between the basement and ground floor is a Reno moving stairway for elevating trolleys of parcels to the despatching-room at ground level. This stairway, which was fitted by Messrs. Waygood & Co., comprises an endless chain belt having teeth for engaging projections on the trolleys, and thus enabling the latter to retain their position on the inclined travelling-belt.

Parcels Conveyors.—To provide for the expeditious transport of parcels from the various departments of the new premises to the packing-room in the basement an ingenious system of conveying plant has been installed by Messrs. A. Sauvée & Co., of 60, Park-street, S.E. The installation includes five spiral shoots connecting the various upper floors with the basement. Parcels descending a spiral shoot are received on an electrically-driven conveyor or band, and delivered therefrom into a second shoot, whence they are deposited upon one of the two rotating sorting-tables for removal to the delivery vans.

There are about 350 ft. of conveyor belting, travelling at the rate of 3 ft. per second.

Boiler Plant and Generating Station.

The power plant is accommodated in part of the basement in the old portion of the Queen's-road building.

The boiler-house contains four Galloway boilers, each 30 ft. long by 8 ft. in diameter, fitted with Meldrum mechanical stokers, and two Lancashire boilers by Messrs. Adamson fitted with stokers of the Meldrum type.

The stokers are arranged for the use of low-priced fuel, the necessary draught being furnished by a chimneyshaft 160 ft. high, with the interior diameter of 8 ft. 6 in.

Steam is generated at the pressure of 120 lb. per square inch, and is passed through Galloway superheaters situated behind the boilers, the temperature being therein raised from 350 deg. Fahr. to 450 deg. Fahr.

The boiler feed-pumps are driven by steam, and motive power for the mechanical stokers is provided by Siemens type electric motors.

The plant for generating electricity has been enlarged to cope with the requirements of the new building, and now includes seven generating sets with the collective output of some 800 kilowatts.

Six of the sets have Willans & Robinson engines direct coupled to Lahmeyer dynamos, and the other set consists of a Belliss engine with Siemens dynamo. Current is generated at the pressure of 200 volts.

The main switch-board is at one end of the generating station, in an open position so as to be readily accessible on both sides.

Electric Lighting.

Current for the lighting of the new premises is supplied at the pressure of 200 volts from the generating station situated in the old part of the Queen's-road building, the supply mains being brought thence to two main switch-boards in the basement [of the recently-completed extension.

From the main boards seven pairs of sub-main cables are taken in steel conduits to feed the sub-main distribution-boards, one in the basement of each of the seven sections into which the new building is divided.

From the sub-main distribution-boards rising cables are taken to each floor as feeders for the iron-cased distribution switch-boards in the numerous departments.

The wiring for arc lamps and incandescent lamps proceeds from the distribution switch-boards, and, like all the cables, is protected by steel tubular conduits.

A noteworthy feature of the conduit system adopted is that it was specially arranged in such manner as to permit all the cables and wires to be drawn in after completion of the building. If necessary, any circuit, or all the circuits, could be drawn out with perfect ease, and without causing disturbance of the conduits, floors, or decorative finish of the building.

This ingenious system is a speciality of the electric-lighting contractors, who were one of the first firms to demonstrate its practicability and to adopt it exclusively in installations carried out by them.

As customary in the best modern practice, all wires throughout the building are in continuous lengths from point to point, thus obviating joints of any description.

The entire installation was executed by Messrs. H. J. Cash & Co., Ltd., of Westminster, and some notion of its extent may be obtained from the statement that the lighting system includes some twenty-four miles of copper conductor, more than a thousand arc lamps, and more than twelve thousand incandescent lamps.

The new shops are illuminated partly by arc lamps of the Brokie-Pell single-enclosed pattern and partly by incandescent metallic filament lamps, the latter being distributed in various places for the more perfect sub-division and uniform distribution of light.

In situations where the headroom is insufficient for the employment of arc lamps special 14-in. holophane pendants have been fitted. There are eighty-two of these, each containing a 200 candle-power 200-volt incandescent metallic filament lamp. These lamps and fittings were supplied by Messrs. Siemens Brothers Dynamo Works, Ltd., of London. The holophane bowl and shade is carried by a neat bronze ring with suspension chains in the same metal.

Holophane pendants of the pattern described are used exclusively in the jewellery department, and incandescent lamps are employed for the illumination of the restaurant and tearoom. Some tasteful examples of special electric light fittings were supplied by Messrs. J. W. Singer & Sons, Ltd.

The two large domes are illuminated by metallic filament lamps in the space between the inner and outer glazing.

The problem of lighting the shop windows was considerably simplified both by the architectural design and by the system of window-dressing which is favoured at the present time by the proprietors of large stores.

The practice in window-dressing formerly thought necessary involved the maximum utilisation of show space with the object of enabling prospective buyers to see a representative selection of the goods for sale inside.

An arrangement of the kind entails outside lamps combined with interior lighting, usually afforded by lamps suspended by flexible conductors. There are objections to this method, one in particular being the source of danger constituted by lamps hanging from long pieces of flexible cord.

The policy largely adopted by large drapery firms to-day is to arrange their shop windows in the most attractive manner possible and, abandoning the idea of making the outer display representative of all classes of goods on sale, to welcome the free inspection of their showrooms without permitting the least importunity on the part of salesmen and saleswomen.

The new premises of Messrs. Whiteley have been designed in general accordance with this wise policy, the result so far as concerns window lighting being that the old-fashioned arrangement of reflecting lanterns and dazzling inside lamps has given place to reflected illumination, ensuring the uniform distribution of light and a far more cheerful effect than that obtainable by previously adopted methods.

Each shop window is lined along the front inside the glass with rows of incandescent lamps concealed by metal strip reflectors, the lamps being attached in pairs by twin holders.

The reflectors are suspended by adjustable chains at the height of about 10 ft. above pavement level, and the top of each reflector is enamelled white. A separate wiring-box is provided for each reflector unit, the lamps having the illuminating power of fifty candles, and, being made for the pressure of 100 volts, they are arranged two in series on the 200-volt circuits. The lamps employed for window lighting represent the total of 25,000 candle-power.

Heating and Cooking Apparatus.

The heating and ventilation of the basement was carried out by Messrs. Comyn Ching & Co., Ltd., the method adopted being to blow air into the building at the rate of two million cubic feet per hour through two large electrically-driven fans of the blower type, and to extract vitiated air by means of exhaust type fans.

Fresh air is drawn in through an intake at some height above ground level, and in cold weather passed over steam-heated coils, raising its temperature by 25 deg. Fahr.

After having been warmed the air is conveyed through galvanised steel ducts, some of which are as large as 3 ft. 6 in. by 2 ft. 6 in., to the various discharge openings situated above head level and provided with regulating dampers. Similar ducts are provided for the extraction of vitiated air.

An interesting feature of the air ducts is that wherever passing through division walls they are fitted with automatic fire shutters, arranged so as to close on the melting of a fuse, and thus to obviate the risk of fire being communicated from one part of the building to another by way of the air ducts.

The heating system for the ground floor and upper stories includes an extensive installation of pipes and radiators through which exhaust steam from the engines in the generating station is drawn by means of vacuum pumps fixed in the engine-room.

This part of the heating installation, as well as the hot-water services and gas supplies for cooking purposes, were executed by Messrs. H. J. Cash & Co., Ltd.

The cooking apparatus was supplied by the Briffault Range Company, Ltd.

Vacuum Cleaner Plant.

In accordance with modern ideas, Messrs. Whiteley have abandoned old-fashioned methods of sweeping and dusting in favour of vacuum cleaning apparatus.

The installation, which is of a very complete character, was made by the Vacuum Engineering Company, Ltd., of London, and presents several features of interest.

With the object of permitting a large number of cleaners to be in use at the same time, three powerful vacuum machines have been laid down, each being an "Otavacum" turbine vacuum cleaner of novel design, with the normal capacity of 800 cub. ft. of air per minute and the maximum capacity of 1,800 cub. ft. per minute. The machine includes a 10-horse-power electric motor, to which is connected an air turbine of simple and ingenious construction. A noteworthy feature of the apparatus is its remarkable freedom from vibration.

Air and dust drawn in by the turbine enter a deflector and pass round a curve, where the dust is separated by centrifugal force and falls into a collecting tank, while the air passes away through an exhaust outlet of 18 in. diameter.

The dust collector can readily be removed for emptying purposes by the aid of a lever which lowers a platform supporting the tank, the lever being employed in the reverse direction for raising the platform and fixing the tank in position after it has been emptied.

The main risers are of 4 in. diameter, with the aggregate length of about 1,000 ft. The horizontal pipes are of 5 in. diameter with the aggregate length of 1,200 ft. All the pipes are of mild steel, of specially smooth interior finish, and exceptional care was taken in the design of bends and junctions.

If rectangular T-pieces were used at the junction of the horizontal pipes with the vertical risers the air would undoubtedly pass in the required direction, but a considerable proportion of the dust would be carried forward into the opposite branch and tend to choke the pipe beyond. Moreover, hairpins and other objects which are invariably found in shops frequented by ladies have an awkward habit of lodging themselves across projections in vacuum tubes, where they constitute a fruitful cause of stoppage.

In order to obviate risks of this kind the junctions between the horizontal and vertical pipes in the installation at Messrs. Whiteley's new premises are in the form of curved Y-pieces, having the effect of guiding both air and dust in the required direction.

The unusually large diameter of the pipes employed is another valuable safeguard, and in addition it contributes to the efficient working of the installation.

For the attachment of the hose-pipes to which the dust-removing appliances are fitted the vacuum pipes are provided with 104 inlets, distributed at convenient points on the walls of the building.

Each inlet has a lid that is kept closed when not in use by a spring, as well as by the pressure of exterior air.

To attach a hose-pipe it is simply necessary to lift the lid and insert the end of the hose, the connexion being made air-tight automatically by means of an india-rubber washer. In order to guard against the accidental displacement of the hose-pipe, the lid of the inlet is provided with a projection which engages a circumferential rib at the end of the pipe. The connexion so formed can readily be broken by opening the lid a little wider.

The hose-pipes are of 2 in. internal diameter, and from twelve to twenty-four of them can be used simultaneously. They are supplied with dust-removing fittings suitable for cleaning floors and dusting walls, fixtures, furniture, and objects of various kinds.

Drainage System and Sanitary Work.

The whole of the work coming under this head, as well as the heating and ventilation systems, were carried out under the supervision of Messrs. Corby & Boyce, consulting engineers, of Buckingham-street, W.C.

From the drawings reproduced in our first article (p 697 *et seq.*) it will be gathered that the drainage system in Messrs. Whiteley's premises is one of exceptional magnitude. The provision for dealing with storm water is necessarily on a more extensive scale than that usually necessary in business houses, and a novel feature of the sanitary installation is a complete and independent drainage system in the basement story, for the special purpose of carrying away any water used for fire extinguishing purposes.

All the drains are constructed of extra heavy cast-iron socketed pipes, from 4 in. to 9 in. in diameter, jointed with rope lead so as to obviate the employment of yarn.

At all points where branches join the main drain pipes, and at all changes of direction, specially designed cast-iron junction boxes are fitted, the boxes being enclosed in brick chambers, each with a manhole frame and cover.

Some fifty chambers of the kind have been provided in the building, the underground drains alone comprising more than 3,000-ft. run of piping.

The plumbing also covered a very large amount of work, carried out in a most complete manner, and regardless of cost wherever necessary to ensure perfectly satisfactory results.

The main soil and ventilating pipes in connexion are of extra heavy lead drain piping, the wastes being of galvanised steam tubing with lead joints.

In setting out the sanitary system throughout care was taken to comply with the fire-prevention requirements of the County Council, one stipulation being that no pipe should pass through an area of the interior walls dividing up the building into distinct sections as already described.

The sanitary fittings comprise about 100 closets, ninety lavatory basins, forty urinals, and thirty-five sinks. All these fittings were selected by the architects.

Most of the closets were supplied by Messrs. Doulton & Co., Ltd., of Lambeth. They are enclosed by marble divisions in metal framing with teak doors. The basins are of the "Wandle" and "Axis" patterns, the former with lead trap and pottery liner working perfectly with a 2-gallon flush, and the latter with movable lead outlet bend. Doulton's "Paisley" water-waste preventers are provided, with non-corrosive interior fittings.

The lavatory basins, of white glazed "Victorian" ware, and some of marble, were supplied by Messrs. Shanks & Co., Ltd., of Barrhead.

In addition to urinals, Messrs. John Bolding & Sons, Ltd., of London, supplied ten pillar pattern closets, with water-waste preventers and the necessary fittings.

The cold-water supply system, with large storage tanks on the roof, supplies every part of the premises, and includes numerous washing-down hydrants on the main roof, in the loading yards, and at selected points on the three frontages of the building.

Similar hydrants with sprinklers are provided for cleansing the large domes, a special motor and pump having been laid down for the supply of water at the increased pressure requisite.

The whole of the plumbing work was executed by Messrs. Holloway Bros. (London), Ltd., the general building contractors.

GENERAL NEWS.

Professional and Business Announcements.

Owing to the demolition of the premises, No. 107, Bishopgate, London, E.C., Messrs. Leonard & Clarke, quantity surveyors, are removing their offices to No. 7, Camomile-street, Bishopsgate, E.C.

As the London County Council require the premises, No. 55, Lincoln's Inn-fields, London, W.C., for improvements, Mr. A. J. Bolton, architect and surveyor, after some forty-four years' occupation, has removed to No. 30, Theobald's-road, Bedford-row, W.C.

One of the pupils of Mr. G. P. Knowles, of 39, Victoria-street, Westminster, S.W., heads the list in the recent competitive examination for an appointment in the Valuation Office, Ireland.

The Quantity Surveyors' Association, Incorporated.

Mr. Henry Riley has been elected President of this Association for the ensuing year, and Messrs. T. J. Carless and T. E. Bare Vice-Presidents.

Marylebone Municipal Buildings.

The Borough Council have resolved to borrow, with the sanction of the London County Council, 70,000*l.*, wherewith to proceed with the erection of the new Town Hall in Marylebone-road, south side, at the west corner of Gloucester-place. In our numbers of December 1-8 last we illustrated the four premiated sets of designs. Those by Mr. T. Edwin Cooper, F.R.I.B.A., were placed first in the competition, and were adopted from the 181 designs submitted.

Extension of the Royal Albert Dock.

The Port of London Authority have offered to Messrs. S. Pearson & Son, Ltd., the contract, amounting to about 1,400,000*l.*, for the new dock on the south side of the Royal Albert Dock. The undertaking extends to the making of a main dock 4,500 ft. in length by an average of 600 ft. in width and 35 ft. deep, and having a water area of 65 acres, a dry dock, and an entrance lock 800 ft. by 100 ft., and 45 ft. deep, with a channel lock into Royal Albert Dock.

Presentation to Mr. A. Y. Nutt, M.V.O.

The retirement of Mr. A. Y. Nutt, after forty-four years' service in the Architect's Department and as Resident Architect, Windsor Castle, has been signalised by the gift to him of a silver-mounted dressing-case by the staff of H.M. Office of Works, the Lord Chamberlain's Department, and contractors, workmen, and friends at the Castle.

The Birthday Honours, 1912.

The birthday honours include: Baronetcy—H. L. Tangye, M.I.M.E., of Tangyes, Ltd.; Knighthood—Colonel Prain, F.R.S., Director of the Royal Botanical Gardens, Kew; C. H. Read, P.S.A., Keeper of British and Mediæval Antiquities, British Museum; Dr. C. Waldstein, late Slade Professor, Cambridge University; and W. Wallis, F.S.A., Director Birmingham Art Gallery. K.C.B.—Dr. Kenyon, Director and Principal Librarian, British Museum. C.S.I.—O. C. Lees, M.Inst.C.E., late Chief Engineer and Secretary to the Government of Burma, P.W.D.; and W. E. T. Bennett, M.Inst.C.E., Chief Engineer and Secretary to the Government of the Punjab, P.W.D. K.C.I.E.—Dr. M. A. Stein, C.I.E., Archæological Department, N.W. Frontier Circle. C.I.E.—Major S. D. Crookshank, M.V.O., R.E., Executive Engineer, P.W.D.; D. W. Aikman, P.W.D., Sanitary Engineer, Punjab. C.M.G.—W. J. Downer, I.S.O., Assistant Secretary, H.M.O. Works; and C.I.S.O.—J. Strauchon, Surveyor-General, Land and Survey Department, Dominion of New Zealand.

Mr. E. O. Sachs.

Mr. Edwin O. Sachs, F.R.S.Ed., has been accorded the distinction of a Knight (1st Class) of the Royal Swedish Wasa Order, and the King has granted him permission to wear this decoration, which has been conferred upon him for the services rendered by him in connexion with the design of the Royal Dramatic Theatre at Stockholm.

Cranmer Memorial, Cambridge.

On June 13 was unveiled in the chapel of Jesus College a memorial to Cranmer, who until he became Primate in 1533, was a Fellow of the College. Mr. Albert Bruce-Joy executed the medallion portrait, which is set in a carved alabaster frame, and the likeness is after the picture of 1546 by G. Flicius, in the National Portrait Gallery.

International Road Congress, 1913.

The third International Road Congress will meet on June 23-28 of next year, in London. Arrangements are made for receptions by the Corporation of the City and the First Commissioner of Works on June 23, and by the Institution of Civil Engineers, in either their new premises or the Albert Hall, on June 25, and by the Royal Automobile Club on June 26. Members of the Congress will inspect roads in the Home Counties, visit Windsor Castle, by invitation of the King, and proceed up the River Thames. On June 26 the Chancellor of the Exchequer will deliver the opening address. On June 27 the final meetings will be held and a garden party will be given by the Surveyors' Institution. On June 28 there will be a banquet in the Hotel Cecil.

Tooley-street Tram Extension.

The proceedings before the Select Committee of the House of Commons with reference to the proposal of the London County Council to extend the tramways in Tooley-street, a distance of 300 yds. nearer London Bridge, is an example of the sort of opposition from private vested interests with which all public improvements have to contend. Although the police gave evidence that the proposal would not create any special difficulty in regulating the general traffic, it was opposed by the traders in Tooley-street. Evidence put forward on their behalf showed that there was an average of 900 vehicles a day using the wharves and other business premises in Tooley-street, and it was contended that any extension of the trams would seriously impede this traffic. It is, of course, necessary and right that all such points should be raised and be given their due weight, but if such arguments are allowed to prevail it is difficult to see how any improvements could be carried out. We are glad to see that the Committee passed the proposals and allowed the extension.

Geological Survey.

It is notified in the report of this department for the year 1911 that in England and Wales the field-work has been carried on in three districts—the Denbighshire district, the Warwickshire district, and the London and South-Eastern district. In the latter, the well-known subdivisions of the chalk and overlying tertiary strata are being traced in detail, together with the various gravels, sands, loams, and brick earth which constitute the superficial deposits. While the mapping of the chalk has an important bearing on questions of deep-seated water supply, that of the tertiary and superficial deposits has a more special importance in all questions connected with the subsoil, such as its suitability for residential, horticultural, sanitary, and other purposes, apart from the economic uses to which the gravels, sands, and brick earth are put. Here also scientific problems of much interest come up for consideration, such as the age and origin of the high-level gravels and loams and their connexion with the glacial deposits of other regions, and the relation of the river terraces and other valley deposits to the various stages of palæolithic time, which have been recognised on the Continent.

COMPETITION NEWS.

A list of current Competitions is printed on page 740.

Mural Decorations, Crosby Hall.

The Committee of the Exhibition of Designs for Mural Painting and for the Decoration of Schools, etc., which is being held at Crosby Hall, Chelsea, announce the following results of competitions:—

Gallery of Modern Art, Dublin.—Awards have been made to Mr. Walter Bayes, Mr. F. Cayley Robinson, Mr. James Mark Willcox. (Sir Hugh Lane offered 100*l.* each for the execution of three panels from designs to be approved by him.)

Middlesex Hospital.—A prize of 50*l.* is awarded to Mr. Donald MacLaren. (Mr. Edmund Davis offered 100*l.* "In the event of a design being accepted and not approved of by the Middlesex Hospital, the sum of 50*l.* will be given in lieu of the execution of the work.")

Commercial-street L.C.C. School.—Miss Louise Jacobs. (A sum of 25*l.* was offered for the execution of an approved design.)

Cable-street L.C.C. School.—Mr. Stanley H. North. (A sum of 25*l.* was offered for the execution of an approved design.)

Design for School Banners.—Miss Gwynedd M. Hudson, Miss Eleanor Pallett, divided. (10*l.* was offered.)

The results of other competitions will be announced shortly. The exhibition will remain open until June 29.

Liverpool School of Town Planning.

In competition for prizes amounting to 50*l.*, offered by Sir William Lever, an area was selected to be reconstructed on monumental town-planning lines. The site chosen was the triangular area between Mount Pleasant and Brownlow-hill. The first part of the award has been decided, namely, first prize (15*l.*) to Mr. R. H. Mattocks, second prize (10*l.*) to Mr. T. W. Hooley. These designs, with others, are illustrated in the current *Town Planning Review*.

Astley Bridge, Bolton.

Mr. John Bennett, Lic.R.I.B.A., of Bolton, was the assessor in the competition for Parochial Hall, Men and Women's Institute, Gymnasium, etc., and the following results have been announced:—First, Messrs. Marshall, Robinson, Son, & Wheeler; second, Messrs. Henderson & Brown; third, Mr. Frank Freeman.

The R.I.B.A.: The Soane Medallion.

The attention of intending competitors for the Soane Medallion is called to the following modifications in the conditions:—

1. No restriction is placed on the size of the strainers, but they should be of reasonable size.

2. The plans, sections, and elevations to be drawn to one-sixteenth scale.

3. A section through the front buildings up to and including the rail heads of the lines to be drawn to a scale of 8 ft. to an inch.

4. Plans of the upper floors and basement need not be drawn.

A.A. Competitions, 1912.

The following list of awards has been published officially:—

A.A. Silver Medal and prize value ten guineas, to Mr. R. M. Pigott.

A.A. Travelling Studentship, not awarded.

Ditto, second prize, value 5*l.*, to Mr. B. W. Ridley.

Banister Fletcher Bursary, value twenty-five guineas, to Mr. V. O. Rees.

Architectural Union Company's prize, value 20*l.*, to Mr. W. J. Palmer-Jones.

Herbert Batsford prize, for the best drawing in the Sketch-Book for 1911, value five guineas, to Mr. W. S. George.

Essay prize, award not yet made.

Church of St. George, Colwyn Bay.

Mr. Leonard W. Barnard, of Messrs. Prothero, Phillott, & Barnard, Cheltenham, has been awarded first place in a limited competition for the new church of St. George, to be erected at Colwyn Bay.

Regent's Quadrant Competition.

Competitive drawings must be delivered at the office of the *Builder*, 4, Catherine-street, Strand, on or before 5 p.m. on Friday, June 28. An anonymous competitor, who is sitting for the R.I.B.A. Final Examination, asks if the date can be again advanced, but we regret that this cannot be arranged.

Proposed Baths at Balham.

The Baths Committee of Wandsworth Borough Council have had under consideration the conditions of the competition for the designs for baths they propose to erect at Balham, and are of opinion that competitive designs should be invited and that an assessor should be appointed.

BOOKS.

The Early Norman Castles of the British Isles. By ELLA S. ARMITAGE. (London: John Murray. 1912.)

FOR at least a generation the student of the remains of English castles has had to be content with the collection of papers by the late Mr. G. T. Clark, originally printed in the *Archæological Journal*, the *Builder*, and elsewhere, and published by him as a separate work in two volumes in 1884, under the title of "Mediæval Military Architecture in England."

As Mr. Clark's contributions to the subject extend over some forty-five years they naturally vary in quality, and his published collection, which was in no way revised, is marred by a number of contradictions and other blemishes. Notwithstanding, it is still the only work that treats of castles in general both from the documentary and the architectural standpoints, and until a like work is undertaken on a larger and more extended scale it is not likely to be superseded.

Mrs. Armitage's book is not an attempt to go beyond Mr. Clark's work, but is principally concerned with the refutation of a particular theory which was enunciated by him, that the moated mounts which form the dominant feature of so many English castles are identical with the "burhs" mentioned in the Anglo-Saxon Chronicle, especially in connexion with the operations of Edward the Elder and his sister Ethelfleda, the Lady of the Mercians.

The "burh" theory was first challenged by Mr. J. H. Round in the *Quarterly Review* for July, 1894, and further discussed by Mr. G. Neilson in the *Scottish Review* for October, 1898, with reference to the moated mounts found in Scotland. But the question was first dealt with more fully about a year and half later by Mrs. Armitage in a paper communicated to the Society of Antiquaries of Scotland on "Anglo-Saxon Burhs and Early Norman Castles." In this paper the writer contends that the word "burh" or "burgh" connotes a fortified town and not a moated mount, and that the latter are not of Saxon date at all, but the site of Norman castles. Mrs. Armitage subsequently expanded her views, with special reference to the castles mentioned in the Domesday Survey, in the *English Historical Review* for April and July, 1904, in two communications on "The Early Norman Castles of England," and these papers, with her former treatise, form the basis of the larger work which she has now published.

So far as English castles are concerned, Mrs. Armitage's views have been accepted by all serious students, and the documentary evidence for them was marshalled at length in a paper on "English Fortresses and Castles of the Xth and XIth Centuries," read before the Royal Archæological Institute in 1902, and printed in the *Archæological Journal*, LX., 72–95, by Mr. W. H. St. John Hope, who emphasised the important point that the general distribution of moated-mount castles throughout England could not have been brought about by any one dominant power other than the Norman. It is somewhat strange that Mrs. Armitage should practically ignore Mr. Hope's contribution to the controversy.

The application of the Norman castle theory to the parts of Scotland that were under Norman influence has also been accepted by the Scottish antiquaries, but its reference to Ireland has met with considerable opposition in some quarters from writers who have evidently not grasped the elements of the question. The historical evidence has, however, now been reviewed by Mr. G. H. Orpen, who has demonstrated quite clearly the Norman origin of similar works in certain parts of Ireland.

Mrs. Armitage's book concerns itself with Anglo-Saxon and Danish fortifications, the origin of private castles, the distribution and characteristics of motte-castles (as she prefers to call them), the castles of the Normans in England, motte-castles in North Wales, and in South Wales, and in Scotland and in Ireland, together with remarks on stone castles of the Norman period.

This last chapter is the one that should most appeal to those concerned with buildings; but, unhappily, it is the weakest in what is otherwise an interesting book. It begins with the usual confusion between keeps and castles, which later on leads to the statement that "no stone castles in England are known to have been built by William Rufus"; yet on a previous page (p. 197) we read: "It is well known that between the years 1087 and 1089 the celebrated architect, Gundulf, Bishop of Rochester, built a new *stone* castle for William Rufus." The existing keep of Rochester Castle is also stated to be "the only one in England which authentic history gives" to the time of Henry I., though elsewhere (p. 205, note 3) reference is made to the mention "in the solitary 'Pipe Roll' of Henry I." (for 1130–1) of the tower of keep of Salisbury Castle (*turris Sarum*). The fine tower of Hedingham Castle, which apparently is unknown to Mrs. Armitage (although Mr. Montgomerie has given her a plan of its earthworks), is allowed by most authorities to have been planned by the same engineer as William of Corbeuil's great tower at Rochester, and a similar remark as to their joint planning applies to the keeps of Castle Rising and Norwich, the latter of which, with that of Corfe, Mrs. Armitage thinks may have been built by Henry I. Ludlow, a castle apparently unknown to Mrs. Armitage, could have furnished her with another and a remarkable early example of what she calls a "gatehouse keep," as could the Nottinghamshire castle of Newark. On p. 366 a list is given of "the keeps which the 'Pipe Rolls' show to have been built or finished by Henry II." It begins with Scarborough (1157–74) and ends with Tickhill (1178–81), which is referred to again two pages on as "the last keep he built." The list should, however, have ended with Dover, on which Mrs. Armitage elsewhere tells us (p. 142) that "the 'Pipe Rolls' show that he [Henry II.] spent more than 2,000*l.* on the *turris* or keep of Dover Castle between the years 1181 and 1187."

The book concludes with a number of appendices; also with a very defective index. For example, not one reference to the names in the list of keeps on p. 366 is given, nor does it include Bungay, Burton, Conisborough, Derby, Northampton, Ongar, and Yalden, which are a few of the places not indexed that we have noted in the book. Mrs. Armitage does not seem to have made any reference to four such important castles as Framlingham, Hedingham, Ludlow, or Clare, but haply they have only escaped inclusion in her insufficient index.

The book has been printed by Mr. Murray, which accounts for its excellent typography, and is illustrated by an admirable series of comparative plans by Mr. D. H. Montgomerie.

Stresses and Strains. By F. R. FARROW, F.R.I.B.A. Second Edition, revised. (London: Whittaker & Co. 1912. Pp. 138. 5*s.* net.)

HAVING reviewed the first edition of this useful manual shortly after its appearance in 1900, it is unnecessary to deal at length with the present issue. Various modifications have been made in the text with the effect of making definitions and explanations still more clear to the student. The calculated examples have been checked throughout, and these have been inserted in the chapters dealing with the branches of the subject to which they refer, instead of being relegated to an Appendix as before. This is a decided improvement, and will make the book much more convenient to students and others.

Concrete Costs. By FREDERICK W. TAYLOR, M.E., Sc.D., and SANFORD E. THOMPSON, S.B., M.Am.Soc.C.E. (New York: John Wiley & Sons. London: Chapman & Hall, Ltd. 1912. Pp. 692.)

THERE is a great deal more in this book than the title denotes. The authors give much valuable practical information concerning the proportioning of concrete, preparing aggregates, handling and transporting materials, mixing concrete, by hand and by machinery, the design of moulds and centring, and other technical matters. The numerous tables of cost relating to the execution of work in plain and reinforced concrete are exceedingly valuable, despite the fact that they are based upon American prices of materials and rates of labour. However, the data are given in such full detail that it is not a difficult matter to arrive at the equivalent costs applying to similar work in this country. The importance of this manual to contractors cannot be over-estimated, and its value to architects and engineers is equally obvious. The book is one which we are able to recommend strongly to the attention of our readers.

FIFTY YEARS AGO.

From the *Builder* of June 21, 1862.

Something to be Done.

WHILE bad drainage, over-crowding, the ill-construction, want of ventilation, and other defects of the dwellings in our large towns certainly cause a multitude of deaths which might be prevented, we must not overlook other causes of evil. We should attend with care to the proper drainage, ventilation, space, etc., of the schools, not only of the poorer classes, but also of those provided for the children of persons in better circumstances. There are great improvements to be made in these arrangements.

Although we have good reason for congratulation that the exertions which have been used have nearly prevented the system of intramural interments in the metropolis, there are still pernicious effects from keeping the dead for a considerable time in dwellings, particularly of the poorer classes; and from the practice which also exists of keeping dead bodies brought from the hospitals and workhouses, and those of people drowned. There are other things which call loudly for remedy, particularly the better supply of water daily to the poor. Taking encouragement from the past, and hoping that the success which has attended recent efforts will lead to greater exertions, we trust that by the time another great international exhibition happen we may be able to make, not only as regards the metropolis, but throughout the country, satisfactory note of sanitary progress.

EDITORIAL SUMMARY.

The leading article is entitled "The Architect in Utopia."

In Notes columns (p. 716) will be found observations on: "Manchester Old Town Hall"; "The University of South Africa"; "The Advertisements Regulation Act."

Notes on some Picture Exhibitions appear on p. 717.

A short article on "Temporary Exhibition Buildings" is given on p. 718.

A summer visit of the Architectural Association was made to Hitchin on Saturday last, a notice of which appears on p. 718.

An article on Messrs. Whiteley's New Premises in Queen's-road, W., is given on p. 719.

In Book Reviews (p. 723) are notices of "The Early Norman Castles of the British Isles"; "Stresses and Strains"; and "Concrete Costs."

The Illustrated Monthly Historical Review (p. 727) includes: "The Altare della Patria"; "The Architecture of Portugal"; "Egyptian Exploration," etc.

The Building Trade Section (p. 732) contains: "Co-partnership and Labour Unrest"; "Concrete-Mixers"; "Building Act Anomalies"; "Institute of Certified Carpenters"; etc.

A concluding article on the Adelphi Hotel, Liverpool, appears on p. 736.

A meeting of those interested in Mural Decorations was held at Crosby Hall, Chelsea, on Tuesday. An interesting discussion took place on Mural Decorations. A report appears on p. 739.

MEETINGS.

SATURDAY, JUNE 22.

The Institute of Sanitary Engineers.—Sessional meeting at the International Exhibition of Non-Ferrous Metals, Royal Agricultural Hall, Islington, N. Professor E. G. Coker, M.A., D.Sc., M.I.Mech.E., will deliver a lecture in the lecture hall on "Lines of Stress in Metals." Illustrated by photographs in natural colours of bodies under stress. 4 p.m.

MONDAY, JUNE 24.

The Royal Institute of British Architects.—(1) To present the Royal Gold Medal for the promotion of architecture, conferred by his Majesty the King, to Mr. Basil Champneys, for his executed works as an architect. (2) To unveil and formally present to the Institute the portrait of the President, Mr Leonard Stokes, painted by Mr. William Orpen, A.R.A. 8.30 p.m.

TUESDAY, JUNE 25.

The Society for the Promotion of Hellenic Studies.—Annual general meeting. The President, Sir Arthur Evans, F.R.S., D.Litt., LL.D., will take the chair and deliver his inaugural address. Burlington House. 5 p.m.

THURSDAY, JUNE 27.

The London Society. Debate on Mr. Raffles Davison's paper on "London as It Is, and as It Might Be." Royal Society of Arts, John-street, Adelphi. 8.30 p.m.

CORRESPONDENCE.

Timber Specifications.

SIR,—I should like, with your permission, to say a few words on the correspondence in your valuable paper re above.

First, as regards the specification given in your issue of the 7th inst., this is almost word for word taken from a recent book written by a practical timber merchant on the subject, and, unless your correspondent is the author of the said book, surely he should have acknowledged the source of the information.

The specification itself is a very good one from many points of view, but I consider it has the following objections:—In the first clauses "sizes 12 in. by 4 in. and under, etc." 3 in. by 9 in. is a much better limit, seeing that 4 in. by 12 in. is the largest imported sawn size in deal, and, consequently, being the widest plank converted from the tree, is likely to contain more sapwood. I have found 4 in. by 9 in. proportionately more free in this respect than 4 in. by 12 in., 4 in. by 11 in., or 4 in. by 10 in., but, all things considered, result in favour of 3 in. by 9 in. as the largest; then, again, we do not get many 4 in. by 12 in. from the White Sea; again, the first clause does not define any market quality whatever for sizes 12 in. by 4 in. and under; also White Sea goods of the better qualities are more adapted for joinery than for carcassing. There are several objections to White Sea larch as a general constructional timber, so that if that is specified there would have to be further limitations incorporated.

Fifth clause:—No market quality is here given for the Canadian yellow pine, nor for the American whitewood—and generally the specification would not be reasonable for all classes of work, for the best procurable joinery deal is not required for every job.

My own procedure, which I have successfully followed for the last sixteen years, is to specify the actual manufacturer and trade quality of every material throughout a building, except in such materials where a definite trade quality is equal in all respects among all manufacturers, then I specify such quality, or in those where a source is quite definite, in which last I specify the source, in all cases leaving the contractor free to obtain the goods from whatever merchant he pleases; but on no account whatever should I specify the merchant.

In timber and some other goods I qualify the specifying, for certain reasons, by giving several alternative manufacturers of equal repute. I consider the foregoing procedure must be the proper businesslike way of specifying; as, an instance, the timber importer knows perfectly well what manufacture and market quality he is buying, and only pays for that, so why should not anyone acting for a building owner specify what manufacture and trade or market quality he desires, and see that he gets it? The builder then would only be expected to keep to a definite and obtainable article. We do not get the latitude and indefiniteness common to building works in specifications connected with other industries, nor yet in the wholesale trades from which building materials emanate, and any departure from the absolute definition, if not rectified or a monetary allowance made, soon finds its way into the Courts. Of course, it may be said that if actual manufacturers and qualities are specified it is not everyone who specifies that can differentiate the goods; but I venture to suggest that is one of the original responsibilities of the specification-writer, either personally or through specialist assistance; at least, it is so in business concerns—*e.g.*, an iron merchant or a glass merchant makes a contract for a definite manufacture and quality of material, and examines it when delivered to verify its correctness.

A very potent reason for specifying actual manufacturers and trade designations is that we must use what is obtainable, taking care that it is specified of the right quality and for the specific purpose; it is of no use specifying general perfections which cannot be obtained in natural products, and if such perfections are desired they must be sought in a different material. I give hereafter some of my own specification clauses for building timbers, chiefly for best-class work, which are based on many years' experience, involving special training with all parties interested; they are part of those I have been using for fifteen or sixteen years, but brought up to date. The shippers are specially selected as being those who use great care in bracking their goods, and who send reasonably large quantities to this market. I could give others equally as good, but it is obviously impracticable to specify many alternative manufacturers and the stocks available, and their immediate condi tions would guide me personally as to who I should include.

Carpenter.—The whole of the wood to be perfectly sound, clean, and bright, dry, free from blue sap, and loose, dead, or decayed knots.

The deals, battens, scantlings, and thicknesses for carcassing to be either of the following:—Shippers' second quality "Gefle" Red, of "Stora Kopparbergs Bergslags Aktiebolag's" shipment, or shippers' second quality "Söderhamn" Red, of "Bergvik och Ala Nya Aktiebolag's" shipment. Sizes of carcassing timber under 3 in. by 6 in. to be home-sawn out of wider imported dimensions. The boarding to flats, gutters, and valleys may be imported sawn "Kemi," of "Travarn Aktiebolaget Kemi's" shipment, and the rough fillets may also be sawn from these. All timbers more than 9 in. deep, or more than 3 in. thick before they are planed, are to be either of the following:—Shippers' prime quality pitch-pine, of "Hunter, Benn, & Co.'s" shipment, "Southern States Lumber Company's" shipment, or "Rix M. Robinson's" shipment; shippers' select quality British Columbian or Oregon pine, of "The British Columbia Mills Timber and Trading Company's Hastings Saw Mills'" shipment, "Stanley Barker Lumber Company's" shipment, or "Portland Lumber Company's" shipment, or converted by the contractor from these, and all to be sawn square-edged or die square, as the case may be, and all thoroughly open-air seasoned.

Joiner.—The whole of the deal joiners' wood to be perfectly sound and thoroughly open-air seasoned, free from coloured sap, large, loose, dead, or decayed knots and shakes, and to have been sawn into thicknesses and stacked and skidded in open-air drying sheds for at least one year before being brought to the bench, and then selected to suit its individual purpose.

The external deal joiners' work is to be executed with either shippers' first quality "Björneborg" Red, of "W. Rosenlew & Co.'s" shipment, or shippers' first quality "St. Petersburg" Red, of "Oscar Steveni's" shipment. The internal deal joiners' work is to be executed with either shippers' first quality "Kovda" Red, of "N. Russanoff Sons'" shipment, or shippers' first quality "Archangel" Red, of "Surkow & Shergold's" shipment. All boards to be home-converted from not larger deals than 3 in. by 9 in., and any sizes under 3 in. by 7 in. to be home-converted from larger imported sizes not exceeding 9 in. wide.

The deal floorboards to be one of the following:—Shippers' extra first quality "Yunds vall" Red, of either "Skonviks' Aktiebolag" shipment, or "Wifsta Warps Aktiebolag" shipment; shippers' extra first quality "Gefle" Red, of "Korsnäs Sågverks Aktiebolag" shipment, or shippers' first quality "Umeå" or "Örnsköldsviks" Red, of "Mo and Domsjö Aktiebolag" shipment, all to be thoroughly dry and thoroughly well open-air seasoned before being used in the work. The Canadian yellow pine to be shippers' first quality Quebec or Montreal broad pine of either of the following shipments:—"Cox, Long, & Co." "J. Burstall & Co." "W. & J. Sharples," or "Dobell, Beckett, & Co."; to be stacked and skidded for not less than one year before being used for the work, thoroughly dry and sound, clean, and selected free from stains, shakes, sap, loose or dead knots, and other defects.

The American whitewood to be shippers' prime quality of either of the following shipments:—"T. J. Asher & Sons." "Ritter Lumber Company," or "G. M. Spiegle & Co.," to be stacked and skidded for not less than one year before being used for the work, thoroughly dry and sound, and selected clean and free from shakes, loose or dead knots, and other defects.

All hardwoods generally to be specially selected to suit their respective purposes and free from shakes and knots.

The English oak to be from well-grown, straight-grained, winter-rased trees of not less than 5 ft. diameter, which have been felled not less than six years, to be open-air seasoned in the log for two years, and then sawn up into boards and planks, and stacked and skidded in open-air drying sheds for a further period of not less than four years, thoroughly dry and sound, and cut out free from sap, pith, knots, and shakes, and out of winding.

The oak for sash-frame and casement-frame sills to be either "Odessa" oak, of "J. H. Meyersohn & Co.'s" shipment, or "Danzig" or "Riga" oak of "Julius Potempa's" shipment, cut up into planks and stacked and skidded in open-air drying sheds for at least two years before being used for the work, thoroughly dry and sound, and cut out free from sap, pith, stains, loose or dead knots, and shakes, and out of winding.

The Austro-Hungarian wainscot oak to be either of the following shipments:—"Nasie Oak Extract Factory and Steam Saw Mills Company, Ltd." "Eissler & Brüder." "Société de Importation de Chêne." "S. Priday," or "Oliver & Sons."

The Russian wainscot oak to be either "Riga," of "B. S. Kahn's" or "Melzer & Co.'s" shipment, or "Liban," of "Blumstein & Rosowsky's" shipment.

All wainscot oak to have been sawn up and stacked and skidded in open-air drying sheds for not less than four years before being used for the work, thoroughly dry and sound, cut wainscot, selected for figure and colour, and free from sap, stains, shakes, knots, or other defects.

The teak to be shippers' prime Moulmein of either of the following shipments:—"Bombay, Burmah, Trading Corporation, Ltd." "Steel Brothers & Co., Ltd." or "F. Foucar & Co., Ltd." All to be cut out of plank into thicknesses, and stacked and skidded in open-air drying sheds for not less than four years before being used for the work, thoroughly dry and sound, and selected for colour, and free from stains, shakes, grub, burrows, or other defects.

I have refrained from giving specifications for the mahoganies, walnuts, and other woods, both foreign and British, as I am afraid I have already taken up too much of your space: but I may say that I follow out the same methods, not only for woods, but for every material used in building, as I was early convinced that there was no other proper way

of specifying and discrimination for measuring and valuing; but it necessarily involves commencing to take separate specialist trainings at a very young age, in order to be able by middle life to know what to specify and to see that they are supplied.

B. E. LAINE-PEARSON,
Quality, Quantity, and Value Surveyor.

*** Our original correspondent, "A Reader," states that he is very much indebted to Mr. J. Davis (with whom he has been in communication on the subject), the writer of the book, "Building Timbers and Architects' Specifications"; but the suggested specification is not exactly in the form given in the book. We hope that the correspondence now going on will result in some form of specification which will be generally approved.—ED.]

INTERCOMMUNICATION COLUMN.

Paper for Rubbings.

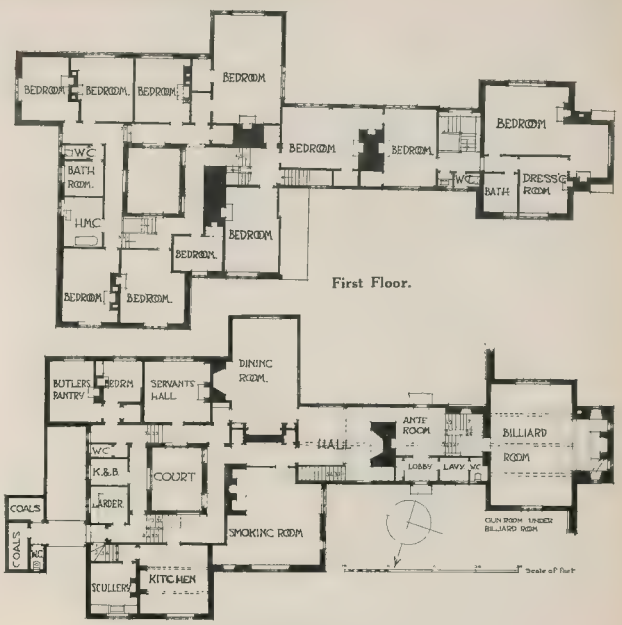
SIR,—Will you be so kind as to inform me what kind of paper is right to use for taking "rubbings" (*i.e.*, "heel ball") from monumental brasses, especially the heraldic coats? Will ordinary white "kitchen-paper" do?

EVA LETHBRIDGE.

Reply.

SIR,—I have never tried kitchen-paper, but do not think it would be as satisfactory as ordinary ceiling or lining paper, which can be procured from any paperhanger. There are two qualities:—(1) At 6d., which is thin, and perhaps gives slightly the clearer impression, but is rather apt to tear; (2) cost 8d., is thicker, and so less likely to tear. The rolls have about 12 yds. in them. I have always found either of these qualities very satisfactory, but generally use the thicker for large brasses. For shields, I consider the cheaper is perhaps slightly better, but it is rather a matter of personal taste. If the rubbings are to be cut out and mounted on linen, the thinner is certainly the best. Your correspondent does not ask any questions *re* the heel-ball, but this is more important than the paper. It should give a very black mark when rubbed on paper, and should not be too hard, nor should it be sticky. Much of the heel-ball offered is too brown to give satisfactory results. It is well to melt down several of the small pieces in which one buys it, to form a large lump, which can be held in the palm of the hand.

J. S. M. WARD.



"Oldcastle," Dallington, Sussex: Ground Floor.
Mr. Ernest Newton, A.R.A., Architect.

ILLUSTRATIONS.

Victor Emmanuel Monument, Rome.

IN our issue of January 5 we illustrated the work of Signor Angiolo Zanelli, who was successful in the competition for executing the Altare della Patria on the Victor Emmanuel Monument at Rome. The design of the other sculptor in the final competition, that of Signor Dazzi, is shown on one of our plates and an article on the artist appears on p. 727.

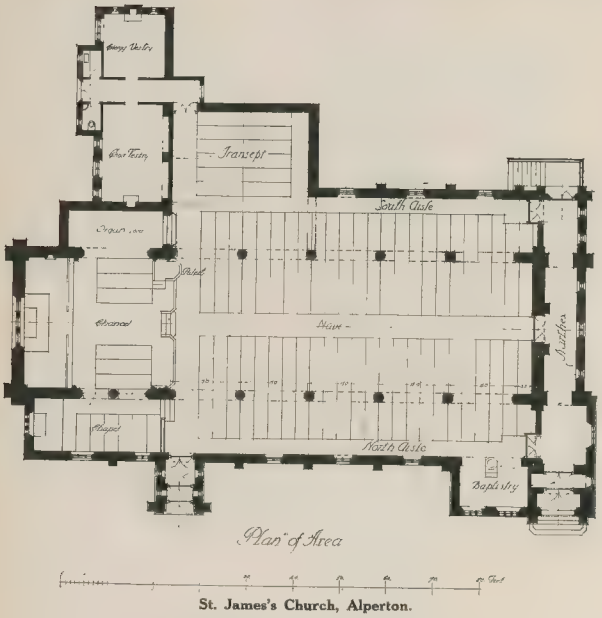
"Oldcastle," Dallington, Sussex.

THIS estate is now the property of Lord Justice Buckley.

The house was a small farmhouse in very bad repair. Previous alterations had swept away



"Oldcastle," Dallington, Sussex.
Mr. Ernest Newton, A.R.A., Architect.



St. James's Church, Alperton.

Mr. W. A. Pite, F.R.I.B.A., Architect.

everything of interest except some old chimneys. The old part is in the middle, and pieces have been added at each end. The small drawing shows this. The larger drawing is of the new billiard-room wing. The stone wall on the right of this view, according to local tradition, is all that remains of an ancient castle.

The whole of the building work, including stables, garage, kitchen-garden, walls, cottage, etc., was carried out by Messrs. Lower & Piper, of Punnetts Town. All the glazing and the hot and cold supplies were executed by Messrs. Wenham & Waters, of Croydon. The electric plant was installed by Mr. Stanhope Thornton, of Sanctuary House, Westminster. The drainage and sewage disposal was carried out by the Banner Sanitation Company, of Craven-street, Strand.

Mr. W. Nicholls was architect in charge, and personally superintended the carrying out of all the work.

The architect was Mr. Ernest Newton, A.R.A., of Raymond-buildings, Gray's Inn, London.

The drawings are shown at the present Royal Academy Exhibition, and in referring to them in our issue of May 10 we wrote:—"The quality of Mr. Ernest Newton's work can hardly be grasped for the exceeding cleverness of his draughtsman. A house, which on one small drawing shows low and long, is shown in part on another large one, looking high and almost heroic. . . ." Mr. Newton sent us the following interesting comment:—"Your criticism of the R.A. drawings of 'Oldcastle,' Dallington, suggests that the draughtsman has taken libertics with his subject. It is quite true, as you say, that one view shows a long low house, and the other a high building. Both these drawings have been made from the actual working details and from photographs of the building. I make a point of this, as I always feel that drawings of architecture should show the building as accurately as possible, and this can only be done when the building is actually built. It is impossible to find time to make perspective drawings oneself, nor, with the limited practice that one gets, would such drawings do as much justice to the building as a drawing made by a man who is always in practice. But, seeing the danger of draughtsmen's work, I have always made it a point only to illustrate those buildings which are actually built; and the draughtsman works from detail drawings and from photographs. The suggestion I objected to in the criticism was that the draughtsman had made more or less imaginary sketches."

St. James's Church, Alperton.

THIS church, planned to seat 750 persons, is placed upon rising ground, and the view is from the south-west.

The external materials are picked brown stock with Bracknell brick dressing and Casterton stone.

The roofs are of horseshoe tiles, with a slightly broken colour; these were supplied and laid by Messrs. Ames & Hunter, and possess interesting characteristics.

Internally the building is plastered, the nave arcade being of Farleigh Down stone; the roof, of unstained timber, runs the entire length of the church without any chancel arch. The acoustic qualities of the church are said to be exceptionally good in quality.

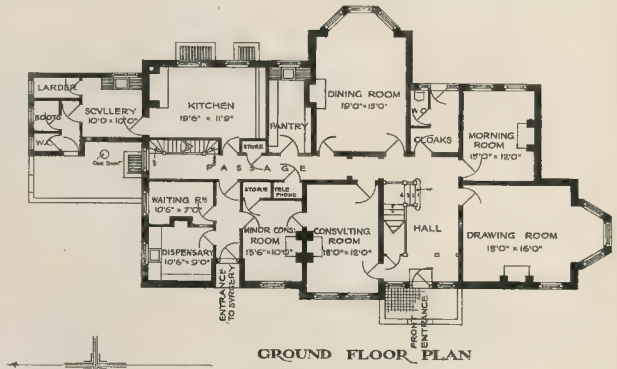
The contract amounted to about 7,800*l*. The contractors were Messrs. Foster & Dicksee, Ltd., and the architect was Mr. William A. Pite, F.R.I.B.A.

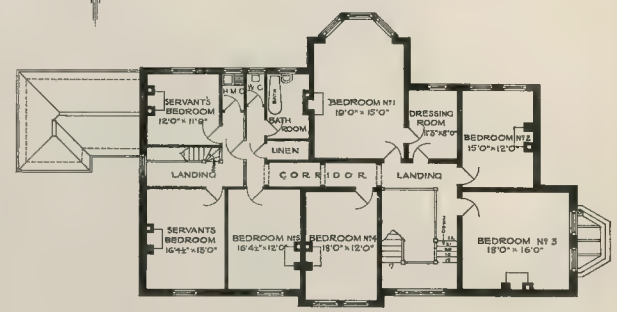
House at Ashstead, Surrey.

THIS house, which is shortly to be erected from designs by Mr. A. C. M. Edwards, A.R.I.B.A., stands on a prominent site at the corner of Ottways-lane and the main Dorking-road at the end of the village. It is proposed to use a red brick of varied tints with a dark hand-made sand-faced tile for the roof. The house is designed on simple Georgian lines with a view to getting a good effect with the least possible cost. The planning was largely influenced by the necessary requirements of the client's profession, and the surgery and waiting-rooms are designed for easy access and for convenience in communication.

KIRKWALL CATHEDRAL.

The working plans for the restoration of this cathedral of St. Magnus have been prepared by Mr. G. Mackie Watson, architect, of Edinburgh, and the Thoms trustees are inviting tenders for the various works concerned.





House at Ashstead, Surrey.

Mr. A. C. M. Edwards, A.R.I.B.A., Architect.



ST. JAMES'S CHURCH, ALBERTON, P.E.I.





Sprague & Co., Ltd., Printers, 69 & 70, Dean St., Soho, W.

VICTOR EMMANUEL MONUMENT, ROME.—Design for the "Altare della Patria," by Signor Arturo Dazzi.





"OLDCASTLE," DALLINGTON, SUSSEX.—Mr. Ernest Newton, A.R.A., Architect

(Royal Academy Exhibition, 1912.)

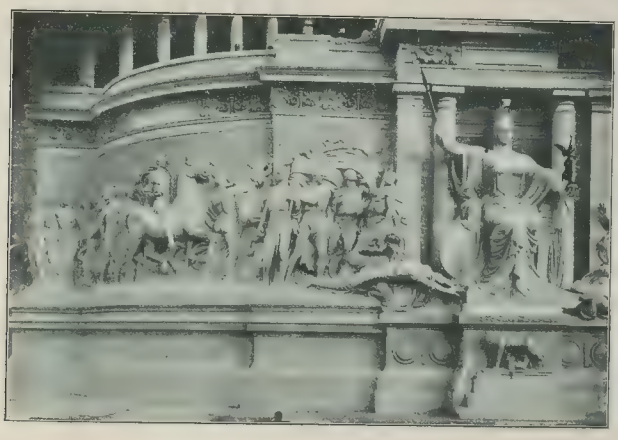
HOUSE IN WOODFIELD LANE, ASHTEAD, SURREY

A.C.M. EDWARDS A.R.I.B.A.
SPARROW & EDWARDS, ST. LONDON, W.C.



HOUSE AT ASHSTEAD, SURREY. MR. A. C. M. EDWARDS, A.R.I.B.A., ARCHITECT.

MONTHLY HISTORICAL REVIEW.



Design for the "Altare della Patria."
By Signor Arturo Dazzi.

THE "ALTARE DELLA PATRIA" OF THE VICTOR EMMANUEL MONUMENT AT ROME:

II.—THE MONUMENTAL ART OF ARTURO DAZZI.

IN the *Builder* of January 5 of the present year we had occasion to describe and illustrate in detail the noble reliefs with which Angiolo Zanelli is now adorning the front of the "*Altare della Patria*," which forms the base of the central figure of Victor Emmanuel in his monument at Rome; and in so doing, while giving full view to the magnificent qualities of Zanelli's art, we did not omit to add our appreciation of the merits of the design which was sent in by Signor Dazzi, noting in this connexion that the Royal Commission, when accepting definitely the design of his rival, had recommended to the Ministry that Dazzi's work should not be entirely destroyed. It is now, therefore, a specially grateful task to complete our notice of the reliefs of the "Monumento" by the fuller account, which we then promised to our readers, of Arturo Dazzi's art; and while treating of this generally we shall keep specially in view his fine design for this altar of the "Monumento." Arturo Dazzi was only eleven years old when (in 1892) he entered upon his art studies; and thus, like his successful rival, whom we noted to have been born in 1879, he belongs to the younger generation of Italian sculptors. We have expressed very strongly, in a preceding article, our opinion of the advantages of such an entirely open competition for great national monuments as that which enabled these two brilliant young men—in both cases little more than thirty years of age—to bring their merits before the public of Italy; and we shall not here dwell further upon that point, but proceed to sketch out briefly the main features of Dazzi's earlier career.

As in the case of Zanelli, so here, too, an early provincial success, the triennial competition of the Academy of Fine Arts at Carrara, which he won with his relief of Andrea Pisano at the quarry of Carrara, gave him the opportunity for completing his studies; and he came to Rome, where two months later he won the Albacini national competition, and soon after the "*Concorso Stanzani*"; he married at this time, and a year after his marriage won the "*Pensionato Nazionale*." Now was the moment for a work which should set the seal on this really brilliant series of earlier successes; and, in fact, in his "Toilers of the Apuan Alps," exhibited at Rome in 1905, although the influence of the Belgian sculptor Meunier may be markedly traced, there is originality in the conception, and merit in the by no means easy treatment of the groups of struggling workers beneath this impassive figure of the "Maiden of the Mountain." The year following (1906) saw in the exhibition of Milan his group (a tragedy of modern life), "At the Hospital Door"; while in the group of "The Builders" (*I Costruttori*), which followed this, and which won for him the medal of Rome and the gold medal of the Munich Exhibition, he treats again the male form in muscular movement with the fullest sentiment of realism.



Signor Arturo Dazzi.

He was now in the last year of his *pension*, and a really fine decorative statue—which was destined to adorn the new Palace of Justice in Rome—that of the Cardinal De Luca, claims our entire admiration. We cannot insist too strongly on the advantage to art of having the best sculptors of their time—and we might here instance Mr. Daniel Chester French in America—to devote their interest to decorative sculpture, which, in its connexion with architecture, affords the highest scope to plastic art; and here in this fine upright figure of the Cardinal, in the XVIIth-century costume, firmly planted on his feet, and with a book of religion held in his nervous right hand, we find a freedom and force of modelling which were worthy of the great Bernini himself.

Let us pass on from this figure to an absolutely different theme, in the classic relief which Arturo Dazzi, after a brief visit to the mountains, commenced to work upon, as his contribution to the decoration of the great altar of the "Monumento"; let us analyse its treatment, its weaknesses, and its success. Both reliefs, we wrote in our previous notice, when speaking of this work as well as that of Zanelli, have this much of subject and treatment in common, that they represent an advancing and ordered group of processional figures, treated in the highest spirit of classic art, and centring in the upright or seated figure of Rome, the "*dea Roma*," the embodied personification of the



"Dea Roma": Design for the Central Figure on the "Altare della Patria."

By Signor Arturo Dazzi.

immortal past as well as the living present and future of the Eternal City.

But where Zanelli's figures possess a certain classic repose, almost realising for us those exquisite lines of the immortal ode of Keats—

"Who are these coming to the sacrifice?
To what green altar, O mysterious priest,
Lead'st thou that heifer lowing at the skies,
And all her silken flanks with garlands drest?"

—these groups within Dazzi's relief seem tormented with a feverish and frenetic energy, and in some cases are almost tumbling over each other in their hurry to arrive at the journey's end. (See Plate.)

What is that end? It is the colossal figure of Rome, enthroned, with the spear clasped in her right hand and a Victory poised on her left, whose sublime repose contrasts (perhaps intentionally) with the tormented multitude which from either side is hurrying towards her. One is inclined to suggest, why all this desperate haste? For the seated figure shows certainly no intention of moving; and, in fact, one may compare the fundamental idea with that of the "Workmen of the Alps," in that both intentionally contrast the thronging busy crowd of human ants with the serene immobility of an elemental form.

For this "*dea Roma*"—this Rome of

Dazzi—is almost elemental, superhuman; the mere contrast of her colossal size lifts her far away from the crowd of humans, while the traditional wolf at her feet is reduced proportionately to the dimensions of a lap-dog.

One cannot help feeling that there might have been another treatment of the subject which would have been closer to the spirit of Rome than either the Hellenic serenity of Zanelli's relief or the frenzied crowd of his competitor. The Roman Triumph which was designed for the Gonzaga Lords of Mantua by their famous court-painter, and which passed, amid the disasters which befell Mantua in the XVIIth century, into the possession of an English monarch, shows the true Roman spirit in its stately dignity—"the sacrificial beasts wreathed with garlands, smoking incense, the captives, the trophies, helms, corselets carried aloft on spears . . . the war-elephants advancing in stately line heralded by beautifully-draped youths." But it has not yet been given to the XXth century to produce a Mantegna; and the hint contained in these figures at Hampton Court was either not known or not accepted.

The work of Dazzi reaches, in fact, its highest point in this seated figure of Rome, a creation of which he may well be proud; she may be perhaps a little exaggerated in size, but both this and the surrounding groups fit well into the spaces assigned them, the light and shadow is effective, the nudes correct and vigorous, though the sculptor never seems to get far away from his somewhat coarse type of the workers in his "*Lavoratori*" and "*Costruttori*," and his women, rarely introduced, are entirely deficient in charm.

It is obviously force, not grace of form, which dominates the impulse of the young sculptor. Young as he is, he has brought himself by a series of works full of talent and character, culminating in this really fine design for the "Monumento," prominently before the notice of the European public, and we shall watch with appreciative interest for the next steps in his artistic development. S. B.



Fig. 2. Church of Santa Cruz at Coimbra: West Front.

THE ARCHITECTURE OF PORTUGAL.—IV.

(*Continued from page 579.*)

THE great effort of Batalha bore fruit in a widened experience, which shows itself in a number of churches built during the XVth century, many of them modelled in some way or other upon it, and laid the basis of the one really national style, the style which came into flower as Portugal drew to the zenith of her fortunes. In particular, this period witnessed a great development in vaulting skill, which enabled the builders to vault over wide spans, and that in a manner not found elsewhere on the Continent, and without recourse to the involved and contorted ribs in use in Spain and elsewhere. An early example of this type, which at Belem approached so nearly to English fan vaulting, occurs in the Church of Villar de Frades, begun in 1425. As the century advances we have the Graça at Santarem, São João Baptista at Thomar, the Matriz at Villa do Conde, Sta. Maria dos Anjos at Caminha, and the Church of Azurara, all interesting as illustrating in various ways the growth of the Manoelino style, named from the glorious reign of Dom Manoel I. (1495–1521), in which it culminated, though most of its elements were already present and commingled under his immediate predecessors. The whole trend of Gothic art in the XVth century on the Continent was towards restlessness and virtuosity, manifested in intricate structure and exuberant ornament, and at the same time towards naturalistic treatment. In Portuguese Gothic the tendencies were as strong as elsewhere, and formed the groundwork of the Manoelino style, but it also absorbed the circumambient influences of its environment. Among these the most easily distinguishable is that of the Moors, settled for so many centuries in the land itself. Next in view of the agelong maritime intercourse of Portugal with the Netherlands, Flemish and perhaps even German influence is not improbable, even before the XVIth century, when Flemish artists are known to have been imported, while certain forms recall the cognate but on the whole less angular manner of Northern France. Again, *pace* Mr. Crum Watson, who strenuously, but not altogether successfully, combats this view, an Indian flavour is probably to be discerned in at least some examples of the later style. When it is remembered that after Vasco da Gama had reached Calicut in 1497 a Portuguese colonial empire was at once founded in India, and an active commercial intercourse with that country immediately sprang up, it is reasonable to suppose that an art so striking and original as that with which the Portuguese there came into contact for the first time, and specimens of which in the form of small articles doubtless returned in each shipload of silks and spices, would produce an effect on the native style. It is not contended that specific buildings in India were imitated, but rather that the builders and carvers had in their minds vague reminiscences of Indian architecture, and before their eyes the patterns of Indian carved or inlaid or woven work, and the forms employed by Indian metal workers and cabinet makers. Then came the Renaissance, and to this welter of competing influences yet another was added by the Italian and French artists working in the new style. Thus in the later examples of Manoelino the friezes and arabesques, the pilasters and candelabra, and the whole code of Italian ornament were more or less skilfully interwoven.

Phenomena indistinguishable from some forms of Manoelino, but without the Indian element, appear in certain parts of Spain, but there the style was but a passing phase which took no root. As instances, a doorway of the south-west cloister of the Hospital of the Catholic



Fig. 1. Doorway in the Hospital of the Catholic Kings at Santiago de Compostella.

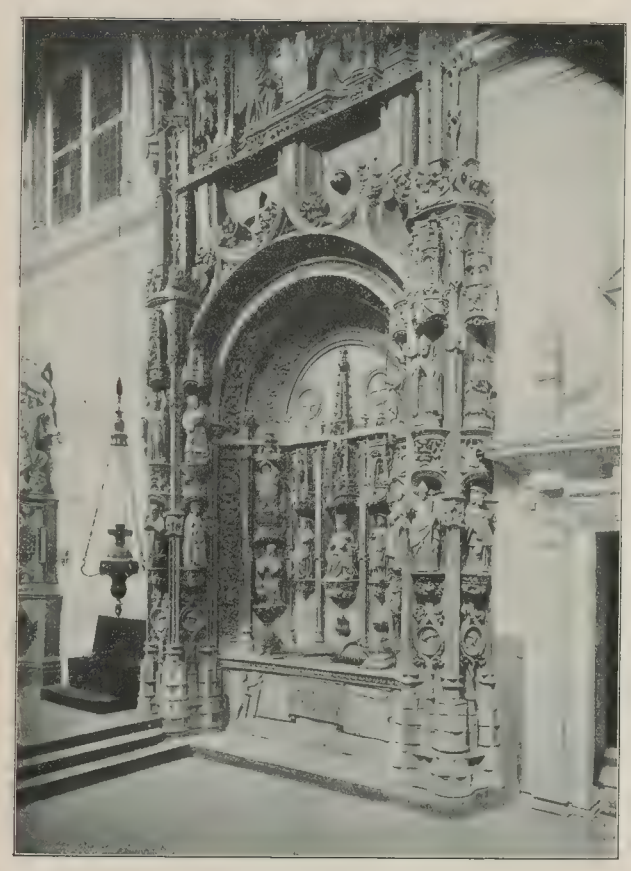


Fig. 3. Tomb of Dom Sancho I. in the Choir of Santa Cruz at Coimbra.

Kings at Santiago de Compostella (Fig. 1) and the court of the Infantado Palace at Guadalajara may be mentioned. Manoelino is in the main a style of decoration affecting but slightly the main lines of plan and structure, but fastening upon the more prominent features, particularly the doors and windows, the piers and arches, and enveloping them in a web of exuberant fancies.

The characteristic tendency of late Gothic to elaboration and complexity brought about the multiplication of members in the piers and the surrounds of openings where they were interwoven and interpenetrated. This was combined with the Moorish cusping and interlacing of arches. As elsewhere, too, the simple pointed form of head gave place either to the round or to some more complex shape, such as the polygonal with straight or curved sides, or that given by two lobed arches, one with convex and one with concave curves, occasionally varied by straight lines being intertwined. The prevalent roll mouldings are laced into various patterns, some of them reminiscent of Romanesque types, and spiral shafts are frequent. The elaboration of the outer wall as the inner outlines of features follows as a matter of course. Openings are framed in by label mouldings curiously bent into gables of complex curvature, which burst into a forest of crockets and finials, while the skyline is fretted with pierced crestings and jagged with pinnacles; and the surfaces of shafts, the spandrels and the panels are carved with bands and diapers of ornament.

The naturalism of the age was not content to bind wreaths round the capitals and trail leafy sprays in the hollows of the jambs; it seized upon the roll mouldings and twined them into cables, which it looped and knotted and tasselled, or into growing stems springing from writhed roots and sprouting with twigs, sometimes lopped in German fashion, sometimes bearing thick bunches of coiled fronds. In windows and cloister arcades stems such as these spread above into lace-like veils of intertwined branches and sprays in lieu of tracery. At other times it would transform a cluster of shafts into a bundle of reeds bound together with ropes or ribbons. The finial which juts from each point of the interlaced cusping, from each angle of the drip mould, and from the summit of every pinnacle becomes a spike of flowers or a knot of leaves.

The Manoelino style, however, is far from being homogeneous, for all its elements are seldom found blended in the same work, and examples from different places and even different parts of the same building differ so greatly from each other that they have little more than the general characteristic of extreme exuberance in common. The period which produced the style was one when the wealth of Brazil as well as the East was pouring into the coffers of Portugal and the lovers of building were able to give free rein to their hobby. Foremost among these was the prince who sat on the throne under the name of Dom Manoel the Fortunate, a typical Renaissance monarch, a splendour-loving patron of art and learning, a Francis I. without his vices. Since, however, over sixty buildings were erected at his expense alone, these articles must confine themselves to a brief description of the salient points in a very few of them.

The portion added by Manoel to the old palace of Cintra is a good example of the earlier style. Here the windows of the eastern wing are of a Moorish type with coupled, semicircular headed, cusped arches enclosed in a rectangular framework, but the latter is formed of twisted and budding branches, which blossom into rich poppy heads above. The Church of the Monastery of Santa Cruz at Coimbra is a relatively sober example of the style without perceptible Moorish influence, and recalling rather a French or Flemish church by the form of the crocketed spires of its turrets and the pinnacled buttresses and swirling labels of its west portal (Fig. 2). In the cloisters, however, a less skilled hand betrays itself, and the segmental arches filled with clumsy tracery, in which the bars are composed of a coarse cable mould, are far from happy in effect. The church contains the tombs of two of the early kings, erected under Dom Manoel (Fig. 3). Almost identical in design, these lofty and elaborate structures reaching to the roof face each other on each side of the choir. Though purely Gothic in general treatment, they exhibit many of the soberer Manoelino characteristics, and were probably designed by a Portuguese. Some of the statuary, however, and sundry Renaissance details introduced here and there are doubtless due to one of the various Frenchmen employed in the church, among whom were Master Nicolas, who had previously worked at Belem and Jean de Rouen, who had collaborated in the Amboise tomb in Rouen Cathedral up to 1521 and afterwards executed the Renaissance pulpit and other works here.

The western choir gallery is fitted with a magnificent series of Gothic stalls (Fig. 4 richly carved and gilded, probably, to judge by the Flemish character of their detail, by the same Flemings who made the reredos of the old cathedral in the same city. Above the canopies runs a deep frieze with foliage cresting, divided by statuettes in niches into panels in low relief, representing the adventures of Vasco da Gama in India. Another example of Flemish workmanship, the choir stalls in the Church of the Order of Christ at Thomar, has unfortunately perished.

EGYPTIAN AND SYRIAN EXPLORATION.

THE last campaigns carried out by the various agencies interested in the exploration in Egypt have been quite up to the average in fruitfulness. Mr. Edouard Naville's work for the Egypt Exploration Fund was in part devoted to further investigations at Abydos, a spot of great sanctity owing to its possession of the reputed tomb of Osiris, in the vicinity of which innumerable kings and other personages had tombs or cenotaphs. He explored a mysterious underground passage, the door of which had been found by Professor Petrie and Miss Murray. It is cut in the marl, and its walls have well-preserved decorations illustrating the Book of the Dead. The roof, consisting of stone lintels 9 ft. long, had at some period been mostly removed. The passage sloped down for some way and eventually led to a series of large subterranean chambers, the purpose of which is not yet clear, but which are considered by Professor Naville to be in some way connected with the tomb of Osiris.

In the course of their more recent work the British School, under Mr. Mackay, were fortunate in finding at Memphis, between two well-known colossi, a gigantic sphinx of the finest work of about 1300 B.C. in excellent preservation though thrown on its side. It is of alabaster and weighs about 80 tons, its measurements being 14 ft. high and 26 ft. long. It will be set up again and remain in position. Professor Petrie, likewise working for the British School, has begun excavating Heliopolis, destroyed by the Persians in 525 B.C., as the key to Memphis, and never since occupied. The massive walls of the temple enclosure, some 40 ft. thick, have been traced out, and an earthwork fort disclosed similar to that discovered at Tell-el-Yehudich in 1906, a rounded square in plan, a quarter of a mile across. It is assigned to the Hyksos period, being a form of construction quite foreign to native Egyptian practice.

Professor Garstang resumed this winter the explorations of Meroë in the Sudan, under the auspices of Liverpool University, begun in the previous year, and traced the city wall for upwards of 1,000 ft. These are 16 ft. thick and were once from 30 ft. to 40 ft. high. A Roman temple and the baths attached to a palace were also discovered, and in the latter a number of works of art, statuary, medallions, frescoes,

glazed ornaments, and tiles, while the palace of Queen Candace yielded a quantity of jewellery.

One of the most interesting of these objects is a remarkably fine contemporary bronze head of Augustus with the eyes enamelled, which has been purchased by the National Collections Fund for 1,000 guineas, a transaction which has brought down two very desirable birds with one stone—the British Museum is enriched by a valuable work of art, and the Liverpool Fund is able to carry on its work for another year.

A similar spirit of enterprise is manifested by the Ny Carlsberg Museum of Copenhagen, which paid for part of the works at Memphis, and is rewarded by the acquisition of a red granite group of Rameses and the god Ptah, found in that deity's precinct.

The activities of the Liverpool University Expedition are not confined to the Sudan. When the summer comes round Professor Garstang seeks a cooler climate. Last summer was devoted to exploration in the neighbourhood of Antioch, and in particular to that of an artificial mound at Sakje-Geuzi, 500 ft. long and 160 ft. high. It concealed remains of many periods. A Roman building complete except for its roof was uncovered, fine fortifications of the Seleucid period, and, lowest of all, remains of Hittite building dating from about 1500 to 600 B.C. In the Hittite houses of the earlier date traces of charred wooden roofs and verandahs gave evidence of destruction by fire. A smaller mound near by proved to have been the royal residence, whose plan was recovered. The palace stood in the angle of a strongly fortified rectangular enclosure.

HISTORICAL NOTES.

Tudor House, Southampton.

THIS fine timber-built house—known generally as "Henry VIII.'s Palace"—has been purchased by the Corporation of Southampton under the Museums Act. It is intended to make it a representative local museum and a centre of interest for the whole of Hampshire. Erected probably in the early part of the XVIth century, it is well worth study; and it is fortunate that it has now become the property of the town. It is interesting not only in itself, but from its position in the old town, and from its close association with other historic buildings and the ancient walls in this quarter. It stands at the south corner of St. Michael's-square, facing the main (west) entrance to the church. Tradition connects it with visits of Henry VIII. to the town, and some have indulged their fancy in picturing Henry here with Anne Boleyn; but, though it is recorded that the King came several times and Queen Catherine certainly once, there is no evidence that Anne was here at all, or that the King ever visited Southampton after Catherine's divorce. Bugle-street, of which this building forms a part, takes its name from a house which stood at the south corner of West Gate-street, and was named Bugle Hall. It had some distinguished owners, one of whom was the celebrated Sir Thomas Wriothesley, Earl of Southampton. Englefield, in his well-known work (1801), states that it was completely destroyed by fire "a few years ago."

Preservation of Historical Structures.

REPORTS from all parts of the kingdom attest the growing strength of the movement for the preservation of ancient buildings and objects of historical interest. The following are examples taken almost at random:—

At a meeting of the County Council of Renfrewshire last month reports were received from a number of members on the buildings and ruins in the county whose preservation should be aimed at, and also a return from the clerks of the various parishes enumerating the structures of historical interest existing in each parish. The Surrey Archæological Society has undertaken to draw up a similar list for Surrey, while the County Council is taking steps to preserve ancient cottages at Guildford which are threatened. On June 6 was held the final meeting of the Ayr Auld Brig Preservation Committee, through whose efforts that picturesque bridge with its reminiscences of Burns has been saved from destruction and repaired at a cost of over 12,000*l.*

The National Trust has just issued an appeal for the acquisition of a Roman fort known as Borran's Field, near Ambleside, which is not only interesting as forming part of the system of block-houses erected by the Romans to control the lake district, but a beautiful spot, on the edge of Windermere, whose conversion into a building site would be a disfigurement of the lake. The site—of 20 acres—is offered for 4,000*l.*, of which 1,000*l.* has been promised locally.

Efforts are being made to arrest the destruction by time and weather of the ruins of the Priory Church of St. Botolph, Colchester. The Priory, the oldest house of Augustine Canons in England, was destroyed at the Reformation with the exception of the nave of the church, which was granted to the parishioners for public worship. In the siege of Colchester by Fairfax in 1648 this parish church of St. Botolph suffered severely, as it stood between the fires of the besieged and besiegers. It has since been abandoned, and is now in a critical condition, urgently requiring attention, which it is hoped the Board of Works may be disposed to give it.

Honiton Church.

THE rebuilding of St. Michael's Church, Honiton, which was all but burnt down in August, 1911, is now nearly complete. The tower, portions of the walls, and many of the arcade piers survived the fire, and have been incorporated in the new structure. Many of the old floor memorials remain intact and are left in position in the new flooring. Other monuments, though damaged, also survive. Notable among these is the beautiful black marble tomb of Thomas Marwood, physician to Queen Elizabeth, who died at the age of 105. The famous Perpendicular screen erected during the episcopate of Bishop Courtenay (1477–91), Shakespeare's "haughty prelate" (*Richard III.*), was unfortunately entirely destroyed in last summer's disaster.

Discoveries at a Dorset Church.

UNDER the above heading the *Times* of June 6 gives an account of some discoveries made in the course of restoration at Whitcomb Church, which was already interesting for the possession of two rude Romanesque doorways, probably of pre-Conquest date. A finely-carved "Celtic" cross has been found embedded in the east wall of the chancel.

"The rood-loft steps have also been discovered, having been walled up probably during the Puritan period. The removal of the plaster on the north wall of the nave has revealed a large extent of fairly well-preserved fresco, representing rather florid XIIIth-century arcading.

Whitcomb was the first pastoral charge held by the dialect poet, William Barnes, a "living" of 13*l.* per annum.

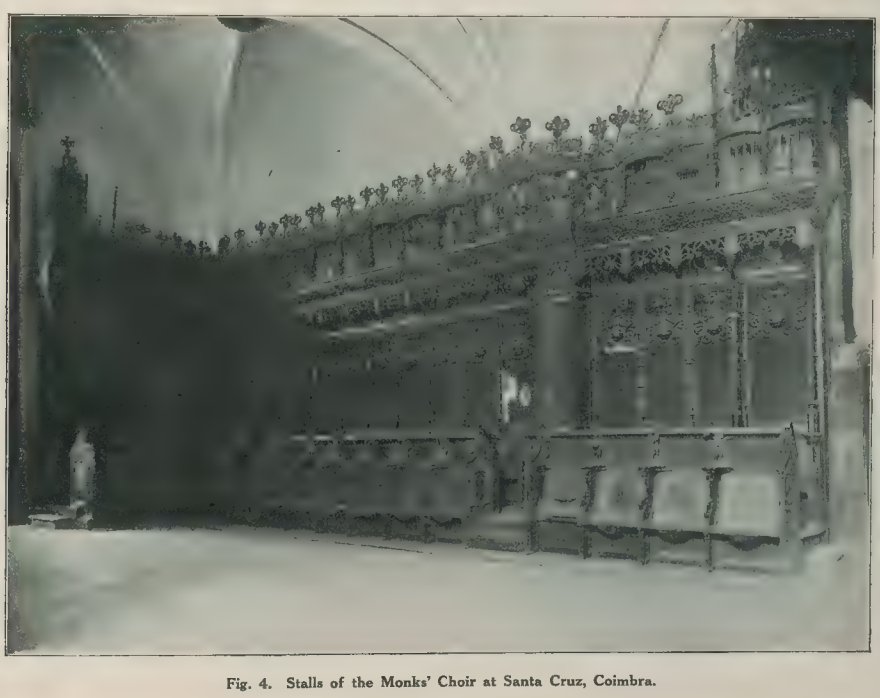


Fig. 4. Stalls of the Monks' Choir at Santa Cruz, Coimbra.

THE BUILDING TRADE.

CO-PARTNERSHIP AND LABOUR UNREST.

A NON-PARTY movement has been set on foot with the object of promoting co-partnership between labour and capital as a remedy for labour troubles and to investigate the causes of failure and success in those schemes which have hitherto been tried. At the same time a tentative Bill has been introduced and read a first time in the House of Commons dealing with this subject. Everyone would welcome a solution of labour troubles which would not only secure to labour an interest in the industry it is engaged upon, but which would also put an end to a kind of strife which benefits no one in this country and which is permanently driving our trade abroad. There are many inherent difficulties in co-partnership schemes; they necessitate restrictions on the use of capital, and the workmen, though they can share profits, can neither provide capital nor share losses. In the case of industries which are keenly competitive these difficulties are increased, whilst in undertakings such as the South Metropolitan Gas Works they are at the minimum. The chief obstacle in the way of such schemes is, however, the attitude both of the trade unions and the Government towards the sympathetic strike. The modern weapon of labour is the general strike; a dispute in one trade in one district, however trivial, is made the pretext of a general cessation of work in affiliated trades throughout the country. It is obvious that so long as this is the policy of the labour leaders they must discourage any movement which attaches labour either to an employer or a trade. All labour must be so detached that the bugle call to battle may unhesitatingly be answered at once. Hence the relations between employer and employed become daily more detached and less friendly. Happily there are now signs in the country that the workmen are tiring of this destructive policy of striking in sympathy, and thus we may hope that more rational methods of conciliation and co-partnership may soon receive a fair and patient trial.

CONCRETE-MIXERS:

THE RANSOME MIXER.

THIS machine, which is supplied in several different styles to suit individual requirements, is of the batch-mixing type.

The mixer proper consists of a rotatory drum fitted inside with scoops of special design, the concrete being discharged from a shoot which is raised during the process of mixing, and lowered when the concrete has been mixed. Fig. 1 is a view which shows the general arrangement of the machine.

The drum is built of substantial steel plates riveted together, and rotates upon two circular cast-iron roller paths riveted to the exterior, the path nearest to the delivery shoot being fitted with an annular toothed rack. In the smaller machines the rack is cast in one with the roller path, and in machines of the larger sizes it is in the form of a separate casting.

The paths are spaced as far apart as possible in order to obviate the oscillation that occurs in machines where the roller paths are at or near the centre of the drum. In addition to ensuring steady running, the wide spacing has the effect of increasing the life of the drum.

The frame carrying the drum is constructed of rolled-steel sections strongly connected together. Brass bearings are bolted upon the frame to support the axles of four cast-iron rollers on which the drum rotates. Bearings are also provided for the driving shaft, fitted at one end with fast and loose pulleys, and at the other end with a cast-steel pinion engaging the annular toothed rack on the drum. All bearings are brass bushed, and the pedestals are made in two halves so as to be adjustable. Moreover, the bearings are made dust-proof by a special arrangement of caps and packing pieces, this being an important feature in concrete-mixing plant.

The discharge shoot is of steel plate and fixed in place by means of three vertical angle bars, to the top of which are bolted cast-iron brackets carrying a quadrant and shaft supporting and moving the shoot up and down as may be required, the movement of the shoot being effected by a hand lever.

While a batch of concrete is being mixed the shoot is raised, and as soon as it is desired to discharge the concrete the lever is thrown over, causing the shoot to fall. The concrete then passes direct into the barrow or other receptacle placed beneath the shoot, the entire batch being discharged in five revolutions of the drum.

Fig. 2 illustrates the construction and arrangement of the steel scoops inside the drum, the scoops ploughing through, picking up, and distributing the materials while the drum revolves, in the manner approximately indicated by Fig. 3.

The Ransome mixer is provided with a

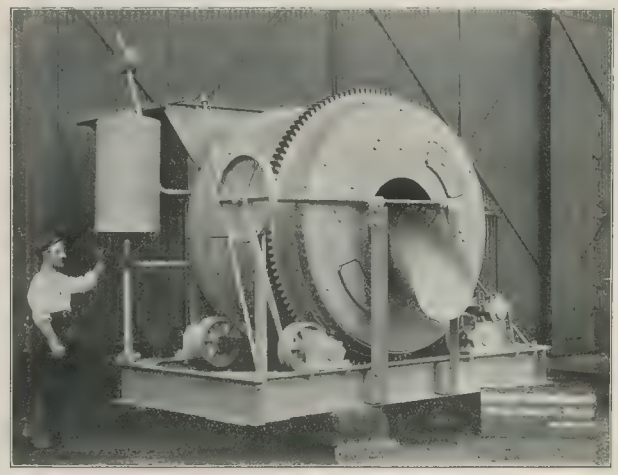


Fig. 1. Ransome Belt-Driven Mixer with Fixed Measuring Hopper.

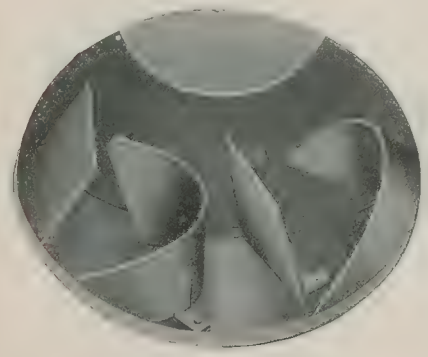


Fig. 2. Interior of Ransome Mixer.

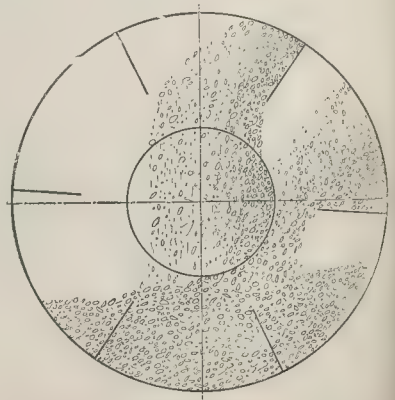


Fig. 3. Diagram Illustrating the Process of Mixing.

measuring feed hopper, either stationary or arranged so that it can be lowered to receive materials and raised to discharge them into the drum.

After the drum has been charged the gate of the hopper is closed and the hopper again charged in order that mixing may be conducted with a minimum amount of interruption.

The machine is also fitted with a water-measuring tank, having an automatic device for delivering the predetermined proportion of water for every batch of concrete.

Fig. 4 is a section of the water-tank, supplied through the valve A, and the screwed pipe D. The float C closes a valve E when the tank is full of water, and by closing the valve A

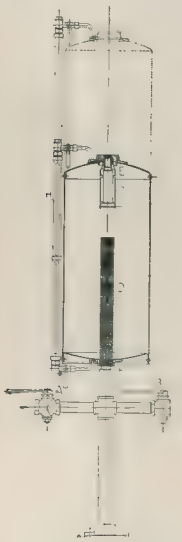


Fig. 4. Ransome Automatic Water-Tank.

and opening a valve B the water flows into the mixing drum until it falls to the level of the top of the pipe D. By screwing the pipe D up or down any required amount of water can be admitted to the drum.

The Ransome mixer is made in sizes ranging from 2 cubic ft. to 2 cubic yds. batch capacity. The frame can be supplied with wheels suitable for road or rails to enable the mixer to be moved readily from point to point, and the machine is finished in various styles for driving by belt from an existing engine or motor, or for being driven by steam engine, internal combustion motor, or electric motor mounted on the frame of the mixer. Another pattern that is often found convenient is one including hoisting apparatus for raising the concrete to the upper floors of a building under construction, the hoist being operated by the man in charge of the mixing machine.

The Ransome concrete-mixer is manufactured by Messrs. Ransomes & Rapier, Ltd., of Ipswich, and supplied by the Ransome-ver Mehr Machinery Company, of Caxton House, Westminster, S.W.

BUILDING ACT ANOMALIES.

THE amusing article we published last week by an architect on the anomalies in the London Building Act draws attention to several points of importance.

With one of his puzzles, however, perhaps we can assist him. We refer to the two instances he gives as to party walls, but he appears to have an excellent legal adviser in "Mr. Quibbles"!

In the case of Drury *v.* Army and Navy Auxiliary Co-operative Society (1896; 2 Q. B. 71) it was held that a party wall when it gets a certain height above the roof of the adjoining building ceases to be a party wall unless there is some statutory provision to make it a party wall above that height. This decision followed a case under the Bristol Improvement Act, 1840, decided in 1873, and the two cases justify "Mr. Quibbles's" opinion in the case of "Mr. D.'s" house, which had a window in a wall "much higher" than "Mr. C.'s" house. When we come to the dormer window erected in "Mr. E.'s" house we find there is a statutory provision qualifying the above statement, to wit, sect. 59 of the London Building Act, 1894. That section makes it necessary to carry up a party wall in buildings, not of the warehouse class, 15 in. above the flat or gutter, and 12 in. higher than any turret, dormer, lantern light, or other erection of combustible materials fixed upon the roof or flat of any building within 4 ft. of such party wall. We can only assume, as did the infallible "Mr. Quibbles," that the dormer window answered this description, and in this case the law is not such "a hass" as we are bound to admit nowadays it often is.

THE INCORPORATED BRITISH INSTITUTE OF CERTIFIED CARPENTERS.

ON Saturday last week a dinner was given to this Institute by the Worshipful Company of Carpenters, in the Hall of the Company, London-wall, the Master of the Company, Mr. W. R. Cobay, presiding. There were also present, representing the Carpenters' Company: Messrs. Frank Preston, B. J. Jacob, Arthur Jacob, Walter Smith, Percy Preston, Wm. Robertson, Lieut.-Colonel A. C. Preston, and J. Hutton Freeman (Clerk). Representing the Incorporated British Institute of Certified Carpenters there were present:—Professor Elsey Smith and Mr. H. P. Fletcher, F.R.I.B.A., Vice-Presidents; Professor Hy. Adams and Mr. W. Busbridge, Hon. Fellows; Mr. F. G. Rice, ex-President Institute of Builders; Mr. W. T. Sweett, Hon. Secretary; and others.

The loyal toast having been honoured,

Mr. George Ayres

proposed the toast of "The Worshipful Company of Carpenters." In the course of his remarks he expressed the indebtedness of the members of the Institute to the Carpenters' Company for its work on behalf of the craft and its help to the Institute. The Company was to be thanked especially for instituting their examinations, which were very thorough, though students received at the hands of the examiners that kindly treatment which they should expect. The Carpenters' Company had always taken an interest in the trade, and they were now in the van in regard to secondary education, their Trades Training School at Great Titchfield-street being the first school in London which one could really call a trade school. The sanitary examinations of the Company were also of great value and were held in high repute. Then as to the public, he believed that a great work was being done as a result of the lectures which were held in that Hall in the art of building and in the arts connected with building. Without the Carpenters' Company this Institute could not have been in existence, and they were very grateful for the help they had received.

Mr. W. R. Cobay,

the Master, in reply, said they met under the shadow of a great misfortune, as the President of the Institute, Mr. Wilson, was unable to be present on account of a recent motor-car accident. Mr. Wilson was on the way to recovery, and he thought they should send him a letter regretting his accident and wishing him a speedy recovery. He agreed with Mr. Ayres that the Company was a living City Guild, as they still represented a living trade, and, he hoped, a prosperous trade. The Carpenters' Company received its Charter upwards of 500 years ago, and from that day to this they had not lost touch with their own craft. In the past they had occupied a most important position in relation to the trade, having to settle many trade disputes; but differences were settled on a friendly basis, as he wished they always were now. It had been said that the City Companies were of no use except to themselves, as they ignored the requirements of the public; but he thought he could say that they were assisting craftsmen in the trade and were doing something in the matter of apprenticeship.

Mr. B. J. Jacob, J.P.,

then proposed the toast of "The Incorporated British Institute of Certified Carpenters," referring to the growth of the Institute, and said that, although they were not members of the Carpenters' Company, the Company looked upon them as part of the family, and they wished them every prosperity. A certified carpenter was a guarantee of good work.

Mr. Herbert Phillips Fletcher, F.R.I.B.A.,

in reply, thanked the Carpenters' Company on behalf of the Institute for entertaining them to dinner that night. The Company was formed many years ago for the purpose of protecting the members of their craft; in other words, it was a great trade union, but a trade union not on the question of a minimum wage or a maximum wage, but a trade union for the good of the craft. It seemed rather hard that a man who worked hard and earned 1s. 6d. per hour should be put on the same level as the "slacker" who was not earning half his 10½d. per hour; and he believed in every man being paid for the work he did. Although it was essential that some sort of minimum wage should be paid, he thought that a man should be paid for what he really did, although he admitted that it was a difficult matter to arrange. He had always taken an interest in their Institute because the first qualification of a member was that he should be a competent craftsman, and he had the greatest respect for a man who could work decently with his hands. But he did not think the Institute was going forward fast enough, and he thought they had rather got into a groove, and it was for them, and not for the President or Vice-Presidents, to work themselves out of that, and they ought to do it. It was not the fault of the officials that the Institute was not going ahead quickly enough, for they could not have better officials; what was wanted was that the backbone of the ordinary members should be put into the work of expansion. The Carpenters' Company had done a great deal for them, but the members of the Institute were not doing as much as they might. They could see what energy and push had done in other societies, and, as carpentry was never so alive as it is to-day, he thought they ought to increase their membership and get a real grip of the trade and take such a hold as the old Carpenters' Company had 500 years ago. They had to put matters on the right lines, and they should put the Institute in such a position that membership should be regarded as the highest honour that a carpenter could attain to, and in this way the cream of the trade would come to their members. He thought that architects should be encouraged to ask whether the men who were working on their jobs were members of the Institute. Personally he frequently did so.

Mr. J. D. Macnair

then suitably proposed the toast of "The Visitors," and referred to the Library of the Carpenters' Company, which the members of the Institute were permitted to use. He wished that every young man connected with the trade should know something about the Carpenters' Company, and especially about their examinations. It would be an incentive to a lad entering the trade to know of these examinations and to be encouraged to compete for them.

Mr. F. G. Rice

briefly replied, and remarked that the Company had always taken an interest in education, as was shown by the fact that they used to lend that Hall to Mr. Busbridge's School for the distribution of prizes. When he was a young man there were no technical school at Titchfield-street, no London County Council continuation schools and such educational facilities, but Mr Busbridge's school did good work.

THE BRITISH FIRE PREVENTION COMMITTEE'S TESTS.

THE British Fire Prevention Committee's summer season has now commenced at the conclusion of the Whitsuntide vacation, and an interesting programme of fire tests has again been arranged for at the Committee's Regent's Park Testing station.

The tests include the following for the coming two months, and applications from members and subscribers who wish to attend should be addressed in writing to the Assistant Secretary of the Committee at 8, Waterloo-place:

Two tests with "Chadrac" fire-resisting

electro-glazing submitted by Messrs. Chater & Sons, of London.

A test with Luxfer fire-resisting electro-glazing submitted by Messrs. British Luxfer Prism Syndicate, Ltd., of London.

A test with a large reinforced concrete floor submitted by the United States Steel Products Company, on behalf of the American makers of "Triangle Mesh Reinforcement."

A test with a pair of experimental reinforced concrete doors submitted by the Chairman of the Belgian Technical Committee for Fire Protection.

A test with asbestos-cement corrugated roofing materials (made in Canada) submitted by the Asbestos Manufactures Company, Ltd., of London.

A series of tests with impregnated textiles, wearing apparel, and similar materials submitted by Messrs. Snowden & Co., Ltd., of London.

A non-inflammable celluloid known as "Cellit" submitted by the Bayer Company, Ltd., of London.

A test with a fire extinguisher (made in England) submitted by the Abbé Daney Fire Extinguisher Company, Ltd., of London.

The Fire-Prevention Committee have further either issued or arranged to issue during June reports on the following tests conducted during the first session of the year, *i.e.*:—

A test with the Abbé Daney Fire Extinguisher (made in France).

A test with two metal doors of the Dahlstrom Metallic Door Company, Jamestown, New York, submitted by Messrs. Roneo.

A partition of the Dahlstrom Metallic Door Company, of Jamestown, New York, submitted by Messrs. Roneo.

Two tests with "Copperlite" fire-resisting glazing submitted by Messrs. Hayward Brothers & Eckstein, Ltd.

NATIONAL INSURANCE ACT.

IN Tuesday's Parliamentary Papers, Mr. Butcher asked the Chancellor of the Exchequer whether, in cases where a master builder or other employer in a trade mentioned in the Sixth Schedule to the National Insurance Act employs a son of the age of sixteen and upwards in his trade wholly or mainly by way of manual labour and pays such son wages, such son must become insured against unemployment under Part II. of the Act and he and his father must pay the contributions mentioned in the Eighth Schedule to the Act: and whether the Board of Trade have yet made regulations for the payment and collection of such contributions, and, if so, how and to whom such contributions are to be paid.—Mr. Robertson replied that a son employed by his father in the circumstances mentioned in the question would appear to be a "workman" as defined by sect. 107 (1) of the Act, in respect of whom contributions to the unemployment fund are payable at the rates set out in the Eighth Schedule and in accordance with the regulations of the Board of Trade.

GENERAL BUILDING NEWS.

PARISH HALL, CROSBY.

The new Parish Hall for St. Luke's Church has been erected at a cost of about 3,500*l.* from the designs of Messrs. Woolfall & Eccles, FF.R.I.B.A., of Liverpool. The hall provides accommodation for 500 persons, and other rooms include lecture, club, and class rooms.

NEW BATHS, WALLSEND.

The new public baths have been erected from the plans prepared by Messrs. Liddle & Browne, architects, of Newcastle. The swimming-bath hall is 118 ft. long by 56 ft. wide, with galleries and accommodation for about 700 people. The builders were Messrs. W. Franklin & Son, of Newcastle, and the engineer was Mr. T. D. Hall, of Wallsend.

MINERS' HOMES, MURTON.

The twelve homes which are being erected for aged miners at East Murton, have been designed by Messrs. C. Johnson & Son, architects, of Bishop Auckland. The houses are of one story, built with faced bricks up to the window and finished rough cast and roofed with Westmorland slates. The builders are Messrs. J. & T. Parker, of Sunderland.

BRANCH LIBRARY, BRADFORD.

The new branch library at Great Horton, Bradford, is being erected at a cost of about 3,500*l.* from the plans of Mr. W. Williamson, the City Architect. The library will have accommodation for 12,400 volumes and reading rooms are provided for adults and children, and the upper floor will be entirely devoted to a ladies' reading-room.

NEW BUILDINGS IN LONDON.

Leather warehouse, Weston-street, Bermondsey, S.E.; Mr. A. E. Anderson, architect, 35, Abingdon-street, Northampton; Messrs. J. Greenwood, Ltd., builders, Arthur-street West, E.C. Factory for Messrs. Park, Davies, & Co., chemical manufacturers, Staines-road, Hounslow, W.; Messrs Edmeston & Gabriel, architects, Union-court, Old Broad-street, E.C.; Mr. W. Downs, builder, Hampton-street, Walworth, S.E. Club premises, Bermondsey, S.E.; Mr. A. W. West, architect, 3A, Lyall-street, Belgrave-square, S.W. Offices for Bank of South America, Moorgate-street, E.C.; Messrs. Dunn & Watson, architects, 35, Lincoln's Inn-fields, W.C. Hospital, Maida Vale, W.; Messrs. Young & Hall, architects, 17, Southampton-street, W.C.; Messrs. J. W. Falkner & Co., builders, 24, Ossory-road, Old Kent-road, S.E. Chapel, Collyer-place, Camberwell, S.E.; Mr. L. G. E. Stelling, on behalf of the Building Committee of Hanover Chapel, Peckham, S.E. Rebuilding Nos. 51 and 52, Chancery-lane, and 22 and 23, Southampton-street: Messrs. Thurgood & Martin, surveyors, 27, Chancery-lane, W.C.

TRADE NEWS.

The "Boyle" system of ventilation (natural), embracing Boyle's latest patent "air-pump" ventilators and air-inlets, has been supplied to Messrs. Vickers', Ltd., new offices, Barrow-in-Furness.

In reference to the illustration of Nos. 48-52, Fleet-street, E.C., for the "Norwich Union" Insurance Society, which we published in our last issue, Messrs. Patman & Fotheringham, Ltd., are the general building contractors for the work.

APPLICATIONS UNDER LONDON BUILDING ACTS, 1894 to 1909.

AT the last meeting of the London County Council the following applications under the London Building Acts were dealt with. (The names of the applicants are given in parentheses):—

Lines of Frontage and Projections.

Brixton.—Iron structure upon the forecourt of No. 205, Clapham-road, Brixton (Mr. H. J. Doughty).—Consent.

City of London.—Oriel window at Fenchurch-chambers, Lime-street, City (Messrs. Fair & Myer).—Consent.

Dulwich.—Projecting porch at No. 51, Underhill-road, Dulwich, next to Bellvoir-road (Messrs. H. King & Son for Mr. D. Rose).—Consent.

Hackney, South.—Erection of buidings on the eastern side of Lower Clapton-road, Hackney, northward of No. 208, Lower Clapton-road (Messrs. J. Garey & Son for Messrs. F. W. Glover & Son).—Consent.

Hammersmith.—Projecting sign at the Temperance Billiard Hall, King-street, Hammersmith (Temperance Billiard Halls, Ltd.).—Consent.

Hammersmith.—Projecting illuminated sign at the "Red Cow" public-house, Hammersmith-road, Hammersmith (Messrs. Bull & Bull).—Consent.

Hampstead.—Erection of additions at No. 40, Canfield-gardens, Hampstead, next to Fairhazel-gardens (Mr. C. Saunders for Mr. B. Groner).—Consent.

Hampstead.—Erection of a one-story shop in front of No. 335, Finchley-road, Hampstead (Mr. W. A. Forsyth).—Consent.

Hampstead.—Erection of a bay-window at No. 5, Belsize-road, Swiss-cottage (Mr. W. A. Watts for Mrs. F. M. Jacklin).—Consent.

Hampstead.—Erection of an addition at No. 194, Goldhurst-terrace, Hampstead (Mr. C. H. Webb for Mr. J. E. Sutton).—Consent.

Hampstead.—Erection of an iron and glass porch in front of No 44, West End-lane, Hampstead (Messrs. A. H. Paine & Son).—Consent.

Hampstead. — Erection of a projecting window upon a balcony in front of No. 22, Chesterford-gardens, Hampstead (Messrs. Spalding & Myers for Mrs. Tien).—Consent.

Kensington, North.—Erection of a wood and glass showcase at No. 124A, High-street, Notting-hill (Mr. S. Newcombe for Mrs. E. Carpenter).—Consent.

Lewisham.—Greenhouse in the garden of "Hyndford House," Inglemere-road, Forest-hill, abutting upon Bampton-road (Mr. G. Hayward).—Consent.

Lewisham.—Illuminated sign in front of No. 295, High-street, Lewisham (Messrs. B. Weatherley & Sons).—Consent.

Lewisham.—Ten houses on the western side of Perry rise, Lewisham (Mr. G. H. Paine for the Pery-rise Land Company).—Consent.

Marylebone, East.—Retention of balconies in front of Nos. 3 and 4, Princes street, St. Marylebone (Mr. W. H. White).—Consent.

Marylebone, East.—Erection of a projecting balcony at No. 89, Harley-street, W. (Mr. W. H. White for Mr. D. J. Armour).—Consent.

Marylebone, East.—Erection of iron and glass roofs over the entrances to the Tottenham Court-road tube railway-station (Mr. W. E. Mandelick for the London Electric Railway Company).—Consent.

Norwood.—Erection of a projecting sign at the Temperance Billiard Hall, Coldharbour-lane, Brixton (Temperance Billiard Halls, Ltd.).—Consent.

Norwood.—Coal store building at No. 1, Carnegie-terrace, Herne Hill-road, Norwood (Mr. H. Gardner).—Consent.

Paddington, South.—Erection of a one-story shop at No. 38, Queen's-road, Bayswater (Messrs. Veale & Gibbs).—Consent.

Paddington, South.—Projecting screen in front of No. 7, Radnor-place, Paddington (Mr. E. J. Griffiths, M.P.).—Consent.

St. George, Hanover-square.† — Wooden screen at No. 35, Warwick-street, St. George, Hanover-square (Messrs. C. E. Fry & Sons).—Consent.

St. George, Hanover-square.—Illuminated sign in front of No. 48, Dover-street, Piccadilly (Premier Wine Company, Ltd.).—Consent.

St. Pancras, West.—Illuminated sign at No. 292, Euston-road, St. Pancras (Mr. H. Monighetti).—Consent.

Strand.—Projecting balconies at No. 2, 3, and 4, Tavistock-street, Covent-garden (Mr. Lewen Sharp for Mr. G. Monro).—Consent.

Strand.—Projecting sign at the Dudley Art Galleries, No. 169, Piccadilly (Messrs. W. A. S. Benson & Co., Ltd., for the Fine Art Society, Ltd.).—Consent.

Strand.—Three illuminated signs in front of No. 149, Oxford-street (Messrs. Crane & Sons, Ltd.).—Consent.

Strand. Retention of sixteen arc lamps and an illuminated sign at No. 103, Oxford-street (Messrs. Barlow Brothers & Co.).—Consent.

Wandsworth.—Erection of one-story shops in front of "Oakmead," Balham High-road, Balham (Mr. J. J. Taylor).—Consent.

Wandsworth.—Porches to six houses on the south western side of Brudenell-road, Wandsworth, and one house on the north-western side of Ravenfield-road (Messrs. Swain & Selley).—Consent.

Wandsworth.—Projecting sign at No. 415, York-road, Wandsworth (Mr. E Pearce).—Refused.

Westminster.—Steps forming an approach to Nos. 13 to 16, Medway-street, Westminster (Messrs. H. Field & Simmons for the Right Hon. R. McKenna, M.P.).—Refused.

The recommendation marked † is contrary to the views of the Metropolitan Borough Council concerned.

PROJECTED NEW BUILDINGS IN THE PROVINCES.*

ALDERSHOT.—Business premises for Messrs. Dickenson & Co.; Messrs. Friend & Lloyd, 45A, Grosvenor-road, Aldershot.

Ammanford.—School (7,000*l.*): Mr. W. V. Morgan, architect, 24, King-street, Carmarthen.

Arbroath.—Infirmary (12,000*l.*); Mr. Hugh Garvin, architect, 42, Hill-street, Arbroath.

Armagh.—Synod Hall (4,000*l.*); Messrs. M'Laughlin & Harvey, builders, Dartmouth-road, Dublin.

Arnside.—Enlargement of parish church (2,000*l.*); Messrs. Austin & Paley, architects, 24, Castle Park, Lancaster.

Ashford (Middlesex).—Church of St. Hilda: Mr. J. S. Alder, architect, 1, Arundel-street, Strand, W.C.; Messrs. Dorey & Son, builders, Brentford.

Aspatria.—Additions and alterations to Grapes Hotel for the Maryport Brewery Company.

Ayr.—Building, Garden-street (1,000*l.*), for Messrs. W. Mitchell & Sons, provision merchants, 16-22, Main-street, Newton, Ayr.

Babbacombe (Devon).—Block of shops; Mr. T. G. Moore, architect, Fleet-street, Torquay.

Bacup.—Additions to India Cotton Mill, New Church-road, for Messrs. J. Hoyle & Son, Ltd.

Barrow-in-Furness.—Extensions to isolation hospital; Mr. A. Race, Surveyor, Town Hall, Barrow.

Barry Dock.—Drill hall; Messrs. Teather & Wilson, architects, Queen-street, Cardiff: Messrs. D. Davies & Son, builders, Trade-street, Cardiff.

Batley.—Additions to Blakeridge Mill for Messrs. J. T. & J. Taylor, Ltd., woollen manufacturers.

Bexhill.—Picture theatre: Mr. A. C. D. Hicks, architect, 4, Sea-road, Bexhill.

Bideford (Devon). — United Methodist

* See also our list of Competitions, Contracts, etc., on another page.

chapel. Mr. W. B. Rees, architect, 37, St. Mary-street, Cardiff; Mr. C. Bryer, builder, Bridgwater.

Blaby.—Alterations at workhouse (2,090*l.*); Mr. H. D. Smith, builder, 28, Central-avenue, Wigston Magna, Leicester.

Bourne.—Isolation hospital, South-road; Mr. T. Lake, Surveyor, Rural District Council Offices, Bourne.

Bristol.—Hospital (35,000*l.*); Messrs. Oatley & Lawrence, architects, Edinburgh-chambers, Baldwin-street, Bristol; Messrs. W. Cowlin & Son, builders, Stratton-street, Bristol. Academy of Fine Arts: Messrs. Silcock & Reay, architects, Milsom-street, Bath; Messrs. Dallow & Son, builders, Blackheath, Birmingham.

Burnley.—Weaving shed, Barden-lane, for the Barden Mill Company.

Burscough Bridge (Ormskirk).—Additions to seed warehouse, Mart-lane, for Messrs. J Martland, Ltd.

Cardiff.—Grand stand, Cardiff Arms Park: Mr. A. Leitch, architect, 36, Dale-street, Liverpool.

Carnarvon.—Alterations to No. 23, Castle-square, for the Prudential Assurance Company.

Cheadle.—Cottage hospital; Mr. F. S. Cox, Clerk, Guardians' Offices, Cheadle.

Cheltenham.—Additions at infirmary (700*l.*); Mr. R. R. Skemp, builder, Great Norwood-street, Cheltenham. Domestic science block, Gloucester-road School: Messrs. Chatteris & Smithson, architects, Regent-street, Cheltenham.

Chingford.—Erection of pumping station, gas-producer house, and two houses, etc. (14,818*l.*); Messrs. Charles Wall, Ltd., builders, 4, Lloyd's-avenue, E.C.

Chorley. Weaving shed, Stump-lane, for Messrs. Stuttgart & Nuttall.

Cleaden.—Sub-station, The Clusters, for the County of Durham Electrical Supply Company

Cleckheaton.—Additions to Exchange mills and offices for Messrs. C. Hirst & Sons, Ltd., wire drawers and manufacturers.

Clifton (Bristol). — Christian Brothers College: Mr. J. Bevan, architect, Liverpool-chambers, Corn-street, Bristol.

Consett. Theatre and shops, Front street, for the Consett Theatre, Ltd.

Crombie.—Workmen's hut at Royal Naval Ordnance Depôt: Messrs. Scott, Marshall, & Co., fireproof door manufacturers, 2, St Andrew's-square, Edinburgh

Dalkeith.—Conversion of St. John's United Free Church into picture palace; Mr. Wilber Harlen, Portobello, N.B.

Dartford Heath.—School: Messrs. Friday & Ling, builders, North-road, Erith.

Dewsbury.—Brass factory, etc., Jack-lane, for Messrs. Brown & Naylor, brass founders, 78, Town street, Stanninglee, Leeds.

Falkirk.—Extensions to electricity works, High Station-road (1,300*l.*): Mr J. McMillan, Electrical Engineer, Town Hall, Falkirk.

Farnham. — Proposed twenty houses, Crondall-lane: Mr. R. W. Cass, Surveyor, Urban District Council Offices, Farnham Residence near Farnham; Mr. A. H. Guyer, architect, South street, Farnham.

Filey.—Bank, etc., corner of Murray and Union-streets; London Joint Stock Bank, Ltd 5 Princes street, E.C.

Gilmerton.—School (400 places): Mr. James M. Morrison, architect, York place, Edinburgh

Glasgow. — Stores, Great Eastern-road. Messrs. A. G. Barr & Co., Ltd., mineral water manufacturers, 432, Great Eastern road, Glasgow Church hall, Calder-street and Polmadie road: Trustees, Polmadie United Free Church Shops and houses, Castle-street, for Messrs. P. & F. Sherry, wine and spirit merchants, 289 High-street, Glasgow. Alterations and additions to buildings, Buchanan-street and Germiston-street, for the Caledonian Railway Company, St. Rollox, Glasgow. Picture hall and offices, Baker-street, Langside. Mr. James Hamilton, printer, 213, Buchanan-street, Glasgow. Extensions to buildings, Stanley Street and Vermont-street, for Messrs. Hay Brothers, Ltd., confectioners, Vermont-street Kinning Park, Glasgow. Additions to bakery Hydepark-street, for Messrs. Bilsland Brothers

Grange. Parish hall, Kent's Bank-road: Messrs. Postlethwaite & Dawson, builders, Grange.

Green Street Green (Dartford). — Engine-house, cottage, etc. (2,185*l.*): Messrs. William Blay, Ltd., builders, 30A, Spital-street, Dartford.

Grimsby.—Children's homes: Mr. J F. Wintringham, Clerk, Guardians' Offices, Great Grimsby.

Hereford.—School: Mr. G. H. Jack, County Architect, Shire Hall, Hereford.

Hindley.—School (150 places): Managers, St. Nathaniel's School, Hindley

Horsham.—Large residence, St. Leonard's Forest: Messrs. J. Carter, Jonas, & Sons, Architects, 8A, Whitehall, S.W.; Messrs. Norman & Burt, builders, London-road, Burgess-Hill, Sussex.

Ipswich — Factory, Princes-street; Mr. George W. Leighton, architect, 21, Museum-street, Ipswich.

Kelloe.—Remodelling Primitive Methodist chapel (500*l.*); Mr. J. W. Hayes, architect, Wingate; Messrs. Regan Brothers, builders, Trimdon Village.

Leeds.—Proposed extensions and improvements at infirmary (150,000*l.*); Board of Management.

Llandudno.—Convalescent home (6,000*l.*); Mr. S. Salt, builder, Leek.

Llanelly.—Twenty-five houses (3,800*l.*); Mr. T. Rogers, builder, Manselton, Swansea. Bank for Lloyd's; Messrs. Waller & Son, architects, College-green, Gloucester, Messrs. Willcocks & Son, builders, 55, Darlington-street, Wolverhampton.

Lowestoft.—Plans have been passed for three houses, Camden-street; for Mrs. C. Pipe, and three houses, Beccles road, for Mr. E. Darby. Mr. C. F. Peachman has lodged plans for six houses, York-road.

Mansfield.—School, Chesterfield road; Mr. T. R. Collinge, Surveyor, Town Hall, Mansfield.

Midsomer Norton.—Co-operative premises; Mr. E. F. Bird, architect, The Island, Midsomer Norton; Mr. T. Foster, builder, Old Bath hill, Radstock.

Mountain Ash. — School; Mr. W. H. Williams, Surveyor, Municipal Offices, Mountain Ash.

Newton Abbot.—Assembly hall for Mid-Devon Constitutional Club; Mr. F. E. Lloyd-Downes, architect, 36, Queen-street, Newton Abbot.

Northfleet.—Factory for Messrs. Henley's, Northfleet.

Portland.—Council offices; Messrs. Spier & Bevan, architects, Borough-chambers, Wharton-street, Cardiff.

Preston.—Sunday school (1,500*l.*); Vicar, St. George's Church, Preston.

Reading.—Drill hall; Messrs. Hoare & Wheeler, architects, Friary-street, Reading.

St. Anne's.—Bank for Messrs. William & Deacon Banking Company, Ltd., St. Anne's-road; Mr. James Eaves, builder, 51, Booth Ley-road, Blackpool.

Seaford.—Block of shops, Clarmont-road; Mr. J. W. Hawkes, architect, Central-chambers, North-street Quadrant, Brighton.

Shaw.—Premises, Shaw Lodge Estate (800*l.*), for the Crompton Co-operative Society.

Sithney.—School (1,600*l.*); Mr. Jory, builder, Connor Downs.

Southwick-on-Wear.—Public hall, corner of Beaumont-street and The Green; Messrs. Joseph Potts & Son, builders, 57, John-street, Sunderland.

Steyning. — Board-room and offices for Guardians, Messrs. Clayton & Black, architects, 10, Prince Albert-street, Brighton.

Tunbridge Wells. Residence; Mr. H. M. Caley, architect, 29, Mount-pleasant, Tunbridge Wells.

Twickenham.—The following plans have lodged:—Five houses, Hartington-road; alterations and additions to Thistleworth Park-road, for Messrs. Brewer, Smith, & Brewer; four houses, Whitton-road, for Mr. H. G. Alaway; alterations and additions, "The Nelson" Inn, Hampton-road, for Messrs. Nowell, Parr, & Kates; addition to motor-'bus garage, Cambridge-road, for the London General Omnibus Company, Ltd.

Wakefield.—Foundry, Phœnix Works, Calder Vale-road, for Messrs. W. Green & Son, Ltd., fuel economiser manufacturers.

Warley (near Brentwood).—Large residence; Mr. H. R. Bird, architect, St. Thomas's-gate, Brentwood.

Warrington.—Buildings for imbeciles and epileptics (12,666*l.*); Messrs. W. & J. Owen architects, 4, Cairo-chambers, Warrington.

West Hartlepool. School, Stratford-road; Managers, St. Joseph's Roman Catholic School, West Hartlepool.

West Oxford. Schools; Mr. W. H. Castle, Estate Surveyor, Town Hall, Oxford.

Winchester.—Extensions and additions to Guildhall; Mr. W. V. Anderson, Surveyor, Town Hall, Winchester.

Winton.—Stables at depôt (863*l.*); Messrs Jenkins & Sons, builders, 43, Holdenhurst road, Porkesdown, Bournemouth.

Wombwell.—Baths (6,000*l.*); Mr. H. Burgess, architect, Queen Anne's-chambers, Westminster, S.W.

METROPOLITAN ASYLUMS BOARD.

At the fortnightly sitting of the Metropolitan Asylums Board on Saturday communications were received from the Local Government Board assenting to the proposal to rebuild in permanent material two of the wards at Long Reach Hospital, and approving generally of the proposals to extend the verandahs of four of the double cottage blocks at Queen Mary's Hospital, but asking for complete plans and specifications before tenders are obtained.

Lightning Conductors.—Bearing on the Engineer's report *re* lightning conductors submitted at the last meeting, it was decided that the Works Committee be authorised to arrange for the repair and provision of lightning conductors at those institutions of the Board where necessary.

Sea Defences.—It was agreed to adopt the plan of Mr. H. Howard, Surveyor, of Littlehampton, for the erection of a concrete sea wall to protect the Board's property at Rustington. The estimated cost is 450*l.*

METROPOLITAN WATER BOARD.

At the sitting of the Metropolitan Water Board last Friday the Finance Committee reported on the collection of the water rate for the last half-year. The report stated that the amount written off on account of "empties" was 61,726*l.*, or 5·38 per cent. This figure showed a satisfactory diminution on the past six half-years, there having been a continuous slight diminution each half-year from that ending September 30, 1909, when the percentage was 6·21. The amount received for building supplies during the half year was 10,893*l.*

New Reservoirs.—The Board decided to proceed with the construction of two new reservoirs at Littleton for the supply of water on the north side of the Thames, as recommended at the last meeting. The estimated cost of the reservoirs are 1,646,400*l.* and 635,000*l.*, respectively, with a further 250,000*l.*, which will be spent during the first stage for connecting the reservoirs with existing mains.

Erection of Buildings.—The Works Committee reported that, in accordance with the power invested in them, they had accepted the offer of Messrs. Charles Wall, Ltd., of 14,817*l.* 18s., for the erection of a pumping-station, gas-producer house, two cottages, and the formation of roads at the Chingford Reservoir Works. The buildings will be built with natural Portland stone dressings. They had also accepted the offer of Messrs. W. F. Blay, Ltd., of 2,168*l.* 16s. 9d., for the erection of an engine-house, cottage, etc., at Green Street Green.

PATENTS.

APPLICATIONS PUBLISHED.*

9,986 of 1911.—George Henry Pook: Fire-extinguishing sprinkler systems.

11,973 of 1911.—George Bull: Grab.

12,359 of 1911.—Johann Friedrich Meyer (J. F. Meyer): Building of walls and structures.

12,594 of 1911.—Frederick Dudley Bird: Apparatus for emptying cesspools and the like.

14,282 of 1911.—Frederick Mallott and Arthur James Mallott: Lifts or hoists.

14,506 of 1911.—Harold Clinton Ferree: Metal reinforcement for building purposes.

17,170 of 1911.—Tom Parker Whitehead: Rotary chimney-cowl.

21,370 of 1911.—Umiliano Panicali and Giovanni Brenni: Manufacture of ornamental tile slabs or the like.

22,687 of 1911.—John Parsons, jun.: Method and means for rendering walls of buildings and the like impervious to moisture.

25,038 of 1911.—Richard George Vaughan: Locking means for sash-fasteners.

25,485 of 1911.—Franz Hloch: Machines for pressing pasty masses, more particularly mixtures of asbestos and cement.

26,374 of 1911.—James Johnstone Frazer: Covering of walls, floors, ceilings, and other surfaces.

26,642 of 1911.—Wallace Lafayette Selleck: Locks.

26,737 of 1911.—Stefan von Mrokowski: Flooring for rooms and the like.

28,536 of 1911.—Guillaume Albert Amedée Ceulaers: Elastic or resilient cement.

28,927 of 1911.—Gerhard Schreiber: Portable moulding frames for making cement slabs.

1,285 of 1912.—Aktienbolaget Lux: Apparatus for lighting and extinguishing gas-fires from a distance.

3,372 of 1912.—Adolf Panzenhagen: Scaffolding.

7,544 of 1912.—Clarke Williams McKee: Gravity actuated window-locks.

* All these applications are in the stage in which opposition to the grant of Patents upon them can be made.



Adelphi Hotel, Liverpool: A Dining-Room, showing Inlet and Outlet Ventilation Gratings.

ADELPHI HOTEL, LIVERPOOL.—III.

(*Continued from page* 637.)

ENGINEERING EQUIPMENT.

In a large hotel building the engineering equipment is generally similar to that of a hospital or other public institution, although many of the fittings forming part of the several installations are necessarily of more elaborate and ornamental appearance.

When considering the equipment of the Adelphi Hotel the architect had to take into account something more than the requirements applying to the case of a public institution in order to comply with the desire of the Midland Railway Company that everything should be provided for the comfort of visitors without incurring such additional expenditure in running costs and maintenance as would entail disproportionate increase in the charges for accommodation.

Consequently, in selecting the machinery and apparatus for adoption, many points had to be considered all bearing upon the question of maximum efficiency, among them being the questions of first cost, value of space occupied, cost of running, attention required, depreciation, and maintenance charges.

Careful attention was also given in the designs to the installation of steam boilers, engines, and machinery in a situation where they would not constitute a source of possible annoyance to visitors. The system of heating and ventilation chosen is one obviating the familiar pipes and exposed radiators, and everything possible has been done to make engineering details as unobtrusive as possible in all parts of the building open to visitors.

The engineering plant and installations comprise steam boilers and their auxiliary appliances, generating sets, motor generators, switchboards, and other electrical apparatus, electric light and power systems, electric lifts, electric clocks, telephones, hot-water calorifiers, heating and ventilating plant, hot and cold water services, high-pressure water mains with hydrants and automatic sprinklers, vacuum cleaning plant and system of pipes, steam laundry machinery and apparatus, and an extensive installation of culinary plant.

The bulk of the work was executed by Messrs. Richard Crittall & Co., Ltd., of London; the electric light, power, and clock installations were entrusted to Messrs. Higgins & Griffiths, of London; and, as mentioned in our first article, the lifts were installed by the Otis Elevator Company, Ltd.

Boiler-house and Power Plant.

The steam boilers, electricity-generating machinery, calorifiers, and laundry machinery are situated in an independent building below ground level at the north side of the hotel, in order that the noise, vibration, and smell incidental to the operation of such plant shall not be communicated to the main building; but this department is readily accessible by means of connecting passages.

The boiler-house provides space for three water-tube boilers of the Stirling type, two of these having been laid down so far, each with the heating surface of 1,441 sq. ft. and capable of evaporating 7,000 lb. of steam per hour at the pressure of 160 lb. per square inch.

The boilers are fitted with automatic stokers of the Underfeed type, designed for using inexpensive fuel. Two electrically-driven fans provide the forced draught at a pressure of 2½ in. of water, and the products of combustion are conveyed from the boilers through a subterranean flue communicating with a steel chimney of 4 ft. 9 in. diameter carried above the roof of the hotel in one of the main ventilation shafts.

The Stirling boiler has upper steam and water drums connected to lower water drums by curved tubes placed transversely to the direction of the gases of combustion and situated favourably for dividing up the gases and abstracting heat from them. The boiler is completely surrounded by brickwork and suspended so as to provide for free expansion. The combustion-chamber is unusually large and fitted with baffles, causing the flames to pass up and down the various banks of tubes on their way to the main flue.

Coal-hoppers in connexion with the automatic stoking apparatus are fixed overhead in front of the boilers, at one side of which are feed pumps in duplicate, and near by the hot well and cast-iron pump for blowing-down purposes.

In the adjoining engine-room are three electricity-generating sets, each consisting of a three-throw quick revolution steam engine direct-coupled to a dynamo furnishing continuous current at 220 volts for lighting and power.

The whole of the exhaust steam from the engines and the various pumps can be utilised in the calorifiers for heating purposes and hot-water services, an automatic valve being provided so that the exhaust can escape direct to the atmosphere at times when there is a reduced demand for artificial heat and hot water.

An alternative arrangement makes it easy to supplement the exhaust steam by a supply of live steam from the boilers in case the former should be inadequate to provide sufficient heat at any time.

Calorifier and Pump-Room.

The heating and hot-water supply calorifiers are of the Royle type, with automatic regulating valves, and are arranged on the Crittall multiple series system.

Water circulating through the heating apparatus first passes through two calorifiers fitted with copper tube batteries connected with the exhaust steam main, and, providing a sufficient amount of steam is available, the water is there heated up to 150 deg. Fahr. It is next passed through another calorifier, also fitted with copper-tube battery, to which live steam is admitted as necessary by an automatic thermostatic valve.

This auxiliary battery comes into action whenever the supply of exhaust steam happens to be inadequate for raising the temperature of the water to the requisite limit of 150 deg. Fahr.

An electrically-driven pump is fitted in the main heating circuit to accelerate the circulation of water, this device having the effect of increasing the efficiency of the system and at the same time permitting the use of smaller pipes than would otherwise be requisite.

The hot-water supply calorifiers are similar to those for the heating system. Their heating capacity is equal to 5,000 gallons per hour, and to provide for the large quantities of water frequently drawn off by the simultaneous opening of numerous taps, these calorifiers are of the storage type, affording accommodation for 500 gallons of hot water as a reserve. The storage bodies, steam batteries, and circulation mains are of copper throughout.

In the calorifier-room is another electrically-driven pump, of the turbine type, capable of delivering 18,000 gallons of water per hour into the high-pressure fire mains against a vertical head of 180 ft. This pump is connected with the city water mains, and also with the cold-water storage tanks on the roof of the hotel, so that supplies of water shall be assured in the unlikely event of fire breaking out at any time when the city main may happen to be under repair.

The fire pump is fitted with an automatic device so arranged that immediately a hydrant valve is opened in any part of the hotel the pump is started, a bell is rung in the fireman's department, and a signal operates in the engineer's department.

Air Intakes and Conditioning Plant.

On the north side of the building is one of the two main air intakes for the warming and ventilation plant employed in the main apartments and terraces on the ground floor. Air is drawn in by way of a bricked well or area in the garden, the parapet of the well being screened by shrubs.

The incoming air is thoroughly washed, cleansed, and humidified in a "Carrier" air-conditioning plant, consisting of a galvanised-iron chamber, open at the inlet end and fitted with a special vertical screen at the outlet end. The bottom of the chamber is in the form of a shallow tank with ball valve overflow, and pipes are provided whence proceed numerous intersecting jets of water, forming a perfect water curtain through which the entering air must pass. Having been cleansed and humidified during its passage through the spray, the air enters the screen, which constitutes an efficient barrier to entrained particles of water.

In connexion with the air-conditioning plant are a hot-water battery and an electrically-driven fan.

A second plant of the same kind is installed on the opposite side of the hotel building.

The fans mentioned are of the multivane type, direct-coupled to powerful shunt-wound electric motors.

In cold weather the purified air is warmed by means of the hot-water batteries before entering the fans and passing thence into the main ducts. In warm weather the air is cooled before distribution.

Heating and Ventilation Systems.

The apparatus described forms part of the Crittall-balanced system of mechanical inlet and extraction ventilation which has been adopted for the French restaurant, grill-room, entrance hall, hypostyle hall, and the terraces around the fountain court.

From each fan a main duct conveys the purified and warmed, or cooled, air along the basement ceiling to the inlets in the various apartments.

At the base of each inlet is a relay heating battery, provided with an air valve, so arranged that all or any required proportion of the air can be passed over the battery before entering the apartment above. In this manner the temperature of the air can be regulated to a nicety, the valve also affording control over the volume of air admitted.

The warmed or cooled air is delivered into the rooms and other spaces by means of inlets designed as ornamental gratings, which harmonise with the general decorative treatment. Most of the gratings form part of the mouldings round arches and window-heads, and are quite unobtrusive. They possess the additional merit of distributing the incoming air in an effective manner without perceptible draught. Outlet gratings in the ceiling for vitiated air are placed at suitable points.

Air removed is conveyed through concealed ducts to two main ventilation shafts extending to the roof of the hotel, where each terminates at the casing of a powerful electrically-driven fan capable of moving 50,000 cubic ft. of air per minute.

The same fans deal with vitiated air from the kitchen department and service-rooms, the ducts being arranged so that the air from these parts of the building cannot gain admission to apartments used by visitors.

Apart from the absolute certainty of efficient ventilation ensured by this combination of the plenum and exhaust systems of mechanical ventilation, the system is distinctly worthy of notice by architects owing to the inconspicuous character of the air inlets and outlets.

All the rooms and corridors on the upper floors from the first to the fourth stories inclusive are warmed by Crittall's panel and floor border system of "invisible" heating.

The design of radiators has been greatly improved in recent years, and various methods have been introduced for casing radiators or heating pipes in an agreeable manner. For many classes of buildings one or other of these alternatives can be employed with general satisfaction, and for some buildings exposed radiators may be preferred for practical reasons.

In the case of private houses and residential buildings where well-diffused warmth is required continuously in cold weather without the visible presence of radiators, pipes, or open gratings, the system of invisible heating devised by Messrs. Crittall & Co. is certainly a thing to be desired. The warm panel absolutely conceals the heating pipes behind it, and the outer surface is finished in exactly the same style as the rest of the wall.

The warm floor border is similar in principle to the warm panel, and can be finished on the surface to match the flooring, or may be covered by carpet, linoleum, or any other material.

In the Adelphi Hotel a warm panel is placed under each window, and a narrow warm border is arranged along two sides of each room and near the walls of the corridors. The only visible indications of artificial warming apparatus are the handwheel of the valve controlling the supply of heat and a notice pointing out the position of the handwheel.

It may perhaps appear at first sight to some of our readers that the panel system cannot represent an efficient method of warming. The fact remains, however, that it is thoroughly satisfactory, and a little reflection will show that, apart from the heat radiated through the air and the heat communicated to the air by repeated contact with the warmed surfaces as the result of convection, the concealed pipes are placed so that they can most effectively perform the important duty of warming the materials of which the walls and floors are composed.

These parts of every building have always to be warmed, absorbing a very large proportion of the heat given off by heating apparatus of any kind, and until their temperature has been sufficiently raised the objects of the heating system can only be partially attained.

Therefore it will be seen that the principle of this panel system is theoretically correct, while in practice the panels and floor borders are found to diffuse a genial and well-distributed warmth, quite free from the oppressiveness perceptible in connexion with some methods of heating, and free from the unpleasant odour arising from the use of highly-heated pipes or radiators.

On the fifth and sixth floors of the hotel all the rooms are warmed by radiators, as the apartments in these two stories are of more simple character than those in the stories below them.

Hot and Cold Water Services and Fire Mains.

The hot and cold water services throughout the building were fitted by Messrs. Crittall & Co., and connected to the various sanitary fittings by Messrs. Davis, Bennett, & Co., as mentioned in our second article.

Cold water is stored in tanks situated in towers 15 ft. above roof level, the tanks being set back so that they will not be seen from the outside after the front portion of the hotel has been built. The tanks are of cast-iron, and have a storage capacity of about 10,000 gallons.

A service from the city main is laid on direct to the boiler-house, laundry, kitchen, and other parts of the lower floors, where large quantities of water are used, thereby reducing the necessity of pumping to a minimum.

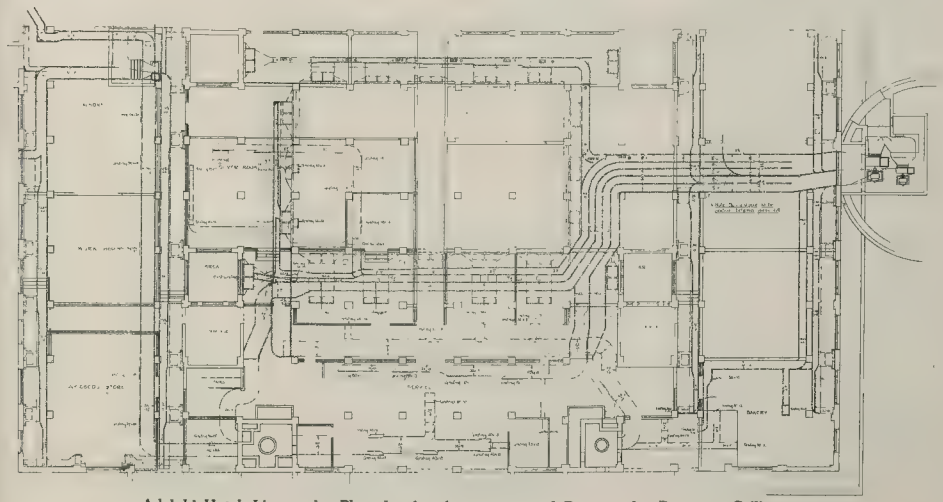
The high-pressure hydrant mains are carried to all parts of the building, and are connected with automatic sprinklers fixed over the service lifts and in places where inflammable materials are stored.

Neatly-finished hydrant cupboards, each with plate-glass door, are provided and fixed near the corner of every corridor, and contain a gun-metal hydrant valve with Midland Railway pattern instantaneous coupling, two lengths of canvas hose, branch pipe, and three automatic fire extinguishers.

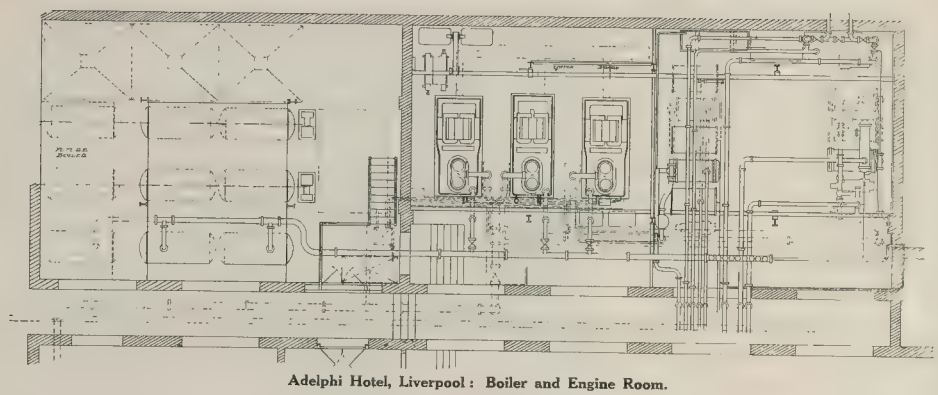
Vacuum-Cleaner Installation.

For the removal of dust from the hotel corridors and rooms a very complete installation of vacuum-cleaning plant has been provided. Rising mains are carried from the basement to the upper stories at numerous points, each riser being connected with a separate vacuum apparatus in order to permit a large number of rooms and corridors to be cleaned simultaneously. The service nozzles on the risers are fixed in the hydrant cupboards, the vacuum hose pipes being of length sufficient to command all the rooms situated between the various rising mains.

Dust entering the receiver of the vacuum plant is automatically mixed with water, and the resulting liquid flows into a detachable receptacle which is emptied at intervals. When inspecting the apparatus at work we asked why the outlet-pipe had not been connected with the drainage system of the hotel in order to obviate the periodical removal and emptying of the receptacles, and were informed that such connexions would be contrary to the regulations of the city authorities. In view of the fact that the discharge from the vacuum plant is quite liquid and contains less solid matter than street rain-water drains, and many domestic waste pipes, to say nothing of soil pipes, it is not easy to understand why the prohibition should exist. It may possibly have been framed some time ago to govern the disposal of trade wastes in Liverpool, but does not seem appropriate for application to vacuum-cleaner plant. While causing inconvenience to the occupants of buildings where the most approved method of cleaning has been adopted the regulation is probably quite inoperative in



Adelphi Hotel, Liverpool: Plan showing Arrangement of Ducts under Basement Ceiling.



Adelphi Hotel, Liverpool: Boiler and Engine Room.

other respects, inasmuch as there is little reason for doubting that the liquid discharge from vacuum apparatus usually finds its way into the drains after all.

Culinary Plant.

One of the most important installations in the hotel is that in the kitchen department. The kitchens are situated beneath the hypostyle hall and other apartments in its vicinity, and when the entire rebuilding project has been completed they will occupy a central position conducive to expeditious services to all parts of the building.

Large as the present kitchens are, they occupy only about two-thirds of the space that will be devoted to them after the front portion of the hotel has been reconstructed.

Consequently, the present kitchens may be regarded as being temporary in a sense. The apparatus has been laid down as far as possible to occupy the positions that will finally be allotted to them, but in cases where this proved impracticable the units were fixed in such manner as to permit them to be readily transferred to new positions.

A striking feature of the present equipment is a central independent range, 22 ft. long by 6 ft. 6 in. wide, with plate and casserole racks over the hot plate.

The range has six fires arranged on the Fourneau system, with a descending flue which passes beneath the floor to the chimney-shaft. It contains ten cooking-ovens and a double temperate oven or hot closet. The sides of the cooking-ovens are fitted with sliding radiancy screens permitting the contents of the ovens to be exposed to the full radiant heat from the firepots if desired.

The other apparatus comprises double coke grills, with hot closets above the fire, steam ovens for vegetables, puddings, and fish, fitted with capstan bolting device by which the doors can be hermetically sealed with one hand, steam-heated *bain maries* for sauce-making, gas-heated salamanders and stockpot stoves, steam-heated service tables in the kitchen and service-rooms, steam-heated pot-washing tanks and gas boiling tables and hot closets in the pastry-room.

The continuous water-boilers in the two still-rooms are fitted with automatic mercury controlling device. The boilers are arranged so that it is impossible for water to be drawn off until it has reached the boiling-point, and to prevent the water from becoming stale as the result of over-boiling the automatic control shuts off the gas immediately after fresh supplies of water have been brought to the boiling-point, the gas being automatically turned on whenever hot water is drawn off and replaced by cold water.

In the bakery are a brick-built oven for making Viennese bread and a Perkins steam tube oven for ordinary bread. These two ovens are capable of supplying the whole of the bread and rolls required in the hotel as well as a supplementary supply for restaurant cars on the railway if required.

The sinks for washing plates, cutlery, and silver are of teak throughout and arranged on the Staines system, the distinguishing feature of which is a series of weirs carrying away the surface water continuously during the process of washing up. Thus greasy matter floating on the surface are led away to the drains, keeping the water in the sinks free from grease, economising water and labour, and conducing to the better appearance of the articles cleansed.

Spacious refrigerator chambers, worked on the carbon dioxide principle, have been installed in the cold larder and wine service-rooms for the storage of meat and wines.

For the conveyance of messages from the kitchen to the larders and auxiliary offices generally a complete system of speaking tubes with megaphone attachments has been provided, while for the transmission of written orders from the service-rooms all over the hotel a system of brass gravity tubes has been installed. These tubes terminate in the kitchen in a position convenient for the clerical staff. An automatic ringing device and electrical indicator is operated immediately on the arrival of a message-carrier at its destination.

Considering its underground situation, the kitchen department of the hotel is wonderfully well lighted, a point for which the architect deserves credit.

Laundry Machinery and Plant.

In order to provide for the expeditious washing, ironing, and mending of visitors' and house linen, the hotel management have fitted a complete steam laundry in the vicinity of the power-house.

Owing to the limited space available, it was important to utilise every square foot to the greatest possible advantage by installing machinery giving a maximum output for a minimum amount of floor space, and by setting out the machinery and appliances so as to obviate wasted room.

After completion of the front portion of the building, the linen sorting and ironing rooms will be extended and a linen mending department will be added.

The whole of the machinery is electrically driven by means of current from the hotel generating plant, some of the machines being driven by means of belting and others direct from motors.

In the wash-house are two rotary washing-machines with the capacity of 350 shirts each, two 48-in. hydro-extractors of the under-driven type, and various accessories. The wastes from the machinery and apparatus are taken into white glazed fireclay channels covered with galvanised gratings laid in rebates.

Between the wash-house and ironing-room are two drying chambers with white glazed brick walls. Articles to be dried are suspended on overhead fixed rails, and are subjected to a blast of air blown through the room from a fan and steam-heater. The rooms are arranged so that one is in use while the other is being filled or emptied. An ingenious arrangement between the two doors provides for the admission of heated air into either room, but not into both rooms at the same time, and when either door is open the operating mechanism cannot be used, thus making it impossible for any thoughtless person to turn on the hot air while the chamber is in course of being charged or emptied.

Two Decoudun ironing-machines in the next room are capable of dealing with tablecloths, sheets, or other pieces of fabric of any length and up to 110 in. wide without folding, and in a second ironing-room an electrically-driven shirt-front ironer and a series of gas-irons are installed.

The department is completed by a large airing-room, with racks and steam coils, and a clean linen sorting-room.

Electric Light Installation.

The electric light and power installations were entrusted to Messrs. Higgins & Griffiths, of London, all the wiring being on the conduit system, and the bedroom switches designed to be flush with the panelling of the dressing-table, washstand, and wardrobe fixtures.

Osram metallic filament incandescent lamps are used throughout the hotel. These and most of the electroliers and lamp fittings have been manufactured by the General Electric Company, Ltd., of London.

All the electric light fittings were made in accordance with designs supplied by the architect. They comprise several massive electroliers in the hypostyle hall and terrace by Messrs. Singer & Sons, of Frome; fourteen sixteen-light cut crystal and ormolu electroliers in the entrance hall and French restaurant, fourteen eight-light neo-Greek electroliers in the grill-room, chased ormolu standards for dining tables, and a large number of smaller fittings, brackets, and pendants for staircases, corridors, and rooms, all these having been supplied by the General Electric Company.

Electric Clocks.

One specially ingenious application of electricity in the new building is represented by the installation of some two hundred electric clocks in the principal rooms, bedrooms, service-rooms, servants' quarters, and elsewhere. All the clocks keep uniform and accurate time, and are operated by one main controlling pendulum.

The dials are of the "Synchronome" impulse type, and with the exception of those in the staff departments are of Parisian enamel on copper. They were made by Messrs. Henri Picard & Freres, of Paris, and set in handsome brass cases, finished by hand by Messrs. Veritys, Ltd., of Birmingham, to the architect's design.

In view of the need for providing silently working clocks in bedrooms the manager of the Midlands Hotels Department had electric clocks of four different makes fitted in some of the rooms at the St. Pancras and Derby hotels, where they were carefully tested. Although none of these was absolutely silent, the "Synchronome" type was found to be the most satisfactory.

The dials are connected with the main controlling apparatus by wiring circuits arranged in loops around the different floors, the ends being attached to a switchboard with devices for enabling any fault to be located without difficulty or delay.

The dials were supplied by the Synchronome Company, Ltd., of London, and installed by the electrical contractors

DORKING PARISH CHURCH.

A faculty has been applied for to enlarge the side chapel of the Parish Church of Dorking. Plans have been prepared by Mr. Amian L. Champneys, son of Mr. Basil Champneys.

MURAL DECORATION.

ON Tuesday evening, at the invitation of the Society of Painters in Tempera, a meeting of those interested in mural decoration was held at Crosby Hall, Chelsea, by permission of the Mural Exhibition Committee.

Sir Charles Holroyd,
who presided, welcomed such a large attendance, and expressed the hope that the exhibition was the beginning of a movement to enable them after some 200 years to produce something like mural decoration in England. They must not be cast down if they did not get a fine style in ten years, because they could only learn by experience. Nothing that had been done so far could really help them, but they had to find their own way of doing things, helped by the examples that had gone before them. Men coming from the art schools thoroughly trained should be made to decorate the many suitable buildings which they had in England. There were schools, in the first place, for young men to try their hands upon, and there were great buildings like the new County Council Hall, which was sure to have large waste spaces. Then there were the municipal offices and, above all, beautiful private houses with suitable places for decoration, which should be done for the space in which it was to be seen. Pictures were painted for the gallery, and he had often been disappointed when seeing them afterwards in private houses. By mural decoration people would be able to decorate their walls suitably. In the dark places they could make the paint sing a tune which would carry through that darkness, and in light places they could play more quietly and make the thing recede properly from the wall, and not, as pictures often appeared to do, to jump at one and stand out. By mural decoration he meant all methods of painting which had been invented. Even the despised oil painting served suitably for mural decoration. But fresco seemed to be the right method, and he believed that pure fresco would exist for a long time on the interior walls of cloisters of England.

Professor Selwyn Image
said the movement which had been initiated was a plain and forcible sign that what Matthew Arnold used to call the social idea was spreading amongst them in the matter of art as in other interests of life. He considered that in the past few years there had been too much pure consideration of picture painting as the highest form of art, but art was not a thing merely of private possession. It was a thing for the whole community, and the more they could spread it through the community the better for the community and the better for the art. He understood that the movement was raising enthusiasm and that there were many who were willing to put wall spaces at the disposal of artists and students for the purposes of decoration. They must remember, however, that the movement for a considerable time must remain in the nature of an experiment, and there would no doubt be a good many failures. He urged students, therefore, to put the highest ideals before them and strive to attain them, and he asked the critics to be generous. Students who had the opportunity of decorating a wall space should take up the work with the greatest seriousness, and in the subjects they chose and in the treatment of those subjects they should avoid extravagance and try to produce the finest work of which they were capable. They should think of the beautiful decoration which had been done in England in the old days by the simplest methods. The speaker discussed the decoration of schools and suggested they should not be too much influenced by the wishes of teachers and children. With regard to the opportunities for the decoration of wall spaces, he did not think students should be allowed to fly off like pigeons and alight on wall spaces. There were many accomplished artists capable of carrying out good design, and he thought these men should gather pupils around them to assist, but be themselves responsible for the design. In conclusion he suggested that the students who did the work should be adequately remunerated.

Mr. Walter Crane
said the last speaker had pointed out the lions in the path, but they wanted a little more audacity. They wanted to take their courage in both hands and go ahead. The suggestion with regard to the movement was that unsatisfactory works should be whitewashed over, and so students could go straight away feeling that they would not be a public annoyance. They spent public money in teaching decorators, and they ought to be able to find some work for them. He agreed that they did not want cheap labour, but the mural decorator could not expect the monetary reward as in the case of the painter of the easel picture which, owing to the tendency of the age, was made the subject of speculation. A picture in a room was a work of art not connected with the room itself, but mural decoration was not so. He agreed as to an artist being responsible for a design and calling in the assistance of pupils, as in the case of the old Italians, but at the same time he was not averse to free experiment on the part of the student, as it was the only way one could learn to do one's work. He considered the great appropriate subjects of mural decoration were of the more permanent symbolic kind, such as the ideas of Justice and Freedom and the great overshadowing figures of Fate and Time and Death.

Mr. J. E. Southall (Birmingham)
remarked that it might be objected that in the case of mural decoration there might very well be no future at all. They saw the new buildings of to-day being constructed of iron posts and girders with hardly anything worthy of the name of a wall in their composition. If in the future there were to be no walls, what was to become of mural decoration? Still, there was the incalculable force of instinct to be considered. Of all the doings of men through all the ages, the pictorial decoration of walls was the oldest, and the instinct which prompted their remotest ancestors to engrave and paint the sides of their caves would not be extirpated in a generation or two, and the time would surely come when they would find it both necessary and delightful to build good solid walls. English people made expensive journeys to see the mural decorations of Italy, but it never entered their minds to spend money on the decorations of the public buildings in this country. If only a small portion of the money spent on presentation portraits could be diverted to presentation frescoes, he believed the British public would begin to discover a new source of pleasure, while the relatives of those now being portrayed would experience a quite inexpressible sense of relief. Discussing the experiments made on the walls of the House of Lords, the speaker said the cause of the decay lay rather with the mistakes of the painters than in any inherent weakness in the process when rightly carried out, and he thought a careful weighing of the evidence did not justify them in saying that the atmosphere of London was fatal to true fresco indoors. If, however, this highest form of art was to flourish, it must be in a community with a lively sense of the common weal as its chief joy. Mr. Southall urged the necessity of there not being early failures in the movement through want of care or judgment on the part of the artists, and pointed out, amongst other things, the danger of concentrating attention upon aerial perspective and light and shade. If an architect lent them a wall they had no right to take it away and leave only a gap, however interesting the perspective seen through the gap. Light and shade were rather the special province of the sculptor, and the best frescoes told as masses of lovely colour. If they observed a proper regard for architecture, they might appeal to architects to give more consideration to painters and sculptors. If some of their architects would exercise more restraint and be a little more severe in style some of the money saved might go towards producing real live mural decoration.

Mr. A. J. Penty,
speaking from the point of view of the architect, said it seemed to him in the past there was some great impersonal force in society around which artists centred. In the Middle Ages the expression of art always centred round the Christian ideal. The difficulty in the revival of fresco at the present day was that they had no great subjects. He suggested that what they wanted was what he would term an artistic philosophy. They needed to fix their view on some particular period of the past, and he suggested the best would be that of Giotto and Cimabue. If they attempted to revive that period they could not do so, but the attempt would have a co-ordinating effect, and it would tend to promote a unity of method amongst those practising mural decoration.

The Chairman
agreed that if a style was to be chosen they should follow Giotto, for his frescoes were better than anybody's. The first great men who took up a method did all it could do. Rembrandt took up etching, and they all followed after, but it was all Rembrandt.

Mr. J. D. Crace
pointed out that in the finest period of Italian fresco work none of the artists thought it necessary to make their designs in quaint and archaic fashion. It seemed to be the impression amongst some of the artists in the exhibition that they should be stiff and archaic in the character of the figures or in the arrangement of the colouring. The great decorators of the past studied simplicity of design, and their designs were conceived in what might be called a diffused light. Above all, they never left their pictures unallied to the wall. Unless they blended their work into the building it was not decoration.

Mr. Halsey Ricardo urged that trained students did not get a chance. He agreed that the mural decoration of old times involved a general scheme in which a number of painters took part.

Mr. R. Hallward
expressed himself as amazed at the suggestion that artists should be left out and students introduced to do this work. The movement had begun upside down. It was suggested that students should do work which might be whitewashed over in a few years if it did not suit certain people, but would any self-respecting artist work on these terms? He considered there was a chance of great harm being done by the movement, and when they were told that the thing must be done this way or that way he heard the gods laugh.

Mr. Noel Heaton
said the failure of the House of Lords' frescoes made people believe that the climate of this country was not suitable for such work, but these and other failures were owing to the lack of sufficient technical knowledge on the part of the artists. Those who worked to gratify themselves as mural decorators should not think themselves above studying the composition of new grounds and their pigments and so forth.

It was announced that the exhibition will remain open till June 29, and that by request the loan portion will be sent to the Manchester Art Gallery after that date.

THE LONDON COUNTY COUNCIL.

THE first weekly meeting after the Whitsun recess of the London County Council was held on Tuesday in the County Hall, Spring-gardens, S.W., Lord Cheylesmore, Chairman, presiding.

The Chief Engineer.—Sir Maurice Fitzmaurice, C.M.G., has resigned his position as Chief Engineer to the Council, which position he has held since 1902. His resignation will take effect from December, when Sir Maurice intends to start a private practice.

Loans.—The Finance Committee recommended that loans be made to Borough Councils as follows:—Battersea, 1,980*l.* for drainage and kerbing; Hackney, 6,500*l.* for electricity undertaking; Poplar, 1,860*l.* for pipe sewer works; and the North Surrey School District Managers, 1,467*l.* for Poor Law purposes.

New County Hall.—In a report of the Establishment Committee it was stated that section A (central) and section C (north) of the superstructure of the new County Hall would be finished in 1915, and section B (south) in 1916.

Slum Area.—On a report of the Housing of the Working Classes Committee an amendment was moved by Mr. P. Harris that it should be referred to the Finance Committee to consider a report as to the submission of an estimate for the clearance of Brady-street, Bethnal Green, slum area, so that a scheme might be put in hand without delay. Sir A. Griffith-Boscawen pointed out that before the area referred to could be dealt with it would be necessary to formulate a scheme to carry it through the Council and to have an inquiry before the Local Government Board. It would, therefore, be impossible to spend any money on the area this year, and there was no necessity to increase the estimates. The amendment was rejected by fifty-eight votes to forty-eight.

List of Competitions, Contracts, etc.

For some Contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) are advertised in this number:** Competitions, iv.; Contracts, iv. vi. viii. x.; Public Appointments, xx.; Auction Sales, xxvi. Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Competitions.

JUNE 24.—**Reigate.**—CORPORATION FARMHOUSE.—Not to exceed 550*l.* Local architects only. Premium 10*l.* 10s. Particulars from the Town Clerk, Reigate.

JUNE 24. — **Wales.** — TWO SANATORIA. — The Executive Committee of the King Edward VII. Welsh National Memorial invite architects to submit sketches for two sanatoria, one in North and the other in South Wales. Accommodation, 150 and 250 beds respectively. See advertisement in the issue of May 31 for further particulars.

JUNE 26.—**Birmingham.**—BATHS.—Twenty and 10 guineas for second and third designs. Applications for conditions to be sent to the Superintendent Engineer, Kent-street, Birmingham.

JUNE 28. — **Hale, Cheshire.**—TOWN-PLANNING SCHEME.—Premiums 50*l.* and 25*l.* Particulars from the Council Offices, Hale. See issue of May 24 (page 601).

* JUNE 28.—**Regent's Quadrant.**—DESIGN FOR TREATMENT.—Premiums, 25 guineas, and 25 guineas divided. Adjudicators, Mr. W. Flockhart, Mr. E. A. Rickards, and Mr. Alan E. Munby. See advertisement in this issue for further particulars; also "Competition News," issue of April 19 (page 453), May 3 (page 512), May 10 (page 537).

JUNE 29.—**Reigate.**—LAYING-OUT AND DEVELOPING REIGATE LODGE ESTATE.—Premiums 30 guineas and 10 guineas. Particulars from the Town Clerk, Reigate.

JUNE 30.—**Padiham.**—TOWN HALL, BATHS ETC. —Premiums 40*l.* and 20*l.* Particulars from Mr. J. Gregson, A.M.Inst.C.E., Surveyor's Office, Padiham.

JULY 1. — **Dusseldorf.** — A plan for the extension of the City of Dusseldorf. Premiums of 1,000*l.* to 375*l.* Conditions on application to the Chief Burgomaster, Dusseldorf. A translation appeared on page 365, September 28.

JULY 1.—**Port of London.**—NEW OFFICES.—Limited to those mentioned in "Competition News," issue of April 12 (page 424).

JULY 5. — **Conisbrough.** — ADDITIONS TO HOSPITAL.—The Doncaster and Mexbrough Joint Hospital Board invite competitive plans for additions to Isolation Hospital. See advertisements in the issues of May 17 and June 7 for further particulars.

AUGUST 6. — **Cardiff.** — FIRE-STATION. — The Cardiff Corporation invite designs and estimates for a fire brigade station in Westgate-street. Mr A. Marshall Mackenzie, assessor. Particulars from the Town Clerk, City Hall, Cardiff.

AUGUST 30. — SAXON SNELL PRIZE. — Fifty guineas, with medal, is offered for essay on "The Lighting, Heating, etc., of an Operating-Room for a General Hospital." Particulars from the Sanitary Institute, 90, Buckingham Palace-road, S.W.

SEPTEMBER 1.—**Goole.**—MUNICIPAL OFFICES.—Premiums 30*l.* and 15*l.* Particulars from Mr. R. Tyson, Council Offices, Goole.

SEPTEMBER 30.—**Dublin.**—UNIVERSITY COLLEGE: NEW BUILDINGS.—Limited to architects in Ireland. Assessor, Mr. H. T. Hare, F.R.I.B.A.

OCTOBER 1. — **Ottawa.** — MONUMENT TO KING EDWARD VII.—Sketch models in plaster to be sent to the Director of National Art Gallery, Ottawa.

NO DATE.—**Jordanhill, Glasgow.**—PROPOSED TRAINING COLLEGE.—Limited to six firms, named in "Competition News," December 1, page 635.

NO DATE. — **Warrington.** — SCHOOL. — The Warrington Education Committee invite competitive plans for the erection of a public elementary school. See advertisement in issue of February 16 for further particulars.

Contracts.

BUILDING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

JUNE 21.—**Abergavenny.**—HOUSES.—For erection of a pair of houses in Wyndham-road, Abergavenny. Plans, specification, and particulars from Mr. B. J. Francis, architect, Abergavenny.

JUNE 21.—**Poole.**—SCHOOL.—Erection of an infants' elementary school at Courthill-road. Plans, specification, and conditions seen, and quantities, with forms of tender, on deposit of 5*l.*, with Mr. Samuel J. Newman, F.R.I.B.A., Borough Surveyor, Municipal-buildings, Market-street, Poole.

JUNE 22. **Armagh.** REPAIRS, ETC.—For carrying out structural repairs, painting, etc., to the savings bank premises, Armagh. Specification with Mr. H. C. Parkinson, architect, Russell-street, Armagh.

JUNE 22. — **Bradford.** — ALTERATIONS. — For alterations at the Technical College. Drawings and general conditions of contract seen, and quantities and form of tender from the City Architect, Town Hall, Bradford

JUNE 22. — **Halstead.**—REPAIRS.—For improvements and repairs to the Stumner Council School. Plan and specification by Mr. F. Whitmore, County Architect, 54, Head-street, Halstead.

JUNE 22. — **Halstead.** — REPAIRS, ETC.—For repairs and painting to the Castle Hedingham Council School. Specification prepared by Mr. F. Whitmore, County Architect, 54, Head-street, Halstead.

JUNE 22. —**Teemore.** HALL.—For building of a Temperance Hall at Teemore, Belturbet. Plan and specification by Mr. J. J. Bergin, C.E., A.S.G., Cavan. Mr. P. Clarke, Secretary to Building Committee, Drumanymore, Belturbet.

JUNE 24. — **Castlereggy.** — ALTERATIONS, ETC.—For alterations and improvements to dwelling-house at Castlereggy, Ballinamore, Co. Leitrim Plans and specifications with Mr. P. J. Brady, C.E., architect, Broomfield House, Ballyhaise.

JUNE 24. — **Ely.** — NURSERY.—Erection of a nursery for infants at Headquarters Homes, Ely. Plans and specifications by architect, Mr. Edwin Seward, F.R.I.B.A., Queen's-chambers, Cardiff. Quantities on deposit of 2*l.* 2s.

JUNE 24. — **Ely.** — WALLS, ETC.—Erection of boundary walls and gateway around land at Ely. Plans and specifications with architect, Mr. Edwin Seward, F.R.I.B.A., Queen's-chambers, Cardiff.

JUNE 24.—**Haworth.**—ALTERATIONS.—For small alterations to Hillside House, Haworth. Drawings seen, and quantities from Messrs. Moore & Crabtree, architects, Town Hall-square, Keighley.

JUNE 24. — **Hingham.** — COTTAGES. For three pairs of cottages at Hingham, Norfolk. Plans and specification with the architects, Messrs. A F. Scott & Son, 24, Castle-meadow, Norwich, and 12, Holborn-hall, London, W.C.

JUNE 24. — **Holmfirth.** — HOUSES.—Erection of six dwelling-houses, Workhouse Farm, Holmfirth. Plans seen, and quantities from Messrs. Lunn & Kaye, architects and surveyors, Milnsbridge, and 14, John William-street, Huddersfield.

JUNE 24. — **Huddersfield.** — ADDITIONS.—For erection of additions and alterations to the restaurant, Buxton-road, for the Huddersfield Industrial Society, Ltd. Plans seen, and quantities from Messrs. J. Berry & Sons, architects and surveyors, 3, Market-place, Huddersfield.

JUNE 24.—**Leadgate.**—SHOPS, ETC.—For building business premises at Chopwell, for the Leadgate Industrial and Provident Society, Ltd. Plans and specifications at the general offices of the Society at Leadgate, Durham.

JUNE 24. — **Leeds.**—TANKS, ETC.—Construction of concrete tanks, water ways, weirs, etc., involving the construction of a temporary coffer dam, at the Generating Station, 1, Whitehall-road, Leeds. Form of agreement, specification, and form of tender from Mr H. Dickinson, Manager, 1, Whitehall-road, Leeds.

JUNE 24. — **Tonyrefail.**—HOUSES.—Erection of twenty-four dwelling-houses for the Penygaeg Building Club. Plans and specification with Messrs. Arthur Ll. Thomas & Gomer S. Morgan, architects and surveyors, Pontypridd.

JUNE 25. — **Cavan.** — ENLARGEMENT.—The Committee of the Killeshandra Co-operative Society, Ltd., Co. Cavan, is prepared to receive tenders for the rebuilding and enlarging of their offices and stores. Plan and specification at the office of the Society, Killeshandra.

JUNE 25. — **London.** — ALTERATIONS, ETC.—For alterations and external painting at Relief Station, Elder-road, West Norwood, S.E. Forms of tender from Mr. James L. Goldspink, Clerk to the Guardians, Guardians' Offices and Board-room, Brook-street, Kennington-road, S.E. Deposit of 2*l.* 2s.

JUNE 25. — **London.** — ADDITIONS, ETC.—For carrying out alterations and additions at the Queen's-road and Blackhorse-road Schools, Walthamstow. Plans and specifications seen, and forms of tender from Mr. H. Prosser, M.S.A., Architect to the Committee, Education Committee Offices, High-street, Walthamstow, N.E.

JUNE 25. — **Londonderry.**—HOUSES.—Erection of two almshouses in Bridge-street, Londonderry. Plans and specifications with Mr. John M. Robinson, architect, 7, Market-buildings, Strand, Londonderry.

JUNE 25.—**Manchester.**—CONVENIENCES.—Erection of conveniences, etc., at Lower Crumpsall Recreation Ground and at the Bowl House, Plymouth Grove Recreation Ground. Drawings seen, and specification from the City Architect, Town Hall, on deposit of 10s. 6d.

JUNE 25.—**Manchester.**—CONVENIENCES.—For the construction of public conveniences at Gorton Town Hall. Specification and quantities from the City Architect, Town Hall, on deposit of 1*l.* 1s.

JUNE 26.—**Aspatria.**—HOUSE.—For the erection of a dwelling-house, etc., at Outgang-road. Plans and specifications with Mr. J. Berwick, 17, Pringle, Aspatria.

JUNE 26. — **Edmonton.**—REPAIRS.—For repairs and painting works, etc., to the concert hall, staircases, entrance hall, at the Town Hall, Edmonton. Particulars and forms of tender from the Architect of the Council, Mr. H. W. Dobb, Town Hall, Edmonton.

JUNE 26. — **Knockbain.**—ADDITIONS, ETC.—For additions and alterations to Knockbain School-house. Plans and specifications seen, and quantities from Mr. Thos. Munro, architect, 62, Academy-street, Inverness.

JUNE 26.—**Neston.** REPAIRS.—For repairs and alterations at property in Brook-street, Neston. Specification and tender from the Surveyor, Town Hall, Neston.

JUNE 26.—**Pettigo.** -ADDITIONS.—For additions to the Red Lion Hotel, Pettigo. Plans and specification with Mr. J. P. M'Grath, C.E., M.R.I.A.I., architect, 6, Castle-street, Derry.

JUNE 26. **Rishworth.**—CONVENIENCES.—Erection of conveniences at Rishworth National School. Plans seen, and quantities from Messrs. Richard Horsfall & Son, 22a, Commercial-street, Halifax.

* JUNE 27. — **Balham.** — BRICK WALL.—The Wandsworth Guardians invite tenders for building a brick wall. See advertisement in this issue for further particulars.

JUNE 27. —**Southampton.**—SCHOOL.—Erection of a corrugated iron temporary Council school at Bitterne. Plan, specification, and conditions of contract with Mr. A. L. Roberts, Architect to the Education Committee, The Castle, Winchester. Deposit of 2*l.* 2s.

JUNE 27. —**Winchester.**—PAVILION, ETC.—For erection of cottage and convenience, pavilion, and bandstand at the new recreation ground. Plans and specification at the City Surveyor's Office, Guildhall, Winchester.

JUNE 28. **Birstall.** -CONVENIENCES.—Erection of public sanitary conveniences, situate at the Smithies, Birstall. Plans, specifications, etc., seen, and particulars and forms of tender from Mr. T. H. Hailstone, the Surveyor to the Council, Council Offices, Birstall, near Leeds.

JUNE 28.—**Llancarvan.**—ROOM.—Erection of a church-room at Llancarvan. Plans and specification at the Vicarage, Llancarvan.

JUNE 28.—**Steeton.**—OFFICES, ETC.—Erection of new offices and workpeople's dining-room, etc., at the Bobbin Mills, Steeton. Plans seen, and quantities from Mr. James Hartley, architect, Skipton.

JUNE 28. — **Winchcomb.** — ADDITIONS.—For alterations and additions at the Winchcomb Workhouse Infirmary. Drawings and specification seen, and quantities and form of tender from the architects, Messrs. Philpott & George, architects and engineers, 31, Promenade, Cheltenham, on deposit of 2*l.* 2s.

JUNE 29. — **Aghina.** — SCHOOLS.—Erection of National schools at Aghina, near Macroom. Plans and specifications with Mr Samuel F. Byrnes, architect, 5, South-mall, Cork.

JUNE 29.—**St. Buryan.**—CLUB.—Erection of a Constitutional club at St. Buryan. Plans and specifications with Mr. O. Reginald Caldwell, architect, Penzance.

JULY 1.—**Clones.**—RESIDENCE.—For the erection of a private residence at Newtownbutler-road, Clones. Plans and specifications with Mr. P. J. Brady, C.E., architect, Broomfield House, Ballyhaise.

JULY 1 **Hendon.**—MORTUARY, ETC Erection of a public mortuary and other buildings near the Council offices, etc. Drawings and specification seen, and forms of tender from Mr. S. Slater Grimley, M.Inst.C.E., Engineer and Surveyor to the Council, Council Offices, on deposit of 2*l.* 2s.

JULY 1 — **Hereford.** — HOUSE.—Erection of a house in connexion with the hospital. Plans, specification, and quantities, on deposit of 2*l.* 2s., from Messrs. Nicholson & Clarke, architects and surveyors, Cathedral-chambers, Hereford.

JULY 1. — **Heywood.** — SCHOOL.—Erection of school. Drawings and conditions with Mr H. Cooper Anderson, A.R.I.B.A., M.S.A., architect and surveyor, 3, Longford-street, Heywood. Quantities on deposit of 3*l.* 3s.

BUILDING—*continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

JULY 1.—**Peterborough.**—EXTENSION.—Extension of Peterborough Post-office. Drawings, specification, and a copy of the conditions and form of contract at Peterborough Post-office. Quantities and forms of tender at H.M. Office of Works, Storey's-gate, London, S.W. Deposit of 1*l.* 1*s.*

JULY 1.—**Stratford-on-Avon.**—COTTAGES.—For the erection of workmen's cottages, in blocks of six, on land adjoining Birmingham-road. Plans and specifications seen, and quantities and form of tender, on deposit of 2*l.*, from Mr. Roden Dixon, Borough Surveyor, Municipal Offices, Stratford-upon-Avon

JULY 1. — **Walbottle.** — HOUSES.—Erection of fifty-eight houses. Specification and drawings by the Surveyor to the Council, Mr. Thos. Gregory, Council Offices, Newburn.

JULY 2.—**Clare.**—FILTERS.—For the erection of No. 2 small sand filters, with necessary pipes and castings, to be erected on the reservoir site at Clare Plans and specifications seen at the Surveyor's Office, Ashen-road, Clare, and quantities and form of tender from the engineers, Messrs Sands & Walker, Milton-chambers, Nottingham.

JULY 2. —**Liverton.**—ALTERATIONS.—Alterations and improvements at the Liverton Mines Council School. Plans and specification and forms of tender from Mr. J. C. Wrigley, Secretary, Education Offices, Northallerton.

JULY 2. —**Manchester.** —WARDS.—Erection of new lunatic wards and drainage at the Withington Workhouse. Plans seen, and quantities from Mr. Fredk. H Overmann, F.M.S.A., 48, King-street, Manchester. Deposit of 1*l.* 1*s.*

JULY 2.—**Mountain Ash.**—ALTERATIONS.—For extensive alterations, etc., to the Duffryn Boys' School, Mountain Ash. Plans and specifications seen, and forms of tender from the architect, Mr. W. H. Williams, M.S.A., Town Hall, Mountain Ash.

JULY 3 —**Aylesbury.**—EXTENSION.—For the extension of Aylesbury Post-office. Drawings, specification, and a copy of the conditions and form of contract at the Aylesbury Post-office. Quantities and forms of tender at H.M. Office of Works, Storey's-gate, London, S.W. Deposit of 1*l.* 1*s.*

★ JULY 3.—**Stepney.**—BACTERIOLOGICAL LABORATORY.—The Stepney B.C. invite tenders for the erection of a bacteriological laboratory at White Horse-street, Stepney. See advertisement in this issue for further particulars.

JULY 4.—**Banstead.**—ROOM.—For building a manual training room at school, Banstead, Surrey. Specification, form of tender, and drawing from architect, Mr. Cecil A. Sharp, 2, Verulam-buildings, Gray's Inn, W.C., on deposit of 5*l.*

JULY 4.—**Garnant.**—SCHOOL.—For building a new school at Garnant, Amman Valley. Plans and specifications seen, and particulars from Mr. W. V. Morgan, A.R.I.B.A., County Architect, County Education Offices, Carmarthen.

JULY 4.—**Penge.**—STAIRCASE.—For erection of an outside staircase at the Melvin-road Council School, Penge. Specifications and forms of tender from the Surveyor to the Committee, Mr. H. W. Longdin, Town Hall, Anerley, S.E. Deposit of 1*l.* 1*s.*

JULY 5. — **Airton.** — SCHOOL.—For erection of Airton new school. Plans seen, and specifications with quantities from the Education Architect, County Hall, Wakefield. Deposit of 1*l.*

JULY 5.—**Bedford.** —EXTENSION.—For the extension of Bedford Post-office. Drawings, specification, and a copy of the conditions and form of contract at Bedford Post-office. Quantities and forms of tender at H.M. Office of Works, Storey's-gate, London, S.W., on deposit of 1*l.* 1*s.*

JULY 5. — **Peterborough.** — ADDITIONS.—For additions and alterations to the infirmary of the Peterborough Union Workhouse. Messrs. Townsend & Fordham, architects, Cross-street, Peterborough.

JULY 5.—**Rothwell Carlton.**—ADDITIONS.—For additions to the Rothwell Carlton Council School. Plans seen, and specifications with quantities from the Education Architect, County Hall, Wakefield.

JULY 5.—**Sicklinghall.**—SCHOOL.—For erection of Sicklinghall new school. Plans seen, and specifications with quantities from the Education Architect, County Hall, Wakefield. Deposit of 1*l.*

JULY 6. —**Brighouse.**—BATHS.—Erection of proposed Public Baths in Mill Royd-street, Brighouse. Plans seen, and specifications, quantities, and forms of tender from Mr. S. F. Haywood, Borough Engineer, Municipal Offices, Brighouse, on deposit of 1*l.* 1*s.*

★ JULY 6.—**Chalfont St. Peter.**—SCHOOL.—The Managers of Chalfont St. Peter's Schools invite tenders for new boys' schools. See advertisement in this issue for further particulars.

JULY 6.—**Folkestone.**—HOUSE.—For the erection of a house, lodge, stables, etc., on the "Acrise" Estate, near Folkestone. Quantities from the architect, Mr. Henry F. Mence, St. Peter's-street, St. Albans. Deposit of 2*l.* 2*s.*

JULY 8. — **Newmarket.** — SCHOOLS.—For the erection of new public elementary schools at Stowmarket and Fakefield. Quantities and forms of tender from Mr. J. Webb, the Committee's Surveyor, Education Office, County Hall, Ipswich. Deposit of 1*l.* 1*s.*

JULY 9.—**Barking.**—DWELLINGS.—For the erection of twenty-six workmen's dwellings at Boundary-road. Plans and specification seen, and form of tender from the Council's Architect, Mr. C. J. Dawson, F.R.I.B.A., 16, Cambridge-road, Barking.

★ JULY 10.—**Lichfield.**—SUB-POST-OFFICE.—The Commissioners of H.M. Works and Public Buildings invite tenders for Whittington Barracks Sub-Post-office, Lichfield. See advertisement in this issue for further particulars.

★ JULY 10. — **London, W.C.** — ALTERATIONS TO MORTUARY.—The Holborn B.C. invite tenders for alterations to the public mortuary in Goldsmith-street. See advertisement in this issue for further particulars.

★ JULY 11. — **Homerton.** — BRANCH LIBRARY — The Hackney B.C. invite tenders for erection of a branch library. See advertisement in this issue for further particulars.

★ JULY 11. —**Stanford.** POST-OFFICE. -The Commissioners of H.M. Works, etc., invite tenders for erection of Stafford new Head Post-office See advertisement in this issue for further particulars.

JULY 13. —**Bucharest.**—PORT CONSTRUCTION.—Tenders invited at the direction of Ports and River Communications, Bucharest, for the prolongation of the lower platform of the Port of Calafat.

JULY 16.—**London.** OFFICES.—For the extension of the new Public Offices, Westminster (superstructure), Drawings, specification, and conditions and form of contract with Sir Henry Tanner, H.M. Office of Works, etc., Storey's-gate, London, S.W. Quantities on deposit of 1*l.* 1*s.*

NO DATE.—**Appleby.**—CLUB, ETC.—For erection of Conservative club and post-office, Appleby, Westmorland. Mr. R. Morton Rigg, Lic.R.I.B.A., M.S.A., architect, Penrith.

NO DATE.—**Buckley.** -ROOMS.—For the erection of a classroom, cloakrooms, etc., at the Bistre C.E. School, Buckley. Quantities, on deposit of 1*l.* 1*s.*, from Mr. F A Roberts, M.S.A., architect and surveyor, Earl-chambers, Mold.

★ NO DATE.—**Durham.**—TEMPORARY SCHOOL. - The Durham Education Committee invite tenders for a temporary school for 250 scholars at West Stanley. See advertisement in this issue for further particulars.

NO DATE. — **Falmouth.** -VILLAS.—For erection of a pair of semi-detached villas in Melville-road. Particulars from Mr. A. E. Lewis, Tremenheere, Gyllyngvase-road, Falmouth.

NO DATE.—**Longwood.**—HOUSES, ETC.—For the erection of eleven dwelling-houses and shop, Raw Nook-road, Salendine Nook, for the Longwood Industrial Society. Plans seen, and quantities with Mr. Sanderson M. Balmford, architect, Longwood.

NO DATE.—**St. Austell.**—TANKS, ETC.—Erection of a new clay dry, tanks, etc., at the New Halwyn Works, Retew, Grampound-road. Particulars from Mr. A. J. Petty, Secretary, New Halwyn China Clay Company, Ltd., St. Austell.

NO DATE. — **Swaffham.**—ADDITIONS.—For proposed alterations and additions to Hamond's Grammar School, Messrs. Lacey & Upcher, architects and surveyors, 6, Upper King-street, Norwich. Quantities on deposit of 1*l.* 1*s.*

ENGINEERING, IRON, AND STEEL.

JUNE 22.—**Lydd.**—SEA WALL.—For the lengthening of the sea wall at the east end. Particulars of Mr. J. Russell, Expenditor, Mill House, Lydd, Kent.

JUNE 24. —**Bucharest.**—BRIDGE.—Tenders invited at Ministry of Public Works, Bucharest, for the construction of a bridge on the Argesh.

JUNE 24.—**Leeds.** TANKS.—For the construction of concrete tanks, waterways, weirs, etc., at the generating station, 1, Whitehall-road, Leeds. Specification, conditions of contract, and form of tender at 1, Whitehall-road, Leeds

JUNE 26.—**Kingston-on-Thames.**—ADDITIONS. —For an addition to the electricity works building and for engine foundations Plans and specification with the Borough Surveyor, Mr. R. Hampton Clucas, Municipal Offices.

JULY 4.—**Dewsbury.**—PLANT.—For the supply of one 1,000-kw. turbine, two 500-kw. direct-current generators, jet-condensing plant. Specifications, with form of contract, from Mr. R. H. Campion, Borough Electrical Engineer, Bradford-road, Dewsbury, on deposit of 1*l.* 1*s.*

JULY 24. — **London.** PLANT.—The Islington Lighting Committee invite tenders for 3,000-kw steam turbine alternator, exciter, condensing plant, switchgear, circulating and steam piping, with other accessories. Specification, general conditions, and form of tender from the Electrical Engineer, 50, Eden-grove, Holloway, London. N Deposit of 2*l.* 2*s*

FURNITURE, PAINTING, MATERIALS, etc.

JUNE 22. **Oswestry.** PAINTING.—For painting and decorating at the Guildhall. Specification and general conditions from the Engineer and Surveyor, Guildhall, Oswestry.

JUNE 24. **Ipswich.** — PAINTING.—For outside painting and for inside colouring, painting and varnishing, etc., of schools, etc., in the borough. Particulars and specifications from the Committee's Surveyor, Mr. E. T. Johns, 8, Lower Brook street, Ipswich.

JUNE 24. **Rochdale.** — PAINTING.—For the painting of the waiting-room, offices, and shelters in the town centre. Specification and form of tender from the General Manager, Tramway Offices, Mellor-street, Rochdale, on deposit of 5*s.*

JUNE 24.—**Sheffield.**—RAILS.—For the supply of 750 tons of steel tram rails. Specification and drawings, with form of tender and conditions of contract, from Mr. W. J. Hadfield, Surveyor of Highways, Town Hall, Sheffield. Deposit of 1*l.* 1*s.*

JUNE 25.—**Bingley.** PAINTING.—For painting, colourwashing, etc., at Bingley, Mornington-road, and Cullingworth Joint Council schools. Specifications from Mr. B. Leah, Education Office, Bingley.

★ JUNE 25. — **Lambeth.** — PAINTING, ETC.—The Lambeth Guardians invite tenders for alteration and painting at the office and relief station. See advertisement in this issue for further particulars.

JUNE 26.—**Andover.** -PAINTING.—For painting and repairs at the free library buildings, Bridge-street. Specification at the Borough Surveyor's Office.

JUNE 26.—**Buckland.** -PAINTING.—For the outside painting of the buildings belonging to the Workhouse. Specifications and conditions from Mr. Eugene Carder, Clerk, 17, Market-square, Dover.

★ JUNE 26. -**London, S.E.**—CLEANSING, WHITEWASHING, ETC.- The Bermondsey Guardians invite tenders for cleansing, whitewashing, and distempering at Infirmary, Lower-road, Rotherhithe, S.E. See advertisement in this issue for further particulars.

JUNE 28.—**Stockport.**—PAINTING.—For painting and decorating the Central and Reddish firestations, etc. Conditions of contract seen, and specification, with form of tender, from Mr. J. Atkinson, A.M.Inst.C.E., Borough Surveyor, Town Hall, Stockport.

JULY 1. — **Blackburn.** — PAINTING.—For the painting, etc., at various schools in the borough. Mr. William Stubbs, A.M.Inst.C.E., Borough Engineer, Municipal Offices, Blackburn.

★ JULY 1.—**London.**—PAINTING, ETC. -The Board of Management of the Central London Sick Asylum District invite tenders for painting and general repairs, etc., at the Cleveland-street and Hendon Asylums. See advertisement in this issue for further particulars.

★ JULY 2. —**Eastern Counties.**—PETROL LORRIES.—Tenders are invited for hiring petrol lorries for work in connexion with the Army manœuvres. See advertisement in this issue for further particulars.

★ JULY 3. — **Chelsea.** — PAINTING, ETC.—The Chelsea B.C. invite tenders for cleaning and painting outside of the Town Hall. See advertisement in this issue for further particulars.

★ JULY 3.—**Essex and Kent.** PAINTING, ETC.— The Metropolitan Asylums Board invite separate tenders for cleaning and painting at the Bridge Industrial Home, Witham, Essex, and White Oak School, Swanley Junction. See advertisement in this issue for further particulars.

★ JULY 4.—**Kensington.**—PAINTING, ETC.—The Kensington Guardians invite tenders for cleaning and painting work at Infirmery, Marloes-road, W. See advertisement in this issue for further particulars.

★ JULY 9. —**Walthamstow.**—PAINTING. ETC.— The Walthamstow Education Committee invite tenders for painting, colouring, etc., at various schools. See advertisement in this issue for further particulars.

★ JULY 17.—**Tottenham.**—DEMOLISHING BUILDINGS.—The Metropolitan Asylums Board invite tenders for demolishing boiler-house, chimney-shaft, and other buildings. See advertisement in this issue for further particulars.

ROADS, SANITARY AND WATER WORKS.

JUNE 22. **Cockermouth.**—KERBING.—For kerbing and channelling footpath at Flimby. Particulars from Mr. R. K. Gibson, Highway Surveyor, Grecian Villa, Cockermouth.

JUNE 22. -**Radcliffe.**—SEWAGE.—For sewering Bolton-street, between Water-street and Holly Bank-street. Plans and specifications seen, and form of tender from the Surveyor, Council Offices, Radcliffe.

JUNE 24. — **Brighouse.** — PAVING. — For the paving of a portion of road, from the bottom of Bonegate-road to Cross-street, with granite setts on concrete. Plans and sections seen, and specifications and quantities from Mr. S. S. Haywood, Borough Engineer and Surveyor, Municipal Offices, Brighouse. Deposit of 1*l.* 1*s.*

JUNE 24.—**Denton.**—SEWER.—For construction of about 1,280 yds. of 12-in. stoneware pipe sewer in Thornley-lane, Denton. Drawings and specifications seen, and form of tender from the Surveyor to the Council, Town Hall, Denton, near Manchester. Deposit of 1*l.* 1*s*

JUNE 24. —**South Stoneham.** — SEWAGE.—For the main sewerage and sewage disposal works at Bitterne Manor, Southampton. Plans and quantities with Messrs. Weston & Burnett, engineers, 24, Portland-street, Southampton. Deposit of 3*l.* 3*s.*

JUNE 25.—**Maybole.** -SEWAGE.—Construction of new sewers, sewage tanks, etc., and alterations on existing works. Drawings with Messrs. Gilbert Thomson & Ferguson, civil engineers, 164, Bath-street, Glasgow. Specification and schedule on deposit of 2*l.* 2*s.*

JUNE 25.—**West Hartlepool.**—ROAD.—For the construction of roadway from bridge at Burn Valley-gardens to Blakelock-road; Back Topcliffe and Brafferton-street, and Back Topcliffe and Harcourt-street. Plans and specifications seen, and forms of tender with quantities from Mr. Nelson F. Dennis, M.Inst.C.E., Borough Engineer and Surveyor, West Hartlepool.

JUNE 26. — **Belfast.** — SETTS — For supply of about 400 tons of setts. Specification, form of tender, and information from the Harbour Engineer, Mr. W. R. Kelly, M.Inst.C.E.

JUNE 26. - **Beverley.** — STREETS.—For private street works in Waltham-lane Drawings and specifications seen, and quantities with forms of tender from Mr. J. Gould Smith, A.M.Inst.C.E., Borough Surveyor, 31, Lairgate, Beverley.

JUNE 26.—**Middlesbrough.**— STREETS.—For the reconstruction and making-up of the back street between Cunningham and Archibald streets with slag scoriæ paving. Plans and specification seen, and quantities at the Borough Engineer's Office, Municipal Buildings.

JUNE 27. -**Greenwich.**—SEWER.—For the construction of a length of 500 ft. of 2-ft. diameter stoneware pipe sewer from Delafield-road to Woolwich-road, Charlton. Drawings, specification, and form of tender from the Borough Engineer and Surveyor, Town Hall, Greenwich-road, S E

ROADS, etc.—*continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

JUNE 29.—**Harrow-on-the-Hill.**—GRANITE.—For supply of broken granite and ¾-in. granite chippings, and coarse and fine gravel. Mr. J. Percy Bennetts, Surveyor to the Council, Harrow.

JULY 1. **Romford.**—SEWAGE, ETC.—For works of road improvement and laying of sewers. Plan seen, and specifications, quantities, and forms of tender from Mr. Herbert T. Ridge, at the Council Offices, Market-place, Romford, on deposit of 2*l.* 2s.

JULY 2.—**Paulton.**—KERBING.—For laying about 150 yds. run of kerbing and channelling and about 150 super. yds. of asphalting at Alexandra-terrace. Particulars from the Surveyor, The Grange, Hallatrow, near Bristol.

JULY 2.—**Woodford.**—TANKS, ETC.—Construction of detritus tanks, percolating filters, humus tanks, etc. Form of tender, quantities, etc., on deposit of 2*l.* 2s., from Mr. William Farrington, Engineer and Surveyor to the Council, Council Offices, Woodford Green, Essex.

* JULY 3.—**Dartford.**—TAR PAVING.—The Metropolitan Asylums Board invite tenders for repairs to tar paving at Darenth Industrial Colony, Dartford, Kent. See advertisement in this issue for further particulars.

* JULY 3.—**Dartford.**—TERRAZZO PAVING.—The Metropolitan Asylums Board invite tenders for repairs to terrazzo paving at Joyce Green Smallpox Hospital, Dartford, Kent. See advertisement in this issue for further particulars.

* JULY 3.—**Fulham and Sutton.**—ROAD AND PAVING REPAIRS.—The Metropolitan Asylums Board invite tenders for road and paving repairs at (1) the Fever Hospital, Fulham; (2) the Downs School, Sutton, Surrey. See advertisement in this issue for further particulars.

JULY 3.—**Goole.** STREET.—For the making-up of Humber-street. Plans seen, specification, forms of tender, and quantities from Mr. C. G. Bradley, C.E., Council Offices, Goole, on deposit of 1*l.* 1s.

JULY 3.—**Hove.**—SEWAGE.—For constructing new sewers in Queen's-gardens, Grand-avenue, The Drive, Holland-road, and Davigdor-road. Plans, specification, and form of contract seen, and quantities and form of tender from the Borough Surveyor, Mr. Hugh Hamilton Scott. Deposit of 2*l.* 2s.

JULY 4.—**Lymm.**—WORKS.—For the construction of outfall works, and laying of stoneware pipe sewers, the construction of about 100 manholes, canal crossing, and adjunct works. Plans seen with the Engineer, Mr. W. M. Beckett, A.M.Inst.C.E., 33, Brazennose-street, Manchester. Specification, quantities, and form of tender on deposit of 3*l.* 3s.

JULY 9.—**Fakenham.** SEWAGE.—For the construction of new sewerage and sewage disposal works. Plans seen, and conditions of contract, specifications, quantities, and forms of tender, on deposit of 5*l.*, from the Council's Engineer, Mr. E. J. Silcock, M.Inst.C.E., Sanctuary House, Tothill-street, Westminster, and 10, Park-row, Leeds.

JULY 10.—**Seisdon.**—SEWAGE.—For the construction of sedimentation tanks, filters, and other works at the sewage outfall site at Whittington. Plans and drawings seen, and specification, quantities, and form of tender from Mr. William Fiddian, civil engineer, Stourbridge, on deposit of 3*l.* 3s.

No DATE.—**Somersal.**—STREETS.—For the work of footpath renewals on the Holme-lane End and Heckmondwike main road, from Dewsbury-road Top, southwards. Mr. Ben Hinchliffe, M.Inst.Mun.E., Engineer and Surveyor, Surveyor's Office, Mechanics' Institute, Somersal

Public Appointment.

Nature of Appointment.	By whom Advertised.	Salary.	Application to be m
*SURVEYOR	Diocese of London	Not stated	July 1

Auction Sales.

Nature and Place of Sale.	By whom Offered.	Date of Sale.
*BUILDERS' MERCHANT'S STOCK At 12, Jewry-street, Winchester	H. W. Smith	June 25
*PLANT AND MACHINERY.—On the Site	Craske & Sons	June 26
*DEALS, BATTENS, BOARDS, TIMBER, ETC.—Great Hall, Winchester House, E.C.	Churchill & Sim	June 26
*BUILDING MATERIALS, STOCKWELL, S.W.—On the Site	Hooker & Webb	June 26
*BUILDING MATERIALS—On the Premises	Bowditch & Grant	June 27
*BUILDING MATERIALS, CAMBERWELL-GATE, S.E.—On the Site	Veryard & Yates	June 27
*FREEHOLD MANUFACTURING PROPERTY, Etc., DORSET—Dolphin Hotel, S'hampton	Joshua Bakey, Cooke, & Standen	July 4
*FREEHOLD PROPERTY At the Mart	Rutley, Son, & Vine	July 9
*FREEHOLD PROPERTY, CURZON-STREET—At the Mart	Winkworth & Co.	July 10
*FREEHOLD BUILDING SITES, PURLEY Greyhound Hotel, Croydon	Finlay Hill	July 11
*FREEHOLD BUILDING PLOTS, EAST SHEEN Greyhound Hotel, Richmond	Farebrother, Ellis, & Co.	July 12
*FREEHOLD BUILDING ESTATE, WINCHMORE HILL.—At the Mart	S. Walker & Sons	July 16

LONDON COUNCILS.

Bermondsey.—Plans lodged by Mr. W. G. R. Sprague, architect, Criterion-chambers, Jermyn-street, W., have been approved for the erection of a cinematograph hall on the site of No. 57, Lower road, Rotherhithe.

Croydon.—Various alterations and improvements are to be carried out at South Norwood School at a cost not to exceed 1,060*l.* Mr. H. Carter Pegg has been appointed architect for the enlargement on the Ecclesbourne-road Schools at a remuneration of 4 per cent. of the contract price. The tenders of Messrs. W. Smith & Sons and Messrs. G. E. Everitt & Sons, both of Croydon, have been accepted at 14,493*l.* and 920*l.* for the erection of the Borough School and a handicraft centre at Boston-road School, respectively.

Friern Barnet.—Plans have been passed for Mr. H. E. Stacey to erect eighteen houses in Athenæum-road and Oakleigh-gardens.

Hemel Hempstead.—Mr. H. G. Darer has had plans passed permitting him to erect a cinematograph hall in London-road.

Marylebone.—A portion of the carriageway of Wellington-road is to be recoated and tar-sprayed at an estimated cost of 210*l.* Plans have been lodged with the London County Council by Messrs. Boehmer & Gibbs for the erection of an hotel on the site of No. 152, Oxford-street. Messrs. Gale, Durlacher, & Emmett, 15, New Bridge-street, E.C., have also lodged plans with the Central Authority for the erection of a cinematograph theatre in Marylebone-road.

Richmond.—The tender of Messrs. R. Clayden, Ltd., Richmond, at 283*l.* 7s. 9d., has been accepted for certain repair works to the Council's workmen's dwellings.

Stepney.—Electricity mains are to be extended in two streets. The General Purposes Committee have decided to proceed with the work of erecting a bacteriological laboratory at the Public Health Offices, for which tenders will be invited, subject to the usual sanction.

Wimbledon.—The Town-Planning Committee have instructed the Borough Surveyor to prepare plans showing lands available for building in the Borough not yet built upon. Plans have been passed for Mr. R. C. T. Gordon for the erection of twenty houses in Ravensbury and Acuba roads.

OBITUARY.

Mr. H. J. Williams.

The death, on June 7, at his residence, Eagle House, Brislington, is announced of Mr. Henry Joseph Williams, of Alliance chambers, Corn-street, Bristol, in his seventy-first year. Mr. Williams had an extensive practice in Bristol, his native city, where he began his career as an architect more than forty years ago. He was one of the fourteen architects who were invited twelve years since to submit designs for the new Bristol Infirmary, for 1,000 patients; he was employed in the repair and resoration of several churches, comprising, as we gather, the underpinning of the north side of Ripon Cathedral. Of his other work in the locality we may mention the Law Union and Crown Insurance offices in Clare-street (1897); Avonbank electricity works in Feeder-road (1900-1); Petty Sessional and police courts, Nelson and Bridewell streets, rebuilding and extension (1901-2), in competition; the new Stock Exchange, with offices and library, in Nicholas-street; and the Waterworks Company's offices in Telephone-avenue (1902-3); Council School, Parson-street, Bedminster, for 1,050 scholars; the Bristol Wagon and Carriage Works Company's workshops and garage in Victoria-street; London and South-Western Bank, and the branches of Lloyd's Banking Company; offices for the *Western Daily Express* in Baldwin-street; and business premises in Wine-street and the Pithay for Messrs. Harris & Sons, in Broad-street for Mr. E. Everard, in Avondale-road for Messrs. Chappell, Allen, & Co., in Temple-gate for Messrs. Todd & Co., in Rupert-street for Mr. C. Wills, in Victoria-street for Messrs. Bolt, with several other factories, warehouses, etc.

Mr. F. Ingle.

We regret to learn that Mr. Frederick Ingle, of the firm of Messrs. Dennett & Ingle, patentees of the Dennett fireproof construction, died on May 30. He was seventy-three years of age. In his early life, before joining Messrs. Robert Dennett & Co., Mr. Ingle was associated with the late Mr. T. C. Hine, F.S.A., of Nottingham.

TO CORRESPONDENTS.

NOTE.—All communications with respect to literary and artistic matters should be addressed to "THE EDITOR" (and not to any person by name); those relating to advertisements and other exclusively business matters should be addressed to "THE PUBLISHER," and *not* to the Editor.

All communications must be authenticated by the name and address of the sender, whether for publication or not. No notice can be taken of anonymous communications.

The responsibility of signed articles, letters, and papers read at meetings rests, of course, with the authors.

We cannot undertake to return rejected communications; and the Editor cannot be responsible for drawings, photographs, manuscripts, or other documents, or for models or samples, sent to or left at this office, unless he has specially asked for them.

All drawings sent to or left at this office for consideration should bear the owner's name and address on either the face or back of the drawing. Delay and inconvenience may result from inattention to this.

Any communication to a contributor to write an article, or to execute or lend a drawing for publication, is given subject to the approval of the article or drawing, when received, by the Editor, who retains the right to reject it if unsatisfactory. The receipt by the author of a proof of an article in type does not necessarily imply its acceptance.

N.B.—Illustrations of the First Premiated Design in any important architectural competition will always be accepted for publication by the Editor, whether they have been formally asked for or not

SOME RECENT SALES OF PROPERTY:

ESTATE EXCHANGE REPORT.

June 1.—By HAMPTON & SONS.

Kingswood, Surrey.—Part of Margery Hall Estate, 193 acres, f.	£19,060

June 3.—By W. G. CARTER & Co.

Hackney. 13 to 24, Montague-rd., u.t. 60 yrs., g.r. 30*l.*, w.r. 219*l.* 4s.	500
Bethnal Green. 38, 40, 42, and 44, Middleton-st., u.t. 24 yrs., g.r. 16*l.*, w.r. 149*l.* 10s.	500
Mile End. 130 and 132, Devonshire-st., u.t. 24 yrs., g.r. 3*l.* 10s., w.r. 75*l.* 8s.	225
56, Mile End rd. (s.), u.t. 17¼ yrs., g.r. 6*l.* 10s., y.r. 48*l.*	250
Forest Gate. 165 and 167, Odessa-rd., u.t. 64 yrs., g.r. 7*l.* 10s., w.r. 46*l.* 16s.	145

By HENRY J. WAY & SON.

Newport, I.W.—8 and 9, Pyle st., f., w.r. 22*l.* 2s.	225
39 and 40, New-st., f., w.r. 26*l.*	280
Whitepit-la., Caversham, f., y.r. 30*l.*	500

June 6.—By CHESTERTON & SONS.

Kensington. 156, Church-st. (s.), f., y.r. 70*l.*	1,000
60 and 62, Bedford-gdns., u.t. 24 yrs., g.r. 25*l.*, y.r. 197*l.*	2,150

South Kensington.—47, Redcliffe-sq., u.t. 38 yrs., g.r. 35l., p. ... £355
52 and 54, Longridge-rd., u.t. 59½ yrs., g.r. 21l., y. and e.r. 2 0l. ... 1,125
16, Nevern rd., u.t. 59½ yrs., g.r. 10l., e.r. 110l. 375

By FISHER, STANHOPE, & Co.

Stamford Hill.—65, Darenth-rd., u.t. 70 yrs., g.r. 6l. 10s., y.r. 44l. ... 380
Clapton.—85, Reighton-rd., u.t. 69 yrs., g.r. 8l., y.r 37l. ... 300
15, Reighton-rd., u.t 66 yrs., g.r. 6l. 10s., y.r. 32l. ... 240

By MORTON & WATERS.

Bayswater.—10, Pembridge-villas, u.t. 31 yrs., g.r. 12l. 12s., y.r. 85l. ... 330
Camberwell.—21, 23, and 25, Lettsom-st., u.t. 357 yrs, g.r. nil, w.r. 67l. 12s. ... 375
Shepherd's Bush. 119, Commgham-rd., u.t. 52 yrs., g.r. 9l. 0s. 1d., y.r. 90l. ... 160

By GARRETT, WHITE, & POLAND.

Notting Hill.—59 and 73, Oxford-gdns., u.t. 63 yrs., g.r. 20l., y.r. 70l. and p. ... 1,075
46, Tavistock-rd , f., y.r. 55l. ... 185

By SALTER, REX, & Co

Kentish Town.—34, Dartmouth Park rd., u.t. 50 yrs., g.r. 9l., e.r. 55l. ... 350
198, Kentish Town-rd. (s., u.t. 36 yrs., g.r. 12l., y.r. 90l. ... 730
Holloway. 5 and 7, Corinne-rd., u.t. 56 yrs., g.r. 9l. 10s., y.r. 76l. ... 620

By STIMSON & SONS.

Camberwell. 54 and 56, Jardin-st., u.t. 10 yrs., g.r. 8l., w.r. 72l. 16s. ... 100

Contractions used in these lists.—F.g.r. for freehold ground-rent; l.g.r. for leasehold ground-rent; i.g.r. for improved ground-rent; g.r. for ground-rent; r. for rent; f. for freehold; c. for copyhold; l. for leasehold; p. for possession; e.r. for estimated rental; w.r. for weekly rental; q.r. for quarterly rental; y.r. for yearly rental; u.t. for unexpired term; p.a. for per annum; yrs. for years; la. for lane; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; cres. for crescent; av. for avenue; gdns. for gardens; yd. for yard; gr. for grove; h.h. for beerhouse; p.h. for public-house; o. for offices; s. for shops; ct. for court.

PRICES CURRENT OF MATERIALS.

* Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

BRICKS, &c.

Per 1000 Alongside, in River.	£	s.	d.
Best Stocks ...	1	14	0
Picked Stocks for Facings ...	2	10	0

BRICKS, &c. (*Continued*).

Per 1000, Delivered at Railway Depôt.

	£	s.	d.
Flettons ...	1	13	0
Best Fareham Red ...	3	12	0
Best Red Pressed Ruabon Facing	5	0	0

GLAZED BRICKS—

	£	s.	d.
Best White, Ivory, and Salt Glzd. Str'tch'rs	11	7	6
Headers ...	10	17	6
Quoins, Bullnose, and 4½ in. Flats	14	17	6
D'ble Stretchers	16	17	6

Second Quality £1 10s. per 1000 less than best.

	£	s.	d.
Best Blue Pressed Staffordshire...	3	15	0
Do. Bullnose.....	4	0	0
Best Stourbridge Fire Bricks ...	4	0	0
Double Headers	13	17	6
One Side and two Ends ...	17	17	6
Two Sides and one End ...	18	17	6
Splays & Squints	16	7	6

	s.	d.	
Thames and Pit Sand ...	6	9	per yard, delivered.
Thames Ballast ...	5	6	»
Best Portland Cement ...	31	0	per ton, »
Best Ground Blue Lias Lime	19	0	»

NOTE—The cement or lime is exclusive of the ordinary charge for sacks.

Grey Stone Lime ...	13s. 0d.	per yard delivered.
Stourbridge Fireclay in sacks	27s. 0d.	per ton at rly dpt.

STONE.

Per Ft. Cube.

	s.	d.
BATH STONE—delivered on road waggons, Paddington Depôt ...	1	6½
Do. do. delivered on road waggons, Nine Elms Depôt ...	1	8¼
PORTLAND STONE (20 ft. average)—		
Brown Whitbed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf ...	2	3
White Basebed, delivered on road waggons Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf ...	2	4½

Per Ft. Cube, delivered at Railway Depôt.

	s.	d.		s.	d.
Ancaster in blocks..	1	10	Closeburn Red Freestone ...	2	0
Beer in blocks ...	1	6	Red Mansfield Freestone ...	2	4
Greenshill in blocks	1	10	Takeley & Gwespyr Stone ...	2	4
Darley Dale in blocks ...	2	4			
Red Corsehill in blocks ...	2	3			

YORK STONE—*Robin Hood Quality.*

Per Ft. Cube, Delivered at Railway Depôt. s. d.

Scappled random blocks ...	2	10

Per Ft. Super., Delivered at Railway Depôt.

6 in. sawn two sides landings to sizes (under 40 ft. super.) ...	2	3
6 in. rubbed two sides ditto, ditto ...	2	6
3 in. sawn two sides slabs (random sizes)	0	11½
2 in. to 2½ in. sawn one side slabs (random sizes)	0	7
1½ in. to 2 in. ditto, ditto...	0	6

STONE (*Continued*).

HARD YORK—

Per Ft. Cube, Delivered at Railway Depôt. s. d.

Scappled random blocks ...	3	0

Per Ft. Super., Delivered at Railway Depôt.

6 in. sawn two sides landing to sizes (under 40 ft. super.) ...	2	8
6 in. rubbed two sides ditto ...	3	0
3 in. sawn two sides slabs (random sizes) ...	1	2
2 in. self-faced random flags ...	0	5

SLATES.

Per 1000 of 1200 at Railway Depôt.

In. In.	£	s.	d.
20×10 best blue Bangor ...	13	2	6
20×12 ditto ...	13	17	6
20×10 1st quality ditto ...	13	0	0
20×12 ditto ...	13	15	0
16×8 ditto ...	7	5	0
22×10 best blue Portmadoc...	12	12	6
16×8 ditto ...	6	12	6

In. In.	£	s.	d.
20×10 best Eur'ka unfading green ...	15	17	6
20×12 ditto ...	18	7	6
18×10 ditto ...	13	5	0
16×8 ditto ...	10	5	0
20×10 permanent green ...	11	12	6
18×10 ditto ...	9	12	6
16×8 ditto ...	6	12	6

TILES.

At Railway Depôt.

	s.	d.
Best plain red roofing (per 1000) ...	42	0
Hip and Valley (per doz.) ...	3	7
Best Broseley (per 1000) ...	50	0
Do. Ornamental (per 1000) ...	52	6
Hip and Valley (per doz.) ...	4	0
Best Ruabon red, brown, or brindled (Rdw'ds) (per 1000)	57	6
Do. Ornamental (per 1000) ...	60	0
Hip (per doz.)...	4	0
Valley (per doz.)	3	0
Best "Hartshill" brand, plain sand-faced (per 1000) ...	45	0
Do. pressed (per 1000) ...	42	6
Do. Ornamental (per 1000) ...	47	6
Hip (per doz.)...	4	0
Valley (per doz.)	3	6
Staffords. (Hanley) Reds or Brindled (per 1000) ...	42	6
Hand-made sand-faced (per 1000)	45	0
Hip (per doz.)...	4	0
Valley (per doz.)	3	6

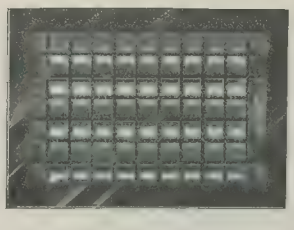
WOOD.

BUILDING WOOD.

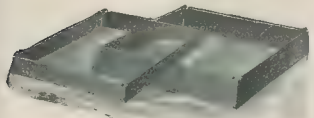
	At per standard. £	s.	d.	£	s.	d.
Deals: best 3 in. by 11 in. and 4 in. by 9 in. and 11 in. ...	14	0	0	... 15	10	0
Deals: best 3 by 9 ...	13	10	0	... 14	10	0
Battens: best 2½ in. by 7 in. and 8in., and 3 in. by 7 in. and 8 in.	11	10	0	... 12	10	0
Battens: best 2½ by 6 and 3 by 6...	0	10	0	less than 7 in. and 8 in.		
Deals: seconds ...	1	0	0	less thn best.		
Battens: seconds ...	0	10	0	»		»
2 in. by in. and 2 in. by 6 in. ...	9	10	0	... 10	10	0
2 in. by 4½ in. and 2 in. by 5 in.	9	0	0	... 10	0	0
Foreign Sawn Boards— 1 in. and 1¼ in. by 7 in. ...	0	10	0	more than battens.		
¾ in. ...	1	0	0	»		

"Ideal" Registers & Ventilators.

"Ideal" Registers combine superior design and finish with strength and durability—they are made of cast-iron, therefore do not rust and can be fixed in any situation—are available in a great variety of sizes—can be promptly supplied in any colour or finish.



"Ideal" Plain Lattice Design Register.



Cast-iron Wall Frames are specially designed to hold Registers securely in position, are inexpensive, and can be masoned solidly into brickwork.

A large stock of nearly all sizes of Plain Lattice Black Japanned Registers is regularly carried at our Hull works.

Full particulars, illustrations, and prices on request.

We make "Ideal" Radiators and "Ideal" Boilers, and supply all Accessories required in connection with Low Pressure Hot Water and Steam Heating.

NATIONAL RADIATOR COMPANY LIMITED. 439 & 441, Oxford Street, London, W.

WORKS: HULL, Yorks. Agents carrying Stocks {BAXENDALE & CO., Ltd., Miller Street Works, MANCHESTER. {WILLIAM MACLEOD & CO., 60, 62, & 64, Robertson Street, GLASGOW.

WOOD (*Continued*).

BUILDING WOOD (*Continued*)—	At per load of 50 ft.					
	£	s.	d.		£	s. d.
Fir timber; best middling Danzig or Memel (average specification)	5	0	0	...	5	10 0
Seconds	4	10	0	...	5	0 0
Small timber (8 in. to 10 in.)	3	17	6	...	4	0 0
Small timber (6 in. to 8 in.)	3	5	0	...	3	10 0
Swedish balks	2	12	6	...	3	0 0
Pitch-pine timber (30 ft. average)	5	5	0	...	6	0 0

JOINERS' WOOD.	At per standard.					
	£	s.	d.		£	s. d.
White Sea: first yellow deals, 3 in. by 11 in.	24	10	0	...	25	10 0
3 in. by 9 in.	22	10	0	...	23	10 0
Battens, 2½ in. and 3 in. by 7 in.	17	0	0	...	18	0 0
Second yellow deals, 3in. by 11in.	19	0	0	...	20	0 0
" " 3 in. by 9 in.	18	0	0	...	19	10 0
Battens, 2½ in. and 3in. by 7 in.	14	0	0	...	15	0 0
Third yellow deals, 3 in. by 11 in. and 9 in.	14	0	0	...	15	0 0
Battens, 2½ in. and 3 in. by 7 in.	11	10	0	...	12	10 0
Petersburg: first yellow deals, 3 in. by 11 in.	21	10	0	...	22	10 0
Do. 3 in. by 9 in.	18	10	0	...	19	10 0
Battens	14	0	0	...	15	0 0
Second yellow deals, 3 in. by 11 in.	16	10	0	...	17	10 0
Do. 3 in. by 9 in.	15	0	0	...	16	0 0
Battens	11	10	0	...	12	10 0
Third yellow deals, 3in. by 11 in.	13	10	0	...	14	10 0
Do. 3 in. by 9 in.	13	0	0	...	14	0 0
Battens	10	10	0	...	11	0 0
White Sea and Petersburg—						
First white deals, 3 in. by 11 in.	15	0	0	...	16	0 0
" " 3 in. by 9 in.	14	0	0	...	14	10 0
Battens	11	10	0	...	12	10 0
Second white deals, 3in. by 11in.	14	0	0	...	15	0 0
" " 3 in. by 9 in.	13	0	0	...	14	0 0
Battens	10	10	0	...	11	0 0
Pitch-pine: deals	19	0	0	...	21	0 0
Under 2 in. thick extra	0	10	0	...	1	0 0
Yellow Pine—First, regular sizes	48	0	0	upwards.		
Oddments	33	0	0	"		
Seconds, regular sizes	33	0	0	"		
Oddments	28	0	0	"		
Kauri Pine—Planks per ft. cube.	0	4	6	...	0	6 0
Danzig and Stettin Oak Logs— Large, per ft. cube	0	3	0	...	0	3 9
Small " "	0	2	6	...	0	2 6
Wainscot Oak Logs, per ft. cube	0	6	6	...	0	8 0
Dry Wainscot Oak, per ft. sup. as inch	0	0	10	...	0	1 0
¼ in. do. do.	0	0	8½	...	—	
Dry Mahogany—Houndras, Tabasco, per ft. super. as inch..	0	0	10	...	0	1 1
Selected, Figury, per ft. super. as inch	0	1	6	...	0	2 6
Dry Walnut, American, per ft. super. as inch	0	0	10	...	0	1 0
Teak, per load	18	0	0	...	22	0 0
American Whitewood planks, per ft. cube	0	5	0	...	0	6 0

WOOD (*Continued*).

JOINERS' WOOD (*Continued*)—	Per square.					
	£	s.	d.		£	s. d.
Prepared Flooring, etc.— 1 in. by 7 in. yellow, planed and shot	0	13	0	...	0	17 0
1 in. by 7 in. yellow, planed and matched	0	14	0	...	0	18 0
1¼ in. by 7 in. yellow, planed and matched	0	16	0	...	1	0 0
1 in. by 7 in. white, planed and shot	0	12	0	...	0	14 6
1 in. by 7 in. white, planed and matched	0	12	6	...	0	15 0
1¼ in. by 7 in. white, planed and matched	0	15	0	...	0	16 6
¾ in. by 7 in. yellow, matched and beaded or V-jointed brds.	0	11	0	...	0	13 6
1 in. by 7 in. " "	0	14	0	...	0	18 6
¾ in. by 7 in. white " "	0	10	0	...	0	11 0
1 in. by 7 in. " "	0	12	9	...	0	15 0

6 in. at 6d. to 9d. per square less than 7 in.

JOISTS, GIRDERS, &c.

	In London, or delivered Railway Vans, per ton.					
	£	s.	d.		£	s. d.
Rolled Steel Joists, ordinary sections	7	10	0	...	8	0 0
Compound Girders, ordinary sections	9	10	0	...	10	0 0
Steel Compound Stanchions	11	0	0	...	12	0 0
Angles, Tees, and Channels, ordinary sections	9	10	0	...	10	0 0
Flitch Plates	9	10	0	...	9	10 0
Cast Iron Columns & Stanchions, including ordinary patterns	7	10	0	...	8	10 0

METALS.

IRON—	Per ton, in London.					
	£	s.	d.		£	s. d.
Common Bars	9	0	0	...	9	10 0
Staffordshire Crown Bars, good merchant quality	9	5	0	...	9	15 0
Staffordshire "Marked Bars"	11	0	0	...	—	
Mild Steel Bars	9	5	0	...	9	15 0
Hoop Iron, basis price	10	0	0	...	—	
" " Galvanised	17	10	0	...	—	
(*And upwards, according to size and gauge.*)						
Sheet Iron Black— Ordinary sizes to 20 g.	10	5	0	...	—	
" " 24 g.	11	5	0	...	—	
" " 26 g.	12	15	0	...	—	
Sheet Iron, Galvanised, flat, ordinary quality— Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15	10	0	...	—	
Ordinary sizes to 22 g. and 24 g.	16	0	0	...	—	
" " 26 g.	17	0	0	...	—	
Sheet Iron, Galvanised, flat, best quality— Ordinary sizes to 20 g.	18	10	0	...	—	
" " 22 g. and 24 g.	19	0	0	...	—	
" " 26 g.	20	10	0	...	—	
Galvanised Corrugated Sheets— Ordinary sizes, 6ft. to 8ft. 20 g.	15	0	0	...	—	
" " 22 g. and 24 g.	15	5	0	...	—	
" " 26 g.	16	15	0	...	—	

METALS (*Continued*).

IRON (*Continued*)—	Per ton, in London.					
	£	s.	d.		£	s. d.
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	12	10	0	...	—	
Best Soft Steel Sheets, 2 g. & 24 g.	13	10	0	...	—	
" " 26 g.	15	10	0	...	—	
Cut Nails, 3 in. to 6 in. (Under 3 in., usual trade extras.)	11	0	0	...	11	10 0

LEAD, &c.

	£	s.	d.			
LEAD—Sheet, English, 4lb. and up	21	15	0	...	—	
Pipe in coils	22	5	0	...	—	
Soil pipe	25	5	0	...	—	
Compo pipe	25	5	0	...	—	
ZINC—Sheet—	In casks of 10 cwt.					
Vieille Montagne	33	10	0	...	—	
Silesian	33	5	0	...	—	
Zinc, in bundles, 1s. per cwt. extra.						
COPPER— Strong Sheet per lb.	0	1	0	...	—	
Thin " "	0	1	1	...	—	
Copper nails "	0	0	10	...	—	
Copper wire "	0	0	10	...	—	
BRASS— Strong Sheet "	0	0	11	...	—	
Thin "	0	1	0	...	—	
TIN—English Ingots "	0	2	0	...	—	
SOLDER—Plumbers' "	0	0	9½	...	—	
Tinmen's "	0	1	0½	...	—	
Blowpipe "	0	1	2½	...	—	

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.			
15 oz. thirds	2½d.	26 oz. fourths	3½d.
" fourths	1¾d.	32 oz. thirds	5d.
21 oz. thirds	3¼d.	" fourths	4½d.
" fourths	2¾d.	Fluted Sheet, 15 oz.	3¾d.
26 oz. thirds	4d.	" 21 oz.	4½d.

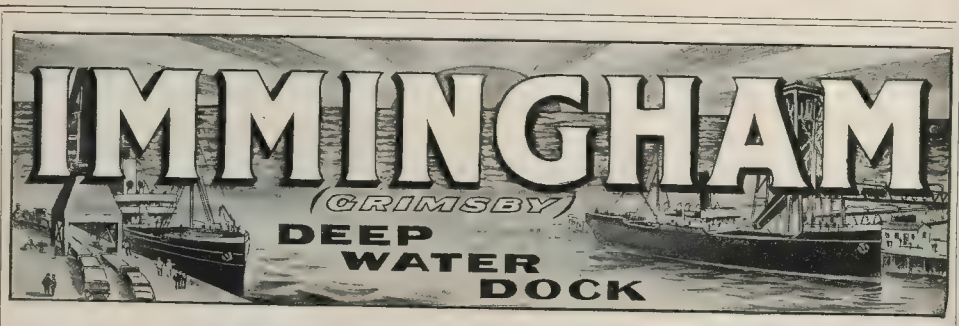
ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.			
⅛ Rolled plate	2¼d.	Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white	3½d.
1/16 Rough rolled and rough cast plate	2½d.		
¼ Rough rolled and rough cast plate	3d.	Ditto, tinted	5d.

* Not less than two crates.

OILS, &c.

		£	s.	d.
Raw Linseed Oil in pipes	per gallon	0	3	10
" " " in barrels	"	0	3	11
" " " in drums	"	0	4	1
Boiled " in barrels	"	0	4	1
" " in drums	"	0	4	4
Turpentine in barrels	"	0	2	11
" in drums	"	0	3	1
Genuine Ground English White Lead,	per ton	29	0	0
Red Lead, Dry	"	25	0	0
Best Linseed Oil Putty	per cwt.	0	10	6
Stockholm Tar	per barrel	1	12	0



IS OPENED PROVISIONALLY.

POINTS OF MERIT:

Favourable Situation.

Immingham Dock is geographically the most central coal port for the Continent, and is in direct rail communication with the great coalfields of the West Riding and South Yorkshire, Derbyshire, Nottinghamshire, &c.

Always Accessible.

Immingham Dock has a storm-protected harbour and deep water channel and entrance lock, enabling the largest ships to enter and leave at any state of the tide.

Most Modern Equipment.

Immingham Dock has eight coal hoists capable of shipping 5,600 tons per hour.
Largest ships can bunker at deep water jetty—only ten miles from the open sea—at any time of the day or night.
Storage accommodation is provided for 11,600 loaded wagons, and there are 170 miles of sidings.
Every precaution taken to minimise breakage of coal.
Movable hoist enables two "holds" of a vessel to be loaded simultaneously.

Low Dock Charges.

Immingham Dock charges are more favourable than at any competitive port.

For Information apply Great Central Goods Agents or Port Master, Immingham Dock, Grimsby. Illustrated Brochure "3" and Map "3," printed in English, French or German, post free from G.C.R. Publicity Office, 216, Marylebone Road, London, N.W.

SAM FAY, General Manager.

VARNISHES, &c.	Per gallon. £ s. d.
Fine Pale Oak Varnish	0 8 0
Pale Copal Oak	0 10 6
Superfine Pale Elastic Oak	0 12 6
Fine Extra Hard Church Oak	0 10 0
Superfine Hard-drying Oak, for seats of Churches	0 14 6
Fine Elastic Carriage	0 12 0
Superfine Pale Elastic Carriage	0 16 0
Fine Pale Maple	0 10 0
Finest Pale Durable Copal	0 18 0
Extra Pale French Oil	1 1 0
Eggshell Flating Varnish	0 13 0
White Pale Enamel	1 4 0
Extra Pale Paper	0 12 0
Best Japan Gold Size	0 10 6
Best Black Japan	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Knotting	0 10 9
French and Brush Polish	0 10 6

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than 6 p.m. on Wednesday.* [N.B.—We cannot publish Tenders unless authenticated either by the architect or the building owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is stated, nor any list in which the lowest Tender is under 100l. unless in some exceptional cases and for special reasons.]

* Denotes *accepted.* † Denotes *provisionally accepted.*

ALDERSHOT. For erection of three houses, Holly-road. Messrs. Friend & Lloyd, architects, Aldershot:—

T. B. Seward	£924	E. C. Hughes	£830
Martin, Wells, & Co., Ltd.	850	H. Jones	795
		W. Sanderson	765

BASINGSTOKE.—For erection of cemetery chapel, lodge, etc., for Corporation of Basingstoke. Mr. F. R. Phipps, A.M.Inst.C.E., Surveyor, Basingstoke

C. Grace & Sons	£2,160 0 0	E. C. Hughes	£2,023 0 0
M. E. Fitt	2,085 0 0	J. E. Franklin & Co.	1,982 0 0
A. G. Butler	2,071 16 4	Jones & Son	1,931 13 4
H. J. Goodall & Son	2,056 0 0	J. Harris	1,926 6 0
Martin, Wells, & Co.	2,055 7 0	Smallbone & Sons*	1,895 0 0

BELPER For erection of an electric palace of varieties, King-street. Mr. E. B Dean, M.S.A., architect, Mansfield. Quantities by the architect:—

L. Brown	£2,100 0 0	Harris & Hunt	£1,960 10 10
J. W. Haynes	2,000 0 0	W. Corah & Son, Loughborough*	1,879 0 0
J. & F. L. Parsons	1,969 0 0		

BLYTH (Northumberland).—For new streets and sewerage works, Princess Louise-road and Wharton-street, etc. Mr. R. Grieves, surveyor:—

Brims & Co.	£8,992 0 0	R. Baxter	£6,569 0 0
J. W. Henderson	8,351 3 7	J. Robson	6,499 0 1
R. Hudson & Sons	8,200 0 0	Walton & Moscrop	6,280 4 7
J. McLaren, jun.	7,831 11 3	G. E. Simpson, Newcastle-on-Tyne*	5,858 11 0
G. Armstrong	7,252 4 9	A. Stark & Sons, Ltd.	5,843 19 0
J. Lunt	6,901 0 3		

BOSTON.—For erection of a house, stables, and cowshed in Brothertoft-road. Mr. F. Parker, F.S.A., architect, 7, Pump-square, Boston. Quantities by Mr. F. Parker, Q.S.A., Boston:—

Pinder & Son	£830 0	J. Leape & Sons	£773 0
Belton & Co.	799 10	W. E. Dawson, Boston*	742 10
J. W. Darby	780 0		
Pett & Bonfield	780 0		

CARLISLE. For additions and alterations at the St. Cuthbert's Roman Catholic schools, Union-street. Mr. H. Foxall, architect, 54, Lowther-street, Carlisle:—

Builders: J. & R. Bell, Nelson-street, Carlisle*	£595 17 8
Joiners: Dowell & Son, Coltur-lane, Carlisle*	280 0 0
Plumbers: Graham & Crawford, Blackfriars-street, Carlisle*	152 10 0
Slater. G. Irving, Linden-road, Carlisle*	19 10 0
Plasterers: Armerod & Son, Close-street, Carlisle*	69 19 9
Painters, etc.: Nill & Stephenson, Castle-street, Carlisle*	52 6 4
Heating: J. Corbett, Corporation-road, Carlisle*	96 0 0

LONDON.—For supply of 7,000 cubic yds. of sand in connexion with the filter-beds at Lee Bridge and Ferry-lane stations, for the Metropolitan Water Board:—

	Lee Bridge. Alongside in Barge.	Lee Bridge. In Truck in Siding.	Ferry-lane. Alongside in Barge.	Ferry-lane. In Truck in Siding.
	s. d.	s. d.	s. d.	s. d.
J. Arnold. Sample 1	‡	11 0	‡	11 6
J. Arnold. Sample 2	‡	10 3	‡	10 9
Ham River Grit Co.	10 6	11 0*	10 6	11 0*
G. Cole	11 2	10 9	11 2	11 3
York & London Ballast Co.	—	12 0	—	14 6

‡ Could not guarantee quantity in stated time.

LONDON.—For painting and repairs to Nos. 2, 3, 4, and 6, Treveca-terrace, New Southgate, for the Metropolitan Water Board:—

W. Oley	£83 6 9	Clemens Bros.	£58 10 0
Webb & Son	72 18 0	J. R. Jackson	57 10 0

LONDON.—For repairs to the reservoir keeper's cottage at Crouch Hill reservoir, for the Metropolitan Water Board:—

Wood & Son	£46 14 0	W. Oley*	£31 14 9
Clemens Bros.	46 10 0		

LONDON.—For the erection of a pumping-station, gas-producer house, and two cottages, required at the Chingford reservoir works, including the construction of the proposed new roadway from the boundary of the Board's land at Enfield Lock to the proposed pumping-station at the northern end of the Chingford reservoir works, the roads and paths around the pump and producer houses, together with a suitable gateway at the entrance to the new roadway, the road to be constructed of tar macadam with granite kerbing, for the Metropolitan Water Board:—

	With Natural Portland Stone Dressings.	With Reconstructed Portland Stone Dressings.	Artificial Portland Stone Dressings.	With Local Facing Bricks of Leicestershire.
	£ s.	£	£	£
Kirk & Randall, Ltd.	15,274 0	15,122	14,546	14,506
C. Wall, Ltd.*	14,817 18	14,666	14,054	14,023

LONDON.—For the erection of an engine-house, cottage, formation of roads, drainage, and other contingent works at Green-street-green, for the Metropolitan Water Board:—

A. Porter	£2,783 16 6
Kirk & Randall, Ltd.	2,392 0 0
J. W. Ellingham	2,186 0 0
W. F. Blay, Ltd.	2,181 16 9

LONDON.—For the renewal of the electrical installation at Blackwall Tunnel, for the London County Council:—

D. Watson & Co.	£4,464 0 0
Drake & Gorham, Ltd.	4,304 11 0½
Pinching & Walton	3,604 8 8
Tilley Bros.	3,536 12 2½
G. E. Taylor & Co.*	3,485 4 2

LONDON.—For laying stoneware ducts, repairing, etc., in connexion with tramways, for the London County Council:—

J. Mowlem & Co., Ltd.	£2,269 0 0
Reid Bros., Engineers, Ltd.	2,077 19 2
Airds, Ltd.	1,939 1 4
J. A. Ewart*	1,818 18 2

LONDON.—For supply of overhead poles required in the extension of tramways in East India Dock road, for the London County Council:—

British Mannesmann Tube Co., Ltd.‡	£137 5 1
British Mannesmann Tube Co., Ltd.‡	140 15 6
Dick, Kerr, & Co., Ltd.	168 2 0
J. Spencer, Ltd.	162 15 0
V. Watlington & Co., Ltd.	161 18 0
Clough, Smith, & Co., Ltd., Southplace, E.C.*	157 0 11

‡ Incomplete Tender.

LONDON.—For repainting superintendent's house, filth hoist and railings, at North Woolwich pumping-station, for the London County Council:—

J. H. Hodgin	£120 10	W. Harris, North Woolwich*	£116 0
Thomas & Edge	118 0		

LONDON.—For providing a parlour and store-room at the Anerley Residential School for the Deaf, for the London County Council:—

L. Kazak	£510 0	W. J. Mitchell & Son	£415 0
W. Johnson & Co., Ltd.	479 0	J. Grover & Son	412 0
W. Akers & Co., Ltd	458 0	J. & C. Bowyer, Ltd.	395 0
F. & G. Foster	447 0	F. W. Fletcher	391 0
J. Garrett & Son	425 0	H. Leney & Son	377 15

[The Architect's estimate comparable with the tenders is £389.]

LONDON.—For the formation of a hall for the girls department of the Mina-road School, Walworth, for the London County Council:—

J. Appleby & Sons	£1,152 0	Rice & Son	£895 0
W. V. Goad	1,022 5	J. & C. Bowyer, Ltd.	865 0
E. A. Roome & Co.	950 0	Triggs & Co.	859 12
J. Garrett & Son	908 0	Woodward & Co.	904 0
T. D. Leng	896 0	J. Marsland & Sons	850 0

[The Architect's estimate comparable with the tenders is £775.]

LONDON.—For supply of enamelled-iron advertisement plates, for the London County Council:—

	Price a Foot Super. and Number of Colours. 2	3	4	5
	s. d.	s. d.	s. d.	s. d.
Imperial Enamel Co., Ltd.	1 0	1 1	1 2	1 3
F. Francis & Sons, Ltd	9½	10	10•	11
J. A. Jordan & Sons, Ltd.	9	9½	10½	11
Falkirk Iron Co., Ltd.	8½	9½	10½	11½
Chromographic Enamel Co., Ltd.	8½	9½	10½	11½
Wildman & Meguyer, Ltd.*	8	9½	10½	11½

LONDON.—For the conversion of the Elliott School, Wandsworth, into a central school, for the London County Council:—

	Alterations to Buildings.	Fittings.
R. S. Ronald	£208 10 0	£480 0 0
Triggs & Co.	237 12 0	409 0 0
J. Garrett & Son	200 0 0	437 0 0
Pasterfield & English	196 0 0	437 17 0
F. & G. Foster	195 0 0	389 0 0
Lole & Co.	191 14 11	389 8 4



LONDON.—For supply of Guernsey granite paving setts, for the London County Council:—

	Price a Ton Delivered at							
	County Wharf (1,500 tons).		Deptford Wharf (300 tons).		Metropolis Wharf (1,000 tons).		Lavender-road, Poplar, Depôt (1,000 tons).	
	s.	d.	s.	d.	s.	d.	s.	d.
A. & F. Manuelle	28	3	29	6	28	3	28	9*
W. Griffiths & Co., Ltd.	28	3	28	3	28	7*	28	7
Fry Bros	28	5	27	0*	29	0	28	9
Brookes, Ltd.	28	3	28	7	29	7	28	5
United Stone Firms, Ltd.‡	28	7	28	9	28	10	29	6
Enderby and Stoney Stanton Granite Company, Ltd.	30	3	31	3	30	0	30	0
H. Woodham & Sons	34	0	34	0	34	0	34	0

‡ Not to specification.

LONDON.—For supply of sand-blasted advertisement glasses, for the London County Council:—

	Prices, each.			Discount per Cent.
	2,500. 26½ in. by 6 in. by 21 oz.	500. 23½ in. by 5½ in. by 21 oz.	800. 18 in. by 6 in. by 21 oz.	
	A. s. d.	B s. d.	C s. d.	
Caspar & Co.	1 0*	1 1*	10	—
Puch Bros.	1 3	1 3	9½*	
London Sand Blast and Decorative Glass Works, Ltd.	1 9	1 8	1 3	—
Pilkington Bros., Ltd.—				
Ruby 20/50 lots	2 3½	2 3	2 1½	2½
,, 50/100 ,,	2 1½	2 1	1 11½	
Blue 20/50 ,,	2 8	2 7	2 4½	
,, 50/100 ,,	2 6	2 5	2 2½	

LONDON.—For quadrennial survey and overhaul of s.s. *Belvedere*, for the London County Council:—

Glengall Ironworks, Ltd.	£2,179 5 0
Mills & Knight	2,088 15 0
Thames Ironworks Shipbuilding & Engineering Co.	2,087 11 0
Fletcher, Son, & Fearnall, Ltd., Limehouse, E.*	1,846 0 0

PEASLAKE Surrey).—For schools. Mr E. H. Lingen Barker, architect, 10, Pembridge-mansions, W. Quantities by Mr. G. Silvester, 7, Adam-street, Adelphi, W.C.:—

Mitchell	£2,547	Tickner	£1,450
Gibson	1,605	Fryer & Sons	1,449
Cassé	1,557	Everitt & Sons	1,440
Harrison	1,536	Goddard & Sons	1,400
Holt	1,500	Drowley & Sons	1,385
Martin & Co	1,497	Cook & Sons	1,359
Woods	1,487	Highlett & Co.	1,355
Staines & Son	1,477	Ellis, Guildford‡	1,342
Milton & Sons	1,475	Puttock	1,317
Jerram	1,470	Smith	1,284
Forster & Sons	1,467	Thorpe	1,259

‡ Accepted after the modifications.

RIDDLESDEN.—For erection of a detached house. Mr. Hartley Howarth, architect, Keighley:—

Mason: E. Turner, Bradford-street, Keighley*	£240 0 0
Joiner: J. Bailey, Laycock*.	90 0 0
Plumber: W. Wallace, Queen-street, Keighley*	61 0 0
Plasterer: A. Emmott, North-street, Keighley*	49 0 0
Tiler: W. H. & E. Walton, Lawkholme lane, Keighley*	39 18 0
Painter: W. Maxwell, Dalton lane*	8 0 0

RYTON.—For erection of Wesleyan Church Hall and classrooms, Crookhill. Mr. G. Bell, architect, Newcastle-on-Tyne:—

G. Browell	£1,168 10 0	W. H. Ayton	£1,117 0 0
E. R. Davidson	1,161 12 3	J. Fairnington	1,108 18 9
S. F. Davidson & Miller	1,158 0 0	I. Bewley	1,087 0 0
J. Walker	1,154 1 0	T. Charlton, Newburn‡	1,027 8 7

‡ Recommended for acceptance.

SHERE (Surrey).—For additions to schools. W. E. H. Lingen Barker, architect, 10, Pembridge-mansions, W. Quantities by Mr. W. G. Silvester, 7, Adam-street, Adelphi, W.C.:—

Gibson	£1,280	Milton & Sons	£990
Cassé	1,129	Highlett & Co.	980
Thorpe	1,125	Harrison	980
Mitchell	1,072	Woods	970
Martin & Co	1,041	Goddard & Son	970
Staines	1,033	Forster & Sons	952
Fryer & Sons	1,024	Ellis	938
Cook & Sons	1,015	Smith	930
Drowley & Sons	1,005	Puttock	927
Everitt & Sons	990	Jerram, East Ham*	897
Holt	990		

SOUTHEND.—For alterations and additions to the London-road School. Messrs. Cabuche & Hayward, architects, Southend:—

		Extra Terrazzo Dado.
S. E. Moss	£3,991 18 0	£272 8
C. W. Pavey	3,799 0 0	250 0
W. H. Sharpin	3,755 0 0	249 0
H. E. Campkin	3,522 0 0	264 0
J. C. Flaxman	3,513 0 0	260 0
E. Leaney	3,539 12 6	210 0
F. E. Woodhams	3,430 0 0	248 0
A. R. Whur	3,432 10 0	245 0
A. E. Symes	3,407 0 0	230 0
Davey & Armitage	3,330 0 0	239 0
F. Davey	3,091 0 0	—
E. & B. H. Davey, Southend‡	3,075 0 0	243 0
R. N. Marrable	2,994 0 0	222 0

‡ Recommended for acceptance.

STEWARTON.—For sewerage works. Messrs. Elliott & Brown, Civil Engineers, Burton-buildings, Parliament-street, Nottingham:—

R. C. Brebner & Co.	£5,877 0 0	W. Chambers & Sons	£4,736 1 8
Boyd & Forrest	5,801 8 10	Crawford Bros.	4,714 2 0
D. Gibson	5,700 10 5	I. Craig, 134, St. Vincent-street, Glasgow*	4,702 17 1
J. Urquhart	5,569 19 5	G. Chalmers	4,623 10 4
Shanks & McEwan	4,895 16 4		
H. M. Murray & Co.	4,838 15 1		

Ham Hill Stone. Doulting Stone. Portland Stone.

The Ham Hill and Doulting Stone Co., Limited (Incorporating the Ham Hill Stone Co. and C. Trask & Son, The Doulting Stone Co.).

Norton, Stoke-under-Ham, Somerset.
London Agent:—Mr. E. A. Williams, 16, Craven-street, Strand.

Asphalte.—The Seyssel and Metallic Lava Asphalte Co. (Mr. H. Glen), Office, 42, Poultry, E.C.—The best and cheapest materials for damp courses, railway arches, warehouse floors, flat roofs, stables, cow-sheds and milk-rooms, granaries, tun-rooms, and terraces. Asphalte Contractors to Forth Bridge Co. T.N. 2644 Central.

SPRAGUE & CO., Ltd.,
LITHOGRAPHERS,
Employ a large and efficient Staff especially for Bills of Quantities, &c.
69 & 70, Dean-street, Soho, W.

THE Tariff Committee of the Workmen's Compensation Insurance Companies have decided on further sharp advances in rates, laying still heavier burdens on employers. There is still, however, a strong free market: for particulars, address: The General Insurance Agency, of 166, Piccadilly, W.

OGILVIE & CO., Telephone. DALSTON 1383. Many years connected with the late firm of W. H. LASCELLES & Co., of Bunhill Row.
Amhurst Works, **DALSTON LANE, N.E.**
EXPERTS IN HIGH-CLASS JOINERY.
ALTERATIONS AND DECORATIONS. ESTIMATES FREE.

J. J. ETRIDGE, Jr. LTD.
SLATE MERCHANTS.
EXPERTS IN SLATING, TILING.
BEST WORK ONLY.
Telephone 2685 Wall, or write
Bethnal Green Slate Works,
BETHNAL GREEN, LONDON, E.

ASPHALTE
For Horizontal and Vertical Damp Courses.
For Flat Roofs, Basements, and other Floors.
The best materials and workmanship are supplied by
THE
French Asphalte Co.
Whose name and address should be inserted in all specifications.
For estimates, quotations, and all information Apply at the Offices of the Company,
5, LAURENCE POUNTNEY HILL, CANNON STREET, E.C.

EWART'S
Cures in 19 cases out of 20.
"EMPEROR"
Write to-day for Illustrated Catalogue Free to
EWART & SON Ltd.,
346-350, Euston Road, London, N.W.
Established 1834.
Telephone: 2570 North.
SMOKE-CURE

THE BUILDER

VOL. CII.—No. 3621. JUNE 28, 1912.

CONTENTS.

	PAGE
Education and Style in Architecture	747
The Architectural Societies of France: III.—Association Provinciale des Architectes Française	748
Sir L. Alma-Tadema, O.M., R.A.	749
Notes	750
Contemporary Architects and their Work: Mr. Basil Champneys (with Illustrations)	751
The Royal Institute of British Architects	756
The Architect as Arbitrator	758
Society for the Promotion of Hellenic Studies	758
General News	759
Competition News	759
Customs House, New York (with Plans)	761
Books	761
Magazines and Reviews	761
Editorial Summary	762
Meetings	762
Architectural Societies	762
Correspondence	762
The London County Council	762
Notes to Illustrations	762
Fifty Years Ago	762
Monthly Review of Engineering:—	
Immingham Dock (with Illustrations)	763
Monthly Review of Engineering (*contd.*):	
Poured Concrete Houses (with Illustrations)	765
Asbestos-Wood. A New Refractory Building Material	766
The Passing of an Ancient Bridge (with Illustrations)	766
Railless Tramcars	766
Gantry at H.M. Stationery Office Building (with Illustration)	767
Novel Suggestion for a Bridge across the Thames (with Illustration)	767
Notes	767
The Building Trade:—	
The Insurance Act.—III.	769
Builders and Fire Insurance	770
Concrete Mixers: The Roll Mixer (with Illustrations)	770
Fees for Specification	770
Land Valuation	771
Government Contracts	771
Burmese Teak	771
National Insurance Act	771
General Building News	771
Applications under London Building Acts, 1894 to 1909	772
Projected New Buildings in the Provinces	772
Westminster City Council	773
Foreign and Colonial	773
Legal Column	774
Law Reports	774
London Councils	775
List of Competitions, Contracts, etc., Open	776
Obituary	778
Patents	779
Some Recent Sales	779
Prices Current	779
Tenders	781

Illustrations.

Mr. Basil Champneys, B.A., Royal Gold Medallist, Royal Institute of British Architects.

Some Works by Mr. Basil Champneys:—

Newnham College, Cambridge: Clough Hall.

Ditto: Interior of Dining Hall.

Oriel College: Quadrangle Front, taken from South-West Corner.

University of Cambridge: Detail of the Divinity Schools.

The New Bedford College, Regent's Park.



Merton College, Oxford: New Quadrangle. (*See page* 754.)

Mr. Basil Champneys, Architect.

EDUCATION AND STYLE IN ARCHITECTURE.

THE education of architects is, at the present time, a subject of such general and vital interest that we need no excuse for reverting to it. We hope, indeed, to publish soon a short series of articles dealing with what has already been accomplished in this matter of architectural education in the British Universities and discussing the possibilities of the future. As a prelude to the consideration of the work of any particular school it would be well to deal with the subject first from a somewhat fundamental point of view.

The controversy between traditional and modern aims and methods in education, between those who put character and individuality and those who put efficiency as its primary end and ideal, is of special interest to those whose art is pre-eminently concerned with both use and beauty.

No doubt the end of education is character; but that is not to say that efficiency is a secondary aim, or that it was made so in the older or traditional methods and ideals. If separation is to be made, it was rather that efficiency came first in order of consciousness. While men aimed at efficiency in pursuit of their occupations—hunting, fighting, shepherding, ploughing, trade, the handicrafts or arts—character and individuality developed silently and unconsciously. Not in the cloister alone, whether of University or still older Abbey, but also in the towns, the fields, and on the high seas, were wrought out those qualities of character that built up England. Probably it is through this very separation and contrast of aim, in its varying phases—religious *v.* secular, classical *v.* modern, cultural *v.* utilitarian and commercial—that we miss any satisfactory national system of education, and fail, as we do, in the development of qualities—such as spontaneous activity, creative impulse and energy, imagination and social and æsthetic interest—without which efficiency is a mere matter of mechanical accuracy, and character and individuality a light under a bushel, a buried talent, or maybe a mere semblance and sham. It is not that efficiency as a primary aim is wrong, but that the aim is faulty, the mark ill-defined.

Who, for instance, would dispute that efficiency is an aim in architecture of the very first importance? And not technical and building efficiency only, but

that also which serves, and expresses, the purpose and function of buildings; that fitness, in short, which is so essential to beauty, individuality, style.

With regard to style, there is no need to prolong the echoes of old battles, or even to dispute with Mr. R. A. Cram, the author of a virile paper, whether or no, or how far, modern architects should aim "to recreate from antiquity the beauty that is primarily educational," till the new civilisation, in full tide, shall burst the "archæological shell" and bring forth its new style fully fledged. But it would seem there is need to ask whether the patient, loving, and sincere study of the beautiful work of ancient and mediæval times has not too much left out of account one of its chief lessons—that style arises, not as an ideal preconceived, but as one growing into consciousness and perfection as men strove, with the means and under the various interacting conditions of their environment, to meet, with practical efficiency, their requirements and give expression to desires and aspirations that animated them. It is thus easy to understand the failure of revivals to develop, and why they can give no more than a semblance of character to modern architecture, veiling the true one, and often even the constructive forms it should express.

Study of the "archæological shells" of the past is necessary, but not less so of the living organism of the present. Fascinated by the beauty of the former, architectural education has not sufficiently emphasised that to the growth of living style the other factor is requisite also. In the result, modern English architecture, failing to carry on its splendid traditions of the past, either of its more native Gothic or its own peculiar appropriation of the Southern Renaissance, fails also to evolve a new one; but fits to its distinctive modern plans, and forms and methods of construction, the cold mask of *soi-disant* revival or Renaissance, sometimes intrinsically beautiful, academically logical, archæologically correct, but, for the most part, still-born, soulless; expressive of little or nothing save perhaps a grandiose importance, real or assumed, or the desire or possession of wealth. It is not only, nor mainly, the fault of the architects. Probably every age must express itself in the forms it deserves. Yet whatever truth may be in the common apology, that an age of mechanical utilitarianism and commercialism has no call nor inspiration to artistic expression, it savours somewhat of feebleness. As if architecture had nothing to do with utilities! As if there were no good even in machinery, or in commerce and industry; no problems, structural and æsthetic; no ideals, social, industrial, or civic, that architecture might pick out of the baser elements and carry onwards by its subtle influence of imaginative work!

It will be said that this knowledge of the living organism of society, of present conditions of life and work, is matter for general education. That is quite true. It is also true that the difficulty voiced in a recent article in the *Builder*, of selecting only students with the right personal qualifications, is by no means confined to the architectural profession. With the corresponding difficulty of selecting a profession or occupation it is a general experience, and points to the failure of present general educational methods, traditional or modern, in the "leading out" and incipient training of the individual aptitudes and potentialities of the pupils. The majority of boys leave school with but little definite knowledge of the living world of work around them or clear consciousness of bent or calling to their proper share in it.

It seems obvious that each would make the better citizen, able to find and do his part, if instructed, for instance, and, so far as possible by actual observation, conversant with each aspect—historic and biographic, antiquarian, æsthetic, and practical, mechanical and industrial, ethical and economic, home, social, civic, political, etc.—of his own town, and its relations to others and the country beyond. But if this be true in general, how especially so for those whose work it is in collaboration with other arts, and the subordinate crafts, to order, shape, and reconstruct cities, towns, and villages. The architect as master builder must perfect himself not only in his own specialised means of expression, but also in knowledge of what is to be expressed—that is, if he is to be indeed an artist, something of the modern seer and prophet we hear of, and not merely a virtuoso dealing in the academic abstractions of a static culture, which cannot entirely express this highly dynamic and analytic age. And as this method enters, as it is entering, into general education there will grow up a common fund of knowledge and interest in which architecture will find alike truer expression, appreciation, and inspiration. Then perhaps style, which, like character in life, is not to be applied, will reappear, the resultant and summation of many efficiencies, whose aim is true and beautiful building, and not merely wage and profit making.

It is not a matter of returning to traditional methods in education, or of reviving traditional forms in architecture; still less is it a matter of ignoring these and consciously aiming at originality.

Our task is to shape our scheme as the fullest possible preparation for life and work, in a civilisation infinitely more complex than any which preceded it. To effect this it is not enough to study, however perfectly, the scientific, mechanical, and utilitarian attainment of modern times, the beauty and culture of the past, though both are necessary. We must study them in relation, and see that, as the past evolved the present, so also the present in all its complexity involves the past. We shall thus understand both the more truly, and discern what is of permanent or merely of evanescent value in each; we shall also be the better able to see and estimate the incipient future.

So shall we compass a system and methods of education reintegrating its twin aims of practical efficiency, and of a living culture that make for character, individuality, and life truly lived.

PARISH CHURCH, HADLOW DOWN.

The rebuilding of this church is being carried out under the direction of Mr. G. Fellowes Prynne, F.R.I.B.A., and the builders are Messrs. Miller & Selmes, of Eastbourne.

THE ARCHITECTURAL SOCIETIES OF FRANCE:

III.—ASSOCIATION PROVINCIALE DES ARCHITECTES FRANÇAISE.

IN our previous articles we have dwelt upon the constitution and *raison d'être* of the two most important architectural societies in France—the Société Centrale des Architectes and the Société des Architectes Diplômés par le Gouvernement. We have pointed out further that France claims the most ancient descent in organisations of the kind, the first dating back to the Académie Royale d'Architecture, founded at Paris under Louis XIV., by Colbert, on December 31, 1671. The Académie was disbanded by a decree of the French Revolutionary Government, and it was many years before an architectural society again became established on a lasting and satisfactory basis, although there were meanwhile numerous tentative attempts at corporate organisation. Napoleon, who found time to elaborate a code for the Théâtre Français, never apparently found time to draw up the constitution for an association of architects. Meanwhile the necessity for such a body became more and more manifest; the qualified man was suffering from the competition of the unqualified man; he had to suffer from the competition of a sort of professional adventurer who claimed qualifications for an art and profession which were open to the first man whose interest it might serve to assume the title of an architect. When, however, in 1840 the Société Centrale was started, its object was not to close the profession, but to guide the public, and to serve the higher interests of architectural art. It sought to include among its members men of satisfactory attainments, and to exercise over them a certain salutary control. From time to time committees were established and schemes formulated with a view to extending the society's influence and establishing an obligatory diploma for all practising architects; but, after an examination of the question of a closed profession in all its issues (a process which lasted many years), the matter was finally allowed to drop and has not been revived for a decade at least. The second most important society in France the Société des Architectes Diplômés, was not founded until 1877, and was not incorporated until 1902. The students who have passed successfully through the École Nationale d'Architecture of the École des Beaux-Arts are alone entitled to enter its ranks. The membership of the Société Centrale has practically remained stationary for some years, while the younger society has forged steadily ahead, and in the course of time it is not unlikely that it will take the leading position. Both societies insist upon definite attainments on the part of its members: the distinction between the two bodies existing in the fact that, while the Société Centrale does not definitely recognise any particular school of architectural training, or indeed admit that such a training is in itself a sufficient guarantee of competence, the Société des Architectes Diplômés, on the other hand, pins its faith to the excellence of

the studies at the Beaux-Arts as being all that is necessary to turn out a fully-fledged professional man. Down to the present time the work and objects of the two societies have proved in a large degree complementary; they co-operate harmoniously for the general good of their art; it is certainly, however, an added distinction for a member of the younger body to obtain admission to the ranks of the veteran society. In each case, it is sought to maintain the standard of its members and to close its doors to architects who are not *véritablement digne de ce nom*. By keeping this object in view they command the respect of, and possess influence with, the Government, municipal authorities, and private clients. We need make no apology for briefly recapitulating the aims of these societies, because they involve principles which have some bearing on certain movements on this side of the channel.

The Association Provinciale des Architectes Français, the third most influential society in France, and last, so far as our review is concerned, forms, with the two other societies, also an integral part of the architectural organism. It is not an association composed of individual members, but of individual societies; it was founded in 1889. The provincial architectural societies of England, as well as some of the colonial societies, are, as we know, allied to the Royal Institute of British Architects, and in looking back on the history of the Institute one sees that in Great Britain we have arrived at a more practical solution than France of the same problem; we have, at any rate, centralised action. Instead of being directly affiliated with any of the leading French metropolitan societies, however, the provincial societies have combined for corporate action and organised a central office for themselves. The group altogether is made up of thirty societies. The central administration consists of a President, four Vice-Presidents, a Treasurer, Secrétaire-Général, four secretaries, and an Archiviste-Bibliothécaire, all of whom are elected for three years, and are not eligible for re-election to the same offices until after an interval of three years. The objects of the Association are effected through its publications and by means of papers and lectures, exhibitions, congresses, competitions, departmental committees, and so on. A general meeting, composed of delegates from the various societies, is held at least once a year to receive reports, to promote and to criticise the acts of the administrative body, and generally to investigate and promote the affairs and policy of the Association. The by-laws can be modified or altered on the motion of the administration, or of at least thirty members representing three departmental societies, and at least a third of the affiliated societies must be represented at any general meeting at which such a motion is put to the vote.

These are, however, mere items of official constitution and procedure. Let us look for a moment at the general programme of the Association. Its scope is amazing; nothing is omitted. It covers æsthetic, scientific, archæological, and professional aspects of architecture with a completeness beyond the possibility of enumeration in a mere article. We can only attempt loosely to describe its general tendency. So far as archæology is concerned, for instance, the Association seeks to promote the preservation of ancient monuments; negotiates with public authorities or private owners in order to prevent the destruction or mutilation of such monuments, or co-operates with existing societies formed for the same purpose. It assists in classifying and verifying the history of older buildings in all parts of the country. Under the same category of work an especially useful part of the Association's effort is connected with the metropolitan and provincial museums. Catalogues of these are collected and indices provided with the object of co-ordinating special works of interest, which are thus made more readily available for the purposes of study. A certain inspection is maintained over objects of this kind, so that their care may not be jeopardised. In connexion with modern work the Association affords assistance to contemporary exhibitions, and promotes others in districts where it may be useful to stimulate interest in architecture; while the composition of juries, awards, and other matters incidental to the holding of such *salons* also form part of its scheme.

To come to matters of scientific interest, the nomenclature, classification, history, and analysis of materials, natural or manufactured, peculiar to certain districts, together with their price, method of use, advantages or disadvantages, are tabulated: a system which should not only be of service to the stranger who comes within the gates of the aforesaid localities, but also to the architect on the spot. A review of local methods of construction, their advantages or disadvantages, forms also part of this portion of the programme; as well as the compilation of reports on the utility of modern inventions concerned with materials, construction, hygiene, scaffolding, and other matters incidental to the art and craft of building. The programme of the Association has also its sociological aspect. It takes into consideration the education of the workman, which extends to his social and moral well-being, to insurance against accidents, and so on. Other divisions and sub-divisions of the programme are devoted to questions of law, local regulations, ownership of designs, and many matters in a state of transition connected with professional practice.

We have only so far indicated certain portions of the two first divisions of this elaborate code. The characteristic gallicisms employed in the "Duties and rights of an architect towards art, the nation, the State, his family, his masters, and his *confrères*, his clients, builders and (last but not least) himself" need only be referred to in passing, as the ebullition of a well-known formula in the French way of looking at things. Among other matters, however, prescribed for discussion is the question of an obligatory diploma—a point which, as in the case of the Société Centrale, still remains at issue. Legal equity in regard to certain aspects of architectural practice is to some extent provided for by the creation of a fund to serve in law actions of general interest to the profession which it may be thought advisable to take or defend. It is also sought to establish a legal basis for professional charges, which at present depend largely upon the adventitious arbitrament of this or that judge.

It may be gathered from the above extracts that the programme of the Association Provinciale is comprehensive, that it fulfils an extremely useful purpose, and that it provides, as it were, a sort of handy manual for the "compleat architect" in all his relations. Do not let us, however, forget one of its minor items, entitled "*Pseudo Architects*—ways and means to diminish their number and to weaken their action"—from which it will be seen that the French architect, with all his politeness, does not hesitate to call a spade by its right name.

SIR L. ALMA-TADEMA, O.M., R.A.

THE art of painting has lost one of its most able and consistent exponents of the last fifty years by the death of Alma-Tadema: the art of architecture has lost one of its most cultivated admirers, and certainly its most brilliant delineator. His friends have lost a most genial, loyal, and lovable companion. Full of honours and years he has passed away, having attained everything that most artists and most men strive after, yet there can be few who do not feel that he has passed away too soon. His amazing vitality, his humour, his faculty of meticulous accomplishment remained those of a man in the prime of life rather than of one who had more than achieved the Psalmist's span of years. Esteemed by his brother artists, probably no painter of his time, no writer of his time, has to the same extent added so greatly to the public apprehension of classic life and art, of the forms of classic architecture. In saying this we do not think that we are saying a word too much. In the vagaries in points of view and attitudes to which higher criticism has been subjected during the last twenty years there have been moments when the art of Alma-Tadema has undergone, just as in the case of the art of Byron and Dickens, depreciation. That is perhaps the fate of all artists, whatever their *métier* or degree. In the early years Ruskin, with his sympathies for Renaissance and Gothic forms, wrote of him discourteously; in later years there have been critics who have underrated the capacity of the artist largely on account of the cordial and genial manners of the man. That is to say that he was not an artist who was either a protagonist of a new art movement or influenced by "movements" of any kind, any more than the fame that came to him influenced his character in his personal or social relations. Miss Helen Zimmern, who knew him with some degree of intimacy, said that he had no art theories; she ought to have said that his theories were forgotten in his devotion to them, or she ought to have seen that all his work was the expression of a singularly consistent art theory. Alma-Tadema loved to show his work, but he

did not care to talk about the impulses, other than anecdotal or technical, which moved him in the creation of it. He was in this respect rather like Tennyson, who once greeted an interviewer and fervent admirer of his poetry, who wished to discuss his mental processes, to a discourse on beer. After all, is it not the men of smaller calibre, and of a more self-conscious creative gift, who care to talk of the psychological emotions of the hen in the operation of the hatching of the egg? Whatever Alma-Tadema's ultimate position may be in the history of art, we have no hesitation in saying that he will always be counted among the most important æsthetic influences of the Victorian era. His influence was certainly outstanding in the cultivation of taste for certain phases of the beauty of design and form of ancient life which were appreciated by very few. He made concessions to the sentiment of his time—it would be probably more just to say that he sincerely felt it; but his sentiment was not of the kind which creates the merely subject picture. It was "a-lover-and-his-lass" kind of sentiment, if you like, or it was the sentiment of "motherhood" (at least in one of his pictures); but these or other elemental and, we daresay, eternal expressions of human emotion did not form more part of his art than his love of form and a certain mannered delicacy of colour. His art was popular on account of its sentiment; it was also popular on account of the artist's subtlety in the understanding of the texture of various marbles (surely a joy in itself); these things could be readily grasped by everyone; but such sentiment and such appreciation of the texture of a given material played only (to our thinking) a small part in the composition of his pictures, because they also possessed, in construction and form, higher and more abstract qualities of beauty. Alma-Tadema was not psychological, not at any rate in the personal sense in which we understand the term to-day—that is to say, his art was a detached, not merely a personal, expression of his moods. It was, we think, Leonardo who said that no artist was capable of producing more than seven masterpieces; we believe that we could readily indicate that number in Alma-Tadema's work which would include others than those which are most generally familiar in reproduction.

NOTES.

Methods of Business and Architecture.

THE business man has again cropped up in the question of the Registration of architects. It is the inevitable herring drawn across the path. "It is now generally accepted as an axiom," we read, "that the architects of Great Britain who are in favour of Registration outnumber those who are not so disposed in the proportion of eight to one. But the minority includes many of those who have attained prominent positions as able artists and successful practitioners. Amongst these able artists are some who adopt business methods which in the professions of law and medicine would cause their names to be erased from the register. Naturally, therefore, they are strong opponents of Registration for architects." We consider the premises, illustrations, and conclusion of this argument to be equally mistaken. In any case, a man who is at once an able artist and successful practitioner can very well allow such criticism to go by the board, and certainly if such men are against Registration their opinion ought to carry more weight than those of less proved capacity. The business of architecture is the production of fine buildings, and a man who is absorbed in this view of his art may often be inattentive in smaller matters. But he rarely is. We do not know who the writer of the article in question has in mind, but our experience of the merely business methods of our prominent architects is probably not less than his, and we cannot agree with him. Not only as a rule, but almost inevitably, the type of mind that can create good architecture is more competent to consider the higher aspects in regard to architectural policy than that engaged first of all in comparatively the elementary problems concerned with business methods. In the same article we read that the Institute must "recognise and placate the Society of Architects if Registration is to obtain the approval of Parliament." But why should this question arise? When the Institute promotes a Bill it will be in the interests of the profession as a whole in which the Society will be necessarily included, and not in the interests of any one section.

Freedom of Labour and in Life.

MR. L. MARCH PHILLIPPS, in an article in the *Contemporary Review* entitled "The Gothic Ideal," commences by pointing out once more his favourite distinction between the two possible ways of approaching the consideration of a great architectural style. The one, aridly technical and professional, deals with the characteristic forms of a group of buildings as interesting in themselves; the other, full of interest and human significance—this is Mr. Phillipps' way—would see, in the essential characteristics of a style a symbolic epitome of the age which produced it. He goes on to indicate his conception of the Gothic ideal that "may be stated in a sentence, though it is not to be exhausted by much thought It consisted in that theory of free labour, the chief condition of which was that the control and direction of every craft should be in the hands of its own craftsmen, and that, not only as regards the supervision of its members, but as regards also the quality of the work accomplished and the standard of excellence to be maintained." He thereupon proclaims the adequacy of that equation which has it that material, by craftsmen, equals the product, asserting that the influence of x, patron or consumer, is clearly malign because it tends to modify the action of that perfect pair, material and craftsman, which, left to itself, would result in the production of objects fashioned to manifest the inherent capacities of the material employed. Mr. Phillipps, that is to say, seeks again, in his own way, to convert us to doctrines with which we are all made sufficiently familiar, and to which, as far as he goes, we are already converted, by the forensic splendour of Ruskin and the lucid fervour of Morris. And he concludes inevitably by pointing the moral to statesmen—for them it chiefly concerns though they be so sadly unaware of its truth as yet—that political liberty is only a meagre half condition of the well-being of a nation. This, too, is a fact of which those who think more highly of Ruskin as a "political economist" than as an æsthetic teacher, are well aware.

The Craftsman and His Work.

THUS the second half of his paper is all plain sailing. But uneasiness, or perhaps we should frankly say disagreement, sticks in our consciousness with regard to the implication of his premise. For the implication inseparable from the assumption that it is best for the craftsmen to be left alone to fashion his material in accordance with its inherent potentialities—best, we must suppose him to mean, for the hope of a great style—is assuredly that the values of a style are to be appraised, relatively, according to the measure in which the qualities of the materials employed are displayed. Which is, we fear, absurd. And there is the further fallacy involved that the material with which all craftsmen—we do not confuse the issues by including the artist in this category—have to deal consists solely of the wood, iron, stone, or whatsoever it may be. Which can never, even under the most primitive conditions conceivable, be the case. Before the craftsmen can attempt anything that shall have some of the quality implied in the term "craft," as opposed to manufacture, he must have, besides a knowledge of the use to which his product is to be put, some conception, conscious or unconscious, of the shape it is to assume and, in cases, of the decoration to be employed. This shape, these decorative forms are relative, however distantly, to the culture, to the civilisation, that is to say, of the age; so that the spirit of that civilisation becomes part of the material in which the craftsman has to work. Now all is indeed well, we readily grant, when the craftsman is on all counts in accord with his patrons, his customers, or, in current phrase, the consumer. But that beatific condition has seldom been attained. At other times, when the craftsman falls short or when his masters progress in some purely cultural direction, x the master, consumer, patron, reassumes control. It is x the variable quantity, the malign influence, as Mr. Phillipps would have us believe (malign to-day we admit), that determines the quality of the product of our equation in the last resort, and is to be given credit, therefore, in the great periods, even by Mr. Phillipps, equally as it is condemned to-day.

Mr. Stokes's Portrait.

IT is the custom at the Royal Institute of British Architects to decorate its walls with the portraits of their Past-Presidents by eminent artists. The portrait of Mr. Leonard Stokes, by Mr. William Orpen, was presented to the Institute on Monday evening, on the eve of his retirement from the Presidential chair. Mr. Orpen will find himself represented

in good company on the walls of the Institute, with Sargent, Orchardson, Alma-Tadema, and many other eminent artists, and this latest example of his work will certainly stand the test and add to his reputation. But Mr. Orpen has not sought to solve the same problem as his brother artists; he has obviously not considered the President in his official aspect, but in the light of a much greater intimacy. Mr. Stokes is, in short, painted in his dressing-gown. The garment adds colour which makes for pictorial value, but it seems a little inconsequent for the collection of which it is to form part. We have nothing but admiration for the fidelity and artistic effectiveness of Mr. Orpen's work, but if portraits painted for official purposes are to descend to the familiar, where is the artist going to stop?

CONTEMPORARY ARCHITECTS AND THEIR WORK:

MR. BASIL CHAMPNEYS.

THE occasion of the presentation of the Royal Gold Medal affords fitting opportunity for a few reflections upon the work of the recipient, in the present instance a man whose name has been as familiar as their own to a generation of English architects. That his work for forty years or so past has attained a high standard is attested by the mere fact that with the whole range of practising architects and *savants* to select from, the choice of the Royal Institute has fallen upon one who makes no other appeal—apart from his contributions to pure literature—than through his executed buildings, and, moreover, one who is not so much as numbered amongst their own ranks. This bears testimony to the broad-minded policy of the Institute, which has ever been followed in this connexion of recommending to the Sovereign the name of a man of distinction, irrespective of his rank, architectural creed, and even nationality. Inspiring, indeed, are the thoughts which flash through the mind as one scans the list of Gold Medallists from 1848, when the award was given to the immortal Charles Robert Cockerell, until 1911, when the distinguished foreigner, Dr. Wilhelm Dörpfeld, was honoured. Now Mr. Basil Champneys figures in the list. Nor could it well be otherwise if due recognition was to be meted out to one who has never sought honours. "The reward of good works is like dates, sweet and ripening late," as they say in the East. But if the works are "good," the reward will surely come. Fame, indeed, usually comes to those who are thinking about something else.



[*Photo. by Davis*

Fig. 1. Mansfield College, Oxford.

Mr. Basil Champneys, Architect.

In considering the work of an artist it is as refreshing as it is rare to find that the leading characteristic of that artist is his versatility, his mastery of design in manners, which at first sight might appear to be opposed one to another. It is a commonplace talked of every day, written about in any magazine article and book dealing with modern architecture, that traditions in the building arts are broken; that building, which all through the ages has portrayed with amazing truth the thought, culture, and civilisation of the peoples who reared it; that architecture, the Mistress Art, is to-day captive, and led blindfold along a tortuous route, reflecting little more than the restless change of a restless age, and the idiosyncrasies of the few who hold the leading chairs at any particular moment. Thus, although we are no longer fighting "the battle of the styles," we have our little coteries of the elect, who on this side of the street shudder at the sight of a classic column beneath this cloud-ridden sky of ours, while an equally enthusiastic circle on the other side of the street point at a cusped window-head the finger of scorn. But great artists will have none of this. Men like Mr. Champneys do not pose: they speak in brick and stone in the manner that they feel most expressive of what they have to say in view of the environment, the uses and the conditions underlying any particular building which they are called upon to erect. And so they belong to no particular "school," but keep their armour bright to champion any cause that comes within the range of their ideal. And who shall tilt at that ideal in a land which boasts something of the best in each phase which at some time or another has swept over Europe? However sensible one may be of the just proportions and extreme refinement of the best of the English neo-Classic work of the XVIIIth and XIXth centuries, one nevertheless sooner or later chafes at the boundaries within which one's admiration is confined.

Mr. Champneys, conscious of the voice within him, has penned many beautiful thoughts: his "Quiet Corner of England," written many years ago, is still widely read, and his "Life of Coventry Patmore" forms one of those subtle links in the chain which unites Architecture with Poetry. In design, he has harked back to earlier models than those favoured by most of his *confrères* to-day—in short, to those afforded by the best examples of our own XIVth and XVth century Gothic



Fig. 2. Newnham College, Cambridge: Peile Hall.

Mr. Basil Champneys, Architect.



Fig. 3. Newnham College, Cambridge: Fellows' Buildings.
Mr. Basil Champneys, Architect.

and by the least affected and least pretentious of our own matured Renaissance. He has worked now in the one manner, now in the other, but the message has always been direct; the spirit permeating the one being of the purest Gothic, and that of the other an equally whole-hearted Renaissance. While avoiding a slavish rendering of any particular period of the past, there is nevertheless that scholarship underlying his simplest building which indicates sympathetic study of the best old examples of its class. The variations on the old work are not obtrusive. They do not appeal first and foremost by reason of their originality, but they strike that unerring note of interest without which scholarly work is apt to be cold, lifeless, and meaningless in an age of progress. And working with materials which have been common to all time, on the kinds of buildings which for hundreds of years have changed least in their essentials, such as colleges, churches, and dwelling-houses, what more can the architect of to-day achieve than to carry on the best traditions, as near as may be from the point at which our forefathers unwillingly dropped them, with just that touch of individuality which, all unconscious of forced effect, expresses itself quite naturally and indeed inevitably as the outcome of the conditions imposed?

Beyond all, we see in the work of Mr. Champneys, as clearly as in that of the best artists of our day, no timid presentation of a limited point of view, but a robust expression relying freely upon every variety of contrast, in projections and recesses, in varied heights, and light and shade applicable to the materials used, and to the impression which the designer seeks to impart. In contemplating Mansfield College, Oxford (Fig. 1), for instance, we are conscious of that ease of execution and skilful massing of parts which one feels in the presence of the best old work of its kind. The same fundamental principles underlie this composition that are found in such buildings as those at Newnham College, Cambridge; in all else they are the poles apart: and until one realises the breadth and depth of the mind of a great architect one is surprised that it is possible for the same man who feels all the subtle delicacy of Gothic detail, and in whose veins the beauty of Gothic lines vibrate, to approach "design" in the totally different manner which is at once evoked by an emulation of the Renaissance.

It would seem that the atmosphere in which Mr. Champneys lived his early years has, in a measure, determined his sphere of work in after life. The son of the Rev. William Weldon Champneys, Dean of Lichfield, a scholar of Charterhouse, and in due course a graduate of Trinity College, Cambridge, he was from the start imbued with a love for literature and for collegiate and ecclesiastical architecture rather than with the desire to rear public buildings or to line the streets of our cities with blocks of shops and offices. Not that the scope of his executed work has been confined to these two classes of building, albeit they predominate, for a glance through the list of his executed works reveals many houses, not a few libraries and museums, and such semi-public buildings as the Indian Institute, Oxford, and the Royal Palace Hotel, Kensington. It is nevertheless in his buildings associated with, or forming an integral part of, the older Universities and with ecclesiastical buildings large and small that we feel that Mr. Champneys has found his *métier*. The mere enumeration of



Fig. 4. King Edward VII. Grammar School, King's Lynn: General View.
Mr. Basil Champneys, Architect.

them is no slight undertaking, and we propose to dwell upon but two or three here, referring our readers to the more exhaustive list which will be found at the end of this appreciation.

Newnham College, Cambridge, is a monument in itself. Begun in 1873, when Mr. Champneys cannot have been in practice for more than a few years, and added to from time to time by the building of hall after hall, until as recently as 1910, when Peile Hall was completed, it presents to-day a series of large houses, each complete in itself, but linked up with the rest, so as to present an extended elevation of very considerable dimensions, varied in design from end to end, yet in unison, depending as it does for cohesion on the spirit that animates the whole design. Quiet, dignified, and, above all, cheerful, it is difficult to imagine a setting more suited to life in a woman's college. And we do not think it will be disputed that the architect, who by such straightforward methods as have been adopted here gives pleasure and comfort to the hundreds who come and go year by year, has served the State well, inasmuch as the influence of the immediate surroundings upon the dwellers in any institution is consciously or unconsciously very real, and much greater than is generally acknowledged to-day.

An exterior view of Clough Hall, together with an interior of the dining hall, will be found on one of our plates, while in Fig. 2 is a view of Peile Hall, with one side of Fellows' Buildings on the right, and in Fig. 3 a part of the latter block facing on to Sidgwick Avenue. These speak for themselves; but the handling of the interior of Clough Hall, which serves for a variety of college functions, is particularly happy with its skilfully-arranged gallery and beautiful plaster ceiling of unusual form.

Another women's college, somewhat less in extent but not in importance, is Bedford College, which is now in course of construction in Regent's Park. We will not venture to offer any remarks upon works in progress, but we are fortunate in being able to reproduce the large pen-and-ink sketches which, if allowance be made for certain modifications which will inevitably suggest themselves as the work proceeds, gives some idea of the general character of this latest addition to London's educational centres.

From 1873 to 1912 is a wide span, and one thinks of Bodley and Bentley, of Mr. Norman Shaw and Mr. T. G. Jackson, as forming a little band of workers to which Mr. Champneys by right belongs. They have done, and some of them fortunately are still doing, fine service to the cause of architecture, and it is to Oxford and Cambridge, no less than to the principal cities, that one turns for evidences of their skill. At Oxford, Mr. Champneys has carried out extensive



Fig. 6. Reredos, Manchester Cathedral.

Mr. Basil Champneys, Architect.

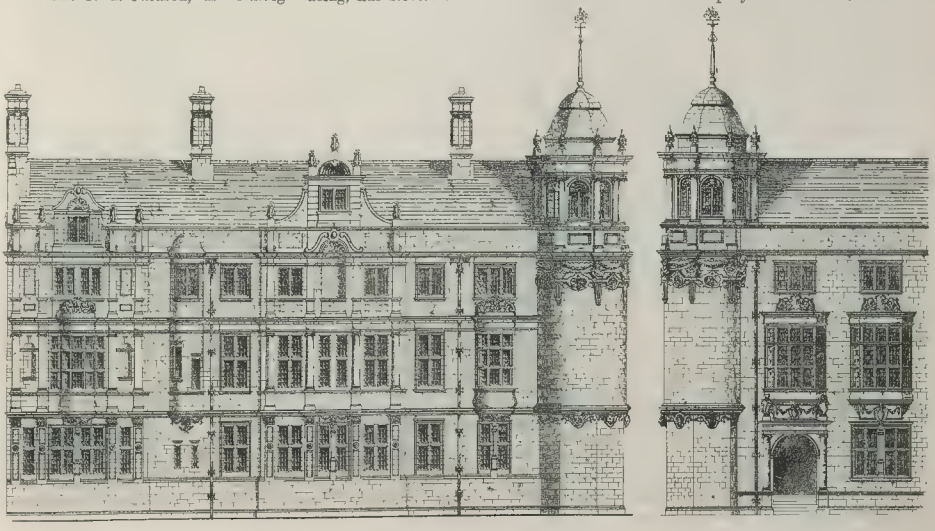


Fig. 5. Indian Institute, Oxford.

Mr. Basil Champneys, Architect.

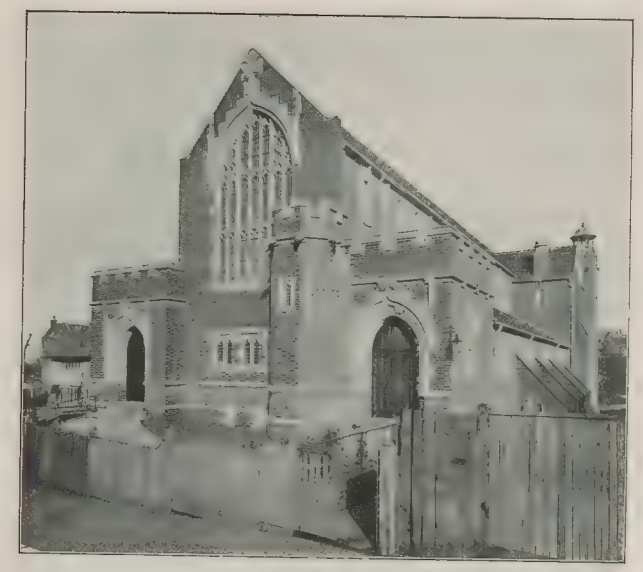


Fig. 7. St. Luke's Church, West Hampstead.

Mr. Basil Champneys, Architect.

additions to New College, Somerville, Lady Margaret and Merton Colleges (page 747), while he has recently made extensive additions to Oriel College, in a phase of free Renaissance which is not altogether pleasing to certain of the more devout worshippers at the shrine of their Alma Mater. A view taken from the quadrangle of this new part of the College is given on one of our plates.

As with colleges so with schools, the list of Mr. Champneys's achievements is a long one. He has built at Winchester and Harrow, and with equal success at Mill Hill, Hendon, at the Bedford Grammar School, at King's Lynn (Fig. 4), and in too many other localities to enumerate here. Allied with these educational buildings are the libraries and institutes, of which the more important are the Indian Institute, Oxford (Fig. 5), built about 1885, and the John Rylands Library, Manchester, a most notable Gothic building, held in high repute throughout England. Here one is impressed not so much by the masterly handling of Gothic detail as by the arrangement of planes and the grouping of masses in the restricted front elevation. How well the small octagonal towers tell above the comparatively plain wall surfaces beneath; and above them again, at exactly the right distance and of the right height, are the two square towers composing admirably against the sky.

In laying stress on this collegiate and scholastic tendency noticeable in the career of Mr. Champneys we must not lose sight of the large number of churches that have fallen to his lot to build or to make additions to. Here, again, we are confronted with a list wherein figure many designs which have been seen upon the walls of Burlington House year by year. In point of number Stafford leads with alterations and additions at Tamworth, Wednesbury, Alrewas, and Tatenhill, besides the erection of Slindon Church, near Eccleshall, a most interesting little country church. In Kent, at Bexley and Matfield; in Lancashire, at Upholland and Stonefold; in Derbyshire, at Chilcote, other ecclesiastical work may be seen, to say nothing of the considerable additions to the cathedral of Manchester, with its wealth of exterior detail and its beautiful choir and reredos (Fig. 6). But this has been visited by most architects at some time or another, and we have, by preference, selected for illustration two smaller churches, which are probably not well known. The first is the exterior of St. Luke's, West Hampstead (Fig. 7), which, to a modified degree, is permeated with the same rich flavour that characterises all his ecclesiastical work. The austerity of a Street or a Scott is not attempted; rather are we conscious of a sensuous beauty such as Sedding, for one, knew how to impart. The other church, that of St. Michael and St. Andrew, at East Greenwich (Fig. 9), is a characteristic suburban one. The main disposition of the nave arcade, with one constructional bay where two are more customary (see plan, Fig. 8), was suggested by the peculiar nature of the subsoil, which called for as few points of support as practicable. It shared the great consideration sacred to its class—unfortunately not to that class alone—of the provision of the largest possible number of seats at the lowest possible cost consistent with its use and purpose. In spite of this restriction, severe always and doubly so in a church, this interior is good. It would be well if a tour of the suburbs revealed many worthy to be classed with it.

Fortunate, indeed, in these days is the architect who is able to maintain control, not only over the structure, but over every detail and fitting connected with it. Mr. Champneys has many times succeeded in keeping the design of the whole of the subsidiary works in his own hands, but unfortunately, in this particular instance, he was unable to carry out what is often the most important feature in a church, namely, the altar, and in justice to him this must be borne in mind in considering the view of the interior reproduced herewith.

To house-work space will not permit more than a passing reference. Were it not that Mr. Champneys has done even better in other fields, one would be tempted to say that here he excels. Restrained, when circumstances demand it, as in the case of St. Bride's Vicarage, Fleet-street (Fig. 10), beneath the shadow of Wren's steeple; fanciful when unrestricted, in the open country, Mr. Champneys's houses are always "domestic," and it may be said that a nice sense of fitness, a straightforward solution of the problem in hand, an unaffected use of honest materials are what one finds wherever building work has been entrusted to him, whether it be at the Universities, in the towns and cities, or in the open country.

LIST OF WORKS BY MR. BASIL CHAMPNEYS.

University Buildings.

Oxford.—Indian Institute, New College (Robinson Tower, students' rooms, and Tutor's House), Merton College (new buildings), Mansfield College, Oriel College (new buildings), Somerville College (library); Lady Margaret Hall (additions).

Cambridge.—Divinity and Literary Schools, Archæological Museum, Newnham College.

London.—Bedford College for Women, Regent's Park.

School Buildings.

Harpur Trust School for Girls, Bedford; Bedford Grammar School (new buildings in square); Harrow School (Butler Museum and classrooms); Mill Hill School (chapel); Winchester College (Quingentenary Museum); King's Lynn Grammar School; Wilmcote; Eelbrook Common; Tanderidge; Johnson street, Stepney; Tamworth (Cookery School); St. Ebbe's, Oxford; Holy Trinity Schools, Oxford.

Rectories and Vicarages.

St. Bride's, Fleet-street; Haslingden; Okewood; Yately; Tatenhill; St. Luke's, West Hampstead; Wootton; Wortley.

Churches.

Manchester Cathedral (reredos and high altar, Victoria porch, new library, vestries, and other work); St. Luke's, Kentish Town; St. Peter-le-Bailey, Oxford; St. Mary Star

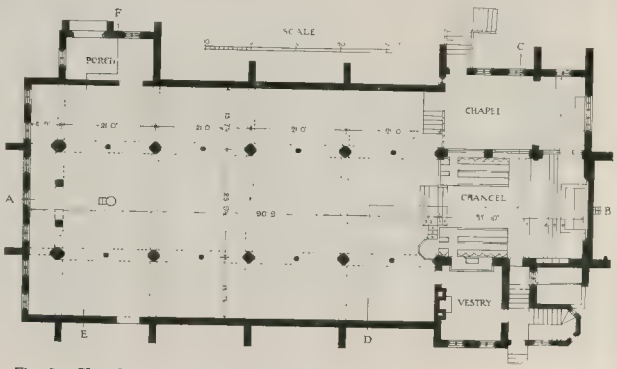


Fig. 8. Church of St. Michael and St. Andrew, East Greenwich: Ground Plan.

Mr. Basil Champneys, Architect.



Fig. 9. Church of St. Michael and St. Andrew, East Greenwich.

Mr. Basil Champneys, Architect.

of the Sea, Hastings; Havering-atte-Bower; Matfield, Kent; Glascote, Warwickshire; Stonefold, Laneside, and Blackley, Lancs; Slindon, Staffs; St. Luke's, West Hampstead; St. Andrew and St. Michael, East Greenwich.

Houses.

70, Ennismore gardens, S.W.; Banacle Edge, Witley, Surrey; Moxley, Holmbury; Haileybury, Bournemouth; house in Grange-road, Cambridge; Crowborough Wood, The Grange, and Matfield Gate, Matfield, Kent; Hall Oak, Oak Tree House, Richford Lodge, and 45 and 47, Frognal, Hampstead; house at Lynton, Devon; house at Bracknell, Berks; houses on Ascot and Sunningdale Estate.

Alterations and Additions.

Churches.—Tatenhill, Tamworth, Wednesbury, and Alrewas (Staffs); Bexley, Kent; Upholland, Lancs; Chilcote, Derbyshire; Okewood, Surrey; St. Dunstan's, Stepney; St. Bride's, Fleet-street; St. Alfege, Greenwich; St. George's, Camberwell; St. George-the-Martyr, Southwark; St. Mark's, Kennington; Colnbrook, Barton-under-Needwood.

Various.—Poyle Park; Heron's Ghyll; Wortley Hall; Gatton Cottage, Surrey.

Miscellaneous.

John Rylands Library, Manchester; Blue Hart Company's Office, Blue Hart-court, E.C.; Swan-chambers, Swan-alley, E.C.; Royal Palace Hotel, Kensington; studio at Shere, Surrey; Fawcett Memorial, Embankment; All Saints' Memorial, Cambridge.

D

THE ROYAL GOLD MEDAL.

THE last meeting of the present session of the Royal Institute of British Architects was held on Monday, at No. 9, Conduit-street, Regent-street, W., Mr. Leonard Stokes, President, in the chair.

The minutes of the last meeting having been taken as read,

The announcement was made by Mr. E. Guy Dawber of the decease of the following members :—

E. J. Milner Allen, elected Associate in 1882 ;
Lewis Angell, elected a Fellow in 1864 and placed on the list of retired Fellows in 1902;
A. E. Twells, Licentiate ;
W. E. Wallis, Associate, elected in 1882.

The Fellowship.

The President said that most Fellows of the Institute had passed through an examination and special test, but the Council had the right in exceptional cases of electing distinguished men without examination and test, and he had to announce—and he did so with much pleasure—that the Council had elected as a Fellow a gentleman who was the third generation of a distinguished family of architects—*i.e.*, Mr. George Gilbert Scott, whose grandfather was Sir George Gilbert Scott, his father being Mr. Gilbert Scott. As they knew, Mr. Scott was the designer of Liverpool Cathedral, and those who had seen the portion already erected would admit that it was extraordinarily fine, and they would all agree that the Institute was doing honour to itself by adding Mr. Gilbert Scott to their ranks.

The Royal Gold Medallist.

The President having received members attending for the first time since their election, said :—

"We meet to-night, as you know, to do honour to our very distinguished *confrère*, Basil Champneys, by handing to him the Royal Gold Medal which, on our recommendation, has been conferred upon him by our Royal Patron and King—George V.

The Royal Gold Medal, it is not necessary to remind you, is the highest honour—architecturally speaking—that can be bestowed upon a member of our profession, and we have only to recall the names of former recipients to find that they belong to men who, if alive, are honoured, respected, and admired by all of us; or, if dead, are acknowledged to have been the great men of the age they lived and worked in, and it is only necessary to mention such names as Cockerell, Barry, Donaldson, Smirke, Tite, Owen Jones, Scott, Fergusson, Street, Sharpe, Penrose, Butterfield, and Bodley, as amongst those so honoured by their Sovereign to prove the statement—if proof is necessary.

On these occasions it is usual for your President to remind the meeting of the main features connected with the medal and its history, and to say a few words about the career of its recipient; we had better, therefore, follow that course to-night.

In the year 1848 Queen Victoria, who had about ten years previously graciously consented to become Patron of our Institute, resolved to grant and confer annually, at the recommendation of the Institute, a Royal Gold Medal for the promotion of architecture. The award has been made without interruption in each succeeding year—except in the year in which Queen Victoria died—to some distinguished man; not always an architect, as we readily admit that there are others who by their works can and do promote architecture—for example, literary men, who by their books and pens greatly advance the cause we have all so much at heart, and they have on several occasions received this medal. Again, the recipient need not be an Englishman; Italians, Austrians, Frenchmen, Germans, Dutchmen, and Americans have all received the medal. So far, however, it has not gone to an inhabitant of one of our great colonies, not because excellent work is not being done there, but perhaps because they are mostly of such vast extent, and so far off, that we on this side have not been able to get sufficient information to enable us to submit the name of a Colonial to our Sovereign. I hope, however, now that travel is getting every day easier, and inter-communication more complete, that it may not be long before the medal goes to one of the great Dominions beyond the seas.

And now we turn to the gentleman upon whom it has pleased his Gracious Majesty to bestow the medal this year. Though not a member of this Institute, and consequently not quite so often seen in this room as we could wish, yet Basil Champneys, at any rate in his work, is well known to all of us; and those whose memories can carry them back, say, a quarter of a century or more, will with one accord proclaim that his distinguished career has been followed throughout with interest and admiration, and that the honour now conferred upon him, backed up as it is by the unanimous vote of this Institute, and confirmed by the King, is but a well-merited distinction added to a brilliant though unostentatious career.

Basil Champneys is the son of William Weldon Champneys, Dean of Lichfield, and was born in 1842. He was educated at Charterhouse, where he was a Foundation Scholar and Gold Medallist, and Trinity College, Cambridge, where he took an honours degree in Classics. He studied architecture under John Prichard, of Llandaff, and began practice in 1867, and has kindly read papers before this Institute on more than one occasion. Some of his works are illustrated on the walls to-night, and it is naturally to his executed works that we turn when thinking of him as an architect, and to his published works when thinking of him as an author. Fortunately for us he has done a good deal of work both at Oxford and Cambridge which is easily accessible.

At Oxford we find : The Indian Institute ; the Robinson Tower and new buildings at New College ; Mansfield College (it is not often that a complete college is erected from the designs of one man, and this is consequently perhaps one of Mr. Champneys' best-known works, and it always receives the admiration it so justly deserves) ; new Quadrangle and Warden's House at Merton College ; and new buildings for Oriel College—one of his most recent works.

At Cambridge : The Divinity and Literary Schools and all the buildings of Newnham College.

Other public buildings of a collegiate character may be seen at Bedford, where we find the Harpur Girls' Schools and Grammar School buildings in the square ; and at Harrow, where the Butler Museum and new classrooms may be seen. Also at Winchester we find the Quingentenary Museum ; at King's Lynn, the Grammar School ; and in Regent's Park, the Bedford College buildings (now in course of erection).

Again, at Manchester may be seen one of Mr. Champneys' perhaps largest works, viz., the John Rylands Library, and also the reredos,



Fig. 10. St. Bride's Vicarage, Fleet-street, E.C.

Mr. Basil Champneys, Architect.

Victoria porch, library, and vestries at the Cathedral.

Amongst churches erected from his designs are: St. Luke's, Kentish Town; St. Peter le Bailey, Oxford; St. Mary Star of the Sea, Hastings; St. Luke's, West Hampstead; St. Andrew and St. Michael, East Greenwich, etc. And houses: Bannacle Edge, Witley; Crowborough Wood, Matfield, Kent; and St. Bride's Vicarage, Fleet-street, etc.

Of course, this list might be very much amplified, but enough examples have been mentioned to show the varied character of his work and to prove the uniform excellence of all that comes from his hand.

As hinted just now, Mr. Champneys, besides being a distinguished architect, is also well known as a writer, possessing genuine literary power—a gift, unfortunately for us, not by any means common amongst architects. Books are produced by architects no doubt, but there are very few of us who can really write, and when we find one who can—as Basil Champneys can—we should like him to feel that we are aware of the fact and much appreciate his powers. Anyone who has read his "A Quiet Corner of England," which dealt with that delightful district round Rye, Winchelsea, and Romney Marsh, written some thirty or forty years ago in a pleasant leisurely way, with an appreciation of English XVIIIth-century vernacular rare in those days, will agree that it is an admirable little work. He has also written on William of Wykeham; but no doubt his best-known work, and probably, too, the best thing he has done, is his "Life of Coventry Patmore," which appeared in two stout volumes in 1900, and is in its way a masterpiece in biography, written with fastidious care and most sympathetic appreciation of his subject. This book alone is enough to make a reputation, and with these great gifts, and being so widely read, and knowing his way about so really well—if the expression can be forgiven—it makes one almost regret—if one is allowed to get so near a regret on an occasion like this—that he has not applied himself more to the critical treatment of architecture in his writings.

Having dealt with the medal, and also briefly with its recipient in his dual capacity of architect and author, it only remains for us now to hand the medal to Mr. Champneys, with the earnest hope that he may live for many years to wear it, and that while he wears it he will remember that his Sovereign, in bestowing this well-merited token of his Royal approval on him, did so on the unanimous recommendation of the members of this Institute, who one and all have the greatest admiration for the work and character of Basil Champneys."

The President then invested Mr. Champneys with the medal, amidst applause.

Mr. Champneys, in response, said: "I must thank the President for the very kind and appreciative words he has spoken of my career and work, and express my sincere gratification at the great and distinguished honour which the Institute has conferred on me. That this recognition should have been paid to me, an outsider, carries with it a satisfaction not altogether dissimilar to that which I have felt in having been employed far more frequently at Oxford than at Cambridge, my own Alma Mater; nor can I fail to recognise the generosity implied in the award. This tribute on the part of the Institute is, in fact, but a more conspicuous mark of the courtesy and consideration I have always received from that body, and to which I have responded to the best of my ability. The President and Council have invited me to assist in their endeavours to place architectural education on a sounder footing; to read papers and take part in discussions on questions of art; and some years ago paid me the compliment of asking me to read a paper on a building which I had recently erected. I may say, too, that however gratifying may be recognition by the general public, which I do not wish to depreciate—it is indeed necessary if it be only to offer opportunities and to "bring grist to the mill"—no artist can fail to attach an altogether predominant value to the judgment of those who are actually versed in the practice of his own art.

An occasion like the present seems to justify a brief retrospect of the phases and tendencies which have been manifest during a period of not much less than half a century which I have spent in the study and practice of architecture, and a still briefer anticipation of the problems which must present themselves in the future. I may claim to figure as an old soldier in the army of artistic endeavour, *jam rude donatus*, presented with the emblem of warfare accomplished—with indeed this reservation, that I regard the medal not as a symbol of retirement, but as an encouragement of future effort—at any rate so far "emeritus" as to have the right of passing in review the battles which have been fought in my day, disclaiming at the same time any such preponderant part in them as was exercised by "Bill Adams" on the battle of Waterloo.

When my architectural studies commenced Gothic was in its heyday of popularity. I was nurtured in the strictest school of the Pharisees, whose dogma was: "No salvation out of the XIIIth century." It is true that even within the limits of this rigid and exclusive school there were divergent tendencies. Ruskin was using the influence of his unrivalled eloquence towards the adoption of Italian examples, while others advocated French characteristics. There seemed a danger that the lessons of our national Gothic might be neglected. It seemed, too, as though an exclusive preference were often associated with an imperfect comprehension. The genius of Gothic architecture must often have wondered at the fruit engrafted on it: "*Miratus non sua poma.*" It is indeed worth remark that the most complete and scholarly studies of mediæval architecture have been produced since the vogue of the style has passed. The measure of exclusiveness was the ruthless fervour which consumed all which failed to conform to a Procrustean standard: the measure of ignorance was the misunderstanding of many important principles and precedents; the result of the two combined was the ruin of many of the most valuable monuments of the very style which was the object of adoration. An antidote to, or at least a palliative of, some of these imperfections was the work of Butterfield, which showed a true insight into the essential spirit of Gothic architecture; I can recall the overpowering impression of, as it were, a new revelation, which All Saints', Margaret-street, made on me in my school days. Such insight was combined with strong and original creative power, while Bodley, with somewhat similar endowments, was beginning to demonstrate the potentialities of purely English style.

Meanwhile a rather later school was resuscitating the latest phases of Gothic, showing the capabilities of half-timbered work in domestic, and of the XVth century, our one specially English style, in ecclesiastical building. The original orthodoxy had been shaken, discredited partly by the abuse of precedents, partly by its inadaptability to modern uses, partly perhaps by a sense in the public of *toujours perdrix*, and the way was open for new tendencies to creep in. The mixed styles of the Low Countries, the English work of the XVIth, XVIIth, and XVIIIth centuries, the French Renaissance, all found their advocates, while these in turn appear, so far at least as secular building is concerned, to be yielding to a more correct and scholarly study of classical examples, so that in my own time fashion seems to have come full circle.

It is useless to lament efforts in the past, apparently fruitless, but which may nevertheless have led to an increased insight into the principles which underlie all phases of art, nor is there need to regret the tendencies of the present. These are not indeed surprising, seeing that, somehow or other, the classical spirit seems less remote from our ideas and civilisation than that of the Middle Ages, and if exclusiveness of appreciation is to be deprecated, coherence and concentration of purpose is a condition favourable if not essential to the welfare of art.

There are, however, certain problems already presented to architecture which must severely tax ingenuity and invention in the immediate future. Our art has been defined as that which "makes construction beautiful," but commercial considerations, entailing economy and speed, are leading to the extensive use of a method by which metal construction is clothed with an external facing practically independent of it. In the absence of any organic relation between structure and external appearance it is hard to see how the principle of this definition can be complied with. Similar influences dictate that the ground floor of commercial—a majority of town buildings—must show an unbroken expanse of glass, but a superstructure apparently carried on an unsubstantial material can scarcely fulfil the primary conditions of architectural integrity.

I have mentioned these problems not with any view of suggesting their solution—indeed I may congratulate myself that I have been quit of them so far, and may leave them to others—but recognising that they have to be reckoned with by a younger generation unless a large proportion of necessary buildings are to be permanently banished from the domain of legitimate art. Let us hope that the talent, which undoubtedly exists, may prove equal to obviating the necessity of such a fatal exclusion.

Once more I would express my thanks to the President and the Institute who have conferred on me this most welcome honour."

Portrait of the President.

Mr. J. W. Simpson said it was with great pleasure that he rose to fulfil the duty placed upon him of unveiling the President's portrait and in offering it on behalf of the subscribers as a gift to the Institute. The portrait was a characteristic one, by Mr. William Orpen, who unfortunately was not present to receive their congratulations, but the artist had produced an admirable work of art worthy to be placed beside those other portraits by distinguished painters like Sargent, Orchardson, Alma-Tadema, and others of Past-Presidents which adorned the walls of the Institute. The Institute was justly proud of its portraits, and that of their present President maintained the splendid standard of achievement of their painters. That part of his (the speaker's) duty he fulfilled with particular pleasure, but the second part—*i.e.*, that of moving a vote of thanks to the President for his services during the past two years—he performed with less satisfaction, for their gratitude for benefits received was tempered with regrets by the thought of losing their benefactor. It was true they did not nowadays place their Past-Presidents at once upon the dusty shelves of memory, for they retained them upon the Council; but after two years of work their Past-Presidents did not attend very often at the meetings of the Council. It was thirty-four years since his friendship with the President began in the Royal Academy schools, and he and the President had studied under such men as Mr. R. Norman Shaw, Alfred Waterhouse, and others. How easy work was then, and what admirable things they invented! But how difficult it all seemed now! He and the President entered the Institute in the same year, but, while he had to pass a painful examination, the President was elected upon those merits which they all knew. The work which Mr. Stokes had done for the Royal Institute of British Architects was very great, and it was no light duty that a President accepted when he undertook to carry their flag abroad and direct their Councils at home. Those who had seen the President at Council meetings only had little idea of the immense amount of work carried on behind the scenes, and the increasing amount of time which had to be devoted to it, and he sometimes wondered how long the Institute would be able to command the services of such men as they wanted as Presidents, having regard to the enormous demands made upon the President. Fortunately public spirit was not lacking, and men were still forthcoming to shoulder the burden for the good of the profession. He supposed that no President ever vacated the chair without the private conviction that he had failed in fulfilling the intentions with which he took up the work; but the failures of honest men were the foundations on which their successors built, and in the course of a rather long experience he (the speaker) had never met a man with more pellucid honesty of purpose than their President. During the President's two years of office the membership had increased by leaps and bounds, and the Town Planning Conference over which he presided resulted in architects being recognised by the public once and for all as the proper persons to be consulted in the development of cities. During the same period the ownership of the architect in his artistic conceptions had been placed by Parliament on the same footing as with painters and sculptors, and the new Charter and By-laws had come into operation. The Board of Architectural Education, with wide-reaching powers, had also been set up, and the School of Architecture at Rome, for which they had worked for years, had become an accomplished thing. The duties of President were exacting and arduous; they would be intolerable if they were not appreciated by the members. Their gratitude was his reward,

and he asked them to show their appreciation by their applause.

Mr. J. S. Gibson appropriately seconded the motion, which was heartily agreed to.

The President, in reply, accepted the portrait of himself on his own behalf and on behalf of the Institute, explaining that it was at Mr. Orpen's request that he sat in his dressing-gown. He also suitably acknowledged the vote of thanks proposed by Mr. Simpson.

The session was then brought to a close and the meeting terminated.

THE ARCHITECT AS ARBITRATOR.

IT is unfortunate for those who are concerned with building contracts that cases involving their interpretation are not more frequently and more regularly reported. In a country where, as here, law reporting is left to chance, the explanation is comparatively simple. As a general rule, building cases are long, dull, and uninteresting. They involve nothing sensational, and are therefore neglected by the daily papers. Further, as each building case involves the discussion of one or more clauses in a particular contract the law reporters generally leave it alone. Although the *Justice of the Peace* has recently shown a tendency to report building cases, important decisions are sometimes unrecorded.

The case of Roberts *v.* Hickman, a report of which has recently been published in a second supplement to "Hudson's Building Contracts," is a useful example of a decision which might have been altogether lost had it not been for the industry of Mr. Hudson. It involved a principle of the first importance in relation to the architect in his position as arbitrator. The facts were very simple. The plaintiffs were suing for the balance of their account for erecting buildings under a contract which was in the usual form. The answer of the employers was that the architect's certificate was a condition precedent. To this the builders replied: "The architect, in withholding his certificate, has not been acting fairly between builder and building-owner. It follows, therefore, that the Courts should allow us to proceed without the certificate."

In the event the House of Lords, which finally decided the case, enumerated the following principle:—

"Where an architect in a quasi-judicial position, *e.g.*, a certifier, does not preserve that attitude of judicial independence needed and required of him to discharge his duties (though he may not be guilty of fraud or collusion), he is no longer fit to be a judge; and in the event of his acting in the interests of the building-owner, or by his directions, the building-owner cannot in such circumstances reply upon the architect's certificate as a condition precedent to payment, or as an adjudication binding upon the builder."

It is important (if the true value of this decision is to be realised) to understand the kind of conduct on the part of the architect to which exception was taken.

Here are some extracts from the letters:—Architect to building-owner: "There is no doubt they (meaning the builders) are entitled to their certificate of practical completion, as the building is now finished and they are giving up possession." Same to same: ". . . . As the builder is entitled under the contract to a certificate, I must, of course, give it to him. . . . I am not issuing any other certificate until the account has been issued and agreed. At the same time, I must express my opinion that I think you are wrong in not agreeing to the certificate I proposed to give, namely, 500*l*." Architect to builder: "I regret I cannot enclose certificate, my clients' instructions being that the certificate I next give you is to be a final one, including for a complete settlement of the work done, into which I shall be prepared to go after Easter. . . . Had you not better call and see my clients, because in the face of their instructions to me I cannot issue a certificate, whatever may be my own private opinion in the matter?"

Founding upon these letters, the builders contended that the architect had really abrogated his functions and had ceased to exercise his proper function between the parties.

Lord Justice Fletcher Moulton, in the Court of Appeal, said:—

"The misconduct on the part of an architect in allowing himself to receive instructions from one of the parties, and to act in that party's interest, goes to the status of the architect. It makes him incapacitated to act as judge, and it is obvious that that affects his decision on every point, and not only on the point on which you can show that he has taken a direction from either side. He is no longer fit to be a judge, because he has been acting in the interests of one of the parties, and by their direction. That taints the whole of his acts and makes them invalid to whatever subsequent matter his decision is directed." In the House of Lords the Lord Chancellor said: "I agree with what Lord Justice Fletcher Moulton said, but would like to add this: It is not, in my opinion, a case to which the terms 'turpitude' or 'fraud' are apt. I think the real error of the architect was that he mistook his position; that he meant to act as a mediator; that he had not the firmness to recognise that his true position was that of an arbitrator, and repel unworthy communications made to him by the defendants. It is undoubted that the defendants, Messrs. Hickman, tried in this respect to lead him astray in their own interests."

The moral is that the architect should be extremely careful about the way in which he expresses himself when writing to either party about the question of certificates.

SOCIETY FOR THE PROMOTION OF HELLENIC STUDIES.

SIR ARTHUR EVANS, F.R.S., presided on Tuesday, at the Rooms of the Society of Antiquaries, Burlington House, over the annual general meeting of the Society for the Promotion of Hellenic Studies.

MR. G. A. Macmillan (Hon. Secretary) read the annual Report, which stated that the most important outside piece of work accomplished under the auspices of the Society during the past year had been the Report of the Committee on the position of Greek in education. The Report made references to the work of the Society for the Promotion of Roman Studies and of the Schools at Athens and Rome. The statement of accounts for the year showed that the expenditure had exceeded the income by 31*l*. The cash balance at the closing of the accounts stood at 701*l*., as against 740*l*. last year. The names on the roll of membership comprised forty honorary members and 915 ordinary members, as against 949 ordinary members last year. The subscribing libraries now numbered 203.

On the motion of the Chairman, seconded by Sir Edward Pears, the report was adopted.

The President, Sir Arthur Evans, took as the subject of his address the persistence of Minoan and Mycenæan elements in Hellenic life, and said that Greek civilisation could no longer be regarded as an *enfant de miracle*. Its roots lay in the older indigenous culture—the Minoan or its later Mycenæan offshoot. Discovery after discovery which the Greeks attributed to themselves could be traced back to their prehistoric predecessors. Summing up the most recent results of researches in the field of Minoan archæology, the President said that the evidence was now clear that from the earliest Minoan Period to the latest there was no break in continuity, and the same must be said of the course of Mycenæan civilisation in Greece, in its origin a purely Minoan creation. The wall-paintings had now supplied us with living representations of the physical aspects of the race which maintained themselves unchanged throughout and were in absolute contrast to any type of Northern invaders. Thanks to the recent discoveries made by the German archæologists at Tiryns of a series of Mycenæan wall-paintings, the record of this old Ægean type could be carried down throughout the whole course of the earlier and later palaces. It was the same at Mycenæ itself. Till the break-up of the Mycenæan dominion in the XIIth century B.C., there was no place for an independent Greek population. Yet the influence of this earlier civilisation on Hellenism could hardly be overrated. Attention was called to striking survivals in religious art, of which the newly-discovered pediment sculptures of the early Doric temple in Corfu afforded an interesting example. The central figure and confronted animals was simply an inheritance from the Mycenæan arrangement. A libation vessel in the shape of a lioness's head found at Delphi, similar to those of the palace shrine at Knossos, showed that the religious foundation there went back to Minoan times. In Crete the instances of religious survival were still more remarkable, and the cult of the Cretan Zeus had finally been transferred to "Christ the Lord." The intensive absorption of Minoan elements had, no doubt, been facilitated by the juxtaposition of Greeks with the older stock for considerable periods and by the bilingual conditions thus resulting. It seemed probable that the primitive Arcadian Greeks had lived in a subject position in the Peloponnese, through, at any rate, a large part of the period of Mycenæan domination. When, on the break-up of this dominion, the Arcadians, then in possession of Laconia, sent out, not later than the XIth century B.C., a colony to Cyprus, we find them already thoroughly penetrated with the old Minoan religion and carrying with them the cult of the Dove Goddess. This fact alone points to long anterior influences.

The poems of Homer belonged to a time when iron was already beginning to supersede bronze for cutting purposes. Mycenæ itself had been long overthrown and its civilisation was already decayed. How, then, is it that in the Homeric poems we find traces of an acquaintance with the courts and palaces of Mycenæan dynasts and with the masterpieces of Minoan art? The explanation in Sir Arthur Evans' opinion lay in the bilingual conditions that preceded the Homeric age. The traditions of an earlier epic—of which illustrations are actually found in Minoan paintings and reliefs—had been in part at least taken over in a translated form, and adapted and reset to the honour and glory of the Achæan race. The personality of Homer himself was only enhanced by this view of his work. It was shown that certain epic passages and incidents had been illustrated by Minoan artists some five centuries before Homer's time. An anticipation of the episode of Scylla attacking a boat was shown to have been represented as early as the XVIth century B.C.

In conclusion, the President pointed out that over and above the direct survival of Minoan and Mycenæan elements in Hellenic life there were at least some traces of a process of revival in the domain of art akin to that observable in Renaissance Italy. A series of early Greek coin-types, notably those of Eretria, seemed to have been directly taken from Minoan gems, and the types of an ivory signet of about 400 B.C. found in Western Crete seem to have been literally borrowed from the signet of some Minoan personage, and represented the costume and armour in vogue a thousand years earlier.

The Hon. Auditors, Mr. Macmillan and Mr. Clay, were thanked for their services on the proposition of Sir J. Sandys, seconded by Mr. F. E. Thompson.

Dr. T. Ashby (Director of the British School at Rome) called attention to the fact that from October 9 to 21 there will be two Congresses in Rome. The Third International Congress of Archæology would meet from October 9 to 16, and there would be twelve sections, dealing with all branches of archæology and the organisation of archæological studies. The archæological exhibition in the Baths of Diocletian would be specially reopened for the Congress. The second Congress which immediately followed was the Tenth International Congress for the Study of the History of Art, which would specially deal with the relations of Italian art to other countries from early Christian to modern times. There would be four sections into which the period of Italian art would be divided.

ROMAN CAMP, AMBLESIDE.

The National Trust invite contributions to a fund of 4,000*l*. in respect of an option of purchase, granted to the Trust for six months, of 20 acres, known as Borran's Field, at the northern end of Windermere and close to Ambleside, forming a scene of great natural beauty. Part of the land has recently been excavated for building purposes, but the owner will suspend operations for six months to come, with a view to the purchase for the Trust, and will give 200*l*. to the fund. On the land is the Roman fort of Borran's Ring, which belongs to the system of roads and blockhouses established in the Lake country, and excavations during the past thirty years have revealed many relics and vestiges of the Roman occupation of the fort and the locality.

GENERAL NEWS.

A Girtin "Discovery."

Messrs. Ernest Brown & Phillips have discovered an interesting collection of hitherto unknown water-colour drawings by Thomas Girtin, and they will be included in their forthcoming exhibition of "English drawings and water-colours, with special reference to the art of Thomas Girtin," which opens to-day at the Leicester Galleries, Leicester-square. All the drawings are in a fine state of preservation as they have never been exposed to the daylight.

Decoration of Olympia.

Messrs. William Whiteley, Ltd., who secured the contract for the decoration of Olympia for the International Horse Show this season, completed the contract within seven days. Among the work carried out was the installing of 5,000 electric lights and 100 arc lamps in the arena. In the Royal terrace and private boxes 5,000 yds. of marbling have been built.

Indian Archæological Department.

The primary function of the Department is the conservation of monuments of historic and architectural interest under the Ancient Monuments Preservation Act, but exploration is undertaken so far as means and opportunity permit. In Bombay about 2,000*l.* was spent last year in repairs to the caves at Elephanta and Junnar and to ancient buildings at Bijapur. In Burma measures were taken to preserve further buildings and sculptures. The excavations of the prehistoric site at Yathemyo were continued. Interesting examples of the Pyu script was discovered. In Madras explorations were carried on in three centres, and five monuments were declared "protected." The Muhammadan monuments at Agra and Fatehpur-Sikri are undergoing conservation. A list of ancient monuments in the Punjab, the preparation of which will occupy a number of years, was begun. Excavations were continued among the important Buddhist ruins of Takht-i-Bahai in the North-West Frontier Province and Kasia in the United Provinces. Various ancient sites around Muttra have been explored, with interesting results.

The Channel Ferry.

In commenting upon the project for connecting England and France by a Channel ferry at the time when Dover was proposed as the British terminal, we pointed out the absolute lack of space at Dover for accommodation of the kind required. It is satisfactory to note, therefore, that in its new form the scheme provides for the establishment of the ferry between Newhaven and Dieppe, a route not only avoiding the difficulty presented by Dover, but also that due to the fact that Calais Harbour is unsuitable for steamers larger than those at present in use. The ferry would undoubtedly be much appreciated in France, but nothing can be done towards the realisation of the project unless the railway companies concerned are able to obtain concessions from the French Government.

London Water Supplies.

Pursuing the wise policy of the old water companies, the Metropolitan Water Board have continually added to the storage capacity of the great system under their control, with the result that the Metropolis is amply supplied with water of excellent quality, notwithstanding the ever-increasing growth of population. As a provision for the future the Board are now about to commence the construction of reservoirs authorised by the Act passed last year. These include two large reservoirs at Littleton and one at Stanwell. At present only one of the former is to be commenced and the others will follow in due course. The three works mentioned will safeguard supplies on the northern side of the Thames for the next two decades. The southern districts also require additional storage facilities, but on a much smaller scale.

The Rebuilding of Piccadilly.

In the House of Commons Mr. Soames, on Thursday last week, asked the Secretary to the Treasury whether the building adjoining the Piccadilly Hotel on the east side, which has been set back, is on Crown land; and, if so, whether he is aware that a front is now being erected which, instead of completing the design of an eminent architect for the elevation to Piccadilly, is of a totally different character, completely discordant with the remainder of the block; whether drawings of this front were submitted to any Government department and approved by them; whether it was the original intention of the Government that, in the rebuilding of Regent-street Quadrant and the block of Piccadilly east of the hotel, there should be a similarity of treatment of the whole façade; and, if so, why that intention has been abandoned; and whether the Government in future will exercise sufficient control over the buildings erected on Crown land to prevent the recurrence of such an unhappy result.

Mr. Masterman, in reply, said the building referred to stands on Crown land held under a lease granted before the hotel was commenced. The Commissioners of Woods had had prolonged negotiations with the various parties concerned, but they are advised that they have no power to prevent the re-erection of the old front. It was the intention that in rebuilding the Quadrant there should be similarity of treatment throughout, but objections had been raised to the original design and the question is now under consideration. No definite design was even settled for the buildings in Piccadilly east of Nos. 19 and 20. In normal cases the Commissioners had full power to control buildings erected on Crown lands. In this instance there is no new building, but only the re-erection of an old façade, removed when part of the former premises were thrown into the street.

Wider Scope for Housing Schemes.

An amendment has been inserted in Clause 4 of Sir A. Griffith Boscawen's Bill for the better enforcement and application of the Housing of the Working Classes Act, which gives local authorities wider powers with reference to the use of land that in the first instance was acquired for the erection of working-class dwellings. The amendment originated in the fact that the London County Council possesses 225 acres at Tottenham only 40 of which have been used for workmen's dwellings. The intention is to give powers to utilise the remainder for houses of a larger type. We think that, as Mr. Burns pointed out, it is most undesirable to create "communities of the rich and parishes of the poor," and that a wider discretion may well be given to the local authorities. We see no special reason for supposing that in this instance the ratepayers' money will be used for the erection of expensive houses for the professional classes which Mr. Booth, who opposed the amendment, seems to consider is "trading of a virulent type."

Church Building Society.

The Incorporated Church Building Society held its usual monthly meeting on the 20th inst., at the Society's house, 7, Dean's-yard, Westminster Abbey, S.W., the Rev. Canon C. F. Norman in the chair. Grants of money were made in aid of the following objects, viz.:—Building new churches at North Finchley, St. Barnabas, Middlesex, 80*l.*; Porthcawl, All Saints, Glam., 150*l.*; Cardiff, St. Stephen, 200*l.*; Loughborough, St. Peter, Leics., 125*l.*; and Winton, St. Luke, Bournemouth, 240*l.*; rebuilding the nave of Speenhamland, St. Mary, Berks, 150*l.*; and towards enlarging or otherwise improving the accommodation in the churches at Groton, St. Bartholomew, Suffolk, 50*l.*; Mutford, St. Andrew, Suffolk, 20*l.*; North Sunderland, St. Paul, Northumberland, 25*l.*; Radnage, St. Mary-the-Virgin, Bucks, 75*l.*; Rathmell, Holy Trinity, Yorks, 10*l.*; Slade Green, St. Augustine, Kent, 2*l.*; and Tyne Dock, St. Mary, Co. Durham, 30*l.* Grants were also made from the Special Mission Buildings Fund towards building mission churches at Frimley Green, St. Andrew, Surrey, 50*l.*; Greenwich, St. Peter, Kent, 30*l.*; and Silfield, St. Helen, Wymondham, Norfolk, 20*l.* The following grants were also paid for works completed:—Beckenham, St. Barnabas, Kent, 50*l.*; Preston, St. Matthias, Brighton, 110*l.*; Plumstead, Church of the Ascension, Kent, 100*l.*; Skirbeck Quarter, St. Thomas, Lincs, 100*l.*; Upwood, St. Peter, near Huntingdon, 10*l.*; Stoke St. Milburgh, St. Milburgha, Herefords, 15*l.*; and Haslingden Grane, Lancs, 25*l.* In addition to this the sum of 205*l.* was paid towards the repairs of fourteen churches from trust funds held by the Society.

Housing Reform.

The twenty-first annual national conference of Charity Organisation Societies was opened on the 21st ult. in Manchester. Mr. J. S. Nettlefold, in a paper on "Slum Reform," said that most of the poor were bound to live in the centre of the city and in meagre accommodation, but they need not live in slums. If the better-off classes were provided for on the outskirts, it ought to be possible to have decent accommodation in the centres. The two main difficulties to contend with were—(1) the condition of the houses and (2) the habits of the tenants. These acted and reacted on each other, and no plan of reform would be satisfactory which did not deal with both sides of the problem; otherwise the untouched side would tend to nullify any improvement in the other. Miss Octavia Hill was the first to put this principle into practice, and her work had been a light to guide all subsequent reformers. But he proposed to deal chiefly with what had been his special work in Birmingham—the reformation of old and insanitary property. The Birmingham Corporation had adopted the policy of calling upon owners to repair their property at their own expense instead of at the expense of the ratepayers. The policy met with much opposition from some owners of slum property, who endeavoured to get off with the least possible expenditure. The methods adopted by these owners were known as "slum-patching," whereas the Corporation insisted on thorough repair. Slum-patching was bad business both for landlords and tenants. Mr. Nettlefold described in detail the alterations which the Birmingham Corporation required to be made in groups of insanitary houses. In the years from 1902 to 1911, he said, the number of houses dealt with was 5,790. Of these 2,819 had been rendered habitable, 2,139 demolished, 80 converted into workshops, and 156 were now undergoing repair; 147 closed courts had been opened to the streets, involving the removal of 358 obstructive buildings. All this had been accomplished at a total cost to the ratepayers, including compensation and administration, of 26,085*l.*, which worked out at less than ½d. rate, and with the majority of property owners and their agents the Corporation were on the best of terms. Birmingham could not claim the credit of being the first to attempt slum reform in this way. She got her inspiration from Hull, Manchester, and other cities. But in some directions she seemed to have gone further than other places, and her work had encouraged others to extend their operations.

Memorial to Alexander Anderson.

A memorial to Alexander Anderson, the Scottish poet, better known as "Surfaceman," has been erected in the village of Kirkconnel, the place of his birth. The memorial is built of Gatelaw Bridge red freestone, and is 14 ft. in height. In the centre has been placed a bronze medallion of the poet, executed by Mr. H. S. Gamley, A.R.S.A., with this inscription: "Alexander Anderson, 'Surfaceman.' Born 1845. Died 1909. He sleeps among the hills he knew." The monument stands in a picturesque spot near the village churchyard.

COMPETITION NEWS.

A list of current Competitions is printed on page 776.

Port of London Offices.

The designs of Mr. Robert Atkinson, Messrs. Bowden & Wallis, Mr. Edwin Cooper, Messrs. Lanchester & Rickards, Mr. J. R. Truelove, and Mr. E. W. Wray are due to be sent in on Monday next. Sir Aston Webb's report on the final competition will be awaited anxiously by the competitors and with interest by the rest of the profession.

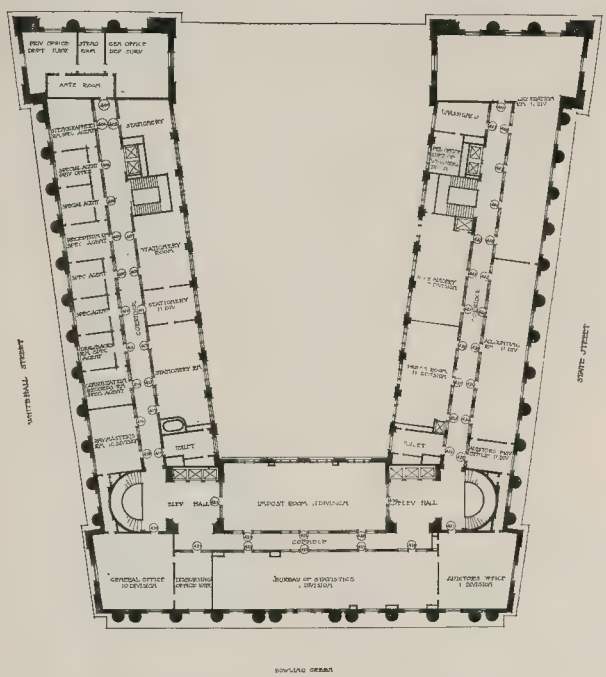
Public Offices, Lymington.

The first premiated design in this competition is by Messrs. Newby Vincent & Findlay Smith, Prudential Buildings, Above Bar, Southampton. The second premiated design is by Messrs. Aldridge & Thomas, Hinton Chambers, Bournemouth. Mr. R. F. Gutteridge, A.R.I.B.A., was the assessor.

Mural Decorations, Crosby Hall: Additional List of Awards.

The following awards have been made in addition to those announced in our last issue (p. 722):—

Church of St. Jude-on-the-Hill: Hampstead Garden Suburb.—Miss Mabel Esplin is the



United States Customs House, New York: Third Floor.

Mr. Cass Gilbert, Architect.

winner of this competition. The building is by Mr. Lutyens, and 50*l.* was available when the conditions were published.

Sutton Valence School, near Maidstone, Kent.—Mr. George Haghe Day is the successful competitor. The new building is by Messrs. Adams & Holden, and the Governors voted 25*l.*–50*l.* for the execution of an approved design.

Stencil Pattern for Dado Border.—5*l.* 5*s.* was offered anonymously for a stencil pattern of a lively figure-subject. Mr. T. A. Godfrey has been declared the winner of the prize.

Colwall Sewage Disposal.

In the recent limited competition for the sewage disposal of Colwall, near Malvern, the scheme submitted by Messrs. Taylor & Wallin, of Newcastle-upon-Tyne and Birmingham (Mr. Harry W. Taylor, A.M.Inst.C.E.), has been premiated, and they have now been engaged as engineers for the execution of their scheme. The disposal works will be on modern bacterial lines.

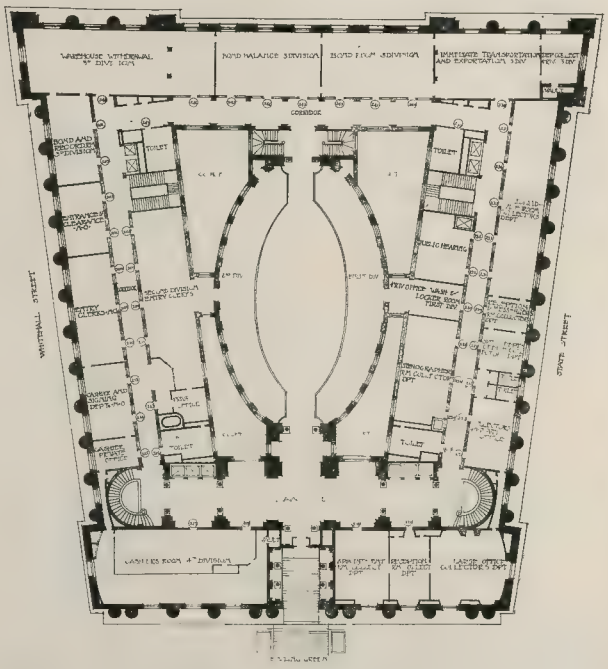
Proposed Public Baths at Balham.

The Baths and Washhouses Committee of Wandsworth Borough Council report having further considered the conditions of competition for the design of the proposed baths at Balham, and state that they are unanimously of opinion that competitive designs should be invited and that an assessor should be appointed. At the meeting of the Council last week Councillor Anderson moved that the following recommendation of the Committee adopted at a previous meeting of the Council should be rescinded: "We have considered the subject of the preparation of plans for the proposed baths at Balham, and recommend that architects be invited to submit competitive designs for a suitable building." He further moved "that the Borough Engineer be instructed to prepare the necessary plans and specifications for the proposed baths at Balham and to supervise the work." In moving the resolutions Councillor Anderson said his case was that the Borough Engineer could very well be the Council's architect. He had prepared plans for the baths on Tooting Common, and there was not very much difference between the baths on the Common and the baths under discussion. If they took the Engineer as architect they would save 450*l.* on each of the baths they constructed. Here they had a man who was a competent architect, who had made buildings for them of which they might be proud. He could do the work if they gave him the proper assistance. Alderman Lorden, in supporting the Committee, said that their Engineer was a man who attended to the roads and sewers and his other work splendidly, but he did not pose as an architect. If they put the work of the baths in his hands immediately he would have to get an architect into his office, and it seemed to the speaker to be an insult to the profession to say that they were going to get the right man for three guineas a week (as was suggested by Councillor Anderson). They could not get a man to assist the Engineer under six guineas, and then the Council would be setting up an architect's department, which would not be desirable. Councillor Evershed said Councillor Anderson had stated there was very little difference between the open-air baths on Tooting Common and the baths they were about to build. Was he aware that the contents of those baths would be 96,000 gallons of water, and that one of the most serious questions they had to face was that of percolation? Although they had cement and glazed bricks yet a certain amount of water did get through. He (Councillor Evershed) would advise all the Councillors to go to the Wandsworth Baths and to go under the building in order to see the yards of piping there were beneath the building. Tooting baths had nothing of the kind. There was another point to show the difference between the two baths. Councillor Anderson seemed to forget that at the open-air baths there was absolutely no engineering, whereas in connexion with the baths they were about to erect one-third of the money would be spent in engineering work. On being put to the vote only two voted in favour of the rescision. The Committee's recommendation was then carried.

Stockport Union: New Wards.

In the limited competition for mental wards at Stepping Hill Infirmary, Stockport, the following are the awards:—

First premium, Messrs. Edwin T. Hall,



United States Customs House, New York: First Floor.

Mr. Cass Gilbert, Architect.

F.R.I.B.A., and E. Stanley Hall, A.R.I.B.A., London. Second premium, Mr. Arthur Marshall, A.R.I.B.A., Nottingham. Third premium, Messrs. Reginald H. Spalding, A.R.I.B.A., and Ernest G. Theakston, Lic.R.I.B.A., London.

The drawings will be on view at Pendlebury Memorial Hall (Dodge-hill entrance), Lancashire-hill, Stockport, until 29th inst. inclusive, between the hours of ten and five.

CUSTOMS HOUSE, NEW YORK.

IN our issue of January 12, in an article on the work of Mr. Cass Gilbert, we referred to the plan of the New York Customs House as one of the few really great plans which are conceived at fairly long intervals in various parts of the world. We were not able then to illustrate these plans, but through the courtesy of Mr. Cass Gilbert we now publish those of three of the principal floors.

BOOKS.

Building Structures in Earthquake Countries. By ING. ALFREDO MONTEL. Forty-two diagrams and one plate. (London: Charles Griffin & Co., Ltd. 1912. Pp. 127. 8s. 6d. net.)

TRANSLATED from his Italian book and including some additional matter by the author, this work is an excellent survey of the subject to which it is devoted. Earthquakes in general, and the earthquake of Calabria and Sicily in particular, are discussed with special reference to building construction. Japanese regulations for the design of earthquake-proof timber buildings are summarised, and particulars are given of Japanese investigations into the resistance of brick columns to the effects of horizontal movements and shocks. Different methods of designing earthquake-resisting buildings are considered, and, above all, attention is paid to brick and reinforced concrete construction. The advantages of monolithic buildings are emphasised, and the author points to the fact, established by the Calabro-Sicilian earthquake, that reinforced concrete houses are very well able to resist earthquake shocks. He is not quite correct in stating that the same fact was proved by the San Francisco earthquake of 1906. It is true that reinforced concrete floors and other structural details and one partly completed building existed in that city at the time of the disaster; but there were no reinforced concrete buildings, for the simple reason that this type of construction was not permitted by the local building code. The structure mentioned as partly completed was being erected at the owner's risk in defiance of regulations in the hope that it would be passed after completion. However, this misconception on the part of the author in no way detracts from the general value of his book, which will be appreciated by architects in earthquake countries, and may also be found useful to many of our readers who are called upon to design buildings in places where the soil is of unstable character or has been undermined by colliery workings or brine-pumping operations.

Everybody's Guide to the Insurance Act. By THOMAS SMITH, Barrister-at-Law. Second Edition. (London: Charles Knight & Co. 1912. 357 pp. 1s. net.)

THIS is a wonderful shilling's-worth. We have here an introductory chapter, an explanation of the Act, the text of the Act, and an index, 357 pages of clear type, but readers must not expect to find any treatise on this Act easy reading. On his title-page the author quotes from a speech of Mr. Balfour in the House of Commons:—"This is the most complicated Bill of the last 100 years, and it touches more sets of people in more obscure and unanalysable ways than any measure that has ever yet been tried"; but the author approaches his work in no hostile spirit. He says, "The object of this handbook is by no means to criticise. Even if it were, a far greater measure of praise possibly than of adverse criticism would be afforded to the proposals . . . " yet he is alive to the drawbacks attending such a measure, and his introductory remarks contain some very shrewd observations on the effect the Act may have upon wages, hospitals, friendly societies, and thrift generally. This edition completes the sixtieth thousand, and this fact speaks for itself. If we may venture to offer any suggestions for future editions, we should like to advise the printing of all the regulations issued under the Act in order in the Appendix after the text of the Act. There are some regulations made under sect. 91, Part II., of the Act for obtaining the decision of the umpire upon whether contributions are payable in respect of certain classes of persons which we have been unable to find. A reference to a particular section of the Act is also sometimes difficult to discover in the text.

Hunt's Law of Boundaries, Walls, and Fences. Sixth Edition. Revised and substantially re-written by R. G. NICHOLSON COOMBE, M.A., LL.M., Barrister-at-Law. (London: Butterworth & Co. 1912. Pp. 262. 15s.)

THE last edition of this work by Mr. Henry Stephen appeared in 1904; the present editor has, he states, substantially re-written the work, and we find in its pages the same lucidity of style which characterises his work on "The Law of Light." This treatise also appears to us admirably arranged with headlines to attract the eye and a clear text, with the cases in footnotes. There is a table of cases with the references to all the Reports and an Index. There is a chapter on party walls, also on the right of support for land and buildings, and the various kinds of boundaries are dealt with, including water boundaries and the foreshore. This volume will not only prove useful to the legal profession, but is a valuable guide on a complicated branch of the law with which many persons find themselves concerned, and the subject is presented in an attractive form easily comprehended.

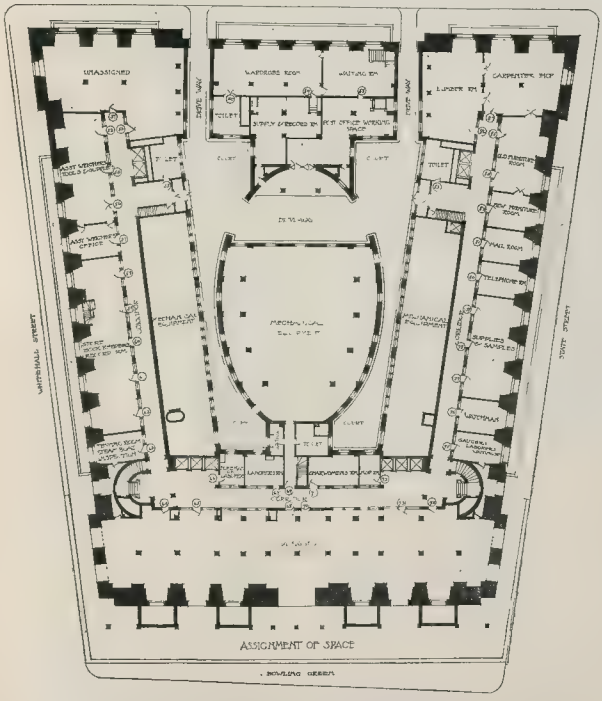
BOOKS RECEIVED.

THE PREPARATION AND USES OF WHITE ZINC PAINTS. By Paul Fleury, translated from the French by Donald Grant. (London: "The Oil and Colour Trades Journal." 6s. net.)

THE GREAT STATE. Edited by H. G. Wells. (London: Harper & Brothers. 6s. net.)

MAGAZINES AND REVIEWS.

The *Contemporary Review* contains an interesting article by Mr. Lisle March Phillipps, whose name should not be unknown to those interested in architectural criticism, entitled "The Gothic Ideal." "There are," says Mr. Phillipps, "two distinct methods of estimating a great architectural style. The first, which is the method in vogue with professional architects, and which, indeed, may be said at the present time to be the only method generally adopted, is to concentrate attention on, and confine it to, the peculiarities of a group of buildings, to analyse the forms employed, their derivation, combination, and development, and to assure the reader that the essence of the style and its animating principle are to be sought in the structure itself, which, by a process of inevitable evolution, has taken the shape we see. The second method is to treat the structural features of a given style as outward and visible manifestations of certain racial or national characteristics, the chief value and chief interest of such features consisting in the light they throw upon those human attributes and the vivid portraiture of them which they produce." The author proceeds to examine the Gothic ideal from the second standpoint. We publish a note upon his view of the matter on page 750.



United States Customs House, New York: Basement.
Mr. Cass Gilbert, Architect.

BRISTOL MASTER BUILDERS' ASSOCIATION

The annual summer excursion of this Association took place on Wednesday, the 19th inst., when among the places visited were Totnes, Dartmouth, Paignton, and Torquay. The dinner was held at the Queen's Hotel, Torquay, Mr. Audley Perkins, President, in the chair.

EDITORIAL SUMMARY.

The leading article deals with some considerations on "Education and Style in Architecture."

The second article is upon the French Architectural Societies—"Association Provinciale des Architectes Française" (p. 748).

A short article on the late Sir L. Alma-Tadema, O.M., R.A., appears on p. 749.

In "Notes" columns (p. 750) will be found comments on: "Freedom of Labour and in Life"; "The Craftsman and His Work"; "Mr. Stokes's Portrait"; "Methods of Business and Architecture."

Another of our articles on "Contemporary Architects" is given on p. 751, where an appreciation is given of the work of Mr. Basil Champneys, the Royal Gold Medallist this year of the Royal Institute of British Architects.

A meeting of the Royal Institute of British Architects was held on Monday, when the Royal Gold Medal for the promotion of architecture was awarded to Mr. Basil Champneys for his executed works as an architect. At the same meeting the portrait of the retiring President, Mr. Leonard Stokes, was unveiled (p. 756).

A short report of the meeting of the Society for the Promotion of Hellenic Studies appears on p. 758. The President, Sir Arthur Evans, delivered an address.

In Correspondence Column (p. 762) will be found a letter on: "Timber Specifications."

The Monthly Illustrated Review of Engineering p. 763, contains: "Immingham Dock, Grimsby"; "Poured Concrete Houses"; "Asbestos-Wood"; "Railless Tramcars"; "Passing of an Ancient Bridge"; "Novel Suggestion for a Bridge"; "Gantry for H.M. Stationery Office."

The Building Trade Section (p. 769) includes: "The Insurance Act"; "Builders and Fire Insurance"; "Concrete-Mixers"; "Fees for Specifications"; "Government Contracts"; "Projected New Buildings in the Provinces," etc.

In Law Reports (p. 774) will be found: "Padbury *v.* Holliday & Greenwood"—subcontractors and liability of contractors; "Wilkinson *v.* Shorrock"—contractor's successful appeal; "Denman *v.* Finchley Urban District Council"—builder's action.

MEETINGS.

SATURDAY, JUNE 29.

Institution of Municipal and County Engineers.—North-eastern district meeting, Bridlington.

Edinburgh Architectural Association.—The annual excursion, to Durham.

TUESDAY, JULY 2.

Society for the Promotion of Roman Studies (Rooms of the Society of Antiquaries, Burlington House, W.).—Mr. G. H. Stevenson, M.A., on "The Light Thrown on Roman Scotland by the Excavations at Cappuck, near Jedburgh, in 1911-1912." Lantern illustrations. 4.30 p.m.

JULY 4, 5, AND 6.

Liverpool Architectural Society (Incorp rated).—The Architectural Associations of London and Dublin will visit Liverpool on Thursday, Friday, and Saturday It has been arranged by the Council to entertain the visitors to a supper, to be held at the University Club, on the evening of Saturday, July 6, at 8 p.m.

ARCHITECTURAL SOCIETIES.

Bristol Society of Architects.

The second monthly sketching expedition in connexion with the Bristol Society of Architects took place on Saturday last week. Whitchurch was first visited, and after inspecting the church an hour was allowed for sketching and measuring. The church, which was originally cruciform in plan, contains many points worthy of study. The central tower, carried upon Norman arches, is a feature rarely seen in Somerset, and the early XIVth-century windows in the north transept and chancel are excellent examples of the period. Upon leaving Whitchurch the members proceeded to Publow, where they were received at the church by the vicar, the Rev. H. J. Ker Thompson, M.A., who gave a description of the building and an account of the restoration work accomplished and still in progress. The glory of Publow is the fine XVth-century tower with its excellent masonry of squared and tooled limestone. The south porch also calls for attention, and in addition there are one or two architectural and archæological problems calculated to produce discussion. On the return journey a halt was made at Pensford, where there is a fine specimen of an XVIIIth-century mahogany Communion table.

CORRESPONDENCE.

Timber Specifications.

SIR,—As the writer of "Building Timbers and Architects' Specifications" I wish to thank you and your correspondents for your friendly reference to that book, and to echo your hope, expressed in your editorial note, that practical good will be done by the discussion in your columns.

It is becoming obvious, however, that there is a greater evil than the vague and obsolete specifications against which "Building Timbers" was largely directed. That is the substitution of new clauses based upon limited information, conveying an illusory suggestion of up-to-date knowledge, which really hamper the builder in greater degree than the old formulæ.

There is all the difference between mentioning two or three shipments as a standard of quality and specifying those shipments alone.

Your correspondent, Mr. B. E. Laine-Pearson, has been well advised in some respects as to the brands and shipments which he specifies. They are all usually very good. But what is the builder to do when those shipments are not up to their usual standard, or when they are not available at all? The shippers are not like local shopkeepers who can deliver across the counter on demand. For many months in the year their output may not be represented, and even if they sent their whole cutting in any given year there would not be anything like enough of their higher qualities to go round if this specification were adopted.

I advise the building trade to resist strenuously any limitations to brands or shipments, as putting a fictitious value on goods which are no better than many competing varieties.

Let me say, too, that where freedom from blemish is required, deal is not a suitable wood to specify. Even the finest shipments contain centres, sapwood, and knots. If an architect secures for his client the saving in cost implied by the use of a moderate priced material like deal he cannot expect the perfection of finish yielded by woods which are 200 to 400 per cent. dearer. Where deal is necessary the builder and timber merchant can but do their best with the material at their command.

I make bold to submit the following as a fair and reasonable clause for governing deal used in carpenters' work (shown on p. 162 in "Building Timbers").

'Wood for carcassing or carpentry shall be as follows:—

"Sizes 4 by 12 and under; sound, bright, square-edged.

"Baltic or White Sea red or yellow.

"Larger sizes to be sawn from prime pitch-pine or Oregon or British Columbian pine or White Sea larch."

"Sizes 2 in. to 3 in. thick by 4½ in. or less in width to be sawn out of larger imported dimensions."

If the words "sound, bright, square-edged" are not regarded as sufficient protection, and a standard is required, the words, "Equal to Kemi brand" would meet the case.

I cannot expect you to devote your valuable space to a detailed discussion covering joinery and hardwoods, so select the wood for carpenters' work as the item around which most of the troubles centre.

Hoping to hear that the official bodies are moving in the matter in the near future.

JAMES DAVIES.

THE LONDON COUNTY COUNCIL.

THE usual weekly meeting of the London County Council was held on Tuesday, in the County Hall, Spring-gardens, S.W., Lord Cheylesmore, Chairman, presiding.

Town Planning.—The General Purposes Committee submitted a report in which they stated that the Clerk and the Architect of the Council had attended a meeting in connexion with the intention of the Acton Urban District Council to apply to the Local Government Board for authority to prepare a town-planning scheme in relation to lands lying in the parish of Acton and adjoining parishes.

Sessions House.—A report was submitted by the Local Government Committee recommending the building of a new Sessions House on the site of the Newington Sessions House at an estimated cost of 100,000*l.*

Tivoli Music Hall.—The Theatres and Music Halls Committee stated that drawings had been submitted by Messrs. Wylson & Long for the reconstruction of the Tivoli Music Hall, Strand. Seating accommodation is shown to be provided for 1,580 persons.

ILLUSTRATIONS.

Buildings by Mr. Champneys.

THE work of the Royal Gold Medallist for 1912 is illustrated this week, and the plates are supplemented by a new portrait of the distinguished architect. The new Bedford College, Regent's Park, is in progress and will form a notable addition to the buildings erected by Mr. Champneys.

Bedford College.

The college originated in 1849 in a single house in Bedford-square, but, through the enterprise of the late Mrs. Jesser Reid, the institution prospered rapidly, and it has now a large share in promoting the higher education of women. The Treasury grant is 7,000*l.* a year. The Baker-street building has long been inadequate for the needs of the College, and in 1903 the Governing Body started a Building and Endowment Fund. Up to the present 121,000*l.* has been received, that sum being made up, partly, by donations of 30,000*l.* from an anonymous gentleman, 20,000*l.* from the London County Council, 11,500*l.* from the late Mr. R. J. Turle, and 6,000*l.* from the Goldsmiths' Company. Ten thousand pounds was given anonymously to provide a dining-hall, and 10,000*l.* was given by Lady Tate for a library. The latter building is being erected from designs by Mr. Sidney R. J. Smith, F.R.I.B.A.; otherwise the new Bedford College will be the work of Mr. Basil Champneys.

About 18,000*l.* was spent in acquiring a Crown lease of the site (11 acres) in Regent's Park, and such progress has been made with the buildings that it is hoped they will be ready for occupation in the early part of next year. Questions were asked in the House of Commons on Tuesday, to the end that no further buildings should be erected in Regent's Park without Parliamentary sanction.

FIFTY YEARS AGO.

From the *Builder* of June 28, 1862.

The State of Russia.

A CORRESPONDENT of the *Siècle*, writing from St. Petersburg, gives an account of the acts of incendiarism in that capital, so terrible as to recall the times of the Jacquerie, and to lead to the question whether this, bad as it is, be not the beginning of a general outbreak of savage vindictiveness threatening to involve society in desolation. During the preceding fortnight, or say the first half of June, fire succeeded to fire in every direction, spreading such devastation that the value of property consumed is estimated at 100,000,000 of roubles. In one fire 500 houses were burned. Another set a whole faubourg in flames. A third consumed eighty houses in a different faubourg. The telegraph was set to work to call assistance from Moscow, and the answer was that Moscow was burning too! The most serious loss appears to be that caused by the destruction of a bazaar containing 2,000 shops filled with merchandise, and which is now a heap of ruins. By this ruin of property 200,000 persons are thrown on the streets. It was on Whit-Monday that the bazaar was destroyed. Other towns besides St. Petersburg and Moscow have also been set fire to



MR. BASIL CHAMPNEYS, B.A

ROYAL GOLD MEDALLIST, ROYAL INSTITUTE OF BRITISH ARCHITECTS.

[*Portrait by Reginald Haines.* 1912.]

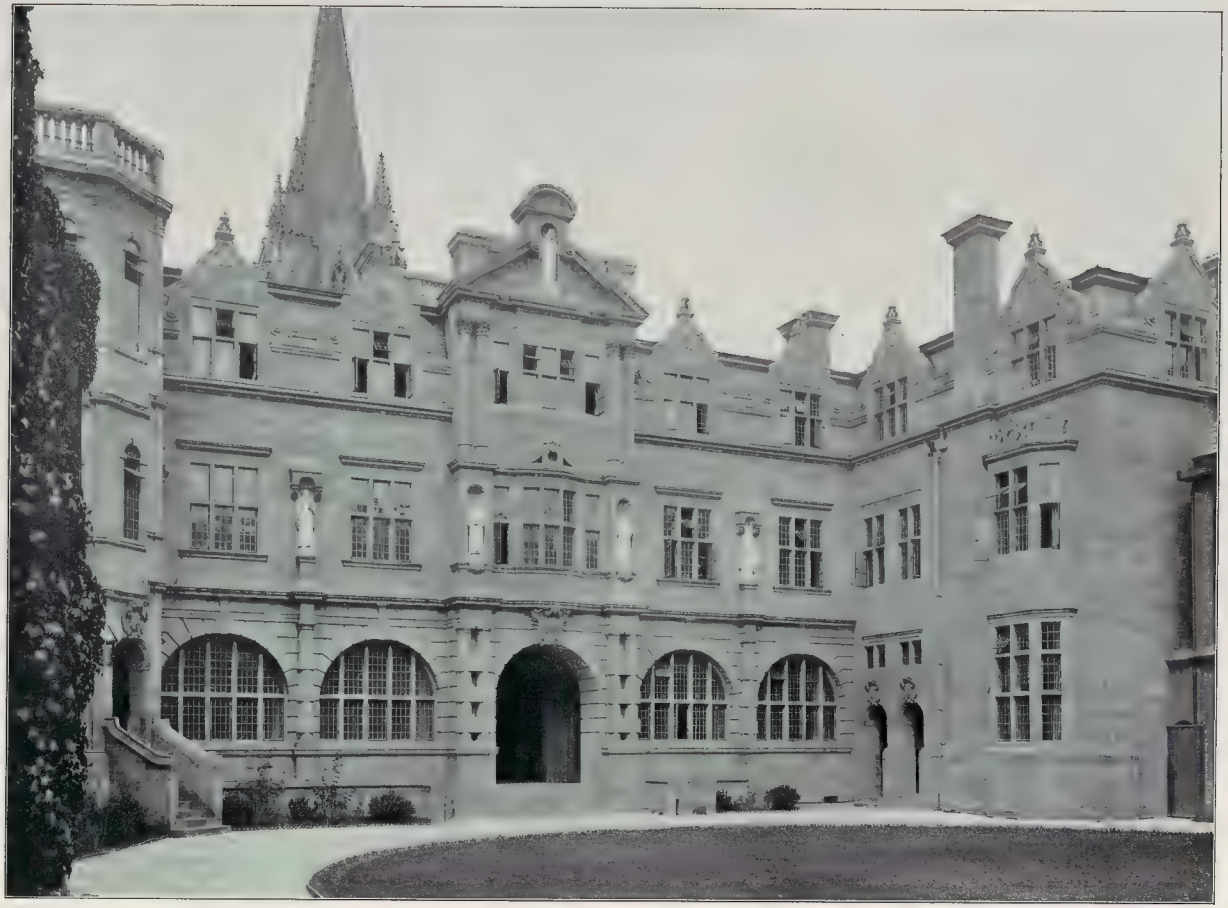


Photo by Soame.

Sprague & Co., Ltd., Printers, 69 & 70, Dean St., Soho, W.

ORIEL COLLEGE: QUADRANGLE FRONT, TAKEN FROM SOUTH-WEST CORNER.—MR. BASIL CHAMPNEYS, ARCHITECT.



Sprague & Co., Ltd., Printers, 69 & 70, Dean St., Soho, W.

NEWNHAM COLLEGE, CAMBRIDGE: CLOUGH HALL.—Mr. Basil Champneys, Architect



RESIDENCE: NORTH FRONT.



RESIDENCE DINING HALL. SCIEN

THE NEW BEDFORD COLLEGE, REGE



ARTS LECTURE ROOMS: ENTRANCE FRONT.



LOCK. ARTS LECTURE ROOMS. SCIENCE BLOCK

PARK.—Mr. Basil Champneys, Architect



Sprague & Co., Ltd., Printers, 69 & 70, Dean St., Soho W

NEWNHAM COLLEGE, CAMBRIDGE: CLOUGH HALL. INTERIOR OF THE DINING HALL.—Mr. Basil Champneys, Architect.



Sprague & Co., Ltd., Printers, 69 & 70, Dean St., Soho, W.

UNIVERSITY OF CAMBRIDGE: DETAIL OF THE DIVINITY SCHOOLS.—Mr. Basil Champneys, Architect.

MONTHLY REVIEW · *of* · ENGINEERING.



[*Photo. Topical.*

General Offices, Immingham, Grimsby.

IMMINGHAM DOCK.

SITUATED on the southern shore of the wide estuary, somewhat inappropriately designated the River Humber, the new seaport created at Immingham by the Great Central Railway Company is about 6 miles west of Grimsby and some 9 miles east of Hull.

The establishment of a new port between Hull and the open sea is merely a phase of the eastward movement that has been taking place on the Humber for many years past.

The increasing size of steamships long ago pointed to the necessity of providing better dock accommodation at Hull, and, as the old docks could not be brought into line with modern requirements, new works of the same character have been inaugurated on the eastern borders of the port, where a greater depth of water prevails.

The development of Grimsby, still nearer to the North Sea, was another evidence of the eastward movement, which is further denoted by the enterprise briefly considered in the present article.

Five years ago the site of the Immingham Dock estate formed part of a wide stretch of marshland lying between the village of Immingham and the brown waters of the Humber.

To-day the visitor finds it occupied by docks, jetties, quays, railways, and all the accessories of a modern seaport, situated in a land-locked harbour, with a deep-water channel available for the largest ships afloat at all states of the tide.

From the entrance gates of the new dock two long jetties project into the deep-water channel. One of these, on the eastern side, is intended for passenger traffic, and on it is built a railway-station in communication with the Great Central Railway system. The other jetty is devoted to the shipment of bunker and cargo coal, transported along a viaduct terminating at a coal hoist on the main jetty and capable of delivering coal at the rate of 500 tons an hour into vessels moored alongside.

The two jetties provide a V-shaped area of still water outside the entrance gates, thus protecting vessels from the side sweep of the current.

The entrance lock is 840 ft. long by 90 ft. wide, with the depth of 27 ft. 6 in. at low water and 47 ft. at high water. In addition to the gates at either end there is a pair of gates at the middle of the lock to enable vessels of moderate size to be handled conveniently and economically.

At one side of the entrance lock are the general offices, and along the other side is a graving dock 740 ft. long by 56 ft. wide and 23 ft. deep from sill level.

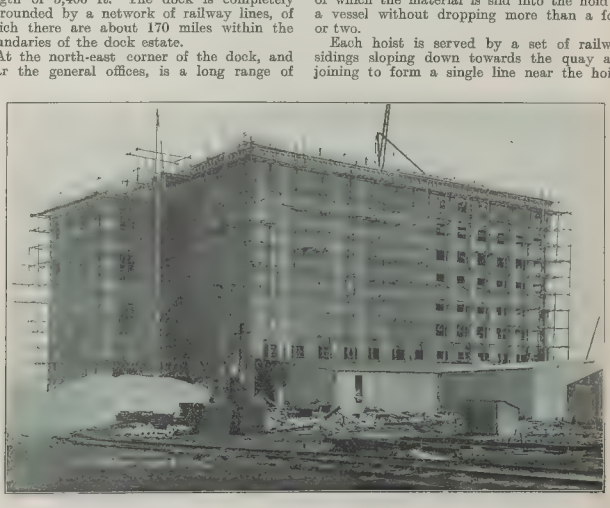
As at present developed the main dock comprises a basin 1,100 ft. square, with two arms on the western side, each measuring 1,250 ft. long by 375 ft. wide.

The total water area of the dock is about 45 acres, and the quays extend to the collective length of 5,400 ft. The dock is completely surrounded by a network of railway lines, of which there are about 170 miles within the boundaries of the dock estate.

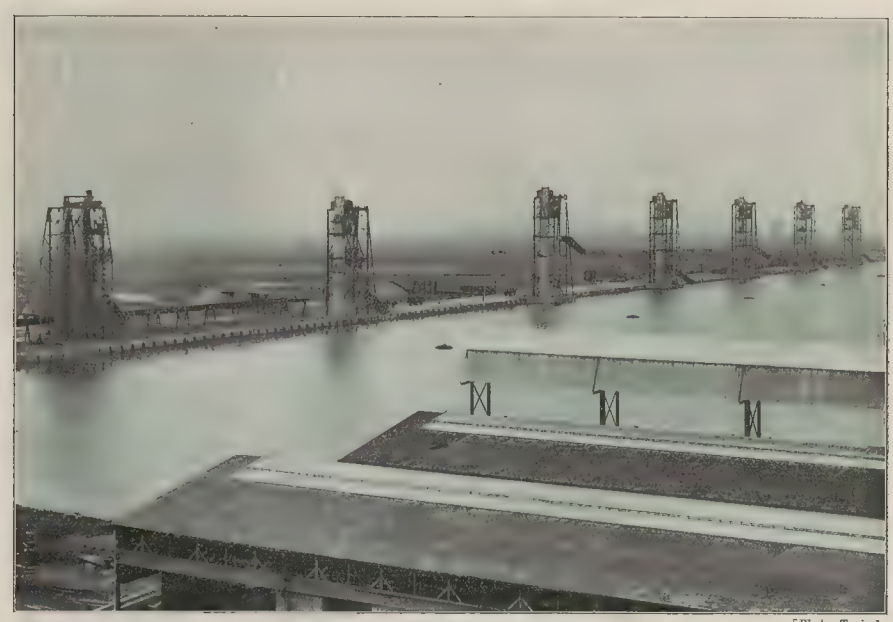
At the north-east corner of the dock, and near the general offices, is a long range of single-story transit sheds; at the eastern end are another range of sheds and a large granary building with elevator and machinery of the latest types for handling grain; along the southern side of the main basin and the south-west arm there are seven hydraulic coal hoists, six stationary and one movable, so that coal can be delivered into two holds of a vessel moored to the quay; and along the outer sides of the north-west arm extensive yards are provided for the storage of timber.

To avoid the breakage of coal as it is discharged the hoists are constructed with a system of radial extension shoots, by means of which the material is slid into the hold of a vessel without dropping more than a foot or two.

Each hoist is served by a set of railway sidings sloping down towards the quay and joining to form a single line near the hoist.



New Granary and Silos for the Great Central Railway Company: Constructed in Ferro-Concrete.



[*Photo. Topical.*

Elevated View showing Seven Coal Hoists.

The full trucks running by gravity down to the quay are hoisted one at a time, and the coal is tipped out by hydraulic machinery.

The empty trucks are then placed on the line carried by an overhead gantry, whence they gravitate to the tracks where empties are made up into trains.

Each of the seven hoists has eight gravity sidings with room for 320 loaded trucks containing 3,200 tons of coal ready for discharge, the hoists being able to deal with nearly 5,000 tons per hour.

Behind the gravity sidings are two yards for full and empty trains, the latter leaving by independent lines so that they shall not get in the way of full trains.

Accommodation is provided for the storage of 174,000 tons of coal on the dock estate.

For the mechanical handling of materials generally numerous cranes have been installed, including five 30-cwt. cranes for timber, ten 3-ton and two 5-ton gantry type cranes on the south-west arm, a 50-ton crane with luffing jib on the western quay, six 2-ton and one 10-ton crane on the north-east quay, and a similar equipment on the eastern quay.

In the construction of the dock some 3,500,000 cubic yds. of earth were excavated, this material having been utilised for the purpose of raising the level of the surrounding



[*Photo. Topical.*

View under Movable Hydraulic Coal Hoists, from South Quay.

land, and similar use was made of mud dredged from the bed of the estuary near the approach jetties.

Among the buildings erected on the dock property are :—The general office building, transit sheds, bonded stores, dining-rooms, granary building, locomotive sheds, power-station, and passenger-station.

The power station was built by Messrs. H. Arnold & Son, of Doncaster, and includes accommodation for steam boilers, hydraulic pumping engines, and electricity generating plant.

Eight Lancashire type boilers, 30 ft. long by 8 ft. 6 in. diameter, have been laid down, the flues leading to a cylindrical chimney-shaft, 200 ft. high, with the interior diameter of 7 ft. 6 in. Separate engine-rooms are provided for hydraulic and electrical machinery, and the power-house building includes workshops for repairs.

The hydraulic-power accumulator house is in the form of a brick tower on the western side of the power-house.

The granary building, previously mentioned as being situated at the eastern end of the main basin, is a reinforced concrete structure measuring 137 ft. by 128 ft. in plan, and was erected by Messrs. Stuart's Granolithic Company, Ltd., of London (see p. 763).

We are informed that reinforced concrete has also been employed for the construction of various bridges and viaducts for railway lines on the dock property, these having been constructed by the Yorkshire Hennebique Contracting Company, Ltd., of Leeds.

At the present time the new seaport of Immingham is quite in its infancy, having only recently been opened to traffic and still awaiting the inaugural ceremony to be held under the auspices of the King on July 22 next.

If we may judge by the history of Grimsby, the new port should provide ample scope for building operations. The situation is one very suitable for the establishment of factories, being near the coalfields and in touch with the railway and canal systems of Great Britain, while the sea affords means of communication with other countries.

It is stated that plentiful supplies of building material are available and that clay for brick-making purposes is at hand in large quantities.

POURED CONCRETE HOUSES.

OUR readers are already familiar with the proposal made by Mr. Thomas A. Edison that dwelling-houses for workmen and others might be economically constructed in one piece by pouring concrete of special composition into a single mould previously erected.

Very little has been heard recently of this proposition, but it is of interest to note that Messrs. Small & Harms, of 12, Rue du Mont-Thabor, Paris, are working upon the same idea on practical lines.

Mr. Small is an American engineer and Mr. Harms a Dutch structural engineer who has lived for ten years in the United States, and both of them were formerly colleagues of Mr. Edison.

These engineers have patented the method of construction described in this article, and two companies have been formed for the purpose of working the patents—the Monogram Construction Company, of Santpoort, Holland, and the Société Française de Maison and Constructions Moulées, of Paris.

The first poured concrete building constructed, or, as one may appropriately say, cast on the Small-Harms system is a small house at Santpoort, a seaside resort near Haarlem.

The building covers an area of 39 square metres, and comprises six rooms on two floors. The cost is stated at 1,800 guilden (144*l.*), which is very reasonable in view of the relatively high cost of materials in Holland.

As may be seen by the photograph reproduced in Fig. 1, the design has been kept exceedingly simple, so that it is well adapted for a concrete structure. The entire absence of meaningless details facilitates the construction, and at the same time tends towards breadth and simplicity in design, while the character of the building is aided by the uniform tint of the concrete, which remains as left by the moulds.

The roof is flat and finished by a simple cornice, and round the house is a terrace in concrete raised a few inches above normal ground level.

As a pleasing contrast to the even tone of the walls, the doors and windows are painted in bright colours, which constitute the only decorative treatment on the exterior.

The house was designed by Mr. H. P. Berlage, the architect of the new Exchange in Amsterdam, which is a good example of unadorned brick construction.

A serious problem demanding solution before the idea of casting entire houses could be practically realised was the need for obviating the separation of the materials in the concrete during the operation of pouring.

This difficulty was overcome by Messrs. Small & Harms by the addition of colloidal material, which, used in small quantities, has the effect of increasing the viscosity of the concrete, while facilitating its flow into all parts of the moulds and obviating the segregation of the constituents.

The fluidity of the concrete employed may be gauged by the statement that the quantity of water by volume ranges from 120 to 175 per cent. of the volume of cement used, or from three to four times the customary amount.

The concrete was mixed in the proportions of 1 part Portland cement, 3 parts sand, and 2 parts gravel.

It will be noticed that, contrary to customary practice, the quantity of sand is far greater than that of the aggregate, the reason for this being the necessity of making the concrete exceptionally fine and close-grained.



Fig. 1. View of Completed House.



Fig. 2. Mould Ready for Concrete.

The patentees claim that the colloidal substance added to the concrete makes the latter flow almost as readily as water. In fact, it is stated that the concrete will flow upon a floor surface inclined at two degrees, or upon itself at an inclination of half a degree, without the evidence of any tendency to segregation.

These contentions appear to be confirmed by the appearance of the house at Santpoort, where the exterior and interior surfaces show the concrete to be of uniform texture and colour and as smooth as if finished by trowelling.

Moreover, the surfaces are perfectly plain and the angles well defined, thus denoting the rigidity of the moulds under heavy pressure, which in this case reached the maximum due to a column of concrete 6 metres high.

Thanks to the fluidity of the mixture, the concrete can be poured in from one point of the mould, flowing thence to every part of the building to be cast.

It would be quite possible to pour the floors and flat roof at the same time as the walls and other details. But this would necessitate keeping the moulds in position long enough to permit the concrete to harden until capable of supporting its own dead weight.

As this might prove inconvenient the patentees have adopted the alternative of employing slabs of suitable length, width, and thickness, and of fixing these in place, while the moulds are being erected, to form floors and flat roofing. The same practice is followed in construction of stairs. The result is that the general moulds can be taken down two days after the concrete has been poured.

Chimney flues and other stoneware pipes are enclosed in the moulds and embedded in the concrete subsequently poured in.

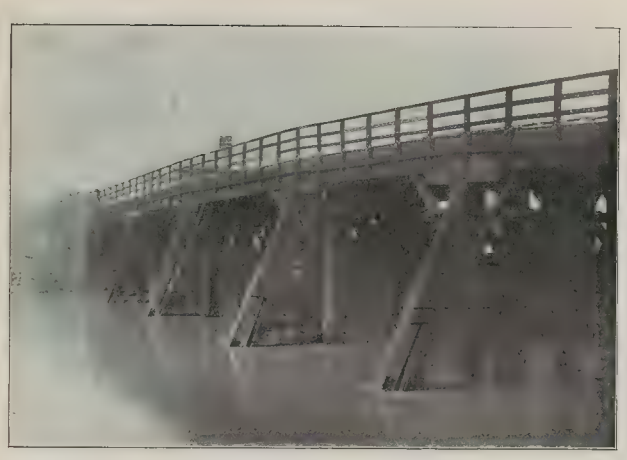
The rapid construction rendered possible by this new method of building is indicated by the statement that the erection of moulds for a small house usually occupies about eight days, the pouring of the concrete six hours, and the removal of the moulds two days after pouring occupies two days, making a total of thirteen days for construction.

Foundations, however, are presumed to have been constructed in advance, with or without cellars. It may be pointed out in this connexion that the rigidity of the superstructure, its ability to act as a single unit, and the relatively small dead weight due to the thinness of the walls, make it possible to reduce the foundation work considerably, and it is believed that poured concrete houses can be constructed on the notoriously unstable soil of Amsterdam without the aid of foundation piles as universally employed up to the present.

The mould in which the house at Santpoort was cast consisted of some 2,600 castings of size and weight convenient for handling, and assembled by about 10,000 bolts and nuts.

Fig. 2 is from a photograph taken when the mould had been erected ready for the pouring of the concrete. It should be noted that the units can be employed, after the fashion of children's building blocks, in numerous combinations as required by designs for large or small buildings.

The initial outlay involved in the provision of the mould is heavy, as may be judged by the statement that the moulds for the house at



Wooden Trestle Bridge at Cressage.

Santpoort cost 15,000 gulden (1,200*l.*), but it must be remembered that the castings are practically everlasting, and can be used so many times that the charge per building becomes a very small item.

Since the foregoing was written we have been informed that the first house on the Small-Harms system in France was poured on May 9 last, in the Rue de Montjoie, Paris, by the Société Française de Maisons et Constructions Moulées.

ASBESTOS-WOOD:
A NEW REFRACTORY BUILDING MATERIAL.

IN a recent paper read to the American Society of Mechanical Engineers Professor Norton discusses methods of treating wood so as to increase its resistance to fire, and describes a new building material invented by himself and designated asbestos-wood.

Some of the processes hitherto adopted for the treatment of timber involve saturation with a chemical solution which on drying leaves in the pores a salt capable of giving off a gas when heated, the gas being of such nature as to be incapable of supporting combustion.

Given thorough saturation, the protection afforded is very considerable, and the durability of the wood is increased.

In other processes the timber is impregnated with chemical solutions intended to encase the fibres with a solid refractory substance, a method of treatment which has also proved to be satisfactory in practice.

As an alternative to natural wood treated chemically, Professor Norton proposes a kind of artificial wood composed of two elements a fibrous substance and a cementitious material—the former consisting of asbestos and the latter of magnesium oxide or calcium silicate and aluminate.

Professor Norton claims that his asbestos-wood is practically incombustible, harder than natural wood, has a transverse strength about two-thirds that of white pine with the grain, and, without being brittle, an elasticity less than that of natural woods, and heat conductivity of between 30 and 50 British thermal units per square foot per twenty-four hours per degree Fahrenheit.

The weight of asbestos-wood 1 in. thick ranges from 8 lb. to 13 lb. per square foot, equivalent to from three to four times the weight of white pine.

Test specimens, 12 in. long by 12 in. wide by ¼ in. thick, supported on two knife-edges 11 in. apart, were found to break under the centre load of 200 lb., while white pine similarly tested broke under a load of 300 lb. with the grain and 20 lb. across the grain. The equality of strength in both directions possessed by asbestos-wood is a feature that in some cases is of great advantage.

The absorption of water by asbestos-wood varies between 4 and 20 per cent., and prolonged immersion in fresh water appears to cause no injury.

The coefficient of expansion is said to be about 0·000004 at ordinary temperatures, diminishing rapidly at 700 deg. Fahr., and becoming negative at 950 deg. Fahr., when shrinkage commences.

Boring, sawing, and finishing are naturally more difficult than in the case of natural wood. The new material withstands abrasion well, but is slippery when wet, a disadvantage in floor and stair construction.

The fire-resistance of asbestos-wood is its chief recommendation. Being composed of incombustible materials, it cannot be burned, and exposure to fire merely causes gradual dehydration. Under prolonged red heat the boards are weakened, but their resistance is probably ample for such exposure as occurs in an average fire.

Professor Norton says that a ½-in. sheet of asbestos-wood may be placed over the top of an open furnace at 1,700 deg. Fahr., the flame impinging upon the lower surface of the sheet, and at the end of half an hour the sheet may be taken off and, while the under side is still white hot, plunged into cold water and then returned to the furnace for ten minutes, without injury beyond slight warping and a reduction of strength by 25 per cent. or more.

It is also stated that in some fire tests the paint on the outside of an asbestos-wood door, 1¼ in. thick, was not scorched after the fire on the other side had been burning at a temperature of 1,700 deg. Fahr. for more than an hour.

THE PASSING OF AN ANCIENT BRIDGE.

FOR nearly two centuries the River Severn has been spanned at Cressage by a wooden trestle bridge. The span is about 70 yds., and is supported by four trestles. Now this structure has been purchased for 1,000*l.* by the Shropshire County Council, and within a few weeks it is to be removed and its place taken by a stone bridge suited to the needs of modern traffic and free from toll. The stonework at either end is in good condition and will be incorporated in the new structure.

RAILLESS TRAMCARS.

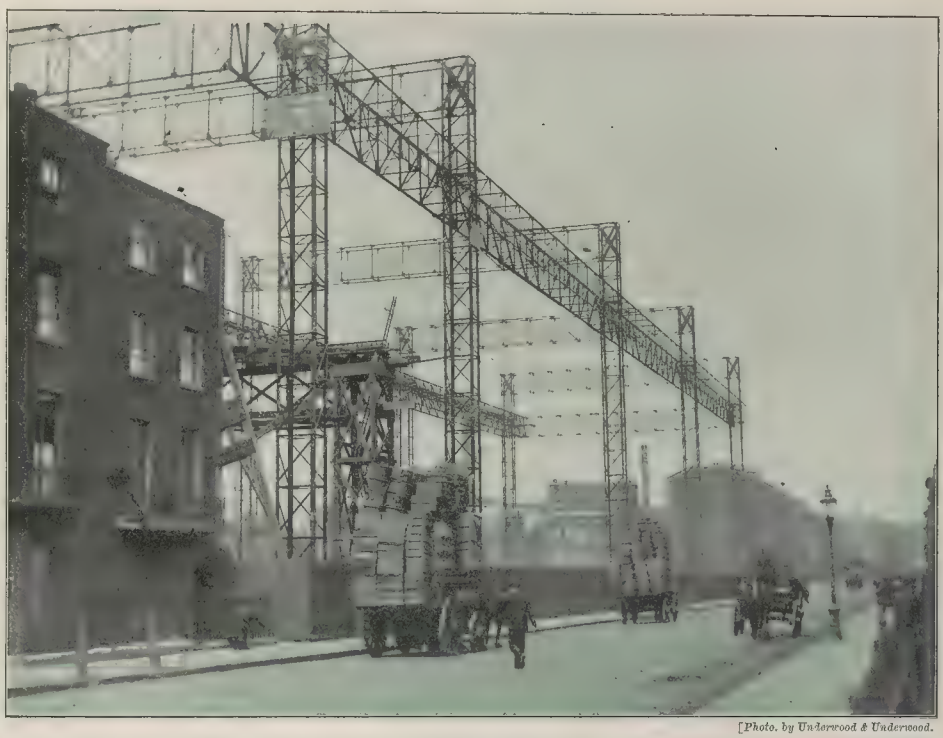
THIS latest addition to vehicular traffic appears likely to become increasingly adopted, especially in the outlying districts of large towns. The description "railless tramcar" is somewhat of a misnomer, for the vehicle is really more of the omnibus class, and the chief fundamental difference between it and the motor-omnibus is that it is propelled by electrical power transmitted to it from an outside source instead of generating its own power while running, as is the case with the latter.

The vehicles, as regards chassis and body, are similar in appearance to the motor-'bus, but are fitted with trolley poles or flexible cables which convey the power from the overhead wires through the motors on the car in a manner resembling that employed with electric tramcars, with an additional overhead wire for the return current, in lieu of the metal rails. At first it may not be apparent what claims of superiority the "trolley 'bus"—by which name the vehicle is more aptly described—has over the tramcar or motor-'bus, but a closer investigation of the subject reveals several. There are many obvious and serious objections to electric tramway systems, the chief doubtless being the heavy initial expenditure in construction and subsequent costly maintenance of the permanent way. Again, probably everyone is cognisant of the nuisance of a tramway track in anything approaching a narrow thoroughfare, monopolising, as it does, practically the whole of the road, and when there is a frequent service of cars, rendering it quite impossible for tradesmen's carts or other conveyances to stand outside the shops or houses for many minutes at a time. The track also is a continual source of danger both to horsed vehicles and cyclists by reason of the grooved rails and the difficulty experienced in maintaining a level junction between the wood blocks or granite setts of the track with the margin on either side, generally formed in macadam. These objections, of course, do not exist with the "trolley omnibus."

The chief advantage claimed over the motor-'bus is that of economy, both in the generation and consumption of power. It is cheaper to generate power for a number of 'buses at a central station than for each 'bus to produce its own power as it runs. Then regarding the consumption of power, it is clear that the motor-omnibus must carry the maximum engine-power required at any particular portion of its journey; for instance, if there is but one hill on an otherwise practically level route, the power carried must be sufficient to negotiate that hill, so that for the remainder of the journey the 'bus is carrying extra and useless dead load in surplus plant and fuel, thus involving increased power consumption and adding to the wear of the tyres. On the contrary, the trolley 'bus helps itself to just sufficient power as required at that particular



Wooden Trestle Bridge at Cressage.



[*Photo. by Underwood & Underwood.*

Gantry in Stamford-street.

moment, so that at times it is actually using none at all.

It is hardly to be supposed that the trolley omnibus will supersede the electric tramcar in large cities and towns, for one, if no other reason, that the seating capacity is so much less. but there can be no doubt that it is eminently suitable for small towns where the demand for passenger transport barely warrants the expense of laying down a tram track, and also in the suburbs of the larger towns, to act as feeders to electric trams, by bringing passengers to the various termini, such as do the systems now running in the outlying districts of Leeds and Bradford. When there is legislation that will make it easier and less expensive to obtain Parliamentary powers for trolley omnibus working, this system of traction will most certainly develop rapidly.

GANTRY AT H.M. STATIONERY OFFICE BUILDING.

TO FACILITATE the construction of the reinforced concrete building now in course of erection in Stamford-street, S.E., for H.M. Stationery Office, the contractors, Messrs. Perry & Co. (Bow), Ltd., have adopted the novel idea of employing a large steel gantry as an alternative to the customary derrick towers or other provision for hoisting appliances.

The gantry is 250 ft. long by 90 ft. high by 75 ft. wide, and comprises nineteen steel stanchions supporting twenty-two girders, along the top of which are tracks for three electric travelling cranes to be used for hoisting steel, concrete, and other materials, which can be transported along the top of the gantry and deposited at points where required by the workmen engaged in building operations.

The structure was erected by Messrs. Isles, Ltd., of Stanningley, Leeds, having been designed so that it can be taken down readily and rebuilt on any other site in its present form, or adjusted to any length, width, or height according to the size of the building to be constructed or the space available.

Gantries of the kind have been used hitherto only in shipbuilding, but there is every reason for believing that their employment in the erection of important buildings should be both economical and convenient.

Messrs. Perry & Co. anticipate that the gantry at Stamford-street will save an enormous amount of labour, not only in hoisting and delivering supplies, but also in moving materials and appliances from place to place on the site.

NOVEL SUGGESTION FOR A BRIDGE ACROSS THE THAMES.

A CORRESPONDENT sends us the following suggestions, which will be of some interest to our readers:—

"If Lambeth Bridge were rebuilt according to a design which I am placing before the London County Council, there would be a level road right across the river at low water, and, as the bridge would rise with the tide, the two end portions would have easy gradients, the centre part, about one-third of the bridge, always remaining level. The design, illustrated on next page, shows it to be of the stiffened suspension type, of three spans, supported by two pontoons, and the ends resting on shore, leaving the waterway about the same as at present.

The forces to counteract the pull of the main chains of the centre span will be supplied by the pull of the main chains of the end spans acting automatically through hydraulic presses contained in the towers. Instead of the back chains of the side spans being anchored in the usual way, the pulls along them will be received by hydraulic rams also acting automatically to the towers.

A bridge, say, 48 ft. wide might be built first and another portion, say, 48 ft. wide could be added when increased traffic made it necessary, thus spreading the cost over a long period.

The towers shown are intended to be built of ferro-concrete faced with rubble granite, and to be in keeping with the masonry of the Embankment.

There would be four roads for vehicles and two for pedestrians, provision being made for protecting the latter from the weather and splashes, which will be appreciated by those who have to cross any of the existing storm-swept bridges.

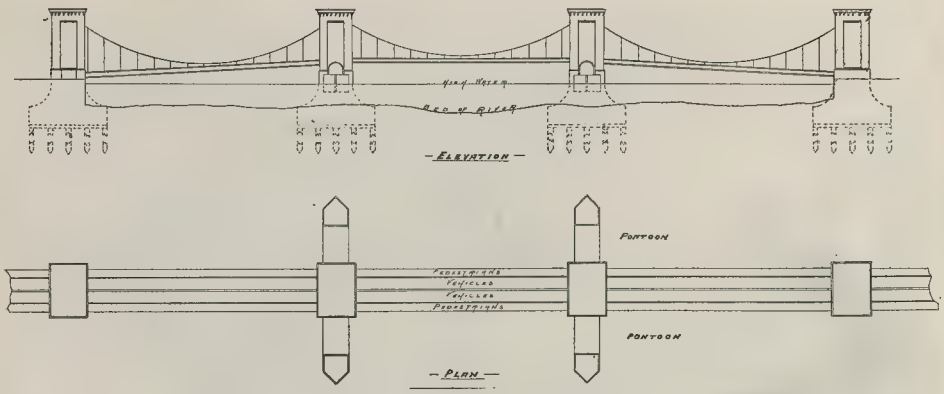
The tides would elevate the bridge, pontoons, and the load, weighing some 5,000 tons, every twelve hours.

The cost would be about the same as a masonry bridge, but it could be built in a much shorter time. JOHN RAWLINGS."

ENGINEERING NOTES.

Value of Automatic Sprinklers. THE practical utility of automatic sprinkler installations was demonstrated recently in New York. An electrically-heated iron had been left on an ironing-board in a building in Madison-avenue, and as the user omitted to switch off the current an outbreak of fire occurred, with the result that at 7.27 p.m. an alarm call was automatically sent to the fire-station and the sprinklers at the same time came into operation. Three minutes later when firemen arrived on the scene the fire had already been extinguished by the sprinklers. In the absence of the safeguards adopted the fire would probably have assumed serious proportions before discovery.

Electrolysis in Pipes. IN consequence of stray currents from electric railways in Carlsruhe, gas and water pipes in that town have been corroded somewhat seriously. Careful investigation shows that destruction is confined to points where the currents pass from the pipes to the surrounding earth, while at the points of entry the action of the currents is protective. Consequently the remedy adopted is to place electrodes in the ground near the pipes at points where electrolytic action is to be feared, the electrodes being connected to the positive pole of a low voltage generator or storage battery and the pipes connected to the negative pole. This treatment appears to have given satisfactory results, and the current required is said to be a very small item.



A Novel Suggestion for Bridging the Thames. *(See previous page.)*

Considere System Standard Specification. LIKE other firms acting as specialists in reinforced concrete, the Considère Construction Company, Ltd., of Westminster, have now published a specification for the guidance of contractors executing works on their system. The provisions of the specification are generally similar to documents of the same class, and if carefully followed should have the effect of ensuring sound and reliable work. The pamphlet is clearly printed with marginal headings which will be found convenient for reference purposes.

Distinctive Colours for Pipes in Buildings. THE practice of colouring pipes to denote the nature of their contents has been adopted to some extent in this country for many years. The following system of colouring is one recently proposed in Germany, the colours being indicated by attaching to the pipes small strips of painted and enamelled iron :—

Contents of Pipe.	*Colour.*
Water.	Green.
Steam.	White.
Gas.	Yellow.
Air.	Blue.
Vacuum.	Grey.
Oil	Brown.
Acids.	Rose, with red streaks.
Lye.	Rose.
Tar.	Black.

The same colours are recommended for use in drawings, steam pipes to be shown by double lines.

Progress in Egypt. LORD KITCHENER, his Majesty's Agent and Consular-General, in his first report in that capacity, just presented to Parliament, states that the monumental work of the raised Aswan dam will be completed shortly, and the immense benefits accruing by the increased irrigation of the country will repay the expenditure many times over. Other completed improvements include the giving of *seifi* (summer) water to Upper Egypt and the abolition of the basin system, which for so long has restricted the full yield of the land. Now that abundant irrigation water is assured no effort should be spared to enable the inhabitants of Egypt to obtain the fullest advantage from their magnificent soil and climate, and the question of drainage, which has long been discussed, becomes one of vital importance. Measures are about to be taken to carry out a large and comprehensive scheme of drainage in the provinces of Behara and Gharbieh, and proposals for this purpose have been submitted to Sir William Garstin and Mr. Webb, whose technical knowledge and long experience of the country are unrivalled. The projects have been approved, and will be carried out without more delay than is necessary for such large works. Shortly stated, the result aimed at is the lowering of the water in the drains in those portions of the Delta to a depth of from 1½ to 2 metres below the surface of the soil. Elaborate experiments in the Domains show that if this result is achieved the yield per feddan in many parts will probably be doubled.

The most important works completed during 1911 were the Khanka Lunatic Asylum, the Minieh Post Office, the Agricultural School Farm, and some additions to Minieh Moudirieh, and police outposts at Matarieh and Diarb Negm. Work on the Boulak and Zamalek Bridges over the Nile has proceeded steadily throughout the year, and the bridges should be open to traffic before the end of 1912. In connexion with this scheme a supplementary credit was granted in the course of the year for the reconstruction of the "Pont des Anglais" over the Bahr-el-Aama. The new bridge, the contract for which was awarded to the Cleveland Bridge Company, of Darlington, will have an opening span to admit the passage of boat traffic. This is particularly necessary during the period of flood, when the navigation through the opening span of the new Boulak Bridge on the main branch of the river will be difficult. The work will be undertaken at once, and a temporary bridge erected so as to permit the passage of boats by the Bahr-el-Aama at the next flood.

In regard to the Antiquities Service, no archæological discovery of great importance was made during the year. In order to prevent illicit excavations and sales, which are frequently accompanied by the wanton destruction of antiquities, a law is being prepared to check such depredations. For some time past numerous sites alleged to contain archæological remains have been reserved for the department in different parts of the Delta. Steps are now being taken to ascertain by testing whether anything of interest actually exists under these areas.

Catskill Aqueduct. THIS aqueduct, now nearing completion, is designed to protect the city of New York from the dangers of water famine, which recur regularly with the droughts of the summer. The new tunnel by which the water is carried under the Hudson River at Storm King Mountain, has been formally opened after work extending over nearly seven years. The tunnel is bored in the solid rock at a depth of 1,100 ft. below the surface of the water, and connects with two vertical shafts, one on either side of the river, borings having proved that solid granite existed from shore to shore less than 1,000 ft. below the river surface. The total length is 3,030 ft., and the whole scheme is expected to be finished by 1913, and is designed to supply New York with 500,000,000 additional gallons daily.

New Process of Timber Seasoning. A METHOD employed in France for seasoning timber may be thus briefly described :—The timber is stacked upon a lead plate covering the bottom of a large tank, the plate being connected to the positive pole of a dynamo. On top of the timber another lead plate is placed and connected to the negative pole of the dynamo. The tank is filled with a solution containing 5 per cent. of resin, 10 per cent. of borax, and a trace of sodium carbonate. When electric current is passed through the stack of timber it is said that the sap is replaced by resin and borax. After the operation is completed the timber is removed and dried. It is claimed for this process that, however green the timber may have been before treatment, the result is always perfectly seasoned material.

The Toxicity of Paints. AN interesting communication concerning the toxicity of certain paints was recently made by Professor E. C. C. Baly to the Liverpool Section of the Society of Chemical Industry. It has been noticed that persons inhabiting rooms freshly painted with white lead paint often show symptoms of poisoning quite distinct from the symptoms of lead poisoning. The symptoms of lead poisoning are colic and constipation, whereas the ailments experienced by persons inhabiting freshly-painted rooms are commonly headache and diarrhœa. As the result of a number of experiments on the subject, Professor Baly has found that white lead and linseed oil emit a vapour, which he believes to be an aldehyde, which has toxic effects. The poisonous volatile substance does not contain any lead. It is emitted from a mixture of linseed oil and manganese dioxide, and also from linseed oil mixed with red lead, but it is not emitted in appreciable quantity from linseed oil mixed with either lead sulphate or zinc white. When turpentine was added to the mixture of white lead and linseed oil the poisonous vapour was emitted more readily than when no turpentine was present. Professor Baly is continuing his experiments and hopes to communicate some further results to the Society at an early date.

Crushing Strengths of Cements. MR. C. GOSLICH contributes to the *Chemiker Zeitung* of 1912 the results of tests made to ascertain the resistance to crushing of mixtures of Portland cement and of iron Portland cement with the blast-furnace slag, fine sand, and standard sand. These were made up in the proportions set forth in the subjoined table, and were tested after five years. To convert the resistances, expressed in kilogrammes per square centimetre, into pounds per square inch it is only necessary to multiply by 14·223, or approximately 14¼ :—

Mixtures Subject to Test.					Resistance to Crushing in kilogrammes per Square Centimetre.	
Cement.	Slag.	Fine Sand.	Standard Sand.	Portland Cement.	Iron Portland Cement.	
7	3	nil	20	642	}	551
7	nil	3	20	642	}	
7	3	nil	50	341	}	238
7	nil	3	50	249	}	
7	3	nil	70	157	}	117
7	nil	3	70	122	}	

It will be noticed that in the first pair of tests the effects of slag or of fine sand upon the Portland cement were identical, but with increases of standard sand, as in the second and third pairs of tests, the slag gave better results than the fine sand to the extent of 27 per cent. and 22 per cent. respectively.

THE BUILDING TRADE.

THE INSURANCE ACT.—III.

IN the former two articles we have dealt with the Insurance Act so far as it relates to unemployment insurance from the employer's point of view only, but we now propose to consider those provisions which concern the employee.

In our article of May 31 we pointed out that the two considerations which first arise are, to what trades does Part II. of the Act relate, and who is an employer or a workman within the Act, and on these two points it is unnecessary for us to recapitulate what we have said, for they affect employer and employed alike.

By sect. 84 every workman having been employed in an "insured trade" (see our former article, May 31 and Schedule VI.), who is unemployed, and in whose case the "statutory conditions" are fulfilled, shall, subject to the provisions of this part of the Act, be entitled to "unemployed benefit" so long as these conditions continue to be fulfilled and so long as he is not disqualified under the Act for the receipt of unemployed benefit. Having already indicated what are the "insured trades" and who are "workmen," the first thing now to be ascertained is what are the "statutory conditions." These are contained in sect. 86, and the workman has to prove (1) that he has been employed as a workman in an insured trade in each of not less than twenty-six separate calendar weeks in the preceding five years; (2) that he has made application for unemployed benefit in the prescribed manner, and proves he has since been continuously unemployed; (3) that he is capable of work, but unable to obtain suitable employment; (4) that he has not exhausted his right to unemployed benefit.

As regards (1), the expression "calendar week" is defined in the Act as "the period from midnight on one Sunday to midnight on the following Sunday." The expression is not very happy, as men employed in such trades cannot easily prove seven days' employment, but presumably six full working days must be intended. As regards (2), the method of application for unemployed benefit is prescribed by rules made under sect. 91 of the Act. Rule XI. of the Unemployment Insurance Regulations, 1912, provides that a workman shall attend at the local office at which his unemployment book is lodged on every working day between hours to be fixed by the Board of Trade and sign a register. If the workman lives at a distance of more than 3 miles from the local office the attendance is less frequent, but unless personal attendance is expressly excused a workman shall not be deemed to be unemployed on any day in respect of which he has not signed the register. When, however, the application has to be made to an association of workmen with whom an arrangement has been made under sect. 105, to which we shall refer later, the procedure is a little different. It will be observed that the workman has to prove continuous unemployment after his application. By sect. 107 this is defined as either "two periods of unemployment of not less than two days each, separated by a period of not more than two days, during which the workman has not been employed for more than twenty-four hours," or "two periods of unemployment of not less than one week each separated by an interval of not more than six weeks." Here it is to be noted the expression "calendar weeks" is not used, which enhances the difficulty of explaining its use above.

We now come to the third condition, proof of being capable to work, but unable to obtain suitable employment, and in connexion with this certain provisos to this section have to be considered.

It is provided that the workman shall not be deemed to have failed to fulfil the statutory conditions by reason only that he has declined (1) an offer of employment in a situation vacant in consequence of a stoppage of work due to a trade dispute; (2) an offer of employment in the district where he was last ordinarily employed at lower wages or on conditions less favourable than he has habitually obtained; (3) or an offer of work in any other district on conditions less favourable than those observed by associations of employers and workmen in such district or by "good employers."

We believe this is the first occasion on which the expression "good employers" appears in any Act of Parliament. The provisos in sect. 86 have to be read in connexion with sect. 87, for, although to fulfil the statutory conditions to obtain unemployed benefit a man need not accept a post rendered vacant in consequence of a trade dispute, by sect. 87 a man who has lost employment by reason of a stoppage of work due to a trade dispute is disqualified from receiving benefit, as also is a man who has lost his employment through misconduct or who has left his employment without just cause. In the former case the disqualification continues so long as the stoppage of work lasts; in the two latter instances the disqualification lasts six weeks.

It is also to be noted that by the same section sickness or disablement benefit received by the workman so long as it is paid to the workman is a disqualification for the simultaneous receipt of unemployment benefit.

Sect. 107 contains a definition of "trade dispute"—"any dispute between employers and workmen or between workmen and workmen which is connected with the employment or non-employment or the terms of employment, or with the conditions of labour of any persons, whether workmen in the employment of the employer with whom the dispute arises or not." This definition very nearly follows that in the Trade Disputes Act, 1906, and it recognises the "sympathetic strike."

With reference to the third statutory condition in sect. 86—*i.e.*, proof that the workman is capable of work—we may here refer to sect. 100, by which it is provided that if repeated failure on the part of an insured workman to obtain or retain employment appears to the insurance officer to be wholly or partly due to defects in knowledge and skill, he may test the workman's knowledge and skill. Failure to accept the test or failure to satisfy the test will be taken into consideration in determining what is suitable employment. If the workman is a hopeful subject, although defective in knowledge and skill, technical instruction may be given to him out of the unemployment fund.

It only remains to consider the fourth "statutory condition" under sect. 86, that the workman has not exhausted his "unemployment benefit." The rates and periods of unemployment benefit are contained in the seventh schedule, but it must be remembered that under sect. 84 no unemployment benefit is to be paid for any period of unemployment which occurs within six months of the commencement of the Act—*i.e.*, July 15, 1912.

The rate of unemployment benefit is in respect of each week following the first week of unemployment 7s., or such other rate as may be prescribed either generally or for any particular trade, but the rate cannot be increased above 8s. or reduced below 6s. This is for adults. When the workman is under seventeen he is paid no benefit, but while between seventeen and eighteen he receives half the rate which he would receive were he over eighteen, but no workman shall receive more unemployment benefit than in the proportion of one week's benefit for every five contributions paid by him or on his behalf, except when, as will be shown below, certain additional contributions are to be credited to him. Nothing can exceed the complication of this part of the Act, which should have been expressed in the clearest terms, but we will endeavour to explain it to some extent.

It will be seen that the duration of benefit depends upon the number of contributions. The eighth schedule lays down the contributions. "From every workman employed in an insured trade, 2½d. for every week he is so employed." This is qualified in two ways—(1) in respect of length of employment, (2) age of the workman. (1) If the employment is for less than a week it is to be treated as employment for a week, except it is less than two days. If it is less than two days, for one day the contribution is 1d., for more than one day 2d., but for the purpose of calculating contributions for unemployed benefit these reduced contributions are to be treated as two-fifths or four-fifths of a full contribution.

(2) Workmen below the age of eighteen contribute 1d. a full week (no provision is made in their case for shorter periods of employment), but this contribution is to be calculated as two-fifths of a full contribution in respect of unemployment benefit after he is eighteen. In the case of a workman over twenty-one Proviso (*a*) in the seventh schedule provides that "if he has habitually worked at an insured trade before the commencement of the Act, there shall be deemed to be added to the number of contributions he has actually paid five contributions for each period of three months or part of such period during which he has so worked before the commencement of the Act, up to a maximum of twenty-five contributions."

A period of unemployment commences after application has been made, but no workman shall receive benefit for more than fifteen weeks or such other number of weeks as may be prescribed within any period of twelve months, or in respect of any period less than a day.

Now let us endeavour to work out this complex series of puzzles set by the Legislature. Take the case of a man over twenty-one engaged in an insured trade (ten months before July 15, 1912) who becomes unemployed ten months after the commencement of the Act. We will say that during that period in which the Act has been in force he has paid forty-five contributions and been engaged by the week. In respect of those contributions, at the rate of five contributions for one week's benefit, he is entitled to nine weeks' benefit; but he is further entitled to five contributions for each period of three months or part of such period before the commencement of the Act—that is, during ten months, at five contributions to one week's benefit four additional weeks, or thirteen in all at 7s. per week or whatever rate may be prescribed.

The man of eighteen has paid in the same period also forty-five contributions, and if he was above eighteen when contributing he is entitled to nine weeks' benefit.

If he was below eighteen when contributing, but above eighteen when he became unemployed, his contributions for the purposes of benefit are treated as two-fifths of a contribution—*i.e.*, eighteen contributions, and at the rate of five contributions for a week's benefit he is entitled to three and three-fifths weeks' benefit. If he was below seventeen when contributing and when unemployed was still below eighteen, he receives benefit at half the rate he would if he were eighteen, but his contributions in this case are counted as full contributions. Below seventeen he receives no unemployment benefit at all.

It will be seen that an equally complicated series of mathematical problems have to be solved where a workman is employed for periods of less than a week, a contribution of 1d. for a day's work counting as but two-fifths of a contribution, two days four-fifths, and yet under sect. 86 the proof is put upon the workman that he has not exhausted his right to benefit. It is hardly possible to conceive a worse devised piece of legislation for the working classes—legislation which puzzles the trained lawyer.

By sect. 88 these questions are left to be determined by the "insurance officers," but when benefit is refused or stopped or not allowed in accordance with the claim the workman may require a report to be made to a court of referees. If the referees and the insurance officer disagree, the question may be referred to an umpire. As a matter of fact, we hardly imagine there will be many appeals, as the workman will be incapable of checking the decisions of the insurance officers.

There are other questions, such as refund arrangements with associations of workmen, etc., which we shall refer to in a further article.

BUILDERS AND FIRE INSURANCE.

AMONG the risks which the prudent builder takes into account before he enters on his work there is none more important than the risk of fire before completion. His entire profit may be swept away if a fire occurs against which he is not insured, for the bare undertaking to carry out works involves an agreement to complete in any event. The risk of fire attaches to the contractor, not to the employer.

Again, even if the fire is small in extent, to make good the damage must inevitably cause delay. Who is responsible for that delay?

Very definite provision is made for the risk of fire in the ordinary forms of contract. An example of a fire insurance clause in a contract for large works is supplied by the War Department conditions of contract, sect. 15 of which is in the following terms:—"The works, until delivered up to the Commanding Royal Engineer, shall stand at the risk of the contractor, who shall be responsible for and must make good all damage by fire, weather, or tempest, and for the delivery up of the buildings and works to the Commanding Royal Engineer in a clean state, and complete in every particular at the termination of this contract. All the glass in the sashes will be handed over to the contractor, and he must, after the completion of the work, give it over to the Royal Engineer Department in a perfect state, free from all cracks and breakages, and quite clean."

In Appleby *v.* Myers (1867), L. R. 2, C. P. 651, it was clearly stated that not even in the case of an entire contract for repairs or additions to a house belonging to the employer which is burnt previous to completion can the builder recover for work and materials done previous to completion, even although such materials may have by accession passed to the employer.

In that case Mr. Justice Blackburn said: "Generally, and in the absence of something to show a contrary intention, the bricklayer, or tailor, or shipwright is to be paid for the work and materials he has done and provided, although the whole work is not complete. . . . But, although this is the *prima facie* contract between those who enter into contracts for doing work and supplying materials, there is nothing to render it either illegal or absurd in the workman to agree to complete the whole, and to be paid when the whole is completed, and not till then. . . . Had the accidental fire left the defendant's premises untouched and only injured a part of the work which the plaintiff had already done, we apprehend that it is clear that the plaintiffs, under such a contract as the present, must have done that part over again in order to fulfil their contract to complete the whole and 'put it to work' [this was the case of machinery] for the sums above named respectively."

The liability of an insurance company is such that they may either elect to rebuild or reinstate the premises. In a Canadian case (Smith *v.* Colonial Insurance Company (1880), 6 Vict. L. R. 200) an insurance company elected to reinstate premises destroyed by fire instead of paying their value. A second fire occurred before reinstatement was complete. Held, that the insurers must reinstate a second time, even though this involved expenditure in excess of the amount insured.

The insurer who elects to reinstate puts himself in the position of a builder who undertakes to restore the destroyed buildings as nearly as possible to their former condition. If after the election to reinstate, reinstatement becomes illegal, the insurers will nevertheless be liable in damages for breach of the contract to reinstate.

It is obvious that when a building is destroyed a large part of the incombustible material may be so unaffected as to be capable of being used again. The rights of the builder are not altogether clear, for, strictly speaking, all the materials used on a building site become vested in the owner of the freehold.

Mr. Hudson, in his "Building Contracts" (page 345), expresses the following view on this point:—"Where a fire occurs in a new building in progress, which the builder is bound under his contract either impliedly or expressly to rebuild in the event of its destruction before completion, it would seem that, although the materials dislocated and detached from the freehold do not thereby revest in the builder, yet he is equitably entitled to utilise these materials so far as they are sound and good for the purpose of rebuilding, subject, of course, if the contract so requires, to their being approved by the architect. He is in much the same position as an insurer who has contracted to reinstate in case of fire, and who has a right to the salvage of the burnt building.

When the builder expressly contracts to insure the building in progress and the materials on the site, which is frequently the case, he then becomes an insurer and entitled to all the rights and subject to all the liabilities of an insurer."

In a New Zealand case the plaintiff contracted to build on additions to the defendants' stores. The plaintiff was to make good any damage caused by fire. Materials brought on to the ground were to become the defendant's property. An accidental fire destroyed the store, the uncompleted additions, and the materials on the ground. It was held that the plaintiff could not recover for work and labour done, inasmuch as a certificate from the architect was a condition precedent to his right to payment; nor for the materials as they had become the defendant's property, and this part of the contract was not severable from the rest. It was held also that the defendant was in law excused from performance of the contract on his part.

The rights of a sub-contractor who has put good work into a partially-destroyed building are not any easier to define than are those of the builder. It is presumed, however, that if he has done and completed his part of the work he is entitled to be paid. In an American case it was held that where a sub-contractor has performed substantially all he contracted for, and before the entire work is performed by the principal contractor the building is destroyed by fire, and the owner and the original owner make a settlement in which deduction is made of the value of whatever remained unperformed on the sub-contract, the sub-contractor is entitled to recover for the work actually done by him, notwithstanding that the sub-contract is not completely performed.

CONCRETE-MIXERS:

THE ROLL MIXER.

THE type of concrete-mixing machine to which attention will now be devoted consists essentially of a rotatory drum, so shaped inside that scoops are not required for mixing purposes.

It is claimed by the makers that the relatively small power taken and the light running of the machine conduce to small maintenance charges and long life, in addition to economical working.

The mixing drum consists of two hollow castings, one keyed to the driving shaft and the other attached to the shaft in such manner that it can be moved laterally by a simple hand-lever in the small sizes and by means of a worm gear in the larger sizes. This arrangement is for the purpose of providing for the instantaneous discharge of the concrete.

Fig. 1 is a section through the drum when closed for mixing concrete. By the slow rotation of the drum the position of the material is constantly changed, and as the inside walls are sharply inclined a cross fall is brought about by which the material is thoroughly mixed in all directions, as suggested by the section. Fig. 2 shows the drum with the right-hand casting moved to open a gap for discharge of the mixed concrete.

The machine is fitted in several styles to suit requirement, but the general arrangement of the drum and auxiliaries is sufficiently indicated by the illustration reproduced in Fig. 3. All types and sizes can be fitted with a special material hoist operated by the pulley driving the mixer, and which enables each batch of concrete to be hoisted to any required height.

Materials to be mixed are placed in a feed hopper, which is raised by lifting gear and

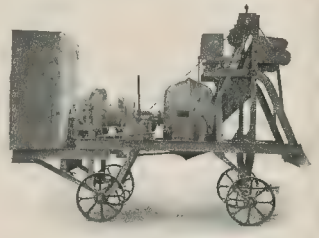


Fig. 3. The Roll Concrete-Mixer.

emptied into the drum. As this revolves, its contents are completely mixed in from thirty to sixty seconds, at first dry and then with water. While the mixing operation is being conducted, the feed hopper is lowered and refilled in readiness for the next batch of concrete.

The drum is emptied by moving the lever acting upon the worm gear, and by reversing the lever the drum is again closed and ready to be refilled.

Water is admitted from a tank, arranged so that the quantity admitted can be adjusted at will.

The Roll mixer is supplied by Builders' and Contractors' Plant, Ltd., of 17, Victoria-street, Westminster.

FEES FOR SPECIFICATION.

BUILDERS and others who are in the habit of competing for contracts advertised by public tender are always anxious to obtain as much information as possible before committing themselves to a figure. The statement in the advertisement is, of course, wholly insufficient, but the advertisement frequently alludes to the fact that further information is available if a small fee is paid.

Public and other bodies, however, who invite tenders have a habit of making a charge for copies of the specifications. In some cases the payment of one guinea, which is not returnable, is demanded for plans and specifications. In other cases the tenderer is supplied with one copy of the specification, which has to be returned, and if he requires other copies he must either make them out himself or pay for them.

It is pointed out that this is a matter of considerable hardship to contractors; and it is obvious that the payment of even so small a sum as one guinea before the would-be tenderer knows anything about the work which he will have to do may be just enough to put smaller firms out of the running.

There does not appear to be any legal remedy.

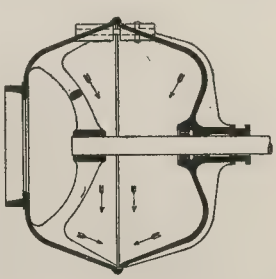


Fig. 1. Drum Closed.

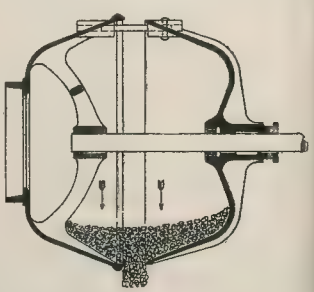


Fig. 2. Drum Opened.

The Roll Concrete-Mixer.

To write for specifications in the circumstances mentioned is to consent to the payment of one guinea in any event. Furthermore, by the Public Health Act, 1875, before any contract of the value or amount of 100*l.* or upwards is entered into by an urban authority, at least ten days' public notice must be given, stating the nature and purpose of the proposed contract and inviting tenders for the execution of the works; and the urban authorities must also take sufficient security for the due performance of the contract. They are thus bound by statute to invite tenders; and it is obvious that if they were to send out a copy of the specification gratis to every applicant considerable expense might be unnecessarily incurred. It might be possible, however, for the party inviting tenders to publish an abridged form of specification which could be obtained at a purely nominal cost, and which would enable a would-be tenderer to decide off-hand whether execution of the proposed works would be at all feasible.

There are circumstances, however, in which the cost of a specification paid for in circumstances similar to those above mentioned may be recovered. In a case heard last year the corporation of a town invited tenders. The sum of one guinea was payable for a copy of the specification, and the sum of 100*l.* was payable as a deposit with each tender. A firm who sent in a tender received a notification to the effect that their tender was accepted, and they then attended to view the plans and to peruse the conditions of contract. Instead of reading the conditions they asked the engineer of the corporation whether the conditions were in the usual form. He replied that they were. Subsequently on reading the conditions it was found that they were of the most unusual description, and the tenderers refused to sign a contract. They then brought an action to recover the deposit and the sum of 1*l.* 1s. which had been paid for the specification. Mr. Justice Channell held that they were entitled to recover both sums. This, of course, was an unusual case which is not likely to recur. Had the tenderers merely declined to go on with the contract because they found they had under-estimated the cost neither sum could have been recovered.

LAND VALUATION.

THE President of the Land Union announces in the *Times* a further case of valuation in which the Referee has revised the original value placed upon a small property. The figures quoted are a little difficult to follow, but the main point seems to have been that, whereas the valuer only allowed the exact cost of making up a road in front of the house as an owner's expenditure to be taken into consideration in arriving at the taxable value for increment value duty, the Referee decided that land given up for streets should also be considered.

GOVERNMENT CONTRACTS.

THE following tenders have been accepted during the past month by the Government Departments named:—*Admiralty, Works Department:* Portland cement—the Associated British Portland Cement Manufacturers, Ltd., Aldermans House, Bishopsgate, E.C.: British Portland Cement Manufacturers, Ltd., Aldermans House, Bishopsgate, E.C.: Messrs. Trechmann, Weekes, & Co., Ltd., 6, Lloyd's-avenue, Fenchurch-street, E.C; the Artillery and Albion Cement Company, Ltd., Greenhithe, Kent; the Wouldham Cement Company, 35, Gt. St. Helens, E.C.; reconstruction of bridge at Four Elms-hill, Chattenden—Messrs. Goddard, Massey, & Warner, Ltd., Traffic street, Nottingham. *Admiralty, Contract Department:* Carpenters' and joiners' work—Messrs. G. G. Bussey & Co., Ltd., Peckham, S.E.; Messrs. East & Son, Berkhamsted, Herts; the India-Rubber, Gutta-Percha, and Telegraph Works Company, Ltd., Silvertown, E.; Messrs. F. Merrick & Son, Glaston bury, Somerset; Mr. G. W. Shaw, 222, High-street, Poplar, E.; Mr. S. Snawdon, Yealmpton, Plymouth; Messrs. E Spencer & Co., Longfellow-road, Bow, E.; the South-Western Building and Steam Joinery Company, Ltd., Lees lane, Gosport; Messrs. Watt, Torrance, & Co., Muirhouse Sawmills, Glasgow; fireclay Messrs. G. K. Harrison, Ltd., Stourbridge; Mr. J. Walker, Kingswinford, Dudley. *War Office:* Washing basins—Messrs. S. E. & J. Fellows, Ltd., Wolverhampton; works services: alterations, etc., at Kilkenny Barracks—Mr. M. Dunne, King-street, Kilkenny; alterations, etc., at married quarters, Depôt, Barracks, Bury—Messrs. J. Fowles & Sons, 13, Hornby-street, Heywood; alterations, etc., at married quarters, Fulwood Barracks, Preston—Messrs. R. Thompson & Morris, 13, Dalton-square, Lancaster; erection of annexes to married soldiers' quarters, Carlisle—Messrs. J. & R. Bell, Nelson street, Carlisle; erection of officers' houses, Tidworth—Messrs. S. Roberts, Ltd., 81, Old Town-street, Plymouth; erection of offices, Army Aircraft Factory, South Farnborough—Messrs. Martin, Wells, & Co., Ltd., Aldershot; erection of quarters, Fort Bovisand, Plymouth — Messrs. Wakeham Brothers, Friary yard, Knighton-road, Plymouth; foundations and site work for dirigible shed, North Aldershot—the General Building Company, 45, Chandos-street, W.C.; installation of electric light, Central Flying School, Salisbury Plain—Messrs. Foote & Milne, Ltd., 66, Victoria-street, S.W.; repair and maintenance of War Department buildings at:—Blackdown and Deepcut—Mr. E. C. Hughes, Albion Works, Wokingham; Guildford, Mill Hill, and Woolwich—Messrs. J. Dorey & Co., Ltd., Brentford; Woolwich (ordnance factories)—Messrs. W. F. Blay, Ltd., Dartford; repair of roads at Royal Gunpowder Factory, Waltham Abbey—Messrs. Bristowe & Co., Ltd., 20, Tothill-street, Westminster; repairs to stable paving, Cavalry Barracks, Colchester—Mr. W. Chambers, 101, Magdalen street, Colchester. *India Office, Store Department:* Fireclay—Messrs. Timmis & Co., Stourbridge. *Crown Agents for the Colonies:* Cement—the Associated Portland Cement Manufacturers, Ltd., 8, Lloyd's-avenue, E.C.; Peter's Branch of the British Portland Cement Manufacturers, Ltd., 72, Victoria-street, S.W.; goods shed—Messrs. A. Findlay & Co., Ltd., 9, Victoria-street, S.W.; countess slates—the Oakly Slate Quarries, Ltd., Portmadoc. *Office of Works:* Builders' work: alterations, Abingdon Post Office—Messrs. T. H. Kingerlee & Sons, Oxford; enlargement, Darlington Post Office, and adaption Sunderland Labour Exchange—Mr. W. B. Cooper, 5, Park-place, East Sunderland; redrainage, Mount Pleasant Parcel Office, third contract — Messrs. Galbraith Brothers, Ltd., Camberwell-green Works, S.E.: heating apparatus, Birmingham Telegraph Stores—Messrs. H. J. Cash & Co., Ltd., Caxton House, Westminster, S.W.: ornamental metalwork, British Museum—the Bromsgrove Guild, Bromsgrove; wood-block flooring, Royal Courts of Justice extension—Messrs. Ellis, Geary, & Co., 5, Cannon-street, E.C. *General Post Office:* Laying a line of Sykes ducts and hollow cement conduits in Hampstead, N.W. Messrs. J. Mowlem & Co., Ltd., Grosvenor Wharf, Westminster, S.W.: laying lines of pipes in Brighton—Mr. J. A. Ewart, 21, Old Queen-street, Westminster, S.W.; laying a line of Sykes ducts in Mile End-road and Bow-road, E.—Messrs. Grounds & Newton, Page-green, South Tottenham, N. *Commissioners of Public Works, Ireland:* Building works: erecting and furnishing Gazebo National School, Co Kilkenny—Mr. J. Mulhall, Castlecomer, Co. Kilkenny; erecting and furnishing Knock National School, Co. Mayo—Mr. P. J. Gilmartin, Ballina, Co. Mayo.

BURMESE TEAK.

IN the report just published by the India Office on the progress and condition of India it is stated that the reserved forest area in Burma has been increased to 26,077 sq. miles. The unclassed forests, much of which will ultimately be brought under cultivation, cover 111,150 sq. miles. The majority of the teak-bearing forests are now being managed under working plans of the girdling schemes, though lack of labour or establishment make it impossible to carry out all the improvements projected in the sanctioned plans. The number of teak trees girdled was 112,500, and the quantity of teak extracted was 309,800 cubic tons (including 262,100 by purchase contractors), an increase of 25,200 tons. The price of teak ruled high. Of other timbers, 327,100 cubic tons were extracted. The area under teak worked by the department is being strictly curtailed in favour of the system of extraction by firms under purchase contracts.

THE BUILDING TRADE UNIONS.

It is stated that a private Conference of trade unions representing men employed in the building trade was held in London on the 24th inst., to consider the proposed amalgamation of the unions under the title of the Amalgamated Building Workers' Union, with a view to maintaining "a fighting organisation working to improve the conditions of the workers." At the end of the meeting Mr. Bowerman, M.P., stated that the Conference, which represented thirteen unions, had approved the scheme. A ballot of the members concerned will be taken not later than September 30.

NATIONAL INSURANCE ACT.

IN the House of Commons a few days ago, Sir Frederick Cawley asked the President of the Board of Trade whether joiners and millwrights employed permanently in factories to keep the buildings and machinery in repair are included in Part II. of the National Insurance Act.

Mr. Robertson replied that, by sect. 91 of the Act, decisions as to whether any workman, or class of workman, come within the scope of the scheme of unemployment insurance, rests not with the Board of Trade but with the Umpire appointed under sect. 89. He might mention that the Umpire has decided that contributions are payable in respect of joiners engaged wholly or mainly in the work of construction, alteration, repair, decoration, or demolition of buildings, and in respect of smiths and mechanics who are engaged wholly or mainly in the work of maintenance or upkeep of machinery, although the work is connected with businesses other than those included under the trades specified in the Sixth Schedule of the Act.

GENERAL BUILDING NEWS.

CHURCH AND SCHOOL, NORTH ORMESBY.

Mr. T. W. T. Richardson, M.S.A., is the architect for the new Primitive Methodist church and school in Ormesby-road, which has been erected at a cost of 2,493*l.* The church is 50 ft. long and 31 ft. wide, and will seat 430 people, while the school has accommodation for 400. The builders are Messrs. Duchars & Bowers, of Middlesbrough.

PARISH CHURCH, WHITERINCH.

This church is being erected from the plans prepared by Mr. Macgregor Chalmers, architect, and the cost of the work will be about 5,200*l.* The building will seat 900 persons.

CHURCH HALL, DUDLEY.

Messrs. Hicks & Charlewood, of Newcastle, are the architects for the St. Paul's Church hall, which has been erected at a cost of 450*l.* The hall seats 200 people, and the contract was carried out by Mr. Thomas Atkinson, builder, of Newcastle.

NATIONAL GALLERY, SCOTLAND.

The enlarged buildings of the Scottish National Gallery were opened recently by the Secretary for Scotland. The alterations to the gallery have been carried out under the supervision of Mr. Oldrieve, of H.M. Office of Works.

MECHANICS' INSTITUTE, NEWSHAM.

Mr. J. Goulding, of Blyth, is the architect for this new institute which is being erected at a cost of about 1,000*l.* The new work includes a large public hall and a caretaker's house. The contract was carried out by Messrs. A. Best & Co, of Newsham.

ENLARGEMENT OF LINSLADE, BUCKS.

The Vicar and Churchwardens of St. Barnabas Church have instructed Mr. J. T. Lawrence, Lic.R.I.B.A., of London, to prepare designs for the enlargement, reseating, and heating of the church.

TRADE NEWS.

Under the direction of Mr. J. A. Macgregor, architect, Castle-Douglas, Scotland, the "Boyle" system of ventilation (natural), embracing Boyle's latest patent "air-pump" ventilators and air-inlets, has been applied to Corsock Church, Corsock, Scotland.

The new Isolation Hospital, Earlestown, is being supplied with Shorland's double-fronted patent Manchester stoves and patent Manchester grates by Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester.

APPLICATIONS UNDER LONDON BUILDING ACTS, 1894 to 1909.

AT the last meeting of the London County Council the following applications under the London Building Acts were dealt with. (The names of the applicants are given in parentheses):—

Lines of Frontage and Projections.

Clapham.—Church on the northern side of Culmstock-road, Clapham-common, to abut upon the eastern side of Alfriston-road (Messrs. J. S. Quilter & Son).—Consent.

Hammersmith.—Illuminated sign in front of a cinematograph building in Down-place, Hammersmith (Mr. H. C. Constantine).—Consent.

Lambeth, North.—Projecting sign in front of No. 1, Felix-street, Westminster Bridge-road (Messrs. Drake & Gorham, Ltd.). Consent.

St. George, Hanover-square.—Erection of a one-story portico at the entrance to the Oriental Club, No. 18, Hanover-square (Messrs. Hampton & Sons, Ltd.).—Consent.

Wandsworth.—Porches, bay-windows, and barge-boards to houses in Hambledon-road, Wincanton road, and Granville-road, Southfields (Mr F. L. Poole).—Consent.

Wandsworth. Bay-windows, porches, and barge-boards to houses on the south-eastern and north-western sides of Wimbledon Park-road and the northern side of Standen-road, Wandsworth, and the erection of an oriel-window at the house on the south-eastern side of Wimbledon Park-road (Mr. F. L. Poole).—Consent.

Wandsworth.—Addition to a stable building at No. 29, Kempshott road, Wandsworth, next to Buckleigh-road (Messrs. W. Mason & Sons) -Refused.

Width of Way.

City of London.—Porch and addition to a building on the southern side of Great St. Helens, City (Messrs. Joseph & Smithem for the St. Helens Estate, Ltd.). Consent.

Islington, North.†—Erection of a building on the north-western side of Tollington Park, Islington (Mr. M. W. Hudson for Messrs. Price & Co.) —Consent.

Islington, North.†—Addition at the rear of Nos. 490 and 492, Holloway-road, Islington (Mr. C. T. Lee for the London County and Westminster Bank, Ltd) —Consent.

Kennington.—Erection of a factory building on the southern side of Miles-street, Lambeth, with a forecourt boundary (Messrs. Searle & Searle for Messrs. Brand & Co., Ltd.).—Consent.

Poplar.—Parish hall on the northern side of Havannah-street, Poplar (Mr. G. Cogswell for the Rev. E. F Scofield).—Refused.

Southwark, West. Erection of a building on the eastern side of Princess-mews, St. George's-road, Southwark (Messrs. Field & Sons for Mr. C. Haben).—Consent.

Southwark, West.—Building to abut upon Bankside and Bankend, Southwark (Mr. J. A. Renwick).—Consent.

Width of Way and Lines of Frontage.

Hampstead.—Church institute and club building on the southern side of Perrin's-court, Hampstead (Mr. A. Keen).—Consent.

Rotherhithe.—Building upon a site abutting upon the eastern side of Lower-road, Rotherhithe, and the southern side of Irwell-place (Mr. W. G. R. Sprague for Mr. W. J. Paveley) Consent

Southwark, West.—Erection of buidings on the site of Nos. 41 and 43, Webber-street, Southwark (Mr. C. B. Young for Mr. F. E Rogers). -Consent.

Width of Way and Construction.

Hampstead.† -Bridge across a footpath between the grounds of Hill House and Heath Lodge, North End-road, Hampstead (Mr. T. H. Mawson for Sir W. H. Lever, Baronet). Consent.

Width of Way and Deviation from Certified Plans.

Lewisham.†—Erection of a stable building and van shed on the eastern side of Havelock-street, Forest-hill (Mr. J. M. Kennard for Mr. C. Pearce).—Refused.

Width of Way, Line of Frontage, and Construction.

Fulham.—Temporary wood and iron building at the premises of the Imperial Carriage Works (Messrs. Wheeler Brothers for the Imperial Carriage Company).—Consent.

Hackney, South.—Addition to a mission building on the northern side of High-street, Homerton (Mr. J S. Alder for the Rev. Stanley Power).—Consent.

Paddington, North.—External iron staircase in front of No. 3, Blomfield-place, Paddington (Mrs. E. Smith).—Consent.

Wandsworth.—Temporary wood and iron building at the rear of No. 213, Streatham High road, Wandsworth (Messrs Holliday & Stanger).—Consent.

Woolwich.—Steel and iron building at the premises of the Western Electric Company, Ltd., on the southern side of Green-lane, North Woolwich (Mr. B. Dawson for the Western Electric Company, Ltd.).—Consent.

Line of Frontage and Width of Way.

St. Pancras, South.—Erection of six blocks of dwellings abutting upon Hastings-street, Judd-street, Bidborough-street, and Tonbridge-street, St. Pancras (Mr. A. Davis for the London Housing Society, Ltd.).—Consent.

Space at Rear.

St. George, Hanover-square.—Addition at the rear of Berkeley House, Hay hill, Berkeley-street (Mr. W. Wonnacott for Mr. A. H. Young). Consent.

Strand -Addition to No. 2, Coventry-street, Piccadilly (Messrs Emden, Egan, & Co.)—Consent.

Space at Rear and Projections.

Westminster.—Building upon the site of Nos. 87, 89, and 91, Tufton-street, and Nos. 62 and 64, Horseferry road, Westminster (Messrs. A. E. Hughes & Son for Mr. Fegan's Homes Incorporated).—Consent.

Space at Rear and Alteration of Buildings.

Chelsea.—Alterations and additions at Nos. 171, 173, and 175, Fulham-road (Messrs. R. W. Price & Sons for Mr. G. Dancocks).—Refused.

Finsbury, East.—Conversion of No. 18, Whitecross-alley, Finsbury, into a dwelling house (Mr. E. W. Coldwell for Mr. W. Jenkinson).—Refused.

Deviation from Certified Plan.

St. George, Hanover square –Re-erection of No 34, Three Kings-yard, Grosvenor street, Westminster (Mr. F. W. Foster). Consent.

Alteration of Buildings.

Paddington, South.—Additional story on the roof of No. 4, Connaught-place, Paddington (Messrs. Davis & Emanuel for Mr. I. E. Raphael).—Consent.

Paddington, South. Additional story at No. 65, Porchester-terrace, Bayswater (Messrs. Waller & Co. for Mr. P. Ritscher).—Consent.

Wandsworth.—Alterations and the erection of a verandah at the rear of the Putney Almshouses, Putney Bridge road, Wandsworth (Mr. H G. Leslie for the Trustees of Sir A. Dawes Almshouses).—Consent.

Formation of Streets.

Hampstead.—Street to lead from Shoot-up-hill to St. Cuthbert's-road, Hampstead, was to have been defined and thrown open as a public highway, and also alteration in the gradient (Messrs. T. H. Perkins & Co.). -Consent.

Hampstead.—Roadway of a proposed street to lead from Frognal lane to Barby-avenue, Hampstead ((Messrs. Farebrother, Ellis, & Co.). -Consent.

Kennington.—Formation or laying out of a new street for carriage traffic out of the eastern side of Denny street, Kennington (Mr. G. Bartlett).—Consent.

Cubical Extent.

Battersea.—Factory building to abut upon Ford's-place, Battersea (Morgan Crucible Company, Ltd.).—Consent.

Brixton.—Additional cubical extent in respect of the erection of two additions at the premises of the General Motor Cab Company, next to Cranmer-road, Kennington (Mr. G Pollard for the General Motor Cab Company, Ltd.). Consent.

Chelsea.—Erection of a building, with a division exceeding 250,000 cubic ft. in extent, upon a site abutting upon Fulham-road, Lucan place, Leader-street, and Sloane-avenue, Chelsea (Michelin Tyre Company, Ltd.). Consent.

City of London.—Building upon the site of Nos. 22 to 25, Farringdon-street, City (Mr. H. O. Ellis for the Amalgamated Press, Ltd.). —Consent.

Hammersmith. Additional stories at Osram Works, Brook-green, Hammersmith (Messrs. J. S. Quilter & Son).—Consent.

Kennington.—Additional cubical extent in respect of a proposed mineral water factory to abut upon Vauxhall-walk and Lilac-place, Lambeth (Mr. A. F. Briggs for Messrs Schweppes, Ltd.).—Consent.

Kensington, South.—Addition to Imperial court buildings, Brompton-road and Basil-street, Kensington (Mr. W. F. Harber). Consent.

Marylebone, East.—Erection upon the site of Nos. 308 320, Oxford-street, and Nos 21 24, Old Cavendish street, St. Marylebone, of a building with divisions exceeding 250,000 cubic ft in extent (Messrs. Ruscoe Brothers & Co) Consent.

Rotherhithe.—Additional story at No. 120, Tower Bridge-road, Rotherhithe (Mr. J. M Kennard).—Consent.

Westminster.—Addition to a two-story building at the Stag Brewery, Palace street, Pimlico (Mr. M. T. Saunders for Messrs. Watney, Combe, Reid, & Co., Ltd.). Consent.

Uniting of Buildings.

City of London.—Formation of an opening at the ground-floor level between No. 38, Lime-street and Nos. 35 and 36, Lime street and No 16, Fenchurch-avenue, City (Mr. L. U. Grace). —Consent.

City of London.—Uniting of Nos. 79-82 with 83, Fore-street, City (Mr. E. Flint for Foster's Parcels and Goods Express, Ltd.).—Consent.

Clapham.—Uniting of Nos. 503 and 505, Lavender-hill, Clapham-junction (Messrs. Briant & Son for Messrs. S. Frost & Co., Ltd.).—Consent.

Greenwich. Formation of four openings exceeding the statutory size and fitted with sliding iron doors in a division wall at the premises of Messrs. M. V. Bowater, Ltd., Morden Wharf, Sea-Witch-lane, East Greenwich (Mr. H. O. Ellis).—Consent.

Holborn.—Opening at the second-floor level connecting Nos. 77-79, Farringdon-road, Holborn, with warehouse premises abutting upon Castle-street (Fireproof Doors, Ltd., for Messrs. Marshall, Sons, & Co., Ltd.).—Consent.

Islington, East.—Double-armoured doors in lieu of double iron doors to openings in division walls at the premises of Messrs. W. Wood & Sons, Kelvin-road, Islington (Mr. J. Farrer for Messrs. W. Wood & Sons).—Consent.

Strand.—Formation of an opening exceeding the statutory size in a division wall at the basement level at No. 4, New Burlington-street (Messrs. Niven & Wigglesworth for Messrs. J. G. Hardy, Ltd.).—Consent.

Strand.—Uniting of Nos. 28-31 with No. 32, Great Pulteney-street, Westminster (Messrs. A. E. Hughes & Son for Mr. D. C. Apperly).—Consent.

Whitechapel—Formation of eleven openings fitted with double iron-shutters in the division walls of the Co-operative Wholesale Society's Tea Warehouse, Leman-street, Whitechapel (Mr. E. W. Chicken for the Co-operative Wholesale Society, Ltd.).—Consent.

Cubical Extent and Uniting of Buildings.

Strand.—Additional cubical extent in respect of a new building upon the site of Nos. 2, 3, and 4, Tavistock-street, and Nos. 4, 5, 6, and 7, Exeter-street, Strand, and the uniting of a portion of the ground floor of such new building with No. 27, Wellington-street (Mr. Lewen Sharp for Mr. G. Munro).—Consent.

The recommendations marked † are contrary to the views of the Metropolitan Borough Councils concerned.

PROJECTED NEW BUILDINGS IN THE PROVINCES.*

ABERDEEN.—Shop premises for Aberdeen Market Company (2,500*l.*); Messrs. Kelly & Nichol, architects, 367, Union-street, Aberdeen. Additions to Balragash House (1,850*l.*); Mr. G. Bennett-Mitchell, architect, 148, Union-street, Aberdeen.

Adwick-le-Street.—Club (3,700*l.*); Secretary, Working Men's Club, Adwick-le-Street.

Aintree.—Factory for Messrs. W. & R. Jacob & Co., Ltd., biscuit manufacturers, 286 304, Scotland-road, Liverpool.

Am'ple.—Five houses; Secretary, Broomhill Collieries, Ltd., Broomhill, Acklington.

Ayr.—Church (4,000*l.*); Mr. J. A. Morris, architect, Wellington-chambers, Ayr.

Barnsley.—Five motor-garages, etc., off Perseverance-street; Secretary, Barnsley British Co-operative Society, mineral-water manufacturers, Perseverance-street, Barnsley.

Batley.—Extensions to premises, Bradford-road, for Messrs. Walker & Smith, engineers.

Browney Colliery (Co. Durham). School (3,500*l.*); Mr. W. Rushworth, Architect, Shire Hall, Durham.

Buarse.—Chapel; Mr. B. E. F. Sheehy, architect, George-street, Limerick.

Burghead (Elginshire).—Additions to school (2,100*l.*); Mr. J. Wittet, architect, 31, High-street, Elgin.

Cambridge.—Hall (2,500*l.*); Mr. W. H. Howie, architect, 213, West Campbell-street, Glasgow.

Cardiff.—Arcade of shops; Mr. W. R. Jackson, architect, Queen street, Cardiff.

Cargo Fleet (North Riding, Yorks).—School (5,175*l.*); Mr. H. M. McNaughton, builder, Snowdon road, Middlesbrough.

Carrington (Notts).—Parish church (10,000*l.*): Mr. Curtis Green, architect, London.

Chepstow.—Restoration of parish church (5,000*l.*); Vicar, Chepstow.

Chester.—Special instruction centre (584*l.*): Messrs. J. Mayers, Son, & Co., Canal Side, Chester.

Clitheroe.—School (6,000*l.*): Mr. H. Littler, architect, Ribblesdale-place, Preston; Messrs Bleazard & Sons, builders, Railway-view, Clitheroe.

Coventry.—Extensions to works, Foleshill-road, for Messrs. S. Courtauld & Co., Ltd., artificial silk spinners.

Datchet.—Twenty-eight houses for the Datchet Co-partnership Housing Society, Ltd.

Denton.—Alterations to Acres Inn for the Chesters Brewery Company, Ltd., Princess-street, Ardwick, Manchester.

Dumfries. Additions to Crichton Royal Institution; Messrs. Mitchell & Wilson, 13, Young-street, Edinburgh

Dundee.—Extensions to Harris Academy (10,000*l.*); Dundee School Board.

Dunfermline.—College and clinic, North Inglis-street; Messrs. H. & D. Barclay, architects, 245, St. Vincent-street, Glasgow.

Edinburgh.—Additions and alterations to

* See also our list of Competitions, Contracts, etc., on another page.

cookery school, Atholl-street (4,000*l.*); Mr. H. Ranser Taylor, architect, Edinburgh. Extensions to Royal Edinburgh Hospital (5,000*l.*): Messrs. Hendry & McLennan, 7, South Charlotte street, Edinburgh.

Erith.—Proposed school; Mr. Stephenson, Secretary, Erith Wesleyan Church Sunday-school.

Exeter.—Picture palace, Fore-street; Mr. J. A. Lucas, architect, Guildhall-chambers, High-street, Exeter; Messrs. Woodman & Son, builders, Bartholomew-street, Exeter.

Glasgow.—Laboratories for Victoria Infirmary (3,000*l.*); Mr. H. E. Clifford, architect, 225, St. Vincent-street, Glasgow.

Greenock.—Proposed five tenements of houses (5,000*l.*); Mr. A. J. Turnbull, Master of Works, Burgh Hall, Greenock.

Halifax.—Cinematograph theatre, Horton-street; Mr. W. Longbottom, architect, 11, George-street, Halifax. Additions to Union (1,500*l.*): Messrs. Clement Williams & Sons, Commercial-street, Halifax.

Hamilton. — Extensions to middle ward hospital (6,000*l.*); Messrs. Cullen, Lockhead, & Brown, Brandon-chambers, Hamilton.

Hastings.—Alterations to Grand Hotel; Mr. H. Ward, architect, 8, Bank-buildings, Hastings.

Hazebrigg. -School (3,000*l.*); Mr. W. Forrest, architect, Moot Hall, Newcastle.

Hove.—Electric theatre, Holland-street; Messrs. Gilbert & Constanduros, architects, 43, Finsbury-square, E.C.

Hull.—Cemetery chapel (2,290*l.*); Messrs. Goates & Son, builders, Hull.

Huntington (North Riding, Yorks).—Additions and alterations to school (1,243*l.*); Mr. C. Martin, builder, Emerald-street, York.

Johnstone.—Buildings for Mr. Matthew Wylie, engineer, Redlands.

Kilbowie.—Extensions to works of Messrs. J. & F. Tullis, engineers (4,000*l.*).

Lancing.—Hall; Mr. Otto S. Doll, architect, 157, North street, Brighton.

Llanelly.—Public hall; Mr. George Watkeys, Surveyor, Urban District Council Offices, Llanelly.

Leith.—Ten houses, Clark-avenue; Messrs. Bain & Brown, builders, Leith-walk, Leith. Three houses, Craighall-terrace; Leith Building Company, Ltd., Leith.

Low Fell (Co. Durham).—Church (6,000*l.*); Messrs. Harrison & Ash, architects, Newcastle-on Tyne.

Luton.—Alterations and additions to Liberal Club, Manchester-street; Messrs. Lacey & Son, builders, Luton.

Lymington.—Municipal buildings; Mr. F. Hill Parr, Surveyor, Town Hall, Lymington.

Maidstone.—Adaptation of police station into Guardians' Offices (2,007*l.*); Mr. W. T. Burrows, 27, Headley street, Maidstone. Confectionery factory; Mr. F. W. Ruck, architect, Week street, Maidstone; Messrs. Wallis & Son, Ltd., Hart-street, Maidstone

Maryhill, N.E.—Electric sub-station (2,500*l.*); Mr. W. W. Lockie, chief electrical engineer, Electricity Department, 75, Waterloo-street, Glasgow.

Maryport.—Enlargement of school (5,500*l.*): Mr. W. Latimer, builder, Sheffield-street, Carlisle.

Mossend.—Electric theatre (3,000*l.*); Mr. R. Hamilton, architect, 49, Clyde-street, Motherwell.

Motherwell.—Baths, etc. (7,000*l.*), and extensions to slaughterhouse (2,000*l.*): Mr. James McCullum, Surveyor, Town-buildings, Motherwell.

Nelson.—Extensions to Clover Mill for Messrs. Reddick, Stuttard, & Co., cotton goods manufacturers.

Netherfield Hill. -Houses (1,550*l.*): Mr. James McQuillan, Surveyor, Urban District Council Offices, Battle.

Newbottle (Fence Houses).—School; Mr. J. W. White, builder, High Barnes Works, General Graham-street, Sunderland.

Newcastle-on Tyne.—Schools, Rye-hill and Cruddas Park: Mr. A. C. Coffin, Town Hall, Newcastle. Picture hall: Messrs. W. & T. R. Milburn, 3, Park terrace, Sunderland.

Newport (Mon).—Baptist chapel; Messrs. Habershon & Fawckner, 41, High-street, Newport.

New Mills School (10,000*l.*): Mr. J. W. Swindells, builder, New Mills.

Northampton School: Messrs. Sharman & Archer, architects, Sheep-street, Wellingborough.

Norwich.—Additions and alterations to city asylum (7,945*l.*); Engineer, Mr. W. E. Collins, Town Hall, Norwich.

Oakenshaw (Co. Durham).—School (5,000*l.*): Mr. W. Rushworth, Architect, Shire Hall, Durham.

Paisley.—Municipal buildings (2,500*l.*); Mr. James Lee, Surveyor, 13, St. James'-place, Paisley.

Partick (Glasgow).—Cinematograph theatre, Orchard-street (3,000*l.*); Mr. Albert V. Gardner, 164, Bath-street, Glasgow. Five houses, Crown-circus; Mr. William Miller, builder, Horselethill-road, Kelvinside, Glasgow. Hall and offices, Maxwell-street, and baths, etc., Douglas and Walker streets; Mr. John Bryce, Surveyor, Burgh-buildings, Partick.

Pembroke (Ireland).—Forty-three houses (8,000*l.*); Surveyor, Urban District Council Offices, Pembroke.

Port Talbot.—Church; Mr. F. R. Kempson, architect, 16, High-street, Cardiff; Messrs. J. Jenkins, Ltd., builders, 12, Clifton-road, Newport.

Pontypridd Stables, Mill-field (2,000*l.*); Mr. E. Lowe, Surveyor, Urban District Council Offices, Pontypridd.

Ripon.—Trinity Day-school (2,000*l.*); Mr. F. Hargrave, architect, Market-place, Ripon.

Romford.—Isolation hospital; Mr. W. Smith, Clerk, Guardians' Offices, Romford.

Ryhope.—Council offices; Mr. G. Brown, architect, 51, Fawcett-street, Sunderland.

Sheffield. — Sunday-schools, Buckenham-street; Trustees, Ellesmore-road Wesleyan Church.

Sincil Bank.—School (6,675*l.*); Mr. F. Scarborough, builder, Allison-street, Lincoln.

Southend-on-Sea.—Theatre; Messrs. Deakin & Cameron, architects, 16 and 17, Devonshire-square, E.C. Alterations and additions, London-road School (3,075*l.*); Messrs. Cabuche & Hayward, Queen's House, Hamlet Court-road, Southend; Messrs. E. & B. H. Davey, builders, Southend.

Sparty Lea.—Primitive Methodist church; Messrs. Marshall & Tweedy, architects, Eldon-square, Newcastle-on-Tyne.

Stafford.—Enlargement of Messrs. Siemens Brothers' Dynamo Works (9,000*l.*); Messrs. F. Epsley & Son, builders, Victoria-road, Stafford.

Stalybridge. -Additions at Eagle Ironworks for Messrs. Bailey & Garnet, Ltd.

Steeton.—Offices, etc., at mills, for Messrs. J. Dixon & Sons, bobbin and tube manufacturers.

Sunderland.—Hospital (6,000*l.*); Messrs. W. & T. R. Milburn, 3, Park-terrace, Sunderland.

Swansea.—The following plans have been passed:—Three houses, Spencer-street, for Messrs. Hughes & Morgan; five houses and shops, Ty-mawr-street, Danygraig, for Messrs. Medwell & Collins; alterations and additions, Badminton Hotel, Fleet-street, for Mr. H. Miles; four houses, Sketty-road, for Mr. J. B. Jenkins; additions, chapel house, Bonymaen, for the Trustees, Cwm Chapel; three houses, Bath-road, Morriston, for Mr. Richard Crombie; Congregation church, Pentrechwyth-road, for the Trustees; fourteen houses, Marlborough-road, for Mr. E. Tucker; six houses, Neath-road, Morriston, for Mr. John Harris.

Taunton.—Garage (3,000*l.*); Messrs. Samson & Coulthurst, Hammett-street, Taunton.

Tottington.—Extensions to Two Brooks Works for the Bleachers' Association, Ltd.

Troon.—Church for Portland United Free Church (6,000*l.*); Mr. H. E. Clifford, architect, 225, St. Vincent-street, Glasgow.

Truro. — School, Daniell-road; Mr. J. Colliver, builder, 25, St. Dominic-street, Truro.

Upper Beedlington. -Additions to school (1,980*l.*); Messrs. F. Sandell & Sons, builders, Railway-approach, Worthing.

Wallsend.—Temperance Hotel and Hostel; Mr. P. L. Browne, architect, Pearl-buildings, Newcastle-on-Tyne.

Whitby. -Alterations and additions to Egton Lodge: Mr. T. Talfourd-Cumming, architect, Broadway-buildings, Reading.

Whiteinch (Glasgow). — Cinematograph theatre (2,500*l.*); Mr. T. Baird, architect, 134, Bath-street, Glasgow.

Wolstanton School. Mr. E. Hollingshead, Urban District Council Offices, Wolstanton

Worcester.—School (750 places); Mr. T. Duckworth, Town Hall, Worcester.

A HERTFORDSHIRE FIRM'S RECORD.

At a coming-of-age celebration at Hitchin, Herts, on Saturday, of the oldest son of Mr. Francis Newton, builder and decorator, it was stated that the firm had continued in the same family from 1728 to the present day, a period of over 180 years. This record is unique in Hertfordshire, and will probably bear comparison for continuity of family business control with any similar trade in the country. The eldest son of the present proprietor, Mr. Francis Newton, is the sixth generation to enter the business. After a presentation had been made to him from the employees, Mr. Francis Newton, in responding to the toast of the firm, stated that two families of workmen were now employed to the third generation with the firm. In these days of hurry, scurry, and industrial unrest, it is reassuring to note that the old foundations of business prosperity, that of harmony between employer and employed, are not altogether obsolete.

WESTMINSTER CITY COUNCIL.

At the fortnightly sitting of this Council on June 20 the following, amongst other matters, were dealt with:—

Underground Convenience.—It was agreed to construct an underground convenience for women in Vauxhall Bridge-road, at an estimated cost of 1,600*l.*

Savoy Hotel.—Consent was given to the extension of the vaults of the Savoy Hotel under Somerset-street, subject to certain conditions.

Building Line of Wardour-street.—The City Engineer reported that, at the request of Messrs. Blow & Billerey, the architects to the owner, he has set out the building line at Nos. 103 to 109, Wardour-street, with a clear width of 40 ft. between the face of the granite piers of the new building on the east side of Nos. 76 to 78, Wardour-street, on the opposite side of the street, and the base of the proposed plinths of the new building to be erected at Nos. 103 to 109, Wardour-street. A representative of the London County Council attended and confirmed the building line as set out.

Combined Strip Pavement.—It was reported that a representative of the Royal Society for the Prevention of Cruelty to Animals had expressed the opinion that the combined strip pavement which has been laid in the carriageway of Piccadilly-circus is the best piece of paving in London.

Setting Back of Abingdon-street.—A communication had been received from H.M. Office of Works suggesting a delay in the setting back of Nos. 29 and 32, Abingdon-street, to see whether, when the rest of the improvement is carried out, such setting back will be really necessary. It was decided to make representations that the Council would like to see the whole improvement carried out at the earliest possible moment.

FOREIGN AND COLONIAL.

Activity of the Building Trade in Hungary.

An enormous development in the building trade has (Mr. Consul Grant Duff reports) been the most salient commercial feature of the past year in Hungary. In Budapest alone 600 new houses were finished, many of them very large ones. Extensive building also took place in Debreczen, Temesvár, and other important towns. The Budapest kilns furnished over 300,000,000 bricks during the year, and still have large orders in hand. The cement factories have also been very active owing to the large employment of concrete in building. Six hundred kiloms. of road have been undertaken by various municipalities, making a total of 11,400 kiloms. of State roads. The largest bridges built during the year were those over the Theiss at Záhany, over the Vag at Szered, and the Danube-Vag at Komárom. It is proposed to repair and enlarge the famous Kettenbrücke at Budapest, and to construct another Danube bridge in the capital.

Building Material and Requisites, San Salvador.

H.M. Consul at San Salvador (Mr. W. E. Coldwell) has forwarded a copy and translation of a decree, dated May 13, authorising the Board of Works of that city to make contracts for the erection of six buildings of reinforced concrete (or similar material) as follows:—(1) Palace of Justice; (2) General Post Office; (3) School for Arts and Crafts; (4) House of Correction for Juvenile Offenders; and (5 and 6) Normal School of Masters and Mistresses.

Building Material, Brazil.

The *Diario Official* of May 18 publishes decrees, as follows:—(1) Granting in favour of the Ministry of Justice and Home Affairs an extraordinary credit of 500,000 milreis (about 33,300*l.*) for the purpose of completing the erection of the cavalry baracks required for the Police Brigade in Rio de Janeiro. (2) Granting in favour of the Ministry of Communications and Public Works a credit of 600,000 milreis (about 40,000*l.*) for the construction of a Postal Telegraph Office in Nictheroy, State of Rio de Janeiro.

Building Material, Argentina.

The *Boletin Oficial* (Buenos Aires) of May 18 publishes a decree authorising the Superintendent of Military Construction to award to Señor Luis Loreti a contract for the construction of infantry barracks at San Nicolás (Province of Buenos Aires) for the sum of 320,705 pesos (about 28,000*l.*).

LEGAL COLUMN.

Boundaries to Highways.

In the case of Attorney-General and Uckfield Rural District Council *v.* Lindsay-Hogg, reported in the *Weekly Notes*, a short point of interest was decided. The plaintiffs claimed a declaration that certain portions of roadside waste formed part of a public highway. The land in question lay between two hedges, one of which had never been planted, but had sprung up naturally, and in these circumstances the Court held that the presumption did not arise that every part of the land between the hedges had been dedicated to the public. In the result the action was dismissed.

LAW REPORTS.

COURT OF APPEAL.
(Before Lords Justices FLETCHER MOULTON and BUCKLEY, and Mr. Justice PARKER.)

Padbury *v.* Holliday & Greenwood and Others.

THIS case, which involved an important question as to the liability of contractors who employed a sub-contractor, for personal injuries inflicted upon a stranger through the negligence of a servant of the sub-contractor, was heard last week upon the application of the defendants, Messrs. Holliday & Greenwood, Ltd., for judgment or new trial in the action which was tried before Mr. Justice Coleridge and a special jury on February 16 last (reported in the issue of the *Builder* of February 23).

The action was brought by Mr. A. G. Padbury, a traveller for a firm of horse-shoe manufacturers at Birmingham, against Messrs. Holliday & Greenwood, Ltd., builders and contractors, of Loughborough Park, Brixton, and Messrs. Wainwright & Waring, Ltd., of Chiswick, to recover damages for personal injuries sustained by him in the following circumstances:—

Messrs. Holliday & Greenwood had been employed by the City of London Real Property Company, Ltd., the building owners, to erect premises in Fenchurch-street, and the contract involved the employment by Messrs. Holliday & Greenwood of sub contractors to execute special works, and the work of putting metallic casements into the windows was entrusted to Messrs. Wainwright & Waring, Ltd. On January 4, 1911, while one of the casements was being put in, an iron tool was placed by a workman in the employment of Messrs. Wainwright & Waring on a window-sill, and the casement, having apparently been blown to by the wind, the tool fell and struck the plaintiff, who was passing along Fenchurch-street at the time, and caused him serious injury.

The defendants, Messrs. Holliday & Greenwood, denied negligence, and in the alternative said that if there was negligence it was not their negligence, but that of their sub-contractors, Messrs. Wainwright & Waring, Ltd., in failing to provide suitable protection to the public. Messrs. Wainwright & Waring did not enter an appearance to the writ, but subsequently the plaintiff discontinued the action against them.

At the trial the jury found, in answer to specific questions left to them by the learned Judge, that the falling of the tool was something which might reasonably have been foreseen by the defendants, having regard to the character of the work being executed by the sub-contractors; that the defendants ought reasonably to have foreseen such a possibility; that the defendants did not take precautions to avoid such a possibility; and they assessed the damages at 500*l.*, and upon the findings the learned Judge gave judgment for the plaintiff as against Messrs. Holliday & Greenwood for 500*l.* and costs. From this decision Messrs. Holliday & Greenwood now appealed.

Mr. Spencer Bower, K.C., and Mr. Stuart Bevan, appeared for the appellants; and Mr. Hohler, K.C., and Mr. Shakspeare for the respondent.

At the conclusion of the arguments of Counsel, Lord Justice Moulton, in delivering judgment, after stating the facts, said he was of opinion, having regard to the decision of the House of Lords in the case of "Dalton *v.* Angus," that before a superior employer could be held liable for the negligent act of a servant of a sub-contractor it must be shown that the work which the sub-contractor was employed to do was work the nature of which, and not merely the performance of which, cast upon the superior employer the duty of taking precautions. In the present case the tool was not placed on the window-sill in the normal course of doing the work which the sub-contractors were employed to do. The fact that the work which was being done was work to the window seemed to him to be immaterial. He thought that the case would have been the same if the work had been purely internal work. He could see no reason for saying that the operation of putting the casement into the window caused the tool to be placed on the window-sill or to fall off. The act which caused the injury to the plaintiff was an act of collateral negligence by a workman who was a servant of Messrs. Wainwright & Waring, and not a servant of the appellants, and therefore the latter were not liable for the consequences of that negligence. He was of opinion, therefore, that the appeal should be allowed, and judgment entered for the appellants with costs.

Lord Justice Buckley and Mr. Justice Parker also delivered judgments allowing the appeal.

KING'S BENCH DIVISIONAL COURT.
(Before Justices BRAY and BANKES.)

Contractor's Successful Appeal: Wilkinson *v.* Shorrock.

THIS case came on for hearing on June 21 upon the defendant's appeal from a judgment of Judge Hamilton at the Haslingden and Accrington County Court.

Mr. Scott appeared for the appellant, and Mr. Hume Williams, K.C., for the respondent.

Mr. Scott, in opening the appeal, said that the action in the County Court was against the defendant—who was a contractor in a large way of business—by an infant in respect to damages for personal injuries caused by alleged negligence, and the result was a verdict for the plaintiff and an award of 30*l.* damages. The appeal before their Lordships was on the ground that there was no evidence of negligence on defendant's part at all. The facts were that defendant was engaged near Accrington in the erection of a mill, and for the purposes of his operations he had made an opening in a fence or wall, and in it had placed an ordinary "contractor's gate." The opening was for the purpose of admitting materials to the building site. There was a distance of about 3 ft. between the gate entrance and the public road—a small by-street, which contained a number of cottages where the child plaintiff, a girl named Doris Wilkinson lived. One Saturday afternoon the girl was found lying beneath the gate injured under the following circumstances:—Mr. Shorrock and his men had left the work at noon, the gate having been properly fixed up; but the servants of a sub-contractor had remained on the premises. Apparently what happened was that, totally unexpected, during the Saturday afternoon, a certain brick company, who were contractors for the supply of bricks, brought a load for the site. The carman found the gate fixed in position, and got the aid of some other man to lift it from the "slots" so that the load might come through. The carter found the gate in this closed condition at 2.30, and so it was apparently on removal propped up against the wall, and soon afterwards it was found that it had fallen on the child. It was obvious that the brick company's carter was not the servant of the defendant, nor were the men employed by the sub-contractor the defendant's servants, and yet on these undisputed facts the Judge had held that the defendant was nevertheless liable for the injury to the child. He submitted that the Court should allow the appeal as there was no evidence as to how the accident happened at all, and it was impossible to bring home negligence to the defendant.

Counsel said that Judge Hamilton, in his judgment, had found that the defendant was responsible for the safety of the gate and responsible to secure it if all the workmen had left, and that he was guilty of negligence in permitting his sub contractor's men to continue to work on the premises after his own foreman had closed the gate and left the works. The Judge also took the view that the defendant knew that the sub-contractor's men might be coming to work on the site, and it was the defendant's duty to see that his usual man or some other man was left to look after the gate, and finally put it safely in position after the other workmen had left the premises.

Mr. Scott proceeded to argue that the Judge was wrong, as the gate was not a dangerous thing *per se*. One might just as well say that a flag-stone was a dangerous thing or a baulk of timber. The judgment (he submitted) was given under an entire misapprehension, and Counsel added that the defendant complained of the bricks being delivered on the Saturday afternoon, but had said that if he had been there, as a matter of courtesy, he would not have refused them. There was no evidence as to the accident—it might have been occasioned by boys "skylarking" and helping the child into the danger. Somebody might have given the gate a shove. It could not possibly be said that a gate like this was "a nuisance"; when it was removed and properly put against the wall there was no danger associated with it at all. The finding of the child in the position in which she was discovered was consistent absolutely with no breach of duty by anybody. The plaintiff must fail because she had not discharged the burden of proof that the defendant had some special duty on the ground that the gate was *per se* dangerous.

For the respondent, Mr. Hume Williams, K.C., submitted that here the case depended on two or three simple questions of fact. The gate was an ordinary contractor's gate placed there by the defendant for his own purposes, and it was one that had to be moved before access could be got to the site. The defendant had a man in his employment whose duty it was to be at the gate and help take it off and on so long as it was being used. Another fact was that the gate was taken off, and it was the defendant's servant's duty to see that it was placed in such a position in the road that it was not a nuisance and a public danger. In his evidence the defendant's gateman had deposed, "we used to lift the gate off first thing in the morning, and we put it into such a position during the day that no man could knock it over." Another important fact was that the defendant knew that on this Saturday afternoon the gate might be used, and that it must be taken off. If a sub-contractor was left at work on a Saturday afternoon it was reasonable that the defendant should know that goods might be required to be taken into the premises. So long as defendant knew that the gate might have to come off he knew that it was liable to become a nuisance, and it was his duty to see that somebody was there to guard it from being a nuisance "as against the whole world," and it was because he did not do that that the accident happened. Had defendant's gateman been there there would have been no accident. If one created a nuisance one must take the consequences.

Mr. Justice Bray, in delivering judgment, said that, in his opinion, there was no evidence of negligence against the defendant to submit to a jury had there been a jury trying the case. Judge Hamilton had said that he found the defendant to be responsible for the safety of the gate after all the workmen had left the premises on the Saturday, but he did not say on what grounds he came to such a conclusion. There was, in fact, no evidence to warrant that particular conclusion. The County Court Judge had held that defendant was negligent in permitting his sub-contractors to continue to work on the premises after his own foreman had finally fixed the gate and left the works; but he (Mr. Justice Bray) did not agree with that at all. If such constituted negligence, it was, at any rate, not the cause of the accident, because the evidence showed that the sub-contractor's men, in fact, had nothing to do with it. The accident happened through the brick-carter coming when he was not reasonably expected. There was no evidence whatever to justify the Judge's conclusions, and the appeal must be allowed with costs, and judgment entered for the defendant.

Mr. Justice Bankes concurred.

Builder's Action against the Finchley Urban District Council.

MR. JUSTICE JOYCE, on June 20, delivered a considered judgment in the case of Denman *v.* the Finchley Urban District Council.

The litigation arose out of the right of plaintiff to connect water-gullies, etc., with the Council's sewer in Clarence gardens, Dollis Park, and raised an important question to builders and frontagers in the district. Mr. Denman is a builder, and last month sought an injunction to restrain the Council from interfering with his work of joining up pipes with the sewer in Clarence-gardens. It was then stated that notice had been served upon him under sect. 150 of the Public Health Act, 1875, requiring him to make up the road. Mr. Denman, being one of the several frontagers, made an arrangement with the other frontagers that he should carry out the work on behalf of all of them. The notice of the Council gave him only six weeks in which to do the work, and when that time had elapsed the work was not completed, the time being quite insufficient.

Defendants took up the position that as the work was not completed within the time they were entitled to treat the matter as if no notice whatever had, in fact, been given to plaintiff, and as if his authority to do the work had lapsed. They claimed they were entitled to do the work themselves and charge

the frontagers with the cost of it, but finally refused to do it themselves or allow plaintiff to finish the job under their legal rights. The road in question was partly made up when plaintiff made excavations for the purpose of connecting his surface drains with the sewers. The connexion was, in fact, practically made, and, plaintiff contended, if the Council succeeded in sustaining the position they took up in the matter, the whole of his work done would be destroyed. Plaintiff pleaded that either he or the defendant Council should be allowed to make the connexions.

The result of the controversy was that the Council ultimately agreed to connect up the plaintiff's pipes without prejudice to their legal rights. So that the issue remaining was, who should pay the costs? To decide the question the matter had to be fully gone into before the learned Judge.

His Lordship, reading his considered judgment, said he was surprised to find that the point involved had never before been decided. Sect. 150 of the Public Health Act, 1875, under which these proceedings came, said nothing about a time limit. All it said was that if the statutory notice was not complied with, then the local authority could step in, do the work themselves, and charge the frontagers with the cost.

The Council contended that if the work of connecting up was not done within the stipulated time, then they were entitled to step in, even while the frontager was doing the work, and prevent any connexion being made with their sewer, leaving the frontager to any remedy he might have—he (the Judge) supposed leaving the frontager with no remedy at all. This was a contention to which he was entirely unable to accede. He was of opinion the local authority could not do anything of the kind, any more than they could before the expiration of the period stated in their notice. If the work was not done within a specified time, and the time allowed being reasonable, the Council might intervene under the express power of the Act and do the work themselves. But, added his Lordship, he was of opinion that unless and until the Council so intervened, and in the absence of some express notice, the frontager who had *bond-fide* commenced to execute the work, might, after the specified period of time, proceed with the work or require to have it done in due course. Even where it was agreed that the notice was at an end, he was not certain that a new notice might not be necessary.

In the present instance it appeared there were negotiations for an arrangement between the parties. It went off, however, on the question of the builder paying the Council inspector's fee, which defendants had no legal right to impose, although it might be done by agreement. But the plaintiff resented the charge, and would not pay it. There was no unreasonable delay on his part. On the whole, the learned Judge said, he came to the conclusion that the plaintiff was entitled to have his surface-water pipes connected up. The local authority were in the wrong upon the law, and therefore were liable for the costs of the litigation. Of course, the Council could appeal.

Mr. Younger, K.C.: Yes, but there will be no order, except that the defendants pay the costs.

Mr. Hughes, K.C.: There will be leave to the defendants to appeal if so advised?

The Judge: Yes; but I don't encourage you to appeal if only on the question of costs.

LONDON COUNCILS.

Barking.—Plans lodged by the Lamp Black Company, Ltd., for the erection of a lamp black factory in Harts-lane, have been approved. Mr. W. E. Davey, whose tender was recently accepted for the erection of the administrative block at the hospital, has been allowed to withdraw his tender as, in consequence of the general increase in the cost of materials, the price for the work would have to be increased by 10 per cent.

Battersea.—The Borough Surveyor has been instructed to prepare estimates with a view to making-up and paving of several roads on the Battersea-rise House Estate. Plans have been passed for Mr. W. H. George for the erection of sixteen houses in Muncaster-road.

Berkhamsted.—Plans have been passed for the Berkhamsted Tenants, Ltd., for the erection of eight houses.

Bethnal Green.—The tender of the Acme Flooring and Paving Company (1904), Ltd., has been accepted for supplying 30,000 8-in. by 3-in. by 5-in. creosoted deal blocks, at 6*l.* 2s. 6d. per 1,000, and 3,000 8-in. by 3-in. by 4-in. creosoted deal blocks, at 5*l.* 1s. 6d. per 1,000.

Brentford.—Tenders are to be invited to carry out extensions to the workhouse laundry.

Camberwell.—The tender of the Devon Construction Company, Ltd., at 1,571*l.* 12s. 9d. has been accepted for kerbing, channelling, roadwork, and laying foundations for asphalt paving, etc., in a portion of Red Post-hill.

City of London.—At the last meeting of the Court of Common Council the Streets Committee were authorised to proceed with the necessary works for the construction of the subway across Cannon-street by Mansion House Station, at an estimated cost of 16,000*l.*

Croydon.—A portion of Norbury Brook, Dunbar-avenue, is to be covered over at an estimated cost of 120*l.* The Borough Engineer has been instructed to prepare plans, specification, and estimates for the erection of a library building in Brigstock-road, at a cost of 5,000*l.* The following plans have been passed:—Messrs. E. Pollard & Co., 29, Clerkenwell-road, E.C., alterations to premises, George-street; Mr. E. J. Saunders, 48, Wellesley-road, additions at St. Stephen's Church, Warwick-road; Mr. J. E. Trimble, Kilmartin-avenue, seven houses, Kilmartin-avenue; Mr. W. Capon, Streatham, S.W., four houses, Kilmartin-avenue; Messrs. Macintosh Brothers, 5, Station-road, West Croydon, four houses, Carlyle-road.

Deptford.—Mr. E. C. Pinks, Parliament-mansions, Victoria-street, S.W., has been appointed to take out the quantities of the new central library proposed to be erected in Lewisham High-road, and to perform the whole of the Quantity Surveyor's work in connexion with the building, including the adjustment of the accounts and all necessary measuring, at a remuneration of 2 per cent. on the eventual total cost of the building.

Ealing.—According to the Borough Surveyor, during the year ended March 31 last 13,900 super. yds. of Ealing stone had been manufactured by the Council's slab-making plant. The quantity laid during the period under review was 15,426 super. yds., as against 17,230 super. yds. during 1911. The cost of manufacture amounted to 1,175*l.* The profit of the year's work amounted at 627*l.*, representing roughly the difference in cost between making and issuing, the latter being charged at 2s. 6d. per yard, as compared with the Indurated Victoria at 3s. 8d.

East Ham.—The Borough Engineer has been directed to prepare plans and estimates for making-up a portion of Masterman-road. Sanction has been received from the Local Government Board to the borrowing of 3,622*l.* for the erection of additions to the swimming-bath. Negotiations are to be carried on with Millars' Timber and Trading Company, Ltd., for the laying of a different kind of wood-block from that specified in their contract, in connexion with the duplicating of the tram-lines in High street North. Plans have been passed for Mr. H. R. Beale for the erection of ten houses and one house and shop in Masterman-road. Mr. Aleck George has lodged plans for alterations and additions to Nos. 162 and 164, High-street North.

Finchley.—The General Purposes Committee are to consider and, if found desirable, to prepare a scheme for the formation of a public library. Plans have been passed for Mr. E. Brown, Messrs. Herbert & Tant, and the North Metropolitan Electric Tramways, Ltd., for the erection of a motor-garage in Woodside Grange-road; twelve houses, Stanhope-avenue; and extensions to the sub-station, Rosemont-avenue, respectively. The Middlesex County Council have been approached with the view to the removal and reinstatement of the tramway centre poles in the Great North-road, at an estimated cost of 3,587*l.* A sum of 1,650*l.* is to be borrowed for improvement works in ten streets.

Greenwich.—Tenders are to be invited for paving a portion of Thornley-place as a new street; also for making-up the footway and properly paving a portion of the roadway running parallel with the above-mentioned road. A portion of the wood-paving in Romney-road is to be laid with creosoted soft wood-blocks, at an estimated cost of 215*l.* A portion of Tunnel-avenue is to be repaired with granite, and portions of the footways are to be kerbed and channelled at a total estimated cost of 514*l.* Plans have been passed for Messrs. W. F. Blay, Ltd., and Mr. W. Harbrow, for alterations to premises of the Thames Export Packing Company, Ltd. Seawitch-lane, and for a mission hall in Trafalgar-road, respectively.

Hackney.—Portions of the footways in Dalston-lane and Graham-road are to be reformed at an estimated cost of 1,300*l.* Plans prepared by the Architect for the proposed north-west branch library in Northwold-road have been approved, and are to be forwarded to Mr. Carnegie for his approval. Tenders are to be invited for the work of erection, the cost of which is estimated not to exceed 5,250*l.* The following plans have been passed:—Mr. D. S. Barclay, eight houses, Craven-walk; Messrs. Rowlandson & Co., factory, Chatham-place; Messrs. Edmondsons, Ltd., eight houses, Leweston-place, Stamford-hill; Mr. J. E. Ashby, alterations and additions, motor garage, Well-street, for the London General Omnibus Company, Ltd.

Hammersmith.—Plans submitted by Mr. J. C. Platt have been approved for rebuilding Nos. 106 and 108, King-street. Messrs. Leslie Davis & Co. have lodged plans with the London County Council for the erection of a motor-garage, adjoining the "Seven Stars" Hotel, Paddenswick-road.

Hendon (Rural).—The tender of Messrs. Halsey, at 192*l.* 4s. 6d., has been accepted for extending the Harrow Weald sewer.

Lambeth.—During the current financial year the carriageways of six streets are to be paved with asphalt, one with Swedish paving-blocks, and a portion of another with creosoted deal blocks, at a total estimated cost of 14,500*l.* Plans have been passed for Messrs. J. A. J. Woodward & Sons, on behalf of Mr. J. Dennis, for carrying out drainage works to three houses proposed to be erected in Dolland-street. Plans have been lodged with the London County Council by Mr. C. H. Young and Mr. F. E Harris for the erection of working-class dwellings upon the site of Nos. 41-3, Webber-street, and for a cinematograph hall on the site of No. 135, Dulwich-road, respectively.

Lewisham.—Artificial stone in lieu of tar-paving is to be laid in six roads at an estimated cost of 372*l.* The following plans have been passed:—Messrs. Edmonsons, Ltd., four houses, Mayow-road; Messrs. J. W. Heath & Sons, six houses, Arthurdon-street; Mr. A. W. Dawson, motor garage, Queens-road; Mr. C. R. Turner, garage, Montpelier-row. Mr. F. E. Rosser has lodged plans with the London County Council for the erection of six houses in Honor Oak-road.

Maldens and Coombe.—The following tenders have been accepted for various improvement works in Kingston-road:—Messrs. E. & E. Ilos, Wimbledon, kerbing, channelling, and forming the carriageway, footway foundations, and constructor of surface-water sewer, 1,234*l.* 13s. 3d.; Atlas Stone Company, Ltd., Cambridge, paving footway with artificial stone slabs, 217*l.* 15s.; Messrs. J. Wainwright & Co., Ltd., Shepton Mallet, paving carriageway margins with tar macadam, 273*l.* 4s. 3d.

Poplar.—Messrs. Edwin Evans & Son have had plans passed for the erection of nine houses in Ridgdale-street.

Southwark.—Messrs. Z. King & Son, 171, Victoria-street, S.W., have lodged plans with the London County Council for consent to the re-erection of Nos. 42-4, Old Kent-road, S.E.

Surbiton.—A certain portion of the area under the Council's control has been approved and adopted as the area to be included in their first town-planning scheme.

Wandsworth.—Tenders are to be invited for paving Gatwick-road, Southfield, part of Seely-road, Tooting, and part of Beechcroft-road, Balham, as new streets; also for paving with wood the carriageway between the kerb and the outer tramway rails of Long-road, Clapham Common. Tender of the Improved Wood-Pavement Company, Ltd., has been accepted for paving works in the following roads at the prices mentioned: — Wimbledon-road, 1,653*l.*; portion of Mitcham-lane, 6,659*l.*; portion of Southcroft-road and parts of Rectory-lane and Mitcham-road, 1,630*l.*; part of Clapham Park-road, 780*l.* The following plans have been passed:—Mr. R. J. Thomson, erection of Weir Hospital, Grove-road, Balham; Mr. S. R. Spinner, shop and house, Chestnut-grove, Balham; Messrs Allen & Norris, ten houses, Wimbledon Park-road, Southfield; Mr. W. R. Williams, additions to All Saints' Church, Lower Putney-common; Messrs. W. H. Lorden & Son, alterations and additions to No. 102, East-hill, rebuilding Nos. 2 and 4, Fairfield-street, Fairfield, and alterations and additions to Nos. 412, 414, and 416, Streatham High-road.

West Ham.—Plans, specifications, etc., by the Surveyor have been approved for making-up portions of Saville-road and Leonard-street. The tender of Messrs. S. Blow, Ltd., 34-5, Upper East Smithfield, E.C., has been accepted at 727*l.* 5s. 8d. for the erection of a handicraft centre at the Upton-lane School. Tenders are to be invited for executing private street works in Sugar House-lane. Messrs. J. Garrett & Son's tender has been accepted, at 3,158*l.*, for the erection of a coal wharf bunker at the generating-station. The following plans have been passed:—Messrs. T. Young & Sons, alterations and additions to Nos. 2, 4, 22, 24, and 26, Well-street, Stratford; Messrs. Green & Smith, alterations to "Essex Arms" public-house, Victoria Dock-road, Tidal

LONDON COUNCILS—*continued on page 778.*

List of Competitions, Contracts, etc.

For some Contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) are advertised in this number:** Competitions, iv.; Contracts, iv. vi. viii. x.; Public Appointments, xvi.; Auction Sales, xxii. Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.

Competitions.

JUNE 28.—**Hale, Cheshire.**—TOWN-PLANNING SCHEME.—Premiums 50*l.* and 25*l.* Particulars from the Council Offices, Hale. See issue of May 24 (page 601).

* JUNE 28.—**Regent's Quadrant.**—DESIGN FOR TREATMENT.—Premiums, 25 guineas, and 25 guineas divided. Adjudicators, Mr. W. Flockhart, Mr. E. A. Rickards, and Mr. Alan E. Munby. See advertisement in this issue for further particulars; also "Competition News," issue of April 19 (page 453), May 3 (page 512), May 10 (page 537).

JUNE 29.—**Reigate.**—LAYING-OUT AND DEVELOPING REIGATE LODGE ESTATE.—Premiums 30 guineas and 10 guineas. Particulars from the Town Clerk, Reigate.

JUNE 30.—**Padiham.**—TOWN HALL, BATHS, ETC. —Premiums 40*l.* and 20*l.* Particulars from Mr. J. Grogson, A.M.Inst.C.E., Surveyor's Office, Padiham.

JULY 1.—**Dusseldorf.**—A plan for the extension of the City of Dusseldorf. Premiums of 1,000*l.* to 375*l.* Conditions on application to the Chief Burgomaster, Dusseldorf. A translation appeared on page 365, September 29.

JULY 1.—**Fort of London.**—NEW OFFICES.—Limited to those mentioned in "Competition News," issue of April 12 (page 424).

JULY 5. — **Conisbrough.** — ADDITIONS TO HOSPITAL. The Doncaster and Mexbrough Joint Hospital Board invite competitive plans for additions to Isolation Hospital. See advertisements in the issues of May 17 and June 7 for further particulars.

AUGUST 6. — **Cardiff.** — FIRE-STATION. — The Cardiff Corporation invite designs and estimates for a fire brigade station in Westgate-street. Mr A. Marshall Mackenzie, assessor. Particulars from the Town Clerk, City Hall, Cardiff.

AUGUST 30. — SAXON SPELL PRIZE. — Fifty guineas, with medal, is offered for essay on "The Lighting, Heating, etc., of an Operating-Room for a General Hospital." Particulars from the Sanitary Institute, 90, Buckingham Palace-road, S.W.

SEPTEMBER 1.—**Goole.**—MUNICIPAL OFFICES.—Premiums 30*l.* and 15*l.* Particulars from Mr. R. Tyson, Council Offices, Goole.

SEPTEMBER 30.—**Dublin.**—UNIVERSITY COLLEGE: NEW BUILDINGS.—Limited to architects in Ireland. Assessor, Mr. H. T. Hare, F.R.I.B.A.

OCTOBER 1. — **Ottawa.** — MONUMENT TO KING EDWARD VII.—Sketch models in plaster to be sent to the Director of National Art Gallery, Ottawa.

NO DATE.—**Jordanhill, Glasgow.**—PROPOSED TRAINING COLLEGE.—Limited to six firms, named in "Competition News," December 1, page 635.

NO DATE. — **Warrington.** — SCHOOL. — The Warrington Education Committee invite competitive plans for the erection of a public elementary school. See advertisement in issue of February 16 for further particulars.

Contracts.

BUILDING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

JUNE 29.—**Aldbury.**—REPAIRS, ETC For painting, distempering, and repairs at the Isolation Hospital at Aldbury. Specification with Mr. A. W. Vaisey, Clerk, Berkhamsted.

JUNE 29.—**Halstead.**—WORKS.—For the reconstruction of the Halstead Caxton Works. Specifications and drawings at the Caxton Works Cottage, Trinity-square.

JUNE 29.—**Muckamore.**—ADDITION.—For building an addition to Ballyrobin National School, Muckamore. Plans and specification with Mr. W. D. R. Taggart, architect, 2, Wellington-place, Belfast.

JULY 1.—**Ferryhill.**—ALTERATIONS, ETC.—For remodelling cottages, King's Head Hotel Ferryhill; alterations to Shepherd's Arms, Billy Row, Crook. Plans and specifications with Mr. J Landell Nicholson, architect, 12, Grey street, Newcastle-on-Tyne.

JULY 1.—**Hatfield.**—ADDITIONS.—For alterations and additions to existing buildings at the Mill, Mill Green, Hatfield. Plans and specification with Mr. Ernest J. Dunham, Clerk, Hillside, Hatfield. Deposit of 5*l.*

JULY 1.—**Kington.**—BRIDGE.—Erection of a steel trough bridge and approaches over the stream on the Woodseaves road at Hobby Lyons, Eardisley. Plans and specifications with Mr. Bernard Phipin, Clerk to the Council, Duke-street, Kington.

JULY 1.—**Kirkburton.** HOUSE.—Erection of a boiler-house at the Hospital. Plans seen, and quantities from Messrs. Joseph Berry & Sons, architects, 3, Market-place, Huddersfield.

JULY 1.—**Stockton-on-Tees.**—ALTERATIONS.—For alterations to the secondary schools, Nelson-terrace. Plans and specification seen, and quantities from Mr. M. H Sykes, Borough Engineer, Town Hall, Stockton-on-Tees.

JULY 2.—**Sunderland.**—PAVILION, ETC.—For the erection of a pavilion at Barnes Park, and a shelter at Harbour View, Roker. Drawings and specifications seen, and forms of tender from Mr. John W. Moncur, Borough Engineer, Town Hall.

JULY 2.—**Walsall.**—FOUNDATION.—For the construction of a concrete foundation for No. 2 cooling tower. Forms of tender, with specification, from Mr. A. S. Barnard, M.Inst.E.E., Borough Electrical Engineer, Electricity Department, Wolverhampton-street, Walsall.

JULY 2.—**Watford.**—ROOM.—For the erection of a mortuary and post-mortem-room and for additional boiler-house accommodation at the Watford Union House. Drawings, specification, and a copy of the conditions and form of contract with Mr. W. H. Syme, F.R.I.B.A., architect, 58A, Vicarage-road, Watford. Quantities and form of tender on deposit of 1*l.* 1s.

JULY 3. — **Macclesfield.**—CONVENIENCES.—For erection of sanitary conveniences, Union Gateway. Specification and plans with Mr. Chas. W. Stubbs, Borough Surveyor.

JULY 3.—**Nelson.**—FRONT. For the erection of new shop front, etc., to the Nelson branch stores, for the Co-operative Society, Ltd. Plans and specification with Mr. William Dowdeswell, M.S.A., architect, Treharris.

JULY 3.—**Saddleworth.**—HOUSES.—Erection of ten houses for the working classes at Shaws, Uppermill; ten houses at Harrop Edge-lane, Dobcross. Plans, specifications, and conditions from Mr. Fred Thorpe, architect, Uppermill, or Union Bank-chambers, Church-lane, Oldham. Deposit of 10s. 6d.

JULY 3.—**Saddleworth.**—HOUSES.—Erection of thirty-five houses (twenty-five at Diggle and ten at Delph). Plans, specifications, and conditions from Messrs. Matley & Mills, architects, Ridgefield, Manchester. Deposit of 10s. 6d.

JULY 3.—**Somerton.**—ADDITIONS.—For alterations and additions at the schools. Plans and specification by the architect, Mr. R. Bowring, of Wells, Somerset.

JULY 4.—**Bedwas.**—SHOP, ETC.—Erection of shop and dwelling house on the Pant Glas Estate at Bedwas. Plans and specifications with Messrs. Gibson, Parry Williams, & Co., architects, Pontypridd.

JULY 4.—**Co. Down.**—PIER. For the repair of breach in main pier of Kilkeel Harbour, County of Down. Plans and specifications at the Office of the County Surveyor, Court-house, Downpatrick, Co. Down. Deposit of 1*l.* 1s.

JULY 4.—**Outlane.**—MISTAL.—For the erection of a five-stalled mistal at Hawthorn Farm, Outlane. Plans seen, and quantities from Messrs. Joseph Berry & Sons, architects and surveyors, 3, Market-place, Huddersfield.

JULY 4.—**Southampton.**—STORE, ETC.—For erection of a coal store and other work at Infirmary, Shirley Warren, Southampton. Forms of tender and specification from Mr. A. J. Walden, Clerk to the Guardians, Clerk's Offices, Workhouse, Southampton.

JULY 4.—**Whitehaven.** COTTAGES. For building eighteen new cottages at Kells, Whitehaven. Plans and specification with Mr. E. L. Nanson, Somerset House, Whitehaven.

* JULY 5.—**Ipswich.** NEW PREMISES.—Messrs. R. D. & J. B Fraser, Ltd., invite tenders for their new premises. See advertisement in this issue for further particulars.

* JULY 5.—**London, N.**—TEMPORARY SCHOOL.—The Hornsey Education Committee invite tenders for erection of temporary school at Muswell-hill, and for alterations to the North Harringay Council School. See advertisement in this issue for further particulars.

JULY 5.—**Thrybergh.**—HOUSE.—Erection of caretaker's house. Plans seen. and specifications, with quantities, from the Education Architect, County Hall, Wakefield. Deposit of 1*l.*

JULY 6.—**Caerphilly.**—HOUSES. Erection of fifteen or more houses at Caerphilly, for the Llwyn-On Building Club. Plans and specifications with Mr. H. Gabe-Jones, architect, Bank-chambers, Hengoed.

JULY 6.—**Neath.**—ALTERATIONS.—For proposed alterations to the Crown Inn, Glyn-Neath. Plans and specification from Mr. J. Cook Rees, M.S.A., architect, Neath.

JULY 6.—**Peter.**—SCHOOL.—For erection of a new boys' school at Chalfont St. Peter, Bucks. Forms of tender, specification, and quantities from the architects, Messrs. Wills & Anderson, 24, Bloomsbury-square, London, W.C Deposit of 2*l.* 2s.

JULY 8. — **Altrincham.** — CONVENIENCES.—For the erection of conveniences in Kingsway. Plans seen, and quantities and forms of tender from Mr. H. E. Brown, Surveyor, Town Hall, Altrincham.

* JULY 8. **Bexley Heath.**—NEW OFFICES, ETC. —The Kent Education Committee invite tenders for new offices, sanitary improvements, and general painting and repairs at Uplands Council School. See advertisement in this issue for further particulars.

* JULY 8. **Blackfriars.**—FACTORY.—Messrs. H. Langston & Co. invite tenders for erection of a factory. See advertisement in this issue for further particulars.

JULY 8.—**Llantrisant.**—ADDITIONS.—For the erection of additions and alterations, with repairs and general renovations, to the Wheatsheaf Hotel, Llantrisant, Glam. Plans and specification with Mr. W. D. Thomas, architect and surveyor, Porth, Glam.

JULY 8.—**Machen.**—HOUSES.—For the erection of thirty houses at Machen, Mon., for the Machen No. 1 Building Club. Plans and specifications from Mr. Philip J. Jones, architect, Church-street, Pontypridd.

JULY 8.—**Merthyr Tydfil.**—PREMISES.—For building new business premises at No. 143, High-street, Merthyr Tydfil, for the Merthyr Gas Company. Plans and specifications with Mr. Charles M. Davies, M.S.A., architect and surveyor, 112, High-street, Merthyr Tydfil

JULY 8.—**Thornton-le-Dale.** SCHOOL For erection of new school-room and renovation of chapel at Thornton-le-Dale. Drawings and specifications at Rev. J. Bilton's, Westgate, Pickering

* JULY 9. **Chelsea.**—WOOD FLOORING.—The Chelsea Guardians invite tenders for taking-up old flooring and relaying with new to two wards at Infirmary, Cale-street See advertisement in this issue for further particulars.

JULY 9.—**Hastings.**—ENGINE-HOUSE.—For the construction of an engine-house at Crowhurst pumping-station. Drawings seen, and specification and form of tender from the Borough Engineer, Mr. P. H. Palmer, M.Inst.C.E., Town Hall, Hastings.

* JULY 9. — **London, S.W.** — TELEPHONE EXCHANGE.—The Commissioners of H.M. Works and Public Buildings invite tenders for new Telephone Exchange at Victoria. See advertisement in this issue for further particulars.

JULY 9.—**Stirling.**—ADDITIONS, ETC.—For alterations and additions to Stirling Post-office. Drawings, specification, and conditions and form of contract at Stirling Post-office. Quantities and forms of tender at H.M. Office of Works, 3, Parliament-square, Edinburgh. Deposit of 1*l.* 1s.

JULY 9.—**Truro.**—RESERVOIRS, ETC.—For the construction of water mains, reservoirs, and other works for the supply of water to Perranporth. Drawings and specification seen, and quantities from the Engineer, Mr. R. Hansford Worth, M.Inst.C.E., 42, George-street, Plymouth.

JULY 10.—**Cwmgorse.**—ADDITIONS.—For the erection of additions, and alterations to New-street Hotel, Cwmgorse. Plans and specification with Mr. David Morgan, architect, Brynheulog, Gwaunesgurwen.

* JULY 10.—**Hailsham.**—FOOTBRIDGE.—The Hailsham R.D.C. invite tenders for a new footbridge over L.B. and S.C.Ry. at the America footpath crossing, near Hailsham Station, Sussex. See advertisement in this issue for further particulars.

JULY 10.—**Islington.** CHAMBERS.—For the construction of three underground transforming chambers. Specification and form of tender from the Electrical Engineer, 50, Eden-grove, Holloway, N.

* JULY 10. **Kensington.** ALTERATIONS - The Kensington B.C. invite tenders for alterations at Branch Library, Ladbroke Grove-road, W. See advertisement in this issue for further particulars.

JULY 11.—**Aberdare.**—HOUSES.—Erection of thirty five houses on the new Cwmaman road, Godreaman, Aberdare, for the Globe Building Club. Plans and specification with Mr. R. H Willson, architect, 41, Lewis street, Aberaman.

JULY 11.—**Gloucester.** FIRE STATION. Erection of a proposed new fire-station, at Bearland, Gloucester Plans and specifications by Mr. R. Read, A.M.Inst.C.E., City Surveyor, Guildhall, Gloucester. Quantities from Messrs. Vale & Kingsford, quantity surveyors, 25, St. Aldate-street, Gloucester, on deposit of 2*l.* 2s.

BUILDING—*continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

* JULY 11.—**Homerton.**—BRANCH LIBRARY.—The Hackney B.C. invite tenders for erection of a branch library. See advertisement in this issue for further particulars.

JULY 12.—**Ashwell.** WATERWORKS.—For the construction of waterworks at Ashwell, Hertfordshire, construction of brick service reservoir, and the erection of pumping-station. Plans with the engineers, Messrs. Elliott & Brown, A.M.M.Inst.C.E., Burton-buildings Parliament-buildings, Nottingham. Specification, quantities, and form of tender on deposit of 2l. 2s.

JULY 15. -**Gloucester.**—ALTERATIONS.—For the proposed alterations at the Crypt Grammar School, Gloucester. Mr. Walter B. Wood, 12, Queen-street, Gloucester. Quantities by Messrs. Vale & Kingsford, St. Aldate-street, Gloucester, on deposit of 2l. 2s.

JULY 15.—**Neath.**—HOTEL.—For the erection of the proposed Pantydrainen Hotel, near Onllwyn, Neath. Deposit of 2l. 2s. for quantities to Mr. T. E. Richards, A.R.I.B.A., architect and surveyor, Pontypridd, and at Cardiff.

JULY 15.—**Stoke Ash.**—SCHOOL.—For the erection of a new Council school at Stoke Ash, near Eye. Specification and form of tender from Mr. J. Webb, Surveyor, County Hall, Ipswich.

* JULY 15.—**Stratford.**—CLASSROOM.—The West Ham Education Committee invite tenders for new classroom at Water-lane Handicraft Centre. See advertisement in this issue for further particulars.

* JULY 15.—**Tunbridge Wells.**—EXTENSION OF INSTITUTE.—The Kent Education Committee invite tenders for extension of Technical Institute. See advertisement in this issue for further particulars.

JULY 16.—**Ammanford.**—EXTENSION. For the extension of protection works at a point in the River Amman, known as Graig Goch. Mr. D. Thomas, Surveyor to the Council.

JULY 16.—**Umberleigh.**—SCHOOL.—For erection of a new school. Quantities, on deposit of 1l. 1s., to Mr. Percy Morris, A.R.I.B.A., 1, Richmond-road, Exeter.

JULY 17.—**London.**—DEMOLISHING.—The Metropolitan Asylums Board invite tenders for demolishing boiler-house, chimney-shaft, and other buildings at the North-Eastern Fever Hospital, St. Ann's-road, Tottenham, N. Drawing and specification by Mr. W. T. Hatch, M.Inst.C.E., M.I.Mech.E., Engineer-in-Chief, at the Office of the Board, Embankment, E.C. Deposit of 1l.

* JULY 23.—**Leyton.**—SCHOOLS.—The Leyton Education Committee invite tenders for new school for girls and infants, and alterations and additions to existing buildings, Church-road Schools. See advertisement in this issue for further particulars.

No DATE.—**Bangor.**—WING. -For making good the work on wing destroyed by fire at Beaumaris Grammar School. Architect, Mr. Harold Hughes, of Bangor.

No DATE.—**Caister.**—HALL.—For the erection of Caister-on-Sea Unionist Hall. Mr. Arthur S. Jewitt, A.R.I.B.A., architect, Bank-chambers, Great Yarmouth.

No DATE.—**Chitheroe.**—FARMHOUSE.—Erection of farmhouse at Standen Hey Farms, Chitheroe. Messrs. Hitchon & Pickup, architects, 46, Manchester-road, Burnley.

No DATE.—**Ingrow.**—CHURCH.—Erection of congregational mission church, Queen's-road, Ingrow. Messrs. John Haggas & Sons, architects, North-street, Keighley.

No DATE.—**Leominster.** HALL, ETC. For the erection of a drill-hall, sergeants' room, lecture-room, storerooms, shooting range, and lavatory accommodation. Messrs. Nicholson & Clarke, architects and surveyors, Cathedral-chambers, Hereford.

No DATE.—**South Shields.**—HOUSE.—Erection of a new house, Beach-road, South Shields, Names, with deposit of 2l. 2s., to Messrs. Thos. A. Page & Son, architects, South Shields.

No DATE.—**South Shields.** SCHOOL.—Erection of St. Bede's Boys' Elementary School, Derby-street, South Shields. Deposit of 2l. 2s. to Messrs. Thos. A. Page & Son, architects, South Shields.

No DATE. **Tibshelf.** PICTURE PALACE.—For the erection of a picture palace at Tibshelf. Plans and specifications, on deposit of 2l. 2s., of Messrs. Thos. A. Page & Son, architects, South Normanton.

No DATE.—**Whalley.**—EXTENSIONS.—For extensions to Church of England schools, Whalley. Plans seen, and quantities from Messrs. Feather & Hall, A.R.I.B.A., architects, 2, Sudell-cross, Blackburn. Deposit of 1l. 1s.

No DATE.—**Whaplode.**—HOUSE.—Erection of a house at Whaplode. Particulars and quantities, on deposit of 1l. 1s., from Mr. W. H. H. Davis, A.S.I., architect and surveyor, 6, Double-street, Spalding.

ENGINEERING, IRON, AND STEEL.

JUNE 28.—**Portrush.**—ENGINES, ETC.—For repairing the main pumps and engines at the Bustney pumping-station. Specification, drawings, and general conditions seen, and form of tender from the Borough Engineer, Town Hall.

JUNE 29. **Wexford.**—WELL.—For sinking an Artesian well. Particulars and specification from Mr. F. Hanrahan, Borough Surveyor, Wexford.

JULY 2.—**Malden.**—PUMPS.—For providing and fixing one set of 7-in. treble standpipe pumps at the Wantz-road pumping-station. Specification seen, and form of tender from Mr. T. R. Swales, M.Inst.C.E.I., Borough Engineer.

* JULY 2.—**Tottenham.**—HEATING APPARATUS.—The Tottenham Education Committee invite tenders for low-pressure hot-water heating apparatus at Culvert-road and Risley-avenue Council Schools. See advertisement in this issue for further particulars.

JULY 9.—**Preston.**—BRIDGE.—For the construction of Penwortham Bridge and approaches over the River Ribble. Plans seen, and specifications and quantities from Mr. W. Compton Hall, M.Inst.C.E., County Bridgemaster, Preston.

* JULY 10.—**Enfield.**—BOILING-PANS.—The Edmonton Guardians invite tenders for providing and fixing five new circular boiling-pans, etc., at Chase Farm Schools. See advertisement in this issue for further particulars.

* JULY 11.—**Barnet.**—ALTERATION TO HOT-WATER SUPPLY, ETC.—The Middlesex District Joint Small pox Hospital Board invite tenders for alterations to heating and hot-water supply at the South Mimms Hospital and installing a central heating and hot-water plant. See advertisement in this issue for further particulars.

* JULY 12. **Walthamstow.** STEELWORK. The Walthamstow U.D.C. invite tenders for extension of switchboard gallery and for other steelwork required at electricity generating-station, Pumy-avenue. See advertisement in this issue for further particulars.

JULY 15.—**Bourne.**—RESERVOIR, ETC.—For the construction of an engine-house and reservoir at Castle Bytham. Plans seen, and particulars from Mr. Thomas Lake, District Surveyor, Bourne.

AUGUST 31.—**Jamaica.**—PIER, ETC.—For the construction of a ferro-concrete freight pier and sea wall in the Harbour of Kingston, Jamaica. Drawings of the proposed work at the Office of the Crown Agents, Whitehall-gardens, London, S.W., or Messrs. Gillespie Bros. & Co., 11, Broadway, New York, or the Public Works Office, Kingston, Jamaica. Specification, quantities, and form of tender, and particulars at the above offices, on deposit of 3l. 3s.

No DATE.—**Barlborough.**—SIDINGS, ETC.—For construction of tramway, railway siding, embankment, etc., at Barlborough. Apply Mr. C. Robinson, Westfield Lodge, Barlborough, near Chesterfield.

FURNITURE, PAINTING, MATERIALS, etc.

JUNE 28.—**Stockport.**—PAINTING.—For painting and redecorating the Central and Reddish fire-stations, etc. Conditions of contract seen, and specification, with form of tender, from Mr. John Atkinson, A.M.Inst.C.E., Borough Surveyor, Town Hall, Stockport.

JULY 1.—**Blackburn.**—PAINTING.—For the painting, etc., at various schools in the borough Mr. William Stubbs, A.M.Inst.C.E., Borough Engineer, Municipal Offices, Blackburn.

JULY 2.—**Belfast.**—PAINTING, ETC.—For carrying out painting and renovation of the buildings at the Abbey Auxiliary Workhouse, Whiteabbey. Specification with Mr. R. H. Wilson, Clerk of the Union, Clerk's Office, Union Workhouse.

JULY 2.—**Keighley.**—PAINTING, ETC.—For whitewashing and colouring at Holycroft senior, junior, and infant, and Parkwood mixed Council schools, and Keighley C. of E. and St. Anne's R.C. schools, and also for painting outside Eastwood, Holycroft senior, junior, and infant, and Parkwood mixed Council schools. Particulars from Mr. H. Midgley, Secretary, Education Offices, Keighley.

* JULY 2.—**Tottenham.**—ELECTRIC FIRE-ALARM BELLS.—The Tottenham Education Committee invite tenders for electric fire-alarm bells to Culvert-road and Risley-avenue Council Schools. See advertisement in this issue for further particulars.

* JULY 2.—**Tottenham.**—PITCH-PINE FLOORING.—The Tottenham Education Committee invite tenders for pitch-pine block flooring at Culvert-road and Risley-avenue Council Schools. See advertisement in this issue for further particulars.

* JULY 2.—**Tottenham.** STOVES AND RANGES.—The Tottenham Education Committee invite tenders for stoves and ranges to Culvert-road and Risley-avenue Council schools. See advertisement in this issue for further particulars.

* JULY 2.—**Tottenham.**—ROLLER WINDOW BLINDS.—The Tottenham Education Committee invite tenders for roller window blinds to Culvert-road and Risley-avenue Council schools. See advertisement in this issue for further particulars.

JULY 3.—**Chelsea.**—PAINTING, ETC.—For cleaning and painting the outside of the Town Hall and interior corridors. Conditions, specification, and form of tender from the Borough Surveyor, Mr. T. W. E. Higgens, at the Town Hall, King's-road, S.W.

JULY 3.—**Essex, etc.**—PAINTING.—The Metropolitan Asylums Board invite tenders for cleaning and painting works at the Bridge Industrial Home, Witham, Essex; White Oak School, Swanley Junction, Kent. Specifications, prepared by Mr. W. T. Hatch, M.Inst.C.E., M.I.Mech.E., Engineer-in Chief, at the Office of the Board, Embankment, E.C. Deposit of 1l.

JULY 3.—**Glamorgan.** PAINTING.—For internal painting, etc., at Parc Gwyllt and Angelton Asylums. Specifications, quantities, and forms of tender from Mr. W. E. R. Allen, Clerk to the Committee of Visitors, Glamorgan County Offices, Westgate-street, Cardiff.

JULY 4.—**Chislehurst.**—PAINTING, ETC.—Painting and repairs at the school. Specifications by the Committee's Architect, Mr. Wilfrid H. Robinson, of Caxton House, Westminster.

JULY 8.—**Oldham.**—PAINTING.—For painting work at the Greenacres and Hollinwood Cemeteries. Particulars and forms of tender at the Borough Surveyor's Office.

* JULY 8.—**Whitstable.**—ROAD MATERIAL.—The Tankerton Estate, Ltd., invite tenders for supply of road materials. See advertisement in this issue for further particulars.

* JULY 9.—**Bethnal Green.**—DISTEMPERING.—The Bethnal Green Guardians invite tenders for distempering the ceilings of the wards, corridors, staircases, etc., at the Infirmary. See advertisement in this issue for further particulars.

JULY 9.—**London.**—PAINTING, ETC.—For painting and decorating the Council-chamber and offices at the Town Hall, Upper-street, N. Conditions, specification, and form of tender from the Borough Engineer, Mr. J. Patten Barber, at the Town Hall, Upper-street, N. Deposit of 2l. 2s.

* JULY 10.—**Enfield.**—PAINTING.—The Edmonton Guardians invite tenders for painting works at Workhouse, Chase Side. See advertisement in this issue for further particulars.

JULY 10.—**Newport.**—PAINTING.—For the painting of the exterior of schools. Specification from Mr. Sidney Wadham, 20, St. James's-square, Newport.

* JULY 15.—**Tunbridge Wells.**—PAINTING, ETC.—The Kent Education Committee invite tenders for painting and repairs at Technical Institute. See advertisement in this issue for further particulars.

No DATE.—**Oldham.**—PAINTING.—For the painting and colouring of schools. Specification from Mr. J. Rennie, Secretary, Education Offices, Oldham.

ROADS, SANITARY AND WATER WORKS.

JUNE 28.—**Rhondda.**—STREETS.—For street improvements at Blaenrhondda-road and Brook-street, Blaenrhondda. Plans and specification seen, and forms of tender, on deposit of 1l. 1s., to Mr. W. J. Jones, Engineer and Surveyor, Council Offices, Pentre Rhondda.

JUNE 29.—**Chorley.**—MAINS.—For laying cast-iron water mains, with valves, hydrants, etc. Particulars, on deposit of 1l. from Mr. Alban Jolly, Surveyor to the Council, 9, High-street, Chorley.

JULY 1.—**Tendring.**—FLINTS.—For the supply of five barges of Kentish flints. Mr. A. J. H. Ward, Clerk to the Council, 42, Church-street, Harwich.

JULY 2.—**Breage.**—ROOFING.—For the re-roofing and renovation of the chapel. Specifications with Mr. J. Pryor, Pengwedna, Breage.

JULY 2.—**Radyr.**—STREETS.—For street improvement works at Driscoll-road. Plans and specifications seen, and quantities from the Surveyor, Mr. James Holden, A.M.Inst.C.E., Park House, 20, Park-place, Cardiff.

* JULY 2.—**Tottenham.**—TAR-PAVING.—The Tottenham Education Committee invite tenders for tar-paving at Culvert-road and Risley-avenue Council schools. See advertisement in this issue for further particulars.

JULY 3.—**Dartford.**—PAVING.—The Metropolitan Asylums Board invite tenders for repairs to terrazzo paving at Joyce Green Small-pox Hospital, Dartford, Kent. Specification, prepared by Mr. W. T. Hatch, M.Inst.C.E., M.I.Mech.E. Engineer-in-Chief, at the Office of the Board, Embankment, E.C. Deposit of 1l.

JULY 3.—**Dartford.**—PAVING.—The Metropolitan Asylums Board invite tenders for repairs to tar-paving at Darenth Industrial Colony, Dartford, Kent. Drawings and specification, by Mr. W. T. Hatch, M.Inst.C.E., M.Inst.Mech.E., Engineer-in-Chief, at the Office of the Board, Embankment, E.C. Deposit of 1l.

JULY 6.—**Egremont.** PIPES, ETC.—For the supply of cast-iron spigot and socket pipes, specials, and valves. Forms of tender, with quantities and specifications, from Mr. James Cowan, Surveyor, Town Hall, Egremont, Cumberland. Deposit of 1l. 1s.

JULY 6.—**Ilford.**—PAVING.—For tar-paving and repairs to tar-paving in the playgrounds at Cleveland-road, Chadwell, and Christchurch-road schools, Ilford. Specification, plan, and form of tender from Mr. H. Shaw, M.Inst.C.E., Town Hall, Ilford. Deposit of 1l. 1s.

JULY 8.—**Belper.**—PIPES.—For the laying and jointing of 5,760 yds. of 5-in. cast-iron pipes Specification and form of tender, on deposit of 1l. 1s., from Mr. George Pym, Clerk, R.D.C. Offices, Belper.

* JULY 9.—**Not Stated.**—PEDESTAL WATER-CLOSETS.—The Commissioners of H.M. Works, etc., invite tenders for supply of pedestal water-closets. See advertisement in this issue for further particulars.

JULY 10.—**South Mimms.**—TANK, ETC.—Construction of a new sewage tank of 20,000 gallons capacity; new percolating filters, with distributing apparatus; new sand filters with new detritus chambers, and other additions and alterations to the existing disposal works. Additions and alterations by Mr. C. E. Bruges, Assoc.M.Inst.C.E., 1, Victoria-street, Westminster, and drawings seen and specification and form of tender from Mr. George Simcox, the Council's Surveyor, Bearwood, Great Northroad, Potters Bar, on deposit of 3l. 3s.

JULY 12.—**Penge.** PAVING, ETC.—For soft-wood paving and concrete foundation in Beckenham road. Plan and specification seen, and quantities, with form of tender, from Mr. H. W. Longdin, Surveyor, Town Hall, Anerley, S.E., on deposit of 2l.

JULY 15.—**Bourne.**—PIPES.—For the supply of cast-iron pipes and valves. Specifications from Mr. Thomas Lake, District Surveyor, Bourne.

JULY 15.—**Church.**—SEWAGE.—Construction of a main sewer from Dill Hall-lane to the outfall sewerage works at Coppy Clough, Church. Plans and sections seen, and forms of tender and specifications from Mr. W. E. Wood, Surveyor, District Council Offices, Church.

Public Appointments.

Nature of Appointment.	By whom Advertised.	Salary.	Application to be in
*CLERK OF WORKS	Willesden Guardians	3l. 3s. per week	July 3
*CLERK OF WORKS	South Stoneham R.D.C.	3l. per week	July 8
*CLERK OF WORKS	Willesden U.D.C.	175l. per annum	July 16
*ASSISTANT ENGINEERS	Gold Coast Government	See advertisement in this issue	No date.

Auction Sales.

Nature and Place of Sale.	By whom Offered.	Date of Sale.
*FREEHOLD MANUFACTURING PROPERTY, ETC., DORSET—Dolphin Hotel, S'hampton	Joshua Baker, Cooke, & Standen	July 4
*FREEHOLD BUILDING SITES, PINNER, MIDDLESEX—Queen's Head Hotel, Pinner	Densham & Lambert	July 6
*BUILDERS' MERCHANT'S & IRONMONGER'S STOCK, LONDON, E.C.—On the Prems.	S. E. Hnward & G. O. Ballard	July 8
*FREEHOLD PROPERTY—At the Mart	Rutley, Son, & Vine	July 9
*FREEHOLD RESIDENTIAL PROPERTY, HENDON HALL ESTATE—At the Mart	Edwin Fox, Bousfield, Burnetts, & Baddeley	July 10
*FREEHOLD BUILDING SITES, PURLEY—Greyhound Hotel, Croydon	Finlay Hill	July 11
*FREEHOLD ESTATE, ERITH, KENT At the Mart	Money & Johnston, Ltd.	July 12
*FREEHOLD BUILDING PLOTS, EAST SHEEN—Greyhound Hotel, Richmond	Farebrother, Ellis, & Co.	July 12
*FREEHOLD LAND AND HOUSES, LONDON, E.—At the Mart	Henry Holmes & Co.	July 15
*FREEHOLD BUILDING ESTATE, HARROW—At the Mart	Humbert & Flint	July 17
*FREEHOLD BUILDING ESTATE, PURLEY, SURREY—At the Mart	Densham & Lambert	July 17
*LEASE, GOODWILL, PLANT, ETC., OF BUILDER, NOTTING-HILL, W. At the Mart	C. C. & T. Moore	July 18

LONDON COUNCILS—*continued from page 775.*

Basin; Mr. E. Wright, three houses, Saville-road, Silvertown; Mr. W. Stewart, factory at Messrs. John Knight's premises, Silvertown; Messrs. Fuller, Horsey, Sons, & Co., alterations and additions to premises, Carpenter's road, Stratford; Messrs. Venesta, Ltd., factory, Venesta Wharf, North Woolwich-road, Silvertown; Messrs. Mackenzie, additions to Seamen's Hospital, Connaught-road, Silvertown. Plans have been lodged by Mr. A. Smith for the conversion of a chapel, Bridge-road, Stratford, into a picture palace; Messrs. Savill Brothers, alterations to the Brewery, Stratford; Messrs. Emden, Egan, & Co., cinematograph theatre, Barking-road, Canning Town; Mr. A. Foster, three cinematograph theatres, Plaistow, Silvertown and West Ham. Plans have been lodged by Mr. A. Smith, Messrs. Newman & Jacques, and Messrs. Fuller, Horsey, Sons, & Co., for the conversion of a chapel into picture palace, Bridge-road, Stratford; a women's settlement in Barking-road, Canning Town; and for alterations and additions to premises in Carpenters-road, Stratford, respectively.

Westminster.—The Works Committee have decided to construct an underground convenience adjoining that now existing in Vauxhall Bridge-road, at an estimated cost of 1,600*l.*, and tenders are to be obtained for carrying out the work. The Improved Wood Pavement Company, Ltd., contractors for annual paving work, have been allowed to sublet the part of their contract for footway construction work to Messrs. John Mowlem & Co., Ltd. Repairs are to be carried out to the macadam roadways of Exhibition-road and Tachbrook-street, at a total approximate cost of 250*l.* Various other repair works are to be carried out to footways at an estimated cost of 225*l.* The City Engineer has been authorised to carry out paving, etc., works in connexion with the widening at Nos. 12, Waterloo-place, and 30, Charles-street, at a cost not to exceed 400*l.* Mr. G. Thrale Jell and Messrs. Hughes & Son have lodged plans with the London County Council for the erection of a building on the site of Nos. 1, 3, and 5, Buckingham Palace-road, and for a building on the site of Nos. 87, 89, and 91, Tufton-street, respectively.

Willesden.—The following tenders have been accepted:—Mr. F. G. Brummell, making-up Newbury-road, 738*l.*, also Donnington-road, 529*l.*; Acme Flooring and Paving Company, Ltd., wood-paving portion of Chamberlayne Wood-road, 12s. 6d. per yard super.; Improved Wood Pavement Company, Ltd., wood-paving portion of Edgware-road; French Ashphalte Paving Company, laying new natural rock asphalt-paving in Malvern-road, 10s. 9d. per yard super. Plans prepared by the Engineer have been approved for making-up Kingthorpe-terrace, Dog-lane. Plans and estimates are to be prepared for making-up Victoria-mews. Plans are also to be prepared by the Engineer for the erection of slipper-baths at Church End and Kilburn at a cost not exceeding 4,500*l.* in respect of each building. The Town-Planning Committee have decided to prepare notices of the intention of the Council to apply to the Local Government Board for authority to prepare a town-planning scheme.

Wood Green.—Plans submitted by Messrs. H. E. Foster & Cranfield have been approved for the conversion of Nos. 108 and 108a, Middleton-road into a cinematograph theatre; as have also plans by Messrs. Barker & Kirk for additions to Walsham How Church, Maurice-avenue, Noel Park.

Woolwich.—A plan has been passed for Mr. J. J. Bassett, 121, Earlshall-road, Eltham, for the erection of eight houses in Dairsie-road, Eltham.

OBITUARY.

Mr. W. E. Wallis.

The death, on June 19, at Littlehampton, is announced of Mr. William Edmund Wallis, lately of Hill Cottage, Caterham, and of No. 12, Buckingham-street, Strand. Mr. Wallis was elected an Associate of the Royal Institute of British Architects in 1882. He was architect and surveyor to the Governors of the Peabody Trust and Donation Fund, for whom he planned and designed the blocks of buildings erected within the area bounded by Cambridge-circus, Minerva-street, Felix-street, and Centre-street, Bethnal Green, and on the Glasshouse-street, Whitechapel, site; and the dwelling-houses in Lillie-road, Fulham. He was the author, conjointly with Mr. John Honeyman, R.S.A., Mr. Owen Fleming, A.R.I.B.A., and Mr. Henry Spalding, F.R.I.B.A., of "Working-Class Dwellings," published twelve years ago.

Sir Lawrence Alma-Tadema, Knt.

We greatly regret to announce the death, on June 25, at Wiesbaden, of Sir Lawrence Alma-Tadema, O.M., R.A., R.W.S., H.R.S., F.S.A. He was Royal Gold Medallist, 1906, sharing, as a painter, that honour with only Lord Leighton (1894). He was elected an Honorary Associate in 1877 and, in 1901, an Honorary Fellow of the Royal Institute of British Architects; he served as a Vice-President, and member of the Art Standing Committee, 1906-7. He was Foreign Associate of the Institut de France, and Member of the "Ordre pour le Mérite" of Frederick the Great; a member of the Society of Portrait Painters, Chairman of the Artistic Copyright Society, and one of the Law of Copyright Committee, 1909. The son of Pieter Tadema, notary, he was born at Dronryp, in the Netherlands, on January 8, 1836; he had his earlier education in the Gymnasium, Leeuwarden, and studied in the Royal Academy, Antwerp, and the atelier of Henri Leys—some of his earliest work may be seen in the mural decoration of Antwerp Town Hall. He was elected A.R.A. in 1876, and R.A. in 1879; he received the honorary degrees of Litt.D., Dublin, in 1892, and D.C.L., Durham, in 1893. He painted the portraits of three Presidents of the Institute—John Whichcord, Alfred Waterhouse, R.A., and George Aitchison, R.A.; the first and last pictures are in the galleries, Conduit-street. He greatly beautified his own house and studios, No. 34, Grove End-road, St. John's Wood; he made several of the designs for Sir Henry Irving's production of "Cymbeline" and "Coriolanus," with the Forum scene, Senate House, and the house of Coriolanus, and, we believe, for "Julius Cæsar," for Sir Herbert Beerbohm Tree. Of Sir Lawrence Alma-Tadema's architectural pictures should be mentioned his "Architecture in Ancient Rome," "Thermæ Antoninianæ," "Baths of Caracalla" (as reconstructed), "San Clemente, Rome," and "Caracalla and Geta" in the Colosseum, also "A Favourite Custom" (bought by the Chantrey Trustees). "Picture Gallery of Ancient Rome," and "Street in Rome." His other chief works include "The Education of the Children of Clovis," "Egypt 3,000 Years Ago," "Pyrrhic Dance," "The Vintage," "A Roman Emperor," "Unconscious Rivals," "Roses of Heliogabalus," "Finding of Moses," a portrait of Paderewski, "Dedication to Bacchus," "Spring," "Pomona Festival," "Cleopatra," "The Kiss," "The Voice of Spring," "A Golden Hour," and "Preparations in the Coliseum," contributed to the current Royal Academy Exhibition. In our issue of January 26, 1907, we published extracts from a paper, "Marbles: Their Ancient and Modern Application," which he read to the Institute. In August, 1909, he was left a widower through the death of his second wife, daughter of the late Dr. George N. Epps, whom he married in 1871. On page 749 will be found an appreciation of the deceased artist and of his work.

Mr. R. Vigers.

Mr. Robert Vigers, who died on June 23, in his eighty-sixth year, at Wellesley House, Sloane-square, S.W., was a well-known surveyor and land and estate agent, practising at No. 4, Frederick's-place, Old Jewry, E.C., and a member of the Surveyors' Institution. He was a Past-President of the Institution and the father of Mr. Leslie Robert Vigers, at whose installation, in May, 1910, as President for the Session 1910-11, were present his father (the deceased) and his sons, Mr. Arthur Vigers and Mr. Allan Vigers—three generations of surveyors. Mr. Vigers managed many estates in London and the provinces; he enjoyed an extensive practice in relation to the compulsory acquisition of property in London by the Great Central and the London, Chatham, and Dover railway companies, as well as for the underground lines; he acted as arbitrator in respect of claims preferred by owners against the Manchester Ship Canal undertaking, and his services were retained in the negotiations for the freeing from toll of bridges in London, the taking over of tramways by the London County Council and local authorities in the country, and the purchase of telegraphs by the Government. He was for fifty years a member, and latterly an honorary member, of the Royal Society of Arts; he established the Surveyors' Institution Benevolent Fund, and gave largely to many charitable objects.

Mr. J. W. Clarke.

The death, on June 14, is also announced of Mr. J. Wright Clarke, of New Wandsworth, sanitary specialist and author of several standard books upon plumbing and sanitary science. He was for nearly thirty years instructor in plumbing at the Regent-street Polytechnic.

PATENTS.

APPLICATIONS PUBLISHED.*

9,910 of 1911.—William Alban Richards and Edgar Rouse Sutcliffe: Building-block and method of using same.

10,041 of 1911.—Arthur Petrie Florence: Kitcheners.

12,059 of 1911.—Frederick Toplas: False bottoms for kitchen-range and like grates.

12,970 of 1911.—Edmund Coignet, Ltd. (communication from Edmund Coignet): Reinforced concrete construction.

14,695 of 1911.—John Murray Leighton: Concrete piles.

17,462 of 1911.—Planet Foundry Company, Ltd., and James Learmouth: Fuel stoves.

17,961 of 1911.—Ernest Andrew Gibbs: Waste pipes for bath, lavatory basins, sinks, cisterns, and the like.

18,340 of 1911.—Edward Colston Snow: Compound for making road surfaces and for similar purposes.

18,482 of 1911.—Ernest Allinson Flower: Roofing tile or slab.

21,081 of 1911.—Richard Marston: Chimney-tops or cowls and ventilators.

21,699 of 1911.—Edward Ethel Gold: Heating systems.

22,570 of 1911.—James Damrel Prior: Hot-water supply systems, tanks, or cylinders of water-heating apparatus.

24,245 of 1911.—James Allen Ross: Wall-papers.

4,172 of 1912.—Otto Arndt: Scaffolding for making and finishing ceilings.

8,534 of 1912.—Felix Gautschy: Closet seats.

PUBLISHER'S NOTICES.

Tel., 6112 Gerrard. Telegrams, "The Builder, London."

CHARGES FOR ADVERTISEMENTS.

COMPETITIONS, CONTRACTS, ALL NOTICES ISSUED BY CORPORATE BODIES, COUNTY AND OTHER COUNCILS, PROSPECTUSES OF PUBLIC COMPANIES, SALES BY TENDER, LEGAL ANNOUNCEMENTS, etc., etc.

Six lines or under ..... 2s. 0d.
Each additional line..... 1s. 0d.

SITUATIONS VACANT, PARTNERSHIPS, APPRENTICESHIPS, TRADE AND GENERAL ADVERTISEMENTS.

Six lines (about fifty words) or under ..... 4s. 0d.
Each additional line (about ten words) ..... 0s. 6d.
Terms for series of Trade advertisements, and for front page and other special positions, on application to the Publisher.

SITUATIONS WANTED (Single-handed—Labour only).

Four lines (about thirty words) or under..... 2s. 6d.
Each additional line (about ten words)..... 0s. 6d.

PREPAYMENT IS ABSOLUTELY NECESSARY.

. Stamps *must not* be sent; but all sums should be remitted by Postal Orders, payable to J. MORGAN, and addressed to the Publisher of "THE BUILDER," 4, Catherine Street, W.C.

Advertisements for the current week's issue are received up to ONE p.m. on THURSDAY, but "Classification" is impossible in the case of any which may reach the Office after TWELVE NOON on that day. Those intended for the Outside Wrapper should be in by TWELVE NOON on WEDNESDAY.

ALTERATIONS IN STANDING ADVERTISEMENTS or ORDERS TO DISCONTINUE same must reach the Office before TEN o'clock on WEDNESDAY MORNING.

The Publisher cannot be responsible for DRAWINGS, TESTIMONIALS, etc., left at the Office in reply to advertisements, and strongly recommends that of the latter COPIES ONLY should be sent.

ADVERTISERS in "THE BUILDER" may have *Replies addressed to the Office, 4,* Catherine Street, Strand, W.C., *free of charge.* Letters will be forwarded if addressed envelopes are sent, together with sufficient stamps to cover the postage. Unused stamps are returned to advertisers the week after publication.

N.B.—The Reply Boxes are not intended for trade lists, circulars, and the like; should these be received, they cannot (if noticed) be forwarded.

AN EDITION Printed on THIN PAPER, for FOREIGN and COLONIAL CIRCULATION, is issued every week.

READING CASES { NINEPENCE EACH. By post (carefully packed), 1s.

SOME RECENT SALES OF PROPERTY:

ESTATE EXCHANGE REPORT.

June 3.—By TAIT, SON, & PALLANT.

Bourton, Warwick. — Five houses and 30 a. 2 r. 3 p., f. £1,040

June 5.—By WINCH & SONS.

Froxfield, Hants.—Oakshott Farm, 123 a. 3 r. 37 p., f. 3,000

By J. C. H. ROBINSON.

Hardmead, Bucks.—Wood Farm, 91 a. 1 r. 3 p., f. 1,650

By F. WARMAN.

Wood Green. 12, 16, 58, and 60, Pellatt-gr., f., y.r. 119l. 1,425
3, Williams-gr., f., y.r. 38l. 500
3, Bounds Green-rd., f., y.r. 36l. 460
1 and 2, Redfern-villas, f., y.r. 62l. 785
12, Trinity-rd., f., y.r. 32l. 415
Frederick-ter., etc., f.g. rents 67l. 10s., reversion in 68 yrs. 1,530
112 and 114, Pellatt-gr., f., w.r. 54l. 12s. 435
9 to 16, King's-rd., u.t. 54 yrs., g.r. 24l., w.r. 203l. 805

June 6.—By NEWBON & SHEPHERDS.

Stoke Newington.—114, Winston rd., u.t. 48 yrs, g.r. 5l., y.r. 28l. 215
Hackney.—9, Queen Ann-rd., u.t. 33½ yrs., g.r. 3l. 10s , y.r. 26l. ; 143 and 145, Cassland-rd., u.t. 31 yrs., g.r. 7l., y. and e.r. 56l. 325

Islington.—13, Sherborne-st., u.t. 35½ yrs., g.r. 8l., y.r. 34l. .....
Hoxton.—26, 28, and 30, Alma-st., u.t. 23½ yrs., g.r. 15l., y.r. 98l. .....
34 and 36, Alma-st., u.t. 22½ yrs., g.r. 9l. 10s , y. and e.r. 68l. .....
55, 57, and 59, Gopsall-st., u.t. 23½ yrs., g.r. 15l. 15s., y. and w.r. 105l. 4s. .....
Harlesden. Kingthorpe-rd , Ivydene, f., w.r. 31l. 4s. .....
Holloway.—30, 32, and 34, Harvist-rd., u.t 31 yrs., g.r. 19l. 10s., y.r. 130l. .....
Harringay.—3 and 4, Park-view-ter., f., y. and e.r. 113l. .....
97 and 99, Harringay-rd., f., p. .....

By ALFRED SPAIN & SON.

Longfield, Kent.—1 and 2, Armstrong-cottages, —— f., w.r. 28l. 12s. .....
Gravesend, Kent.—10, 12, 14, and 16, Mead-rd., —— f., w.r. 62l. 8s. .....
Chalk, Kent. 1 to 5, Kent-cottages, f., w.r. 78l. .....

By G. E. SWORDER & SONS.

Albury, Herts.—Patmore Hall Farm, 538 a. 0 r. 36 p., f. 7,500

By J. R. THORNTON.

Falmer, Sussex.—Two holdings, 47 a. 0 r. 34 p., f. 1,550

By SEXTON & GRIMWADE.

Colne Engaine, Essex.—Westwood Farm, 79 a. 1 r. 17 p., f. 2,000
Halstead, Essex.—Langley Mill, 11 a. 3 r. 33 p., f. 975
Meadow, 4 a. 1 r. 10 p., f. 320
Alphamstone, Essex.—Stapleford Farm, 80 a. 0 r. 9 p., f. 1,700

By PAXTON & HOLIDAY.

Souldern, Oxon.—Spring-ter., f., w.r. 14l. 5s. 205
Pasture land, 2 a. 2 r. 20 p., f. 200
House and two cottages, f., y. and w.r. 20l. 5s. .....
Arable and pasture, 11 a. 0 r. 26 p., f. 325

By GRIMLEY & SON.

Salop.—Whiston House and 8 a. 3 r. 28 p., f. 650
253 and 255, Great Colmore-st., u.t 24 yrs., g.r. 8l. 17s. 9d., w.r. 75l. 8s. 1,000

By BIDWELL & SONS.

Downham, Cambs.—Freehold house and 3 a. 2 r. 20 p. 880
Pasture and arable, 48 a. 0 r. 14 p., f. and c.... 810

By WINTERTON & SONS.

Great Barr, Staffs.—Three farms, 29 a. 2r. 12 p., f. 1,950

By EDWIN EVANS & SONS.

Battersea. 14, Kelmscott-rd., u.t. 77 yrs., g.r 7l., y.r. 36l. 7,820
34, 36, 38, and 40, Elspeth-rd., u.t. 78 yrs , g.r. 29l. 8s., y.r. 144l. 1,140
39, Elspeth-rd., u.t. 79 yrs., g.r. 7l. 7s., y.r. 36l. 310
92, Elspeth-rd., u.t. 81 yrs., g.r. 8l. 8s., e.r. 38l. 265
107, Falcon-rd. (s.), u.t. 36 yrs., g.r. 9l., y. and e.r. 52l. 260
20, Home-rd., u.t. 81 yrs., g.r. 6l., w.r. 33l. 18s. 175
28, Bramfield-rd., u.t. 76½ yrs., g.r. 7l., w.r. 48l. 2s. 250
Wimbledon.—15 to 37, 47 to 57 (odd), Effra-rd., u.t. 84 yrs., g.r. 94l. 10s., w.r. 506l. 12s. 2,700
Tooting.—28 to 50 (even), Leathercroft-st., u.t. 84½ yrs., g.r. 42l., w.r. 254l. 16s. 650

By KNIGHT, FRANK, & BUTLEY.

Sibson, Leics.—Sibson estate, 722 acres, f..... 16,785

June 7.—By JOHN BOTT & SONS.

Walworth.—100, Beresford-st., u.t. 60 yrs., g.r. 6l. 6s., w.r. 53l. 6s. 325

By ELSWORTH & KNIGHTON.

South Kensington.—7, Priory-gr., u.t. 19 yrs., g.r. 5l. 10s., y.r. 65l. 440

By HUSSEY, WALCOTT, & CO.

Regent-street.—Nos. 124 to 130 (even), profit rental of 2,566l. for 7 yrs. (47/210th share) 2,350
Norwood.—Northwood-rd., i.g.r. 48l., reversion in 50 yrs. 900

By PERKINS & CÆSAR.

Peckham. Lyndhurst-rd, f.g.r. 27l. 4s. 6d., reversion in 44½ yrs. 750
67, Victoria-rd., f., w.r. 41l. 12s 325
25, Crewys-rd., u.t. 64½ yrs., g.r. 5l., w.r. 40l. 6s. 210
Lyndhurst-rd., i.g. rents 9l. 17s. 6d., reversion in 41 yrs. 270

By SAMUEL WALLROCK & CO.

Broadstairs, Kent.—Bleak House and 1 acre, f. 3,100

By HANCOCK & SONS.

Probus, Cornwall.- Agricultural estate, 460 acres, f. 12,151

June 8.—By PROTHEROE & MORRIS.

Southend-on-Sea, Essex.—13 to 23 (odd), 16 to 26 (even), Princes-st., f., y.r. 279l. 10s. 3,580
35, Avenue-rd., f., y.r. 48l. 800

By THOS. WM. GAZE & SON.

Long Stratton, Norfolk.—Cherry Tree Farm and cottage, 20 a. 0 r. 21 p., f. 610

By ALFRED PRESTON.

Worlingworth, Suffolk.—Home farm and enclosure, 30 a. 0 r. 37 p., f. 510

By WALTON & LEE.

Wetheral, Cumberland.—Holme House Farm and Bridge End, 76 a. 3 r. 27 p., f. 4,500

By WALLER & KING.

Sparsholt, Hants.—Westley Farm, 645 acres, f. 6,500

By STEVENSON & ALEXANDER.

Llanblethian, Glamorgan.—Hollybush Farm, 275 a. 2 r. 7 p., f. 5,950

June 10.—By FULLER, MOON, & FULLER.

Sydenham.—Broseley gr., f.g.r. 5l. 5s., reversion in 81 yrs 120
F.g. rents 28l. 5s., reversion in 79 yrs..... 610
Leyton.—St. Mary's-rd., f.g.r. 19l. 10s., reversion in 81 yrs. 435

By KEMSLEY.

Hackney.—40, 42, 44, 46, and 50, Westgate-st, 1, London-pl., f., gross rental 192l. ps. 950
Upminster, Essex. Bridge House, f., p. 420

By JAMESON & MESSENGER.

South Lambeth.—Mawbey st, f.g. rents 72l., reversion in 48 yrs. £1,845
Hammersmith. — Masborough rd., f.g.r. 25l., reversion in 45 yrs. 535
Camberwell.—New Church-rd., etc., f.g. rents 154l., reversion in 68 yrs. 2,750

By ALFRED SAVILL & SONS.

Coopersale, Essex.— Part of Coopersale Estate, 135 a. 0 r. 22 p., f. 6,585

By E. & H. LUMLEY.

Mayland, Essex.—Nipsell's Farm, etc., 464 acres, f. 7,800

By DRIVER, JONAS, & Co.

Beckbury, Salop.—Arable and pasture, 33 a. 0 r. 30 p., f. 840
Cardiff, Glamorgan.—6 and 8, North Luton-pl., u.t. 52 yrs., g.r. 8l. 10s., w.r. 57l. 4s. 300
3, 4, and 5, Windsor rd., u.t. 39 yrs., g r. 9l., w.r. 62l. 8s 320

June 11.—By BROWETT & TAYLOR.

Leyton.—23 and 25, Murchison-rd., f., w.r. 49l. 8s. 425
Walworth.—106 and 108, Carter-st., u.t. 32 yrs., g.r. 11l. 11s., w.r 93l. 12s. 310
Wood Green.—Woodside-rd., f.g. rents 13l 10s., reversion in 88 yrs. 298
Sylvan-av., f.g.r. 8l. 8s., reversion in 93 yrs.. 190
Clapham —125 and 126, Rodenhurst-rd., u.t. 89 yrs., g.r. 22l., y.r. 100l. 750

By FAREBROTHER, ELLIS, & Co.

Twickenham.—Clevedon-rd., f.g. rents 180l., reversion in 91 yrs. 3,700

By HAMPTON & SONS.

Esher, Surrey.—Lossberry and 6 a. 2 r. 23 p., f. 2,900
Four cottages, farmery, and 10 a. 0 r. 23 p., f. 2,000

By HANDMAN EROS.

Finchley.— Regent's Park-rd., two building plots, f. 4,030
East End-rd., Hertford Lodge, f., y.r. 95l. 2,000
Lichfield-gr., f.g. rents 13l., reversion in 66 yrs. 300

Contractions used in these lists.—F.g.r. for freehold ground-rent; l.g.r. for leasehold ground-rent; i.g.r. for improved ground-rent; g.r. for ground-rent; r. for rent; f. for freehold; c. for copyhold; l. for leasehold; p. for possession; e.r. for estimated rental; w.r. for weekly rental; q.r. for quarterly rental; y.r. for yearly rental; u.t. for unexpired term; p.a. for per annum; yrs. for years; la. for lane; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; cres. for crescent; av. for avenue; gdns. for gardens; yd. for yard; gr. for grove; h.h. for beerhouse; p.h. for public-house; o. for offices; s. for shops; ct. for court.

PRICES CURRENT OF MATERIALS.

. Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use o this information.

BRICKS, &c.

Per 1000 Alongside, in River. £ s. d

Best Stocks 2 14 0
Picked Stocks for Facings 2 10 0

Per 1000, Delivered at Railway Depôt.

£ s. d.		£ s. d.
Flettons 1 13 0	Best Blue Pressed	
Best Fareham	Staffordshire...	3 15 0
Red 3 12 0	Do. Bullnose.....	4 0 0
Best Red Pressed	Best Stourbridge	
Ruabon Facing 5 0 0	Fire Bricks ...	4 0 0

GLAZED BRICKS—

Best White,		Double Headers	13 17 6
Ivory, and Salt		One Side and two	
Glzd. Str'tch'rs	11 7 6	Ends	17 17 6
Headers	10 17 6	Two Sides and	
Quoins, Bullnose,		one End	18 17 6
and ½ in. Flats	14 17 6	Splays & Squints	16 7 6
D'ble Stretchers	16 17 6		

Second Quality £1 10s. per 1000 less than best.

	s. d.	
Thames and Pit Sand	6	9 per yard, delivered.
Thames Ballast	5	6 „ „
Best Portland Cement.....	21	0 per ton, „
Best Ground Blue Lias Lime	19	0 „ „

NOTE—The cement or lime is exclusive of the ordinary charge for sacks.

Grey Stone Lime ..... 13s. 0d. per yard delivered.
Stourbridge Fireclay in sacks 27s. 0d. per ton at rly dpt.

STONE.

Per Ft. Cube.

	s. d.
BATH STONE — delivered on road waggons, Paddington Depôt	1 6½
Do. do. delivered on road waggons, Nine Elms Depôt	1 8½
PORTLAND STONE (20 ft. average)—	
Brown Whitbed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2 3
White Basebed, delivered on road waggons Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2 4½

Per Ft. Cube, delivered at Railway Depôt.

s. d.		s. d.
Ancaster in blocks.. 1 10	Closeburn Red	
Beer in blocks 1 6	Freestone	2 0
Greenshill in blocks 1 10	Red Mansfield	
Darley Dale in	Freestone	2 4
blocks 2 4	Talacre & Gwespyr	
Red Corsehill in	Stone	2 4
blocks 2 3		

YORK STONE—*Robin Hood Quality.*

Per Ft. Cube, Delivered at Railway Depôt. s. d.

Scappled random blocks	2 10

Per Ft. Super., Delivered at Railway Depôt.

6 in. sawn two sides landings to sizes (under 40 ft. super.)	2 3
6 in. rubbed two sides ditto, ditto	2 6
3 in. sawn two sides slabs (random sizes).....	0 11½
2 in. to 2½ in. sawn one side slabs (random sizes)	0 7
1¾ in. to 2 in. ditto, ditto.....	0 6

* All these applications are in the stage in which opposition to the grant of Patents upon them can be made.

STONE (*Continued*).

HARD YORK— Per Ft. Cube, Delivered at Railway Depôt.	s.	d.
Scappled random blocks	3	0
Per Ft. Super., Delivered at Railway Depôt.		
6 in. sawn two sides landing to sizes (under 40 ft. super.)	2	8
6 in. rubbed two sides ditto	3	0
3 in. sawn two sides slabs (random sizes)	1	2
2 in. self-faced random flags	0	5

SLATES.

Per 1000 of 1200 at Railway Depôt.

In. In.	£	s.	d.	In. In.	£	s.	d.
20×10 best blue Bangor	13	2	6	20×10best Eur'ka unfading green	15	17	6
20×12 ditto	13	17	6	20×12 ditto	18	7	6
20×10 1st quality ditto	13	0	0	18×10 ditto	13	5	0
20×12 ditto	13	15	0	16×8 ditto	10	5	0
16×8 ditto	7	5	0	20×10 permanent green	11	12	6
22×10 best blue Portmadoc	12	12	6	18×10 ditto	9	12	6
16×8 ditto	6	12	6	16×8 ditto	6	12	6

TILES.

	At Railway Depôt. s.	d.		s.	d.
Best plain red roofing (per 1000)	42	0	Best "Hartshill" brand, plain sand-faced (per 1000)	45	0
Hip and Valley (per doz.)	3	7	Do. pressed (per 1000)	42	6
Best Broseley (per 1000)	50	0	Do. Ornamental (per 1000)	47	6
Do. Ornamental (per 1000)	52	6	Hip (per doz.)	4	0
Hip and Valley (per doz.)	4	0	Valley (per doz.)	3	6
Best Ruabon red, brown, or bridled (Edw'da) (per 1000)	57	6	Staffords. (Hanley) Reds or Bridled (per 1000)	42	6
Do. Ornamental (per 1000)	60	0	Hand-made sand-faced (per 1000)	45	0
Hip (per doz.)	4	0	Hip (per doz.)	4	0
Valley (per doz.)	3	0	Valley (per doz.)	3	6

WOOD.

BUILDING WOOD.	At per standard. £	s.	d.		£	s.	d.
Deals: best 3 in. by 11 in. and 4 in. by 9 in. and 11 in.	14	0	0	...	15	10	0
Deals: best 3 by 9	13	10	0	...	14	10	0
Battens: best 2½ in. by 7 in. and 8in., and 3 in. by 7 in. and 8 in.	11	10	0	...	12	10	0
Battens: best 2½ by 6 and 3 by 6	0	10	0	...	less than 7 in. and 8 in.		
Deals: seconds	1	0	0	less thn best.			
Battens: seconds	0	10	0	"		"	
2 in. by in. and 2 in. by 6 in.	9	10	0	...	10	10	0
2 in. by 4½ in. and 2 in. by 5 in.	9	0	0	...	10	0	0
Foreign Sawn Boards— 1 in. and 1¼ in. by 7 in.	0	10	0	more than battens.			
¼ in.	1	0	0	"			

WOOD (*Continued*).

BUILDING WOOD (*Continued*)—	At per load of 50 ft. £	s.	d.		£	s.	d.
Fir timber: best middling Danzig or Memel (average specification)	5	5	0	...	5	10	0
Seconds	4	10	0	...	5	0	0
Small timber (8 in. to 10 in.)	3	17	6	...	4	0	0
Small timber (6 in. to 8 in.)	3	5	0	...	3	10	0
Swedish balks	2	12	6	...	3	0	0
Pitch-pine timber (30 ft. average)	5	5	0	...	6	0	0

JOINERS' WOOD.	At per standard. £	s.	d.		£	s.	d.
White Sea: first yellow deals, 3 in. by 11 in.	24	10	0	...	25	10	0
3 in. by 9 in.	22	10	0	...	23	10	0
Battens, 2½ in. and 3 in. by 7 in.	17	0	0	...	18	0	0
Second yellow deals, 3in. by 11in.	19	0	0	...	20	0	0
" " 3 in. by 9 in.	18	0	0	...	19	10	0
Battens, 2½ in. and 3in. by 7 in.	14	0	0	...	15	0	0
Third yellow deals, 3 in. by 11 in. and 9 in.	14	0	0	...	15	0	0
Battens, 2½ in. and 3 in. by 7 in.	11	10	0	...	12	10	0
Petersburg: first yellow deals, 3 in. by 11 in.	21	10	0	...	22	10	0
Do. 3 in. by 9 in.	18	10	0	...	19	10	0
Battens	14	0	0	...	15	0	0
Second yellow deals, 3 in. by 11 in	16	10	0	...	17	10	0
Do. 3 in. by 9 in.	15	0	0	...	16	0	0
Battens	11	10	0	...	12	10	0
Third yellow deals, 3in. by 11 in.	13	10	0	...	14	10	0
Do. 3 in. by 9 in.	13	0	0	...	14	0	0
Battens	10	10	0	...	11	0	0
White Sea and Petersburg— First white deals, 3 in. by 11 in.	15	0	0	...	16	0	0
" " 3 in. by 9 in.	14	0	0	...	14	10	0
Battens	11	10	0	...	12	10	0
Second white deals, 3in. by 11in.	14	0	0	...	15	0	0
" " 3 in. by 9 in.	13	0	0	...	14	0	0
Battens	10	10	0	...	11	0	0
Pitch-pine: deals	19	0	0	...	21	0	0
Under 2 in. thick extra	0	10	0	...	1	0	0
Yellow Pine—First, regular sizes	48	0	0	upwards.			
Oddments	32	0	0	"			
Seconds, regular sizes	33	0	0	"			
Oddments	28	0	0	"			
Kauri Pine—Planks per ft. cube.	0	4	6	...	0	6	0
Danzig and Stettin Oak Logs— Large, per ft. cube	0	3	0	...	0	3	9
Small " "	0	2	6	...	0	2	6
Wainscot Oak Logs, per ft. cube	0	6	6	...	0	8	0
Dry Wainscot Oak, per ft. sup. as inch	0	0	10	...	0	1	0
¼ in. do.	0	0	8½	...	—		
Dry Mahogany—Houndras, Tabasco, per ft. super. as inch.	0	0	10	...	0	1	1
Selected, Figury, per ft. super. as inch	0	1	6	...	0	2	6
Dry Walnut, American, per ft. super. as inch	0	0	10	...	0	1	0
Teak, per load	18	0	0	...	22	0	0
American Whitewood planks, per ft. cube	0	5	0	...	0	6	0

WOOD (*Continued*).

JOINERS' WOOD (*Continued*)—	Per square. £	s.	d.		£	s.	d.
Prepared Flooring, etc.— 1 in. by 7 in. yellow, planed and shot	0	13	6	...	0	17	0
1 in. by 7 in. yellow, planed and matched	0	14	0	...	0	18	0
1¼ in. by 7 in. yellow, planed and matched	0	16	0	...	1	0	0
1 in. by 7 in. white, planed and shot	0	12	0	...	0	14	6
1 in. by 7 in. white, planed and matched	0	12	6	...	0	15	0
1¼ in. by 7 in. white, planed and matched	0	15	0	...	0	16	6
⅝ in. by 7 in. yellow, matched and beaded or V-jointed brds.	0	11	0	...	0	13	6
1 in. by 7 in. " "	0	14	0	...	0	18	6
⅝ in. by 7 in. white " "	0	10	0	...	0	11	0
1 in. by 7 in. " "	0	12	9	...	0	15	0

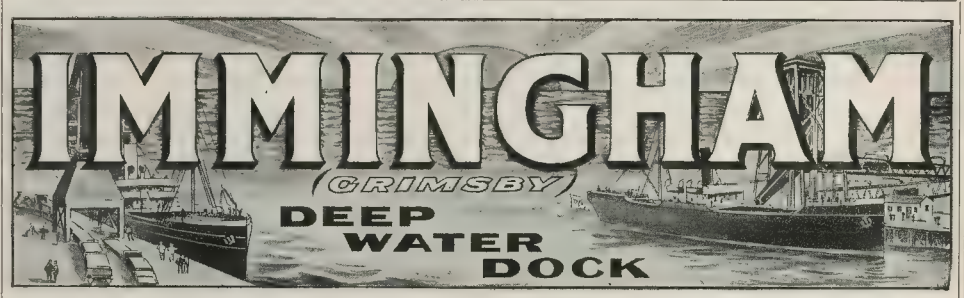
6 in. at 6d. to 9d. per square less than 7 in.

JOISTS, GIRDERS, &c.

	In London, or delivered Railway Vans, per ton. £	s.	d.		£	s.	d.
Rolled Steel Joists, ordinary sections	7	10	0	...	8	0	0
Compound Girders, ordinary sections	9	10	0	...	10	0	0
Steel Compound Stanchions	11	0	0	...	12	0	0
Angles, Tees, and Channels, ordinary sections	9	10	0	...	10	0	0
Flitch Plates	9	10	0	...	9	10	0
Cast Iron Columns & Stanchions, including ordinary patterns	7	10	0	...	8	10	0

METALS.

	Per ton, in London. £	s.	d.		£	s.	d.
IRON— Common Bars	9	0	0	...	9	10	0
Staffordshire Crown Bars, good merchant quality	9	5	0	...	9	15	0
Staffordshire "Marked Bars"	11	0	0	...	—		
Mild Steel Bars	9	5	0	...	9	15	0
Hoop Iron, basis price	10	0	0	...	—		
" " Galvanised	17	10	0	...	—		
(*And upwards, according to size and gauge.)							
Sheet Iron Black— Ordinary sizes to 20 g.	10	5	0	...	—		
" " 24 g.	11	5	0	...	—		
" " 26 g.	12	15	0	...	—		
Sheet Iron, Galvanised, flat, ordinary quality— Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15	10	0	...	—		
Ordinary sizes to 22 g. and 24 g.	16	0	0	...	—		
" 26 g.	17	0	0	...	—		
Sheet Iron, Galvanised, flat, best quality— Ordinary sizes to 20 g.	18	10	0	...	—		
" " 22 g. and 24 g.	19	0	0	...	—		
" " 26 g.	20	10	0	...	—		
Galvanised Corrugated Sheets— Ordinary sizes, 6ft. to 8ft. 20 g.	15	0	0	...	—		
" " 22 g. and 24 g.	15	5	0	...	—		
" " 26 g.	16	15	0	...	—		



IS OPENED PROVISIONALLY.

POINTS OF MERIT:

Favourable Situation.

Immingham Dock is geographically the most central coal port for the Continent, and is in direct rail communication with the great coalfields of the West Riding and South Yorkshire, Derbyshire, Nottinghamshire, &c.

Always Accessible.

Immingham Dock has a storm-protected harbour and deep water channel and entrance lock, enabling the largest ships to enter and leave at any state of the tide.

Most Modern Equipment.

Immingham Dock has eight coal hoists capable of shipping 5,600 tons per hour.
Largest ships can bunker at deep water jetty—only ten miles from the open sea—at any time of the day or night.
Storage accommodation is provided for 11,600 loaded wagons, and there are 170 miles of sidings.
Every precaution taken to minimise breakage of coal.
Movable hoist enables two "holds" of a vessel to be loaded simultaneously.

Low Dock Charges.

Immingham Dock charges are more favourable than at any competitive port.

For Information apply Great Central Goods Agents or Port Master, Immingham Dock, Grimsby.
Illustrated Brochure "3" and Map "3," printed in English, French or German, post free from G.C.R. Publicity Office, 216, Marylebone Road, London, N.W.

SAM FAY, General Manager.

METALS (*Continued*).

IRON (*Continued*)—	Per ton, in London. £ s. d.	£ s. d.
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	12 10 0 ...	—
Best Soft Steel Sheets, 2 g. & 24 g.	13 10 0 ...	—
" " " 26 g.	15 10 0 ...	—
Cut Nails, 3 in. to 6 in.	11 0 0 ...	11 10 0
(Under 3 in., usual trade extras.)		

LEAD, &c.	£ s. d.	
LEAD—Sheet, English, 4lb. and up	21 17 6 ...	—
Pipe in coils	22 7 6 ...	—
Soil pipe	25 7 6 ...	—
Compo pipe	25 7 6 ...	—
ZINC—Sheet—	In casks of 10 cwt.	
Vielle Montagne	33 10 0 ...	—
Silesian	33 5 0 ...	—
Zinc, in bundles, 1s. per cwt. extra.		
COPPER—		
Strong Sheet per lb.	0 1 0 ...	—
Thin " "	0 1 1 ...	—
Copper nails "	0 0 10 ...	—
Copper wire "	0 0 10 ...	—
BRASS—		
Strong Sheet "	0 0 11 ...	—
Thin "	0 1 0 ...	—
TIN—English Ingots "	0 2 0 ...	—
SOLDER—Plumbers' "	0 0 9½ ...	—
Tinmen's "	0 1 0½ ...	—
Blowpipe "	0 1 2½ ...	—

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

25 oz. thirds	2½d.	26 oz. fourths	3½d.
" fourths	1¾d.	32 oz. thirds	5d.
21 oz. thirds	3½d.	" fourths	4½d.
" fourths	2¾d.	Fluted Sheet, 15 oz.	3¾d.
36 oz. thirds	4d.	" 21 oz.	4½d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

⅛ Rolled plate	2½d.	Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white	3½d.
¼ Rough rolled and rough cast plate	2¾d.		
½ Rough rolled and rough cast plate	3d.	Ditto, tinted	5d.

* Not less than two crates.

OILS, &c.

		£ s. d.
Raw Linseed Oil in pipes	per gallon	0 3 9
" " " in barrels	"	0 3 10
" " " in drums	"	0 4 0
Boiled " " in barrels	"	0 4 0
" " " in drums	"	0 4 3
Turpentine in barrels	"	0 2 11
" in drums	"	0 3 1
Genuine Ground English White Lead, per ton		29 0 0
Red Lead, Dry	"	25 0 0
Best Linseed Oil Putty	per cwt.	0 10 6
Stockholm Tar	per barrel	1 12 0

VARNISHES, &c.

	Per gallon. £ s. d.
Fine Pale Oak Varnish	0 8 0
Pale Copal Oak	0 10 6
Superfine Pale Elastic Oak	0 12 6
Fine Extra Hard Church Oak	0 10 0
Superfine Hard-drying Oak, for seats of Churches	0 14 6
Fine Elastic Carriage	0 12 0
Superfine Pale Elastic Carriage	0 16 0
Fine Pale Maple	0 10 0
Finest Pale Durable Copal	0 18 0
Extra Pale French Oil	1 1 0
Eggshell Plating Varnish	0 18 0
White Pale Enamel	1 4 0
Extra Pale Paper	0 12 0
Best Japan Gold Size	0 10 6
Best Black Japan	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Knotting	0 10 9
French and Brush Polish	0 10 6

TO CORRESPONDENTS.

NOTE.—All communications with respect to literary and artistic matters should be addressed to "THE EDITOR" (and not to any person by name); those relating to advertisements and other exclusively business matters should be addressed to "THE PUBLISHER," and not to the Editor.

All communications must be authenticated by the name and address of the sender, whether for publication or not. No notice can be taken of anonymous communications.

The responsibility of signed articles, letters, and papers read at meetings rests, of course, with the authors.

We cannot undertake to return rejected communications; and the Editor cannot be responsible for drawings, photographs, manuscripts, or other documents, or for models or samples, sent to or left at this office, unless he has specially asked for them.

All drawings sent to or left at this office for consideration should bear the owner's name and address on either the face or back of the drawing. Delay and inconvenience may result from inattention to this.

Any commission to a contributor to write an article, or to execute or lend a drawing for publication, is given subject to the approval of the article or drawing, when received, by the Editor, who retains the right to reject it if unsatisfactory. The receipt by the author of a proof of an article in type does not necessarily imply its acceptance.

N.B.—Illustrations of the First Premiated Design in any important architectural competition will always be accepted for publication by the Editor, whether they have been formally asked for or not

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than* 6 p.m. *on Wednesday.* [N.B.—We cannot publish Tenders unless authenticated either by the architect or the building owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is stated, nor any list in which the lowest Tender is under 100*l.* unless in some exceptional cases and for special reasons.]

* Denotes *accepted.* † Denotes *provisionally accepted.*

ABERDEEN.—For reconstruction of the east wing of Robert Gordon's Technical College. Mr. J. A. O. Allan, architect, 25, Union-terrace, Aberdeen:—

Masons: R. Beattie & Son, Holland-street		
Carpenters: Hendry & Keith, Gilcomston Park		
Slater: G. Davidson, jun., Thistle-street		
Plasterer: R. Moir, Little Belmont-street		
Ferro-Concrete: J. Scott & Son, Georgestreet		£4,388 11
Plumbers: T. Blaikie & Sons, Bonaccordstreet		
Painter and Glazier: A. Buchan, Rosemountplace		
Electrical: W. Simpson, Union-street		

ANSLEY.—For erection of a north aisle to St. Laurence's Church. Messrs. R. Scrivener & Sons, architects, Hanley:—

J. H. Taylor	£1,769 4 6	T. Smith, Nuneaton*	£1,231 0 0
J. Dallow & Son	1,580 0 0		
Orr Bros.	1,300 0 0	J. Cole & Son	1,199 0 0

BELFAST.—For alterations at No. 6, Wellington-place. Messrs. Patterson & Grahame, architects, Belfast:—

McAuley & McIlroy, Cromac-street, Belfast* £250

BLACKHILL.—For erection of the Richard Murray Hospital. Mr. J. Eltringham, architect and surveyor, Blackhill:—

W. L. Miller, Back Spring-terrace, North Shields £12,400

[Total cost of work in all trades.]

CAMBRIDGE.—For house, for Sir John Sandys, Litt.D., Public Orator, Cambridge University. Messrs. MacAlister & Skipper, architects and surveyors, 20, St. Andrew's-street, Cambridge:—

Rattee & Kett	£5,109	Bell & Son	£4,800
W. Saint	5,027	W. Sindall, Cambridge*	4,659
J. Cracknell	4,989		
Kerridge & Shaw	4,944		

CARDIFF.—For alterations and additions to No. 16, Millicent-street, Cardiff. Messrs. Ivor Jones & Percy Thomas, architects, 18, St. Mary-street, Cardiff. Quantities by architects:—

W. Thomas & Co.	£630 0 0	J. Stephens	£499 10 0
Knox & Wells	600 0 0	G. Griffiths & Son	498 0 0
Shepton & Son	565 0 0		
D. Bryan	550 3 8	D. Davies	488 14 0
W. T. Morgan	550 0 0	Blacker Bros.	482 0 0
Symonds & Son	528 0 0	J. Gibson	479 0 0
D. Davies & Son	525 0 0	E. P. Edwards	477 16 0
W. Watts	515 0 0	F. Waterman*	450 0 0
W. Williams	500 0 0		

CHELTENHAM.—For erection of children's sick and isolation wards at the Workhouse. Mr. Thomas Malvern, Lic.R.I.B.A., architect, 21, Winchcombe-street, Cheltenham:—

C. T. Capper	£833 0	A. Wilson	£765 0
W. Drew	818 0	R. R. Kemp*	700 0
Collins & Godfrey	767 0	W. Cresswell	679 14

[All of Cheltenham.]

CWMCAM.—For erection of a chapel school. Mr. R. L. Roberts, M.S.A., architect, Abercarn:—

Whymore & Walton	£1,746 0 0	D. Davies & Sons	£1,524 0 0
		W. Williams	1,499 0 0
King & Co.	1,655 0 0	J. Pritchard	1,495 0 0
Kirby & Westacott	1,620 0 0	Herbert & Co.	1,415 0 0
		J. E. Jones	1,345 0 0
Edmunds & Woods	1,615 0 0	Watkins & Co., Crosskeys*	1,295 16 9

CWMTILLERY.—For alterations and additions to the Blaenau-Gwent branch of the Cwmtillery Industrial Society. Mr. R. L. Roberts, architect, Abercarn:—

A. J. Colbourne, Swindon* £814

GREAT YARMOUTH.—For the erection of a new block to the Union Female Infirmary, for the Board of Guardians. Mr. Arthur S. Hewitt, A.R.I.B.A., Architect, Bank-chambers, Great Yarmouth:—

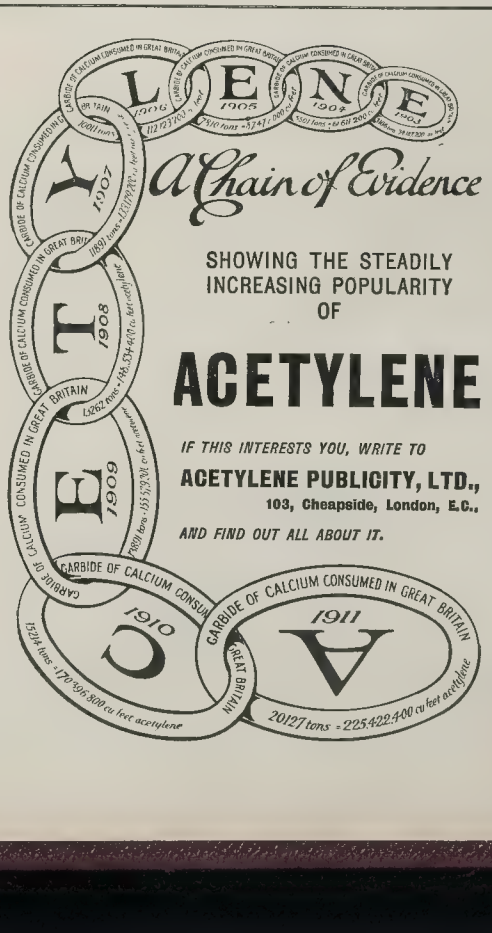
J. Eastoe	£5,374 16	Moore & Sons	£5,100 0
F. Grimble	5,230 0	B. G. Beech	5,089 0
Carter & Wright	5,212 0	J. Balls	5,065 0
J. D. Harman	5,190 0		

[All of Yarmouth.]

[Consideration of these tenders postponed for three months.]

HOLYWELL.—For erection of a new Council school, Holywell, for the Flintshire Education Committee. Mr. Saml. Evans, F.S.I., County Surveyor and Architect, County Offices, Mold:—

Dryland & Preston, Ltd.	£4,752 0	M. S. Rogers & Sons	£4,399 0
J. Mayers, Son, & Co.	4,740 12	A. B. Lloyd	4,385 0
		R. Jones & Son	4,243 0
P. Williams	4,300 0	Sibson Bros., Holywell*	4,222 0
C. G. Lye	4,498 0		



KIRTON-IN LINDSEY.—For renovation of the Wesleyan Church, for the Trustees. Mr. W. H. Buttrick, P.A.S.I., architect, Scunthorpe:

S. & J. Picksley, Kirton-in-Lindsey* ... £236 13

[Architect's estimate, £250.]

LONDON.—For heating work at the Peckham Park School, Peckham, for the London County Council:—

W. J. Burroughes & Sons £870	W. G. Cannon & Sons, Ltd. £739
Hayward Bros. & Eckstein, Ltd. ... 791	J. & F. May 733
Cannon & Hefford ... 777	The Brightside Foundry and Engineering Co., Ltd. ... 731
J. Yetton & Co., Ltd. 746	G. & E. Bradley ... 703

[Architect's estimate comparable with the tenders is £769.]

LONDON.—For the supply of 7,000 gallons of machinery oil to the Greenwich Generating Station, for the London County Council:—

	Prices a Ton.
J. A. Bremner & Co. ...	£13 10 0
Snowdon, Sons, & Co., Ltd. ...	12 10 0
C. C. Wakefield & Co. ...	12 0 0
Spurrier, Glazebrook, & Co., Ltd. ...	11 10 0
W. B. Dick & Co., Ltd. ...	11 10 0
Price's Patent Candle Co., Ltd. ...	10 5 0
M. Wells & Co. ...	10 0 0
Stern Sonneborn Oil Co., Ltd. ...	9 5 0
C. Price & Co. ...	8 12 6
Vacuum Oil Co., Ltd. ...	8 8 0

LONDON.—For erection of three gas-engines at the Falcon Brook Pumping Station, for the London County Council:—

British Westinghouse Electric and Manufacturing Co., Ltd. ...	£9,620 0 0
	£ 6,150 0 0‡
Browett, Lindley, & Co., Ltd. ...	8,524 10 9
Swiss Locomotive and Machine Works ...	6,818 0 0
Campbell Gas Engine Co., Ltd. ...	5,680 0 0

‡ Alternative tender.

LONDON.—For painting exterior and interior of the East-lane School, Rotherhithe, for the London County Council:—

B. S. Ronald ... £1,012 10 6	C. Wall, Ltd. £799 0 0
G. Parker & Sons ... 847 0 0	H. Groves ... 760 0 0

LONDON.—For painting the exterior and interior of the "Latchmere" School, Battersea, for the London County Council:—

H. Bragg & Sons, Ltd. £741	Triggs & Co. ... £678
Maxwell Bros., Ltd. ... 725	

MERTHYR TYDFIL.—For construction of retaining and boundry walls, railings, etc., at the Y.M.C.A. Messrs. Ivor Jones & P. Thomas, architects, Cardiff. Quantities by architects:—

C. Davies ... £288 16 2	Colbourne ... £217 4 7
J. T. James ... 275 2 4	W. G. Bond, Cefn Coed, Merthyr* ... 210 4 7½
F. Waterman ... 271 10 3	
D. W. Davies ... 264 2 7	

NETHY BRIDGE.—For erection of a villa. Mr. Gilbert, architect, The Square, Grantown:—

Masons: D. & A. Mackintosh, Grantown-on-Spey ... £597 0 0
Carpenter: P. Lawson, Grantown-on-Spey ... 597 15 0
Plumber: J. Mackenzie, Grantown-on-Spey ... 165 18 0
Slater: J. Reid, Inverness ... 56 10 0
Plasterer: W. Smith, Grantown ... 85 0 0
Painter: J. Dunbar, Kingussie ... 65 14 6

PETERSTON-SUPER-ELY.—For erection of two semi-detached houses at Maendy Farm. Mr. W. D. Thomas, architect and surveyor, Porth, Glam.:—

T. Dyer ... £685 7 0	T. Mathews,
Owen & Davies 632 0 0	Tonyrefail* ... £581 8 8

QUEENSFERRY.—For extensions to the Queensferry Council Infants' School, for the Flintshire Education Committee. Mr. Saml. Evans, F.S.I., County Surveyor and Architect, County Offices, Mold —

P. Edwards ... £760 0	W. E. Blane & Son £575 0
M. S. Rogers & Sons ... 606 10	P. Williams 560 0
G. Wright & Sons 590 0	G. H. Wright, Shotton* ... 558 10

QUEENSFERRY.—For extensions to the Queensferry Council Mixed School, for the Flintshire Education Committee. Mr. Saml. Evans, F.S.I., County Surveyor and Architect, County Offices, Mold:—

P. Edwards ... £740 0	G. Wright & Sons £583 0
W. E. Blane & Son 620 0	G. H. Wright, Shotton* ... 550 15
P. Williams 610 0	
M. S. Rogers & Sons 598 0	

RUGBY.—For additions to the public baths, Regent-street, for the Rugby Urban District Council. Mr. Jno. H. Sharp, Engineer and Surveyor, Rugby. Quantities by Engineer and Surveyor:—

Winn & Son ... £852 8 3	A. Cockerell* ... £748 15 0
Walton & Son ... 755 15 6	

[All of Rugby.]

[Surveyor's estimate, £750.]

SEVENOAKS.—For additions and alterations to Chart Lodge, near Sevenoaks, for Lord Monson. Mr. J. J. Taylor, F.S.I., architect, 11, Little College-street, S.W.:—

G. Saxby ... £4,565 19 7	Gathercole Bros. £3,990 0
R. Durtnall & Sons ... 4,000 0 0	Wiltshire & Son ... 3,789 0
G. E. Wallis & Sons ... 3,994 0 0	H. J. Tidy, Sittingbourne* 3,694 0

SHOTTON.—For erection of a new hotel, for Mr. Richard Darbyshire, Hawarden. Mr. S. Evans, F.S.I., architect, the Grove, Rhyl. Quantities by the architect:—

Roberts & Lloss £5,470 0	G. Carpenter ... £4,939 0
Parker Bros. ... 5,135 0	J. Moyers & Sons 4,800 0
E. Blane & Son ... 5,015 0	Jones & Hough ... 4,600 0
G. Cash & Co. ... 4,950 0	G. Wright & Sons. Hawarden* ... 4,593 17
P. Williams ... 4,942 0	

SUDBURY (Suffolk).—For construction of a new bathroom and water-closet, etc., at St. Leonard's Hospital. Mr. A. Howard, architect, Cornard-road, Sudbury, Suffolk:—

	With Lead Flat.	With Asphalt Flat.
G. C. Gooday ...	£237	£236 0
Mauldon & Sutton ...	185	185 10
C. Deaves, Bures‡ ...	182	180 16

‡ Accepted, with lead flat.

UPPER BEEDING.—For additions and alterations to the Council school. Mr. Haydn P. Roberts, F.R.I.B.A., County Architect, Worthing:—

G. Gillam £2,500	W. Willett £2,135
W. A. Gates & Son ... 2,244	R. Cook & Sons ... 2,060
E. H. Curd ... 2,209	A. Paskett & Co. ... 1,995
G. Potter ... 2,149	F. Elms ... 1,980
G. Chowne & G. McVey ... 2,140	F. Sandell & Sons, Worthing* ... 1,977

WREXHAM.—For erection of a house and outbuildings in Maes-y-dre-road. Mr. J. H. Swainson, A.M.Inst.C.E., architect, Wrexham:—

H. A. Jones ... £1,968	R. Allen £1,695
W. E. Samuel ... 1,850	Treasure & Son, Ltd.‡ ... 1,435

‡ Subject to deductions.

Ham Hill Stone.
Doulting Stone.
Portland Stone.

The Ham Hill and Doulting Stone Co., Limited (Incorporating the Ham Hill Stone Co. and C. Trask & Son, The Doulting Stone Co.).

Norton, Stoke-under-Ham, Somerset.
London Agent:—Mr. E. A. Williams, 16, Craven-street, Strand.

Asphalte. The Seyssel and Metallic Lava Asphalte Co. (Mr. H. Glen), Office, 42, Poultry, E.C.—The best and cheapest materials for damp courses, railway arches, warehouse floors, flat roofs, stables, cow-sheds and milk-rooms, granaries, tun-rooms, and terraces. Asphalte Contractors to Forth Bridge Co. T.N. 2844 Central.

SPRAGUE & CO., Ltd.,
LITHOGRAPHERS AND PRINTERS.
Estate Plans and Particulars of Sale promptly executed.
69 & 70, Dean-street, Soho, W.

JOINERY,
Of every description and in any kind of Wood.
CHAS. E. ORFEUR, LTD.,
ESTIMATES ON APPLICATION.
COLNE BANK WORKS.
COLCHESTER.
Telephone: 0195. Telegrams: "Orfeur, Colchester."

J. J. ETRIDGE, Jr.
SLATE MERCHANTS. LTD.

EXPERTS IN
SLATING, TILING.
BEST WORK ONLY.
Telephone 2685 Wall, or write—
Bethnal Green Slate Works,
BETHNAL GREEN, LONDON, E.

PILKINGTON & CO.
(ESTABLISHED 1838),
DEPTFORD WHARF,
190 & 192, CREEK ROAD, DEPTFORD, S.E.
Telephone No.: New Cross 1102 (two lines).
Registered Trade Mark.
Polonceau Asphalte.
PATENT ASPHALTE AND FELT ROOFING.
ACID-RESISTING ASPHALTE.
WHITE SILICA PAVING.
SEYSSEL ASPHALTE (*Direct from the Mines*).

ALSO AT DEPTFORD, LIVERPOOL, BRISTOL,



GLASGOW, FALKIRK, BELFAST, & DUBLIN.

Chief Offices: 352 to 364, EUSTON ROAD, LONDON, N.W.

GETTY CENTER LIBRARY
3 3125 00684 9539